FT-900

Technical Supplement



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FT-900
Technical Supplement



This manual provides technical information necessary for servicing the Yaesu FT-900 HF Transceiver. It does not include information on specifications, installation and operation, which are described in the FT-900 Operating Manual, provided with each transceiver, or on FT-900 accessories, which are described in manuals provided with each.

Servicing this equipment requires expertise in handling surface mount chip components. Attempts by non-qualified persons to service this equipment may result in permanent damage not covered by warranty. For the major circuit boards, each side of the board is identified by the type of the majority of components installed on that side. In most cases one side has only chip components, and the other has either a mixture of both chip and lead components (trimmers, coils, electrolytic capacitors, packaged ICs, etc.), or lead components only.

While we believe the technical information in this manual is correct, Yaesu assumes no liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

Yaesu Musen reserves the right to make changes in this transceiver and the alignment procedures, in the interest of technological improvement, without notification of the owners.

Specification

General

Receiving frequency range: 100 kHz ~ 30 MHz

Transmitting frequency ranges:

160 ~ 10 meter Amateur Bands

Frequency stability: ±10 ppm (SSB, CW, AM) from -10° ~ +50° C or ±2 ppm from 0° ~ 50° C (SSB, CW, AM w/TCXO-3 option)

Emission modes: USB, LSB(J3E), CW(A1A), AM(A3E), FM (F3E)

Frequency Tuning Steps:
2.5 Hz/ 5.0 Hz/ 10 Hz (CW, SSB)
100 Hz (AM, FM)

Antenna impedance: 50 Ω nominal(w/o ATU)
16.7 - 150 Ω with ATU (unbalanced)

Operating temp. range: -10° C ~ +50° C

Supply voltage: 13.5-V DC ±10%, negative ground

Power consumption (approx): 1.5 A rx (no signal)
20 A tx (100 watts)

Dimensions (WHD): 238 x 93 x 253 mm (w/o knobs)

Weight (approx): 5.3 kg

Transmitter

Power output: adjustable up to 100 watts (25 watts AM carrier)

Modulation types: SSB: Balanced, filtered carrier AM: Low-level (early stage) FM: Variable reactance

Maximum FM deviation: ± 2.5 kHz

Harmonic radiation: 50 dB below peak output
40 dB (10 MHz, 18 MHz)

Spurious radiation: 40 dB below peak output

SSB carrier suppression: 40 dB

Undesired sideband suppression: at least 50 dB below peak output at 1.5 kHz modulation

Audio response (SSB): < -6dB from 400~ 2600 Hz

3rd-order IMD: -31 dB (typical) @ 100 watts PEP, 14.2 MHz

Microphone impedance: 500 ~ 600 Ω

Automatic Antenna Tuner Option

Impedance range: 16.7 ~ 150 Ω (unbalanced)

Frequency range: 160 ~ 10 m amateur bands

Matching time: < 30 secs.

Matched SWR: <1.4:1

Receiver

Circuit type: superheterodyne

Intermediate frequencies: 1st: 70.455 MHz
2nd: 455 kHz, Notch 8.215 MHz

Sensitivity:
(for 10 dB S/N, 0 dBμ = 1 μV, IPO off)

Frequency→ Mode (BW)↓	150-250 kHz	250-500 kHz	0.5-1.8 MHz	1.8-30 MHz	28-30 MHz
SSB, CW (2.4 kHz)	< 5 μV	< 2 μV	< 1 μV	< 0.25 μV	0.5 μV for 12 dB SINAD (FM)
AM (6 kHz BW, 400-Hz, 30% modulation)	< 40 μV	< 16 μV	< 8 μV	< 1 μV	

Selectivity (-6/-60 dB):

Modes	Min.	Max.
SSB, CW wide, AM narrow (w/o options)	2.2 kHz	4.2 kHz
CW narrow with XF-110C option	500 Hz	1.8 kHz
CW narrow with XF-110CN option	250 Hz	700 Hz
AM (wide)	6 kHz	18 kHz
FM (-6/-50 dB)	8 kHz	19 kHz

Squelch sensitivity(IPO off):
1.8 ~ 30 MHz (CW, SSB, AM): < 2.0 μV
28 ~ 30 MHz (FM): < 0.32 μV

IF rejection (1.8 ~ 30 MHz): 70 dB or better

Image rejection (1.8 ~ 30 MHz): 70 dB or better

IF Shift range: ±1.2 kHz

IF Notch rejection: 30 dB or better

Clarifier tuning range/steps: ±9.99 kHz/ 2.5 Hz
5 Hz or 10 Hz

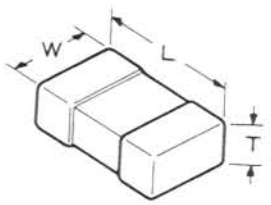
Maximum audio power output:
at least 1.5 watts into 4 Ω with < 10% THD

Audio output impedance: 4 to 8 Ω

Specifications are subject to change, in the interest of technical improvement, without notice or obligation.

The diagrams below indicate some of the distinguishing features of common chip components.

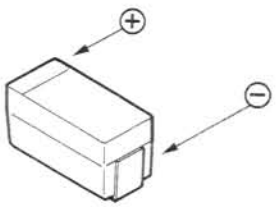
Capacitors



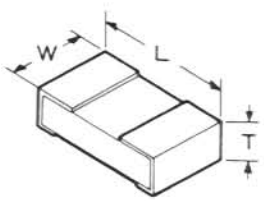
(Unit : mm)

Type	L	W	T
3216	3.2	1.6	0.45~0.60
2125	2.0	1.25	0.35~0.50
1608	1.6	0.8	0.65~0.95

Tantalum Capacitors



Resistors



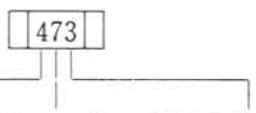
Type	L	W	T
1/10	2.0	1.25	0.45
1/16	1.6	0.8	0.45

INDICATED LETTERS

1 2 3 4
5 6 7 8
9 0 .

Type RMC 1/10W, 1/16W

Marking* 100, 222, 473·····



Ten unit	One unit	Multiplier code
0	0	10^0
1	1	10^1
2	2	10^2
3	3	10^3
4	4	10^4
5	5	10^5
6	6	10^6
7	7	10^7
8	8	10^8
9	9	10^9

Examples :

100 = 10Ω

222 = 2.2kΩ

473 = 47kΩ

Chip Component Replacement

Replacing Chip Components

Chip components are installed at the factory by a series of robots. The first one places a spot of adhesive resin at the location where each part is to be installed, and later robots handle and place parts using vacuum suction.

For single-sided boards, solder paste is applied and the board is then baked to harden the resin and flow the solder. For double-sided boards, no solder paste is applied, but the board is baked (or exposed to ultra-violet light) to cure the resin before dip soldering.

In our laboratories and service shops, small quantities of chip components are mounted manually by applying a spot of resin, placing them with tweezers, and then soldering by very small dual streams of hot air (without physical contact during soldering). We remove parts by first removing solder using a vacuum suction iron, which applies a light, steady vacuum at the iron tip, and then breaking the adhesive with tweezers.

The special vacuum soldering/desoldering equipment is recommended if you expect to do a lot of chip replacements. Otherwise, it is usually possible to remove and replace chip components with only a tapered, temperature-controlled soldering iron, a set of tweezers and braided copper solder wick. Soldering iron temperature should be less than 280 °C (536 °F).

Precautions for Chip Replacement

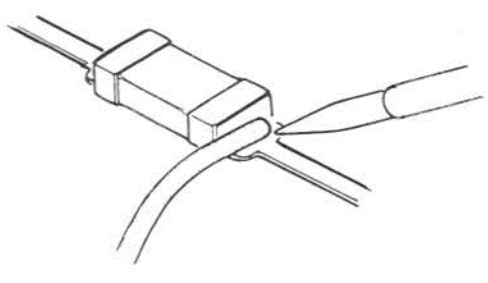
✘ Do not disconnect a chip forcefully, or the foil pattern may peel off the board.

✘ Never re-use a chip component. Dispose of all removed chip components immediately to avoid mixing with new parts.

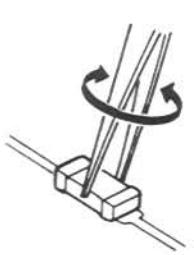
✘ Limit soldering time to 3 seconds or less to avoid damaging the component and board.

Removing Chip Components

❒ Remove the solder at each joint, one joint at a time, using solder wick whetted with non-acidic flux as shown below. Avoid applying pressure, and do not attempt to remove the tinning from the chip's electrode.



❒ Grasp the chip on both sides with tweezers, and gently twist the tweezers back and forth (to break the adhesive bond) while alternately heating each electrode. Be careful to avoid peeling the foil traces from the board. Dispose of the chip when removed.



❒ After removing the chip, use the copper braid and soldering iron to which away any excess solder and smooth the land for installation of the replacement part.

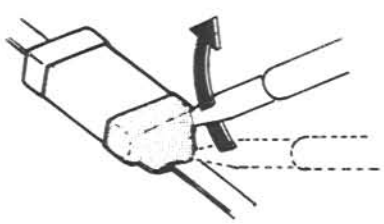
Install a Replacement Chip

As the value of some chip components is not indicated on the body of the chip, be careful to get the right part for replacement.

❒ Apply a small amount of solder to the land on one side where the chip is to be installed. Avoid too much solder, which may cause bridging (shorting to other parts).



❒ Hold the chip with tweezers in the desired position, and apply the soldering iron with a motion line that indicated by the arrow in the diagram below. Do not apply heat for more than 3 seconds.



❒ Remove the tweezers and solder the electrode on the other side in the manner just described.

Bottom Cover Removal

- ❒ Turn the transceiver off, and disconnect all cables.
- ❒ Place the set upside-down on the work surface with the rear facing you, and remove the eight screws affixing the bottom cover (Figure 1). Then lift the bottom cover off.
- ❒ Disconnect the light-blue-banded coaxial cable from J2026 near the rear of the exposed RF Unit (① in Figure 2).
- ❒ Unplug the yellow-banded coaxial cable from J2024 near the rear corner of the RF Unit (② in Figure 2).
- ❒ Using a small sharp tool, gently pry up on either side of J2011, the white plastic ribbon cable socket near the rear left corner of the RF Unit (③ in Figure 2), about 2 mm (⅛ inch), until the ribbon cable can be removed (see Figure 3).
- ❒ Remove the six screws indicated in Figure 2 (one is inside the large shield housing, accessible through the hole near the corner).

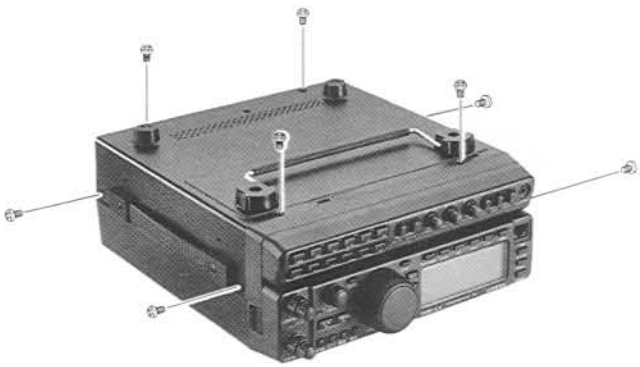


Figure 1: Bottom Cover Removal

Top Cover Removal

- ❒ Place the transceiver topside-up, and remove the four screws indicated in Figure 4.
- ❒ Now turn the transceiver onto its right side (as viewed from the rear). Lift the rear of the top cover/heasink about 2 cm (¾ inch), then slide it back slightly and begin to fold away the uppermost side. Carefully disconnect the coaxial cable from the RF Unit, the speaker lead and the 6-pin connector leading to the LPF Unit (Figure 5). Next fold the two halves of the chassis apart until they lay flat, side by side.
- ❒ Remove the four screws affixing the shield cover over the Local Unit (Figure 7), then remove the shield.
- ❒ To access the solder side of the Local Unit, first remove the wire harness from its tie downs (point Ⓐ in Figure 7).Then unplug the coax connector (Ⓑ in Figure 7) and the ribbon cable (Ⓒ in Figuer 7) by gently prying up each side of the connector as shown in Figure 3.
- ❒ Remove the seven screws shown in Figure 7 (note that one is next to the DVS-2 jack on the rear panel), and also remove the upper

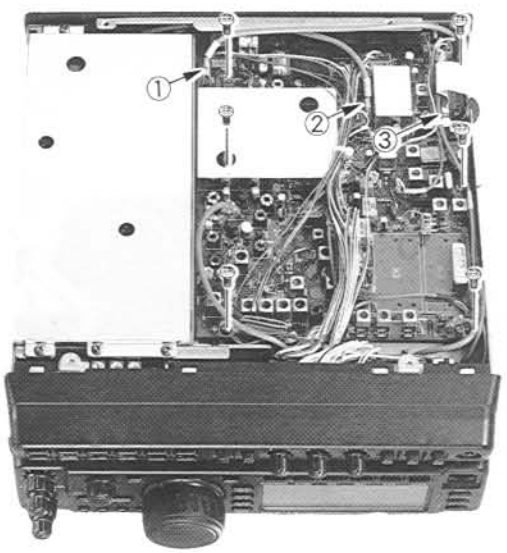


Figure 2: RF Unit Location

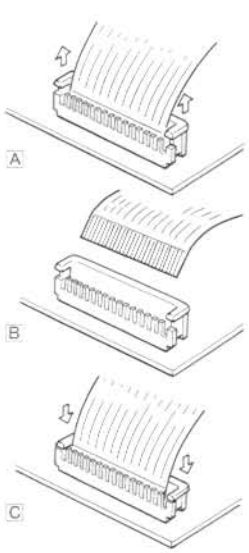


Figure 3: Ribbon Cable Connector



Figure 4: Top Cover/Heatsink Removal

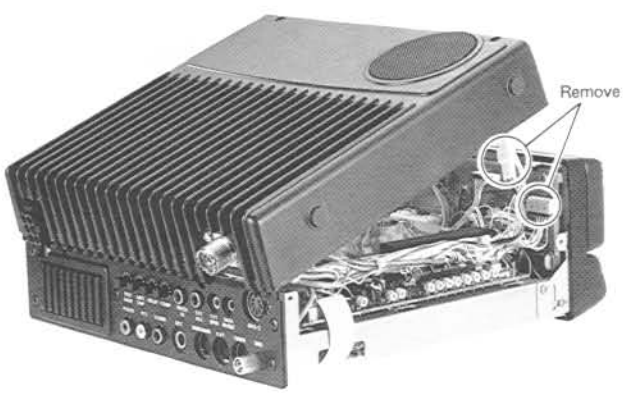


Figure 5: Separating the Top Cover

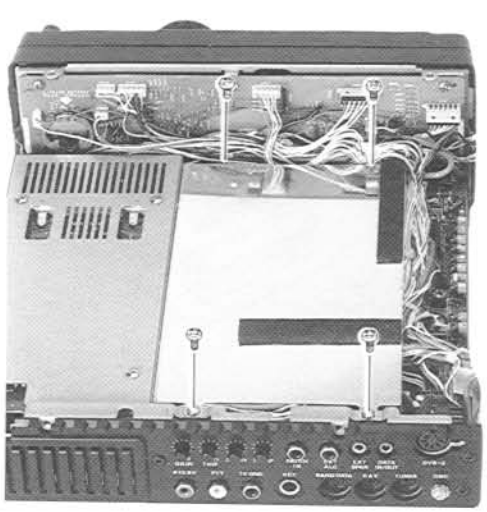


Figure 6:Local Unit Shield Cover

one of the two screws on either side of the front panel (Figure 8) and loosen the lower one (on each side), allowing the front panel to be folded forward so that the Local Unit can be lifted as shown in Figure 8.

ATU-2 Unit Removal

- ❒ With the bottom cover off, remove the 3 screws from the ATU-2 Unit body, indicated in Figure 9
- ❒ Disconnect the two coax cables from their respective sockets on the ATU-2 Unit PCB, labeled "RED" and "GREEN" (Figure 10).
- ❒ Unplug the 4-, 5- and 6-pin connectors from J6504, J6505 and J6506, respectively.
- ❒ Carefully lift the ATU-2 Unit free from the transceiver chassis.

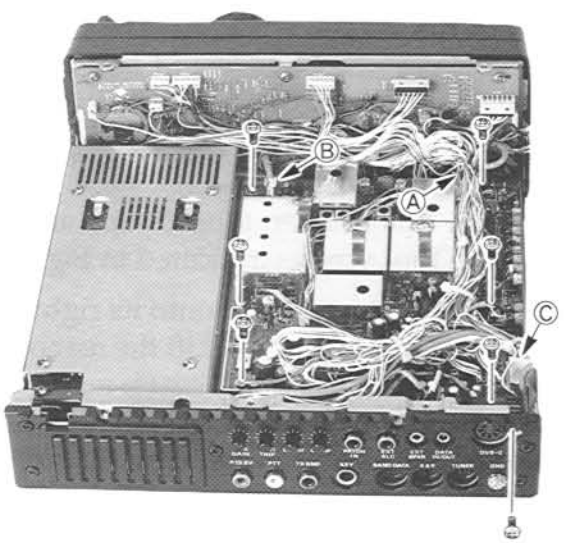


Figure 7: Local Unit Connectors and Screws

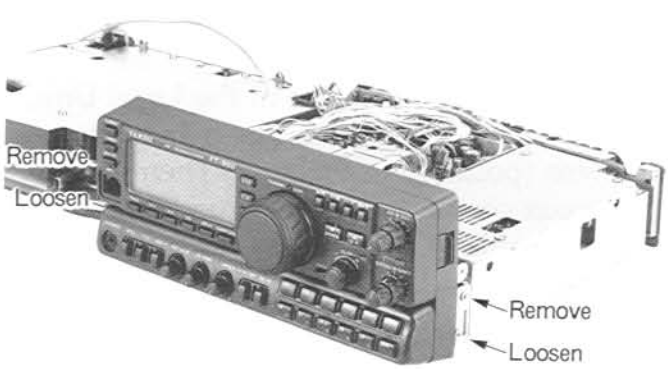


Figure 8: Front Panel Screws

PA Unit and LPF Unit Removal

- ❒ With the top heatsink/cover laying flat on a solid surface, remove the 12 screws from the Shield Cover to expose the PA Unit and LPF Unit (Figure 11).
- ❒ Remove the 12 screws securing the PA Unit to the heatsink and lift the unit free, as shown in Figure 12.
- ❒ Remove the 4 screws securing the LPF Unit and lift it free, also shown in Figure 12.

Sub Panel CNTL-2 Unit Access

- ❒ First, separate the sub-panel from the main unit; press in on the latch at the right side of the main front panel and slide the subpanel to the right and out from the transceiver (Figure 13).
- ❒ Remove the center knob and outer collar from the **AF/SQL** and **NOTCH/SHIFT** controls. Slide the rubber collar off of the VFO dial, then, using a 2-mm hexagonal driver, loosen (but not remove) the setscrew and slide the knob from it's shaft, as shown in Figure 14).
- ❒ Next remove the 6 screws from the rear cover of the sub-panel and remove the cover to expose the CNTL-2 Unit PCB (Figures 15 & 16).
- ❒ This completes normal disassembly and access of PCB Units in the FT-900. Further disassembly should not be required.

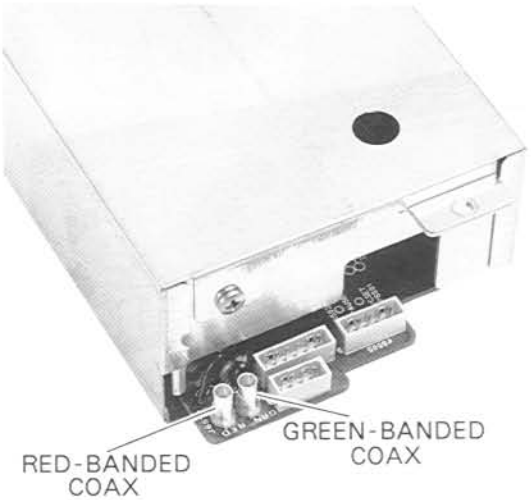


Figure 10: ATU-2 Connectors

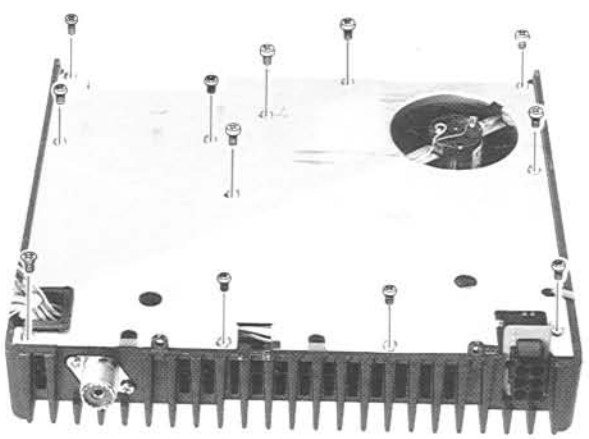


Figure 11: Shield Cover Removal

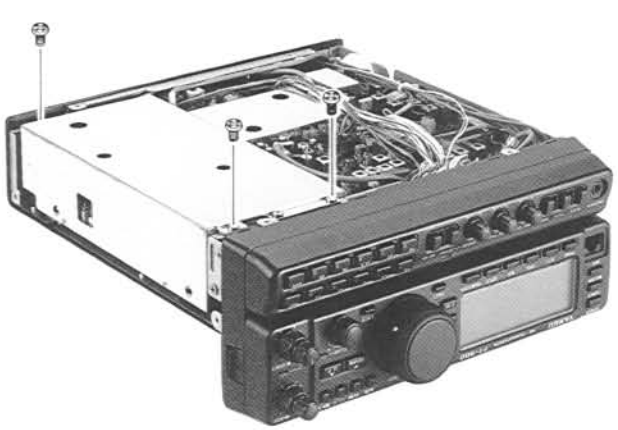


Figure 9: ATU-2 Removal

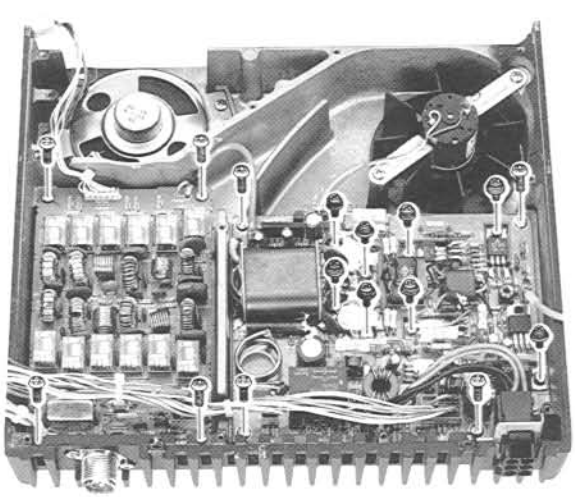


Figure 12: PA & LPF Unit Removal



Figure 13: Removing the Front Sub-Panel

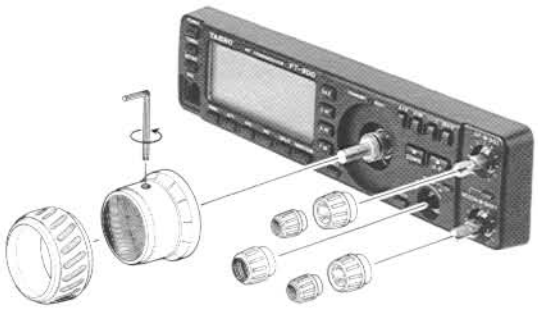


Figure 14: Sub-Panel Knob Removal

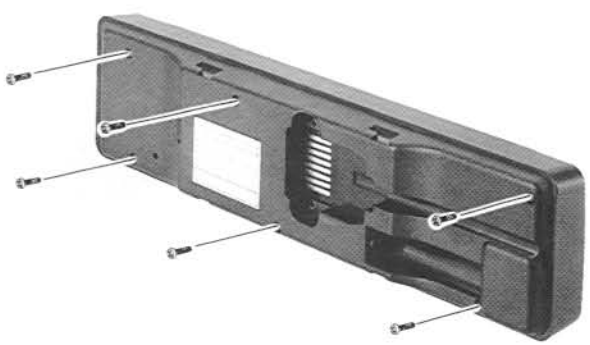


Figure 15: Sub-Panel Rear Cover Removal

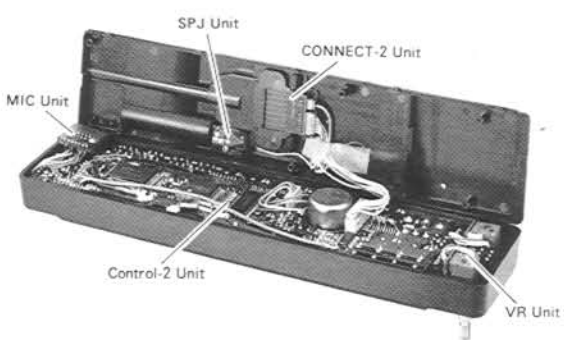
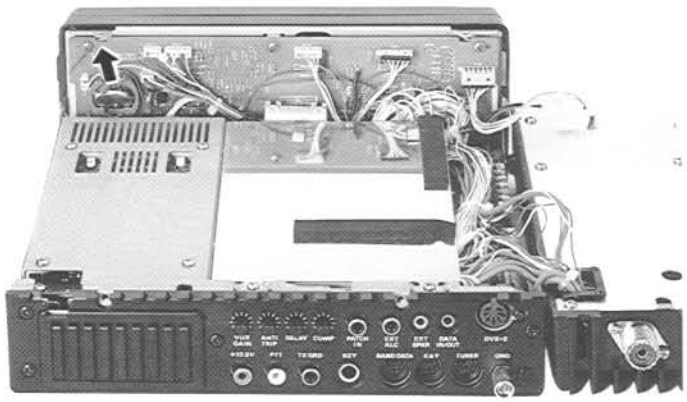


Figure 16: CNTL-2 Unit Access

Battery Replacement

- ❒ Referring to the photograph, remove the 2 screws from both sides of the front panel, and loosen the other set.
- ❒ Gently fold down the front panel from the chassis.
- ❒ To change the backup cell, use your fingers to remove the old cell from its holder (do not grab it with metal tweezers or pliers, as that could short it out). Replace only with Sony lithium type CR2032 (Yaesu part number Q9000564), or equivalent.



Resetting the CPU

Functional problems involving frequency, mode and memory selection can sometimes be resolved simply by resetting the microprocessors. There are two ways to reset the microprocessors in the FT-900, both of which clear the contents of all memories, leaving them at the factory defaults.

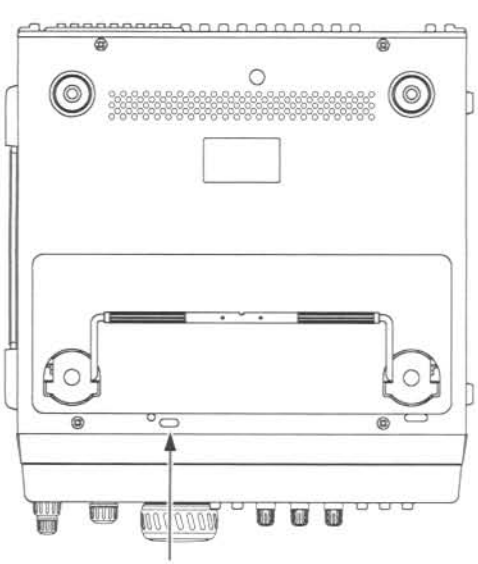
Soft Reset

This procedure relies on a ROM routine which should normally suffice to correct most operating misfunctions. Turn the transceiver off, then hold both the **▲UP/DWN▼** buttons while switching the transceiver back on. If the problem persists, proceed to the Hard Reset.

Hard Reset

- ❒ Turn the transceiver off, and then turn the Backup switch (inside the hole near the front center of the bottom cover) off.
- ❒ Let the transceiver sit for several minutes.
- ❒ Turn the transceiver on, then turn the Backup switch back on (after the transceiver has been turned on).

Power-Up Function	Hold this button & turn power on.	Comments
System (CPU) Reset - clears all memories and returns setting to factory-default.	▲ UP & ▼ DOWN	VFOs and Memory 1 return to default setting of 7.000 MHz LSB.



The FT-900 is carefully designed to allow the knowledgeable operator to make nearly all adjustments required for various station conditions, modes and operator preferences simply from the controls on the panels, without opening the case of the transceiver. The *FT-900 Operating Manual* describes these adjustments, plus certain internal settings.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently be replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend that servicing be performed only by authorized Yaesu service technicians, experienced with the circuitry and fully equipped for repair and alignment. So if a fault is suspected, you should contact the selling dealer for instructions regarding repair. Authorized Yaesu service technicians have the latest modification information, and realign all circuits and make complete performance checks to ensure compliance with factory specifications after replacing faulty components.

Those who do undertake any of the following alignments are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Yaesu must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners.

Under no circumstances should any alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all of the equipment listed, the interactions of some adjustments may require that more complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Rather, have all test equipment ready before beginning, and follow all of the steps in a section in the order they are presented.

- ❒ Digital DC Voltmeter (high-Z, >1 MΩ/V)
- ❒ RF Millivoltmeter
- ❒ AC Voltmeter
- ❒ RF Standard Signal Generator w/calibrated output and dB scale, 0 dBμ = 0.5 μV
- ❒ AF Signal Generator with calibrated output
- ❒ Spectrum Analyzer or receiver (30 MHz)
- ❒ Frequency Counter
- ❒ 50-Ω Dummy Load (150 ~ 250 watts)
- ❒ 16.6-Ω Dummy Load (>150 W)
- ❒ In-Line Wattmeter (150 ~ 250 W, 50-Ω)
- ❒ Linear Detector
- ❒ RF Attenuator (>150-W, 40-dB) or coupler

Alignment Preparation & Precautions

A 50-Ω dummy load and inline wattmeter must be connected to the antenna jack in all procedures that call for transmission, except where specified otherwise. Correct alignment is not possible with an antenna.

Except where specified otherwise, the transceiver should be tuned to 14.2 MHz, USB mode, and these controls set as indicated:

- ❒ **MOX** & **VOX** buttons OFF (▬)
- ❒ **AGC-F** button ON (▁)
- ❒ **PROC**, **IPO**, **ATT** buttons/LEDs OFF (▬)
- ❒ **MIC** & **RF PWR** fully ccw (minimum)
- ❒ **AF** as required
- ❒ **SQL** fully ccw
- ❒ **NOTCH** & **SHIFT** to 12-o'clock

After completing one step, read the following step to determine whether the same test equipment will be required. If not, remove the test equipment (except dummy load and wattmeter, if connected) before proceeding.

Alignment

Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 20 and 30 °C (68 ~ 86 °F). If the transceiver is brought into the shop from hot or cold air it should be allowed some time for thermal equalization with the environment before alignment.

Alignments must only be made with oscillator shields and circuit boards firmly affixed in place. Only one extender board should be installed at a time for access to the board being aligned. Also, the test equipment must be thoroughly warmed up before beginning.

Note: Signal levels in dB referred to in alignment are based on 0 dBμ = 0.5 μV.

Table note: DC voltages should be within ± 10% of those listed in the voltage tables.

Local Unit

Refer to the Local Unit Alignment Diagram for the following section. To prevent PLL unlock from interfering with the Local Unit alignment process, connect TP1008 to ground. Remember to disconnect TP1008 when finished with the alignment.

Reference Oscillator

- ❒ Connect the frequency counter to TP1004.
- ❒ If the counter frequency differs by more than 5 Hz from 10.485760 MHz, adjust the TCXO-3 trimmer (if the TCXO is installed) or TC1002.
- ❒ Replace the counter with the RF millivoltmeter, and confirm at least 120 mV_{rms}.

70-MHz 2nd Local Oscillator

- ❒ Remove the coaxial plug from J1003 and connect a 50-Ω resistor in parallel with the frequency counter across the socket.
- ❒ Adjust L1002 for 70.00000 MHz ± 20 Hz.
- ❒ Replace the counter with the RF millivoltmeter, and confirm at least 40 mV_{rms}.
- ❒ Remove the meter and resistor, and replace the plug in J1003.

Carrier DDS Check

- ❒ Turn the **MIC** and **RF PWR** controls fully ccw (minimum), and connect the frequency counter to TP1009.
- ❒ Select LSB mode, key the transmitter, and confirm 453.500 kHz (within ±10 Hz) on the counter.
- ❒ Select USB mode, key the transmitter, and confirm 456.500 kHz (within ±10 Hz) on the counter.
- ❒ Select CW mode, key the transmitter, and confirm 455.000 kHz(within ±10 Hz) on the counter.
- ❒ Select AM mode, key the transmitter, and confirm 455.000 kHz (within ±10 Hz) on the counter.
- ❒ Connect the RF millivoltmeter to TP1009, key the transmitter and confirm at least 80 mV_{rms} in USB mode.

Sub-Loop: DDS Check

- ❒ Tune the transceiver display to 7.045 MHz. Connect the RF millivoltmeter to TP1010 and confirm at least 40 mV_{rms}.
- ❒ Next connect the frequency counter to TP1007 and adjust L1045, if necessary, for a reading of 60 to 60.1 MHz on the counter.
- ❒ Connect the RF millivoltmeter to TP1011 and adjust T1002 and T1003 alternately several times for maximum RF voltage (at least 10 mV_{rms}).
- ❒ Connect the DC voltmeter to TP1001 and adjust L1045 for 5.0 ± 0.1 V.
- ❒ Select AM, and tune the transceiver display to 7.045.12 MHz then confirm 2.6 ± 0.8 V at TP1001.
- ❒ Tune the transceiver to 7.045.12 MHz, connect the RF millivoltmeter to TP1012, and adjust T1002 and T1003 alternately (again) several times for maximum RF voltage (at least 10 mV_{rms}).

Main PLL: Local BPF & VCV

- ❒ Tune the transceiver to 7.1400 MHz, and connect the RF millivoltmeter to TP1002.
- ❒ Adjust T1005 and T1006 alternately several times for peak RF voltage (at least 100 mV_{rms}). Leave the meter at TP1002.

❒ Connect the DC voltmeter to TP1003. Tune the display to each adjustment frequency in the following table and adjust the corresponding trimmer capacitor for 6.0 ± 0.2 V on the DC voltmeter. Then retune to the check frequency and confirm the corresponding check voltage (± 0.5 V). Repeat at each listed frequency.

Adjustment Freq. (VCO#)	Adj. for 6 V @TP1003	Check	
		Freq.	Volts
30.00000 (VCO4)	TC1005	21.50000	1.8
21.49999 (VCO3)	TC1004	14.50000	1.8
14.49999 (VCO2)	TC1003	7.50000	1.6
7.49999 (VCO1)	TC1001	0.10000	1.7

❒ Tune the transceiver to 29.9800 MHz and again adjust T1005 and T1006 alternately several times for peak RF voltage (at least 100 mV_{rms}) at TP1002.

1st Local Output Level Check

❒ Remove the plug from J1001 and connect a 50-Ω resistor and RF voltmeter in its place.

❒ Tune to 30.00000 MHz and confirm at least 400 mV_{rms} on the meter. Replace the plug in J1001.

PA Unit (RF Power Amplifier)

Final Idling Current

❒ Make sure the transceiver has been on for at least several minutes. Connect the DC voltmeter between TP4001 (+) and TP4002 (—) on the PA Unit. Key the transmitter in an SSB mode, and with no microphone input, adjust VR4001 for 8.0 mV ± 0.5 mV.

LPF Unit

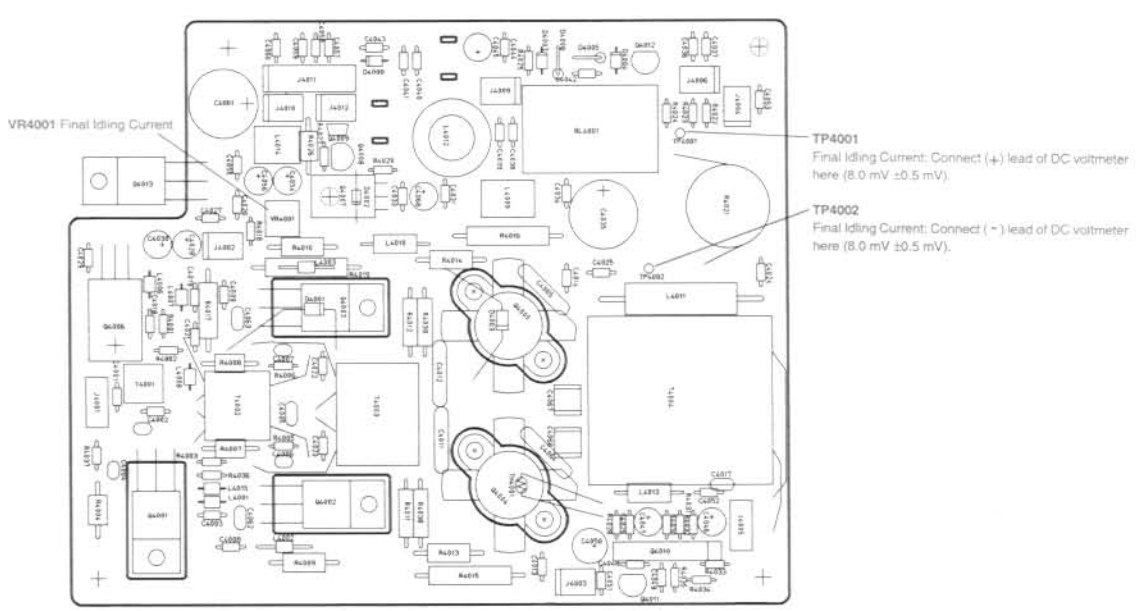
CM Coupler Balance

❒ With the 50-Ω dummy load connected to the antenna jack, tune the transceiver to 14.2 MHz, and select the CW mode. Connect the DC voltmeter between pins 4 (–) and 3 (+) of J5006, key the transmitter and adjust TC5001 for *minimum* on the voltmeter.

ATU-2 (option)

Tuning Capacitor/Motor (Mechanical Check, Setting & Adjustment)

❒ Loosen all set screws in the shaft coupler, and turn the coupler by hand to confirm it moves freely (the motor and capacitor should not move). If the coupler binds, check the motor mounting position (it is soldered in place) and the capacitor mounting (screws).



100-W Power Amp (PA) Unit Test & Alignment Points

- ❒ Turn the power switch off, and jump TP-6501 to chassis ground.
- ❒ Turn the power switch on. The motor should rotate, and then stop.
- ❒ Set the capacitor to its maximum capacitance position (plates fully meshed) by hand, and tighten all shaft coupler set screws, using care not to disturb the capacitor or motor positions.
- ❒ Turn the power off, and jumper both TP6501 & TP6502 to chassis ground.
- ❒ Turn the power back on. The motor should move 180°, and the capacitor should be then at minimum capacitance (fully unmeshed).
- ❒ Remove the grounding jumpers from TP6501 and TP6502.

Tuner Impedance & Phase Detection

- ❒ Connect the 50-Ω dummy load and wattmeter to J6501 (the output of the Tuner Control Unit), and connect J6502 (RF IN) to J5002 (LPF OUT). Tune the transceiver to 14.000 MHz, CW mode.
- ❒ Connect the DC voltmeter between pins 1 ("**I**") and 2 ("**V**") of J6508 (either polarity).
- ❒ Press the **TUNER** and **MOX** buttons, adjust the **RF PWR** control for 50 watts output, and then adjust TC6501, if necessary, for meter indication within ± 0.08 V of 0 V.
- ❒ While still transmitting, move the DC voltmeter to pins 3 ("**C**") and 4 ("**L**") of J6508 (either polarity), and adjust TC6501, if necessary, for meter indication within ± 0.02 V of 0 V.

RF Unit Local Signals and Oscillators

- ❒ With the RF millivoltmeter, confirm at least 900 mV_{rms} at TP2001, and 400 mV_{rms} at JP2002.

Notch Oscillator

- ❒ Connect the frequency counter to TP2004, and with the **NOTCH** control at 12 o'clock, adjust L2062 for 8.67 MHz ± 50 Hz.
- ❒ Replace the counter with the RF voltmeter, and adjust T2032 for maximum voltage (at least 300 mV_{rms}).

Receiver Circuits

IF Interstage Transformers (I) (coarse alignment - only for new IF Unit)

- ❒ Connect the RF signal generator to J2024 on the RF Unit, and inject 100 dBμ at 14.200 MHz. Connect the AF millivoltmeter across and 8-Ω load to the **EXT SP** jack on the rear panel.
- ❒ Preset VR2003 fully clockwise, and adjust T2005, T2009 ~ T2021 in succession several times for peak AF output.

1st Mixer Balance

In USB mode, tune to the internal heterodyne at 29.608 MHz, and adjust VR2001 and VR2002 alternately several times for a null in AF output.

S-Meter Threshold

- ❒ Preset VR2006 on the RF Unit to the 12 o'clock position.
- ❒ Turn the **SQL** control fully clockwise and adjust VR2005 to the point just before the S-meter begins to deflect. The return the **SQL** control fully counterclockwise.

IF Interstage Transformers (II)

- ❒ Connect the RF signal generator to the antenna jack, and inject 20 dBμ ~ -10 dBμ at 14.020 MHz.
- ❒ Adjust T2005, T2009~ T2021 in succession several times for peak S-meter indication (adjust the injection level as necessary to keep the meter around mid scale).

Image Signal Rejection

- ❒ Connect the RF signal generator to the antenna jack, and inject a 70 ~ 80 dBμ signal at 14.930 MHz.
- ❒ Adjust T2009 and T2010 several times for maximum null of the image signal.

IF Gain

- ❒ Inject 7 dBμ at 14.020 MHz to the antenna jack, and tune for peak on the S-meter.
- ❒ Adjust VR2003 on the RF Unit for S-1 deflection.

S-Meter Full-Scale

- ❒ Inject 100 dBμ at 14.020 MHz to the antenna jack, and tune for peak on the S-meter.
- ❒ Adjust VR2006 on the RF Unit for **S9+60 dB** on the S-meter.
- ❒ Reduce the injection level so the S-meter deflects to **S9**, and confirm the injection is between 35 and 45 dBμ.

Noise Blanker

- ❒ With the NB on, inject a 40 dBμ signal at 14.020 MHz to the antenna jack.
- ❒ Connect the DC voltmeter to TP2002, then adjust T2024 and T2025 on the RF Unit for minimum indication on the DC voltmeter.

Notch Null

- ❒ Inject 40 dBμ at 14.200 MHz from the RF signal generator to the antenna jack. Select USB mode, make sure the **NOTCH** is off, and tune to 14.20150 MHz (so a 1500-Hz heterodyne is heard).
- ❒ Press the **NOTCH** button and, with the **NOTCH** control centered, adjust VR7201 on the Notch Unit and L2062 on the RF Unit alternately several times for minimum S-meter deflection or AF output.

FM Squelch Threshold

- ❒ In the FM mode, with no signal at the antenna jack, set the **SQL** control between the 9- and 10-o'clock positions, and adjust VR2004 on the RF Unit so that the squelch just closes.

Transmitter

Connect the 50-Ω dummy load to the antenna jack for all procedures.

ALC Meter Zero Set

- ❒ Select the ALC meter function, and preset VR1014 on the Local Unit to the 12 o'clock position.
- ❒ Connect the DC voltmeter to the anode of diode D1043.
- ❒ Select USB mode, key the transmitter, and with no modulation, adjust VR1013 on the Local Unit for 0 ± 0.02 V on the voltmeter.

Transmitter IF Interstage Transformers

- ❒ Inject a 1-kHz, 3-mV signal from the AF generator into the mic jack.
- ❒ With the inline wattmeter and 50-Ω dummy load connected to the antenna jack, set the **RF PWR** control fully cw (maximum), and select the ALC meter function.
- ❒ Tune to 14.200 MHz in the SSB mode, key the transmitter and adjust T2023 and T2026 ~ T2029 and T2033 several times, for minimum indication on the ALC meter or maximum indication on the wattmeter (around 100 watts).

2nd Tx Mixer Balance

- ❒ Connect the RF attenuator and spectrum analyzer to the antenna jack, and set the **RF PWR** control fully ccw (minimum).
- ❒ Key the transmitter and adjust VR2007 on the RF Unit for minimum spurious 455 kHz on either side of 14.0 MHz (13.545 and 14.455 MHz).

Tx Drive (I)

- ❒ Connect the DC voltmeter to the cathode of D1042 on the Local Unit, and set VR1008, VR1010 ~ VR1012, VR1014, VR1017 and the **RF PWR** control fully clockwise.
- ❒ Key the trasnmitter and adjust VR1015 on the Local Unit for 4.0 V ±0.1V on the meter.

Overcurrent ALC Turndown

- ❒ With the inline wattmeter and 50-Ω dummy load connected to the antenna jack, tune to 21.000 MHz, CW mode.
- ❒ Preset VR1012 on the Local Unit fully clockwise.
- ❒ Key the transmitter and adjust the **RF PWR** control for 140 watts on the wattmeter, then adjust VR1014 on the Local Unit to the point where power suddenly begins to lower (turns down).
- ❒ Confirm at least 130 watts output on each band.

CW (Max. RF Output)

- ❒ Perform the previous procedure, and with the same setup, select CW mode and tune to 14.000 MHz.

❒ Preset the RF PWR control fully clockwise, key the transmitter and adjust VR1012 on the Local Unit for 100 watts ±5 W on the wattmeter.

AM (Max RF Output)

❒ Perform the previous procedure, and with the same setup, select AM mode and tune to 14.000 MHz.

❒ Preset the RF PWR control fully clockwise, key the transmitter and adjust VR1017 on the Local Unit for 25 watts ±1W on the wattmeter.

Ext. Antenna Tuner Tuning Power

❒ With the transceiver tuned to 14.000 MHz, CW mode, install a temporary jumper between TP1005 & TP1006 on the Local Unit.

❒ With the dummy load and wattmeter on the antenna jack, set the **RF PWR** control fully clockwise.

❒ Key the transmitter and adjust VR1010 on the Local Unit for 10 watts ±1 W on the wattmeter. Then remove the jumper.

ALC Meter Sensitivity

❒ With the transceiver tuned to 14.2 MHz, USB mode, inject 3-mV at 1 kHz from the AF generator to the microphone jack.

❒ Key the transmitter, and adjust the **MIC** gain so the meter, set to ALC, just begins to deflect.

❒ Increase the injection level to 6 mV, and adjust VR3003 on the CNTL-1 Unit so that the meter deflects to the top edge of the ALC zone.

PO Meter Calibration

❒ With the wattmeter and dummy load connected to the antenna jack, tune to 14.200 MHz, CW mode, and press the PO meter selector button.

❒ Key the transmitter and adjust the **RF PWR** control for 100 watts ±5 W on the wattmeter. Then adjust VR3001 on the CNTL-1 Unit so the PO meter also indicates 100 watts.

TX Drive (II)

❒ Connect the DC voltmeter to the cathode of D1042 on the Local Unit, and set the **RF PWR** control fully clockwise (maximum).

❒ Key the transmitter and adjust VR1015 on the Local Unit for 3.5 V ±0.08V on the voltmeter.

Reference ALC (SWR Turndown)

❒ Connect the inline wattmeter and a 16.6-Ω dummy load (or three 50-Ωs in parallel) to the antenna jack, and set the **RF PWR** control fully clockwise (maximum).

❒ With the transceiver set to the CW mode on 14.000 MHz, key the transmitter and adjust VR1008 on the Local Unit for 40 ± 2 watts on the wattmeter.

SWR Meter Calibration

❒ With the 16.6-Ω dummy load (or three 50-Ωs in parallel) connected to the antenna jack, and the **RF PWR** control set fully clockwise (maximum), tune to 3.500 MHz, CW mode, and press the SWR meter selector button.

❒ Key the transmitter and adjust VR3002 on the CNTL-1 Unit so the meter indicates 3.0 SWR (within 1 bargraph segment).

SSB Modulator Balance

❒ With the transceiver tuned to 14.2 MHz, USB mode, connect the 50-dB attenuator and spectrum analyzer (or 50-Ω dummy load and sampling coupler) to the antenna jack. Alternatively, a separate receiver can be used, with the transceiver connected to the dummy load.

❒ Set the **MIC** control fully ccw (minimum), key the transmitter, and adjust VR1020 on the Local Unit for minimum power output (carrier leakage, should be less than -47 dB) as indicated on the analyzer or external receiver.

Speech Processor Check

❒ With the wattmeter and dummy load connected to the antenna jack and the **RF PWR** control fully clockwise, tune to 14.200 MHz, USB mode. Inject 2 mV at 1 kHz from the AF generator to the microphone jack.

❒ Set the **MIC** gain and **COMP** controls to their 12 o'clock positions, and press the **PROC** button. Then key the transmitter and confirm 100 watts ± 5 W on the wattmeter.

FM Carrier Frequency

❒ With the dummy load connected to the antenna jack, connect the frequency counter to TP2005 on the RF Unit. Select FM mode and set the **RF PWR** control fully ccw (minimum).

❒ Key the transmitter and adjust L2082 on the RF Unit for 70.455 MHz ± 50 Hz on the counter.

FM & CTCSS Deviation

❒ Connect the attenuator and linear detector to the antenna jack.

❒ Tune to 29.200 MHz, FM mode. Select the (default) 88.5-Hz subaudible tone, and press the **RPT/T** switch to activate CTCSS operation.

❒ Key the transmitter and, with no microphone modulation, adjust VR2008 on the RF Unit for ± 0.7-kHz deviation (± 100 Hz).

❒ Inject 10 mV at 1 kHz from the AF generator to the microphone jack, key the transmitter, and adjust VR2009 on the RF Unit for ± 2.3-kHz deviation (± 100 Hz).

❒ Press the **RPT/T** switch again to turn it off.

FM Mic Gain

❒ With the attenuator and linear detector connected to the antenna jack, and with the transceiver tuned to 29.200 MHz, FM mode, inject 1.5 mV at 1 kHz from the AF generator to the microphone jack.

❒ Key the transmitter and adjust VR1022 on the Local Unit for ± 1.75-kHz deviation (± 70 Hz).

Side Tone & Beep Level

❒ With the inline wattmeter and 50-Ω dummy load connected to the antenna jack, tune to 14.200 MHz, CW mode.

❒ Connect an AC voltmeter across a 4-Ω resistor or loudspeaker connected to the **EXT-SPKR** jack.

❒ Connect the CW key to the **KEY** jack, adjust the **RF PWR** control fully ccw(min.), then key the transceiver.

❒ Adjust VR1004 on the Local Unit for 150 mV ±10 mV.

Transmitter Carrier Point

❒ Temporarily solder across split pad TP3001 & TP3002 on the CNTL-1 Unit.

❒ Connect the AF signal generator to the microphone jack, and set for 3 mV injection at 1 kHz. Set the transceiver to 14.200 MHz, LSB mode.

❒ Hold the **FAST** button and then press **SSB** at the same time to activate the LSB carrier-point-setting mode.

❒ Set the **MIC** gainto the 12 o'clock position andthe **RF PWR** control fullyclockwise (maximum), and press the **ALC** meter selector button.

❒ Key the transmitter and inject 3 mV @ 1.5 kHz from the AF generator to the microphone jack, and then adjust the injection *level* to just above the point where the ALC meter indication no longer rises.

❒ Adjust the **MIC** gain control for 80 watts on the wattmeter.

❒ Tune the AF generator to 300 Hz, and adjust the transceiver frequency so that 20 watts output is obtained.

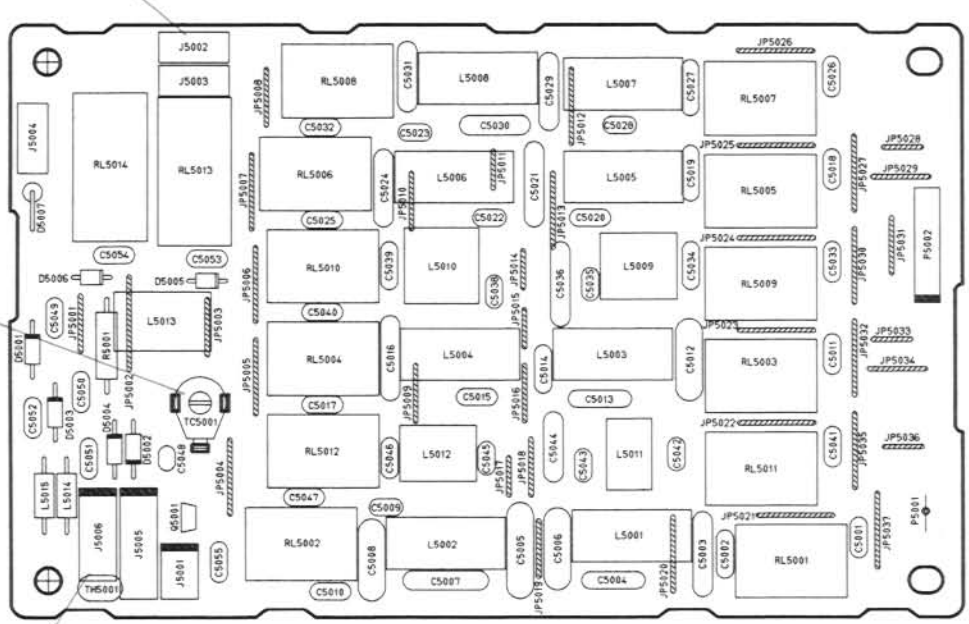
❒ Agin hold the **FAST** button and then press **SSB** at the same time to activate the USB carrier-point-setting mode.

❒ Beginning with the 5th step above ("Key the transmitter..."), repeat the same adjustments while the transmitter is keyed. After unkeying the transmitter, press the **SSB** mode button, and confirm that the display has returned to normal.

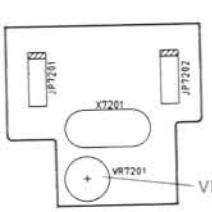
❒ Remove the solder from TP3001 & TP3002.

J5002
Tuner Impedance: Connect to J6502 on Tuner-Control Unit.

TC5001 CM Coupler Balance



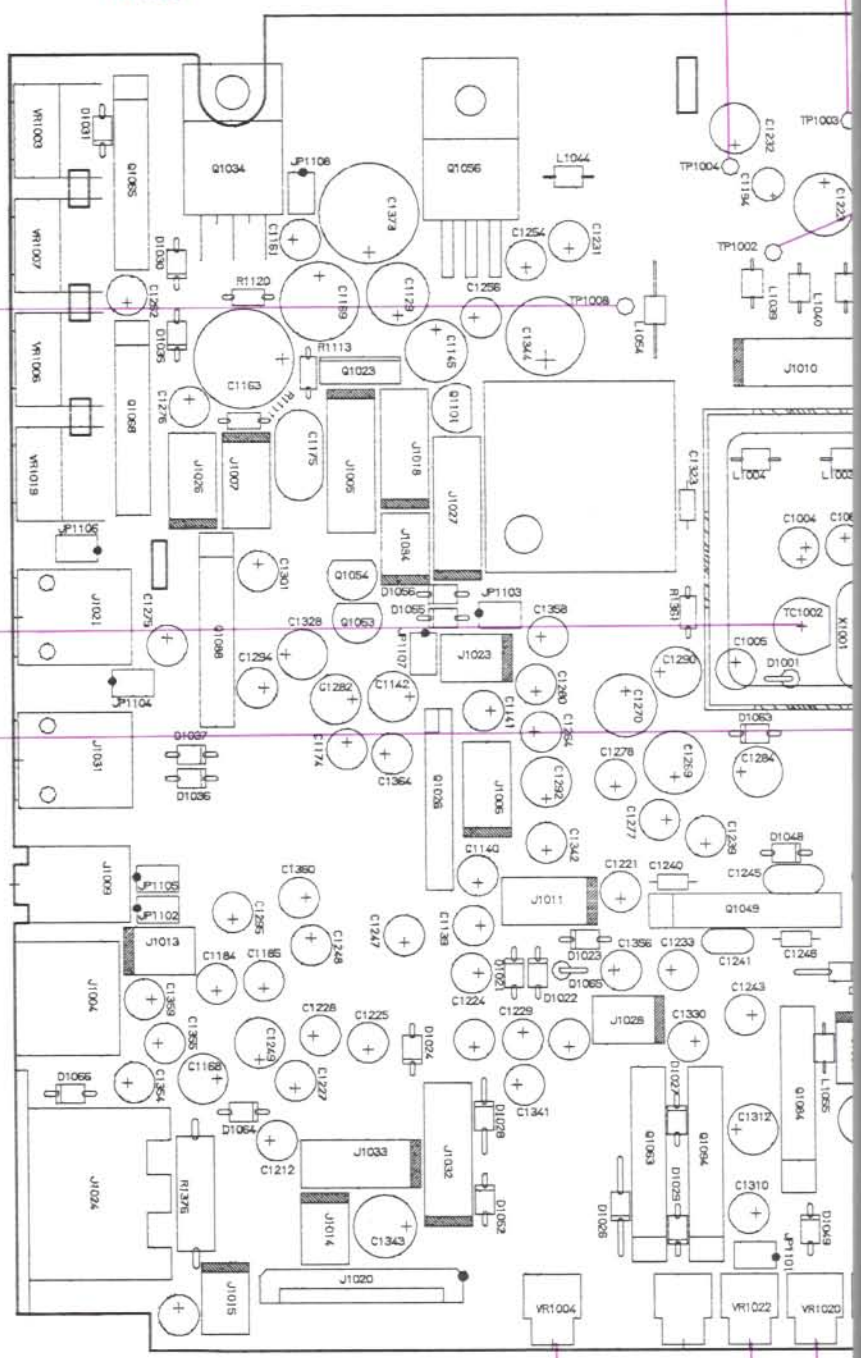
J5006
CM Coupler Balance: Connect DC voltmeter to pin 3 (+) and pin 4 (-) for minimum idication.



VR7201 Notch Null

TP1004
Reference Oscillator: Connect frequency counter & RF voltmeter (10.485760 MHz ±5Hz, >120 mV_{rms})

TP1008
Ground this point while aligning Local Unit



TC1002 Reference Osc.

TP1009
Carrier DDS Check: Connect Freq. counter and RF voltmeter. (>80 mV)
LSB: 453.500 kHz
USB:456.500 kHz
CW, AM: 455.000 kHz

VR1004 Side Tone & Beep Level

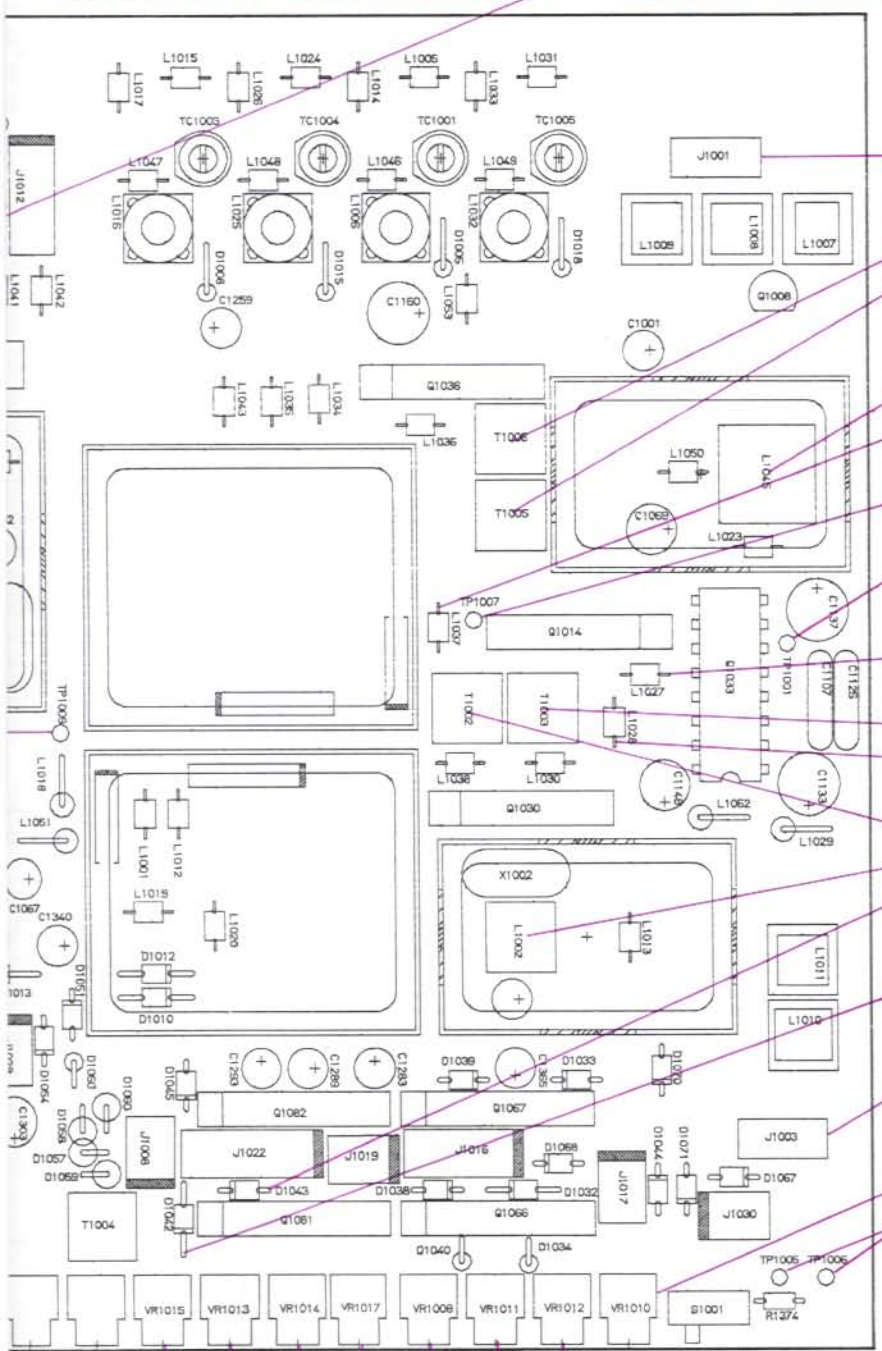
VR1022 FM Mic Gain

VR1020 SSB Modulator Balance

VR1015 TX

VR1013 ALC Mete

VR1014 Overcurrent ALC Zero Set &



TP1003
Main Loop VCV: DC Voltmeter (6.0 ±0.2V)

TP1002
Main-Loop IF: RF Voltmeter (>100 mV_{rms})

J1001
1st Local Osc: Connect RF voltmeter across 50-Ω load (>400 mV_{rms}).

T1006 Main Loop BPF

T1005 Main Loop BPF

L1045 Sub Loop VCO

TP1010
Sub Loop DDS Check: RF voltmeter (40 mV_{rms})

TP1007 Sub-Loop DDS Check:
Freq. Counter (60.0 – 60.1 MHz)

TP1001
Sub-Loop VCV: DC Voltmeter 5.0 V ±0.1 V
2.6 V ±0.8 V

TP1011
Sub Loop IF: RF voltmeter (peak)

T1003 Sub Loop BPF

TP1012
Sub Loop IF: RF voltmeter (peak)

T1002 Sub-Loop BPF

L1002 2nd Local Osc.

D1043
ALC Zero Set: Connect DC voltmeter to anode (0V ±0.02V)

D1042
TX Drive (II): Connect DC voltmeter to cathode (3.5 V ±0.08V).

J1003
2nd Local Osc: Connect freq. counter and RF voltmeter across 50-Ω load (70.000 MHz ±20 Hz >40 mV_{rms}).

VR1010 Ext Ant Tuner Power/Tx Drive (I)

TP1005 / TP1006 Ext. Ant Tuner Power
Jumper between these points

VR1012 Tx Carrier Point
Overcurrent ALC Turndown
Tx Drive (I)

VR1011 Tx Drive (I)

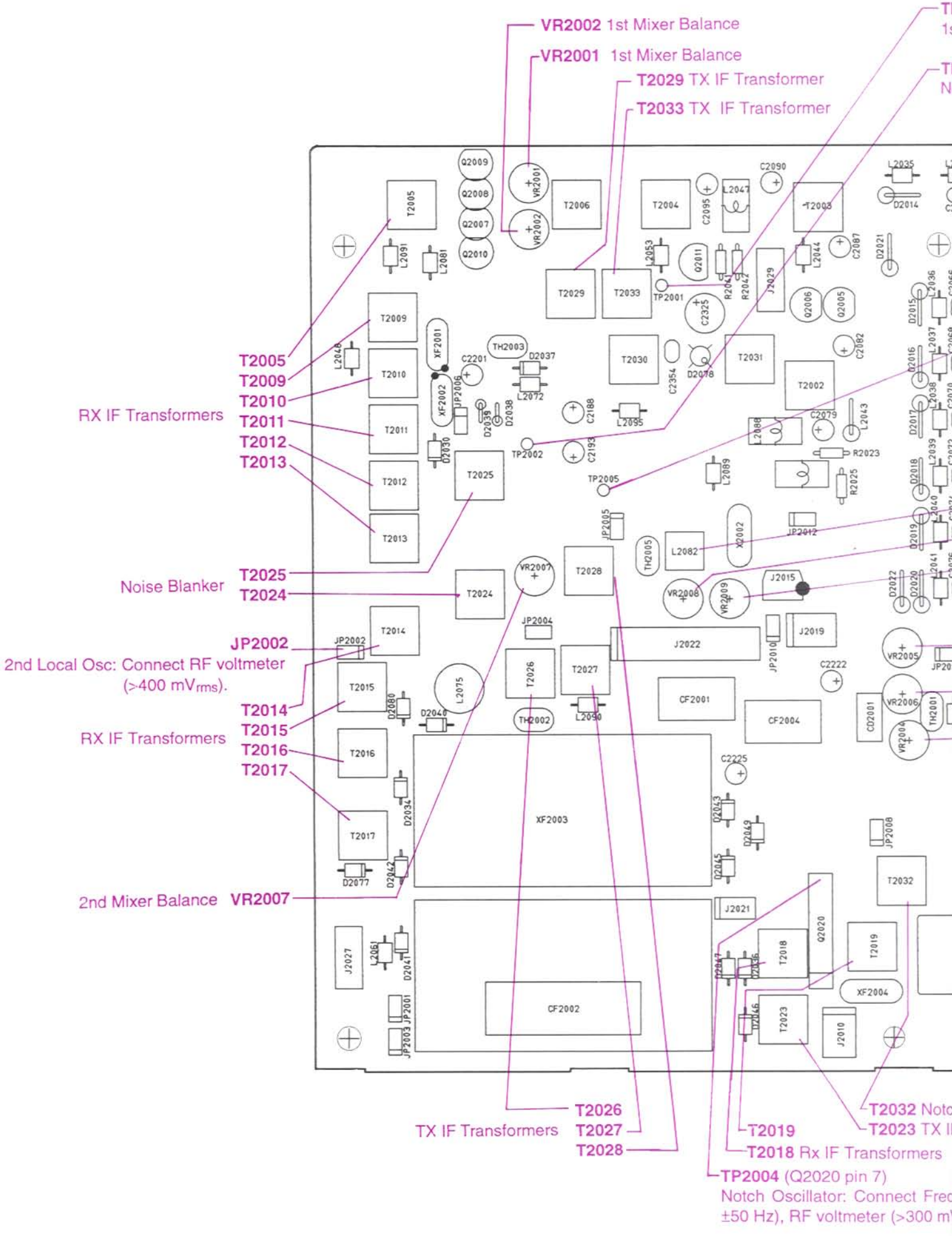
VR1008 Reference ALC /Tx Drive (II)

VR1017 Tx Drive (I) & AM Max. RF Output

(Drive (II)

r Zero Set

Turndown

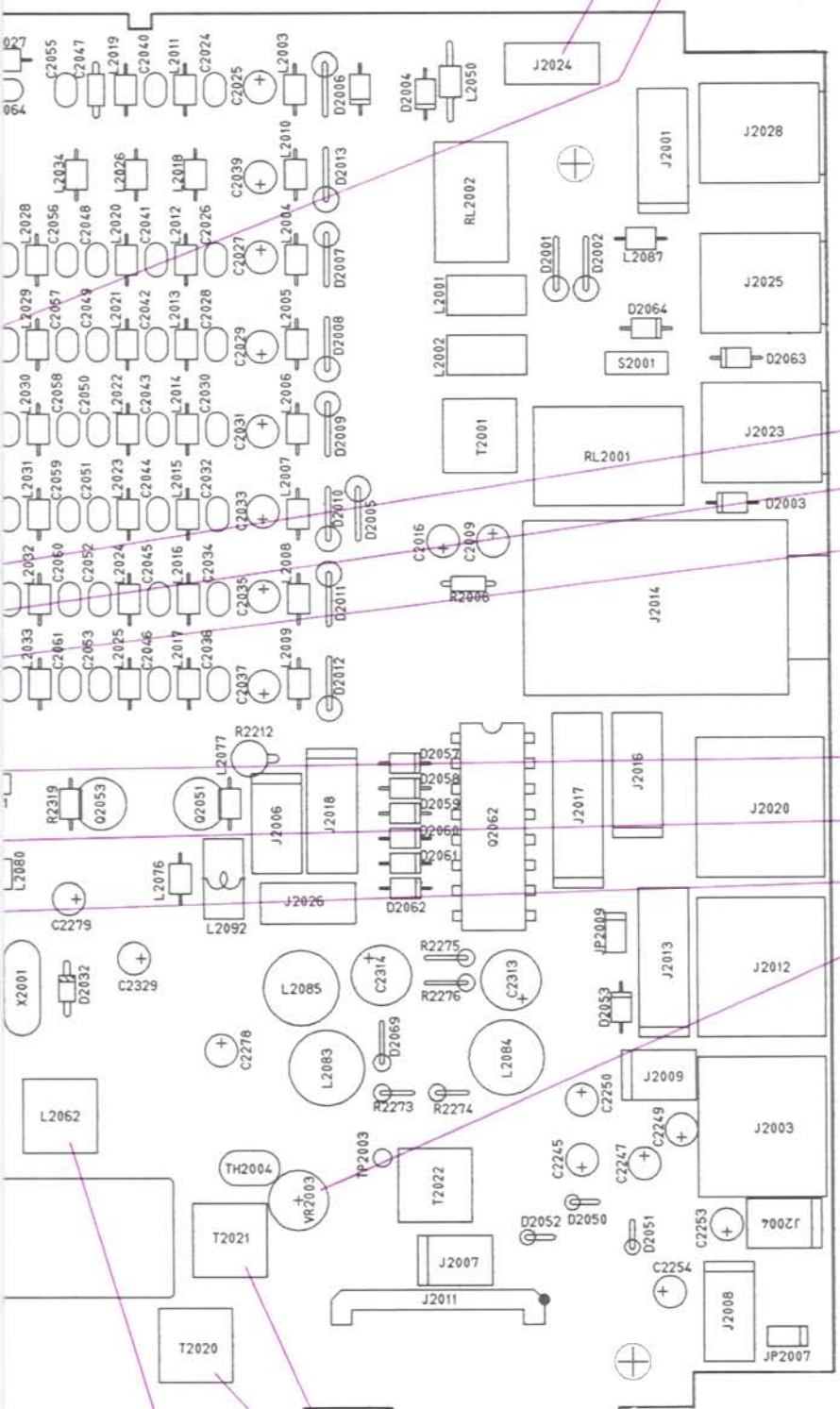

VR2002 1st Mixer Balance
VR2001 1st Mixer Balance
T2029 TX IF Transformer
T2033 TX IF Transformer
T2005
T2009
T2010
RX IF Transformers
T2011
T2012
T2013
T2025
Noise Blanker
T2024
JP2002
2nd Local Osc: Connect RF voltmeter (>400 mVrms).
T2014
T2015
RX IF Transformers
T2016
T2017
2nd Mixer Balance VR2007
T2026
TX IF Transformers
T2027
T2028
T2019
T2018 Rx IF Transformers
TP2004 (Q2020 pin 7)
Notch Oscillator: Connect Freq
±50 Hz), RF voltmeter (>300 m
T2032 Noto
T2023 TX I

P2001
t Local Osc: Connect RF Voltmeter (>900 mV_{rms})

P2002
ise Blanker: Connect DC voltmeter (minimum)

J2024
Rx IF Transformer (coarse alignment): Connect RF signal generator.

TP2005
FM Carrier Freq: Connect Freq. Counter (70.455 MHz ± 50 Hz).



L2082 FM Carrier Frequency

VR2008 CTCSS Deviation

VR2009 FM Deviation

VR2005 S-Meter Threshold

VR2006 S-Meter Full Scale

VR2004 FM SQL Threshold

VR2003 RX IF Gain

h Osc. Level
F Transformer

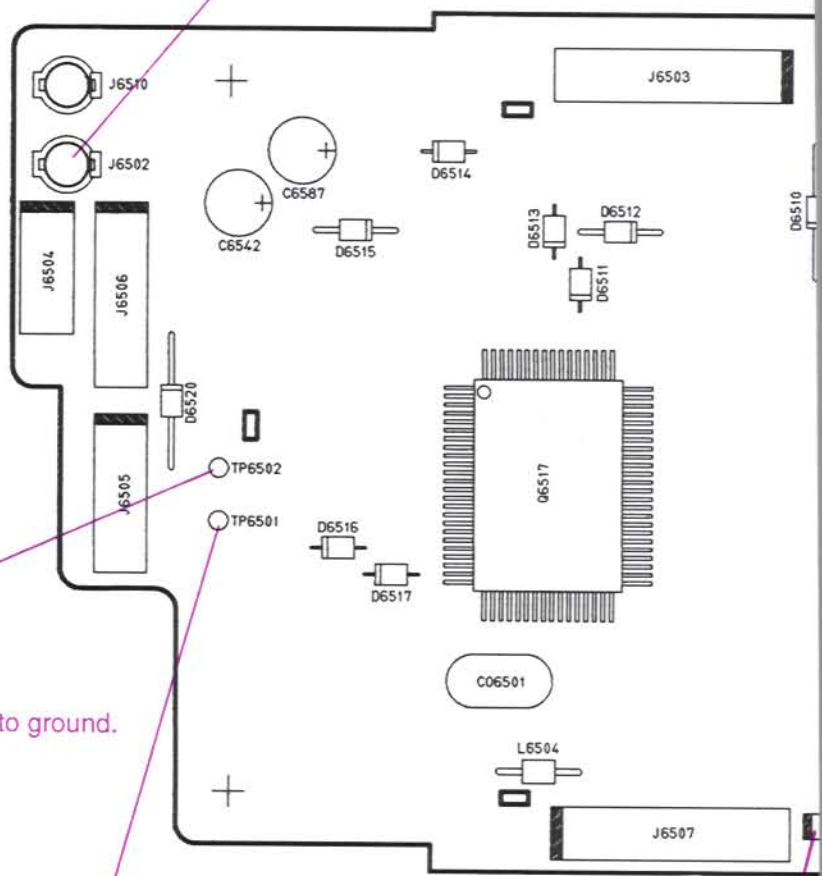
T2021

T2020 Rx IF Transformers

L2062 Notch Osc. Frequency
Notch Null

. Counter (8.67 MHz
/rms).

J6502
Tuner Impedance: Connect to J5002 on LPF Unit

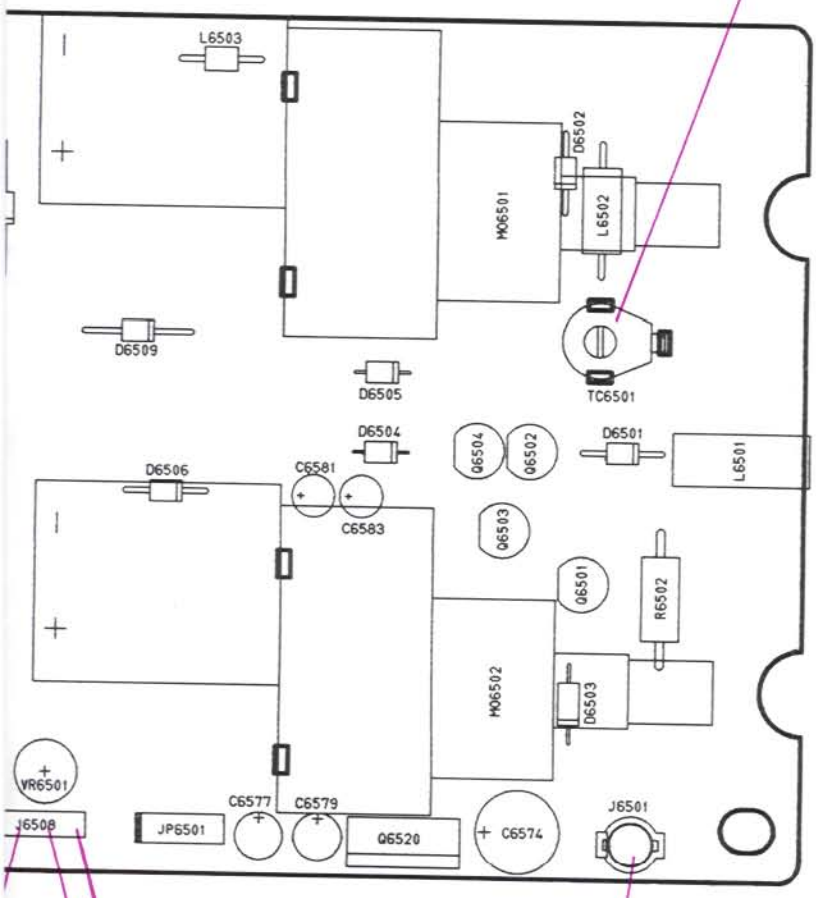


TP6502
Capacitor Alignment: Jumper to ground.

TP6501
Capacitor Alignment: Jumper to ground.

J650
J650
Tune

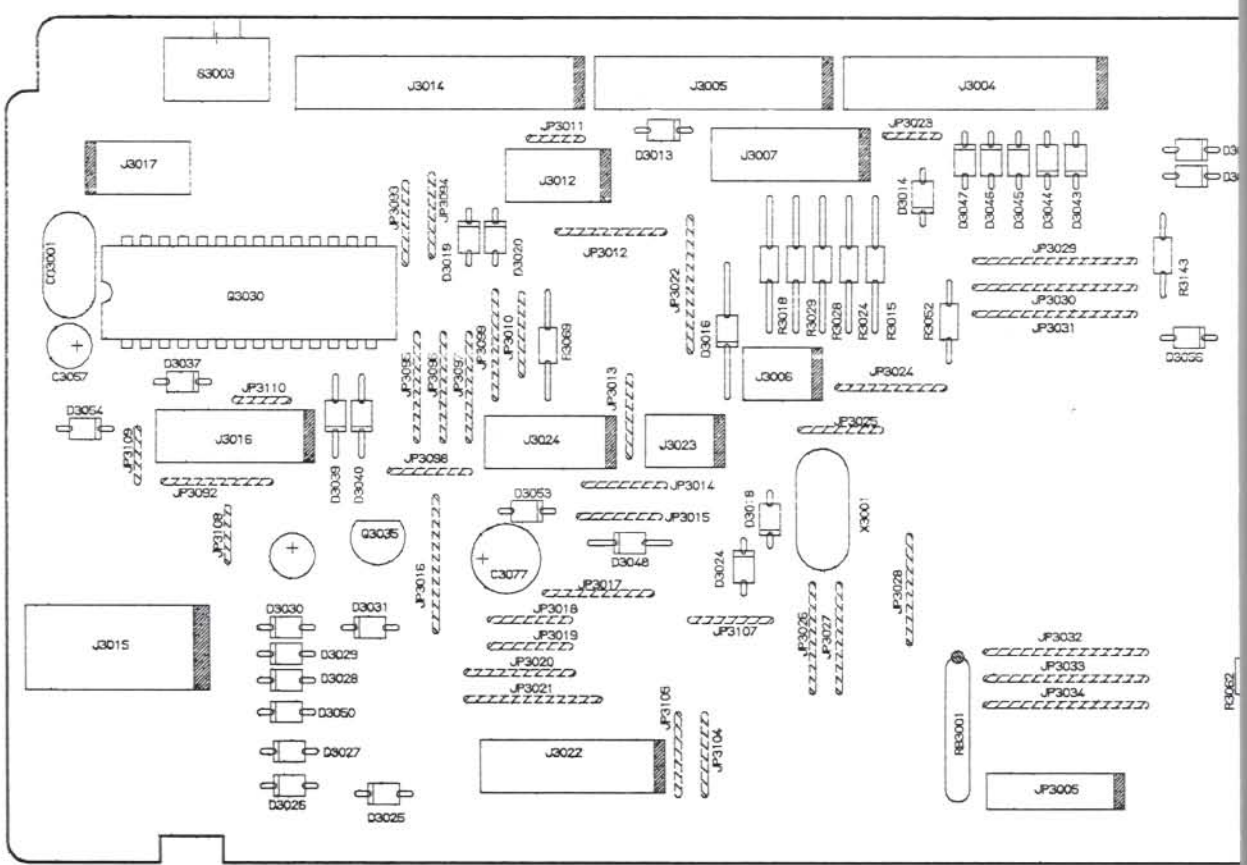
TC6501
Tuner Impedance & Phase Detection

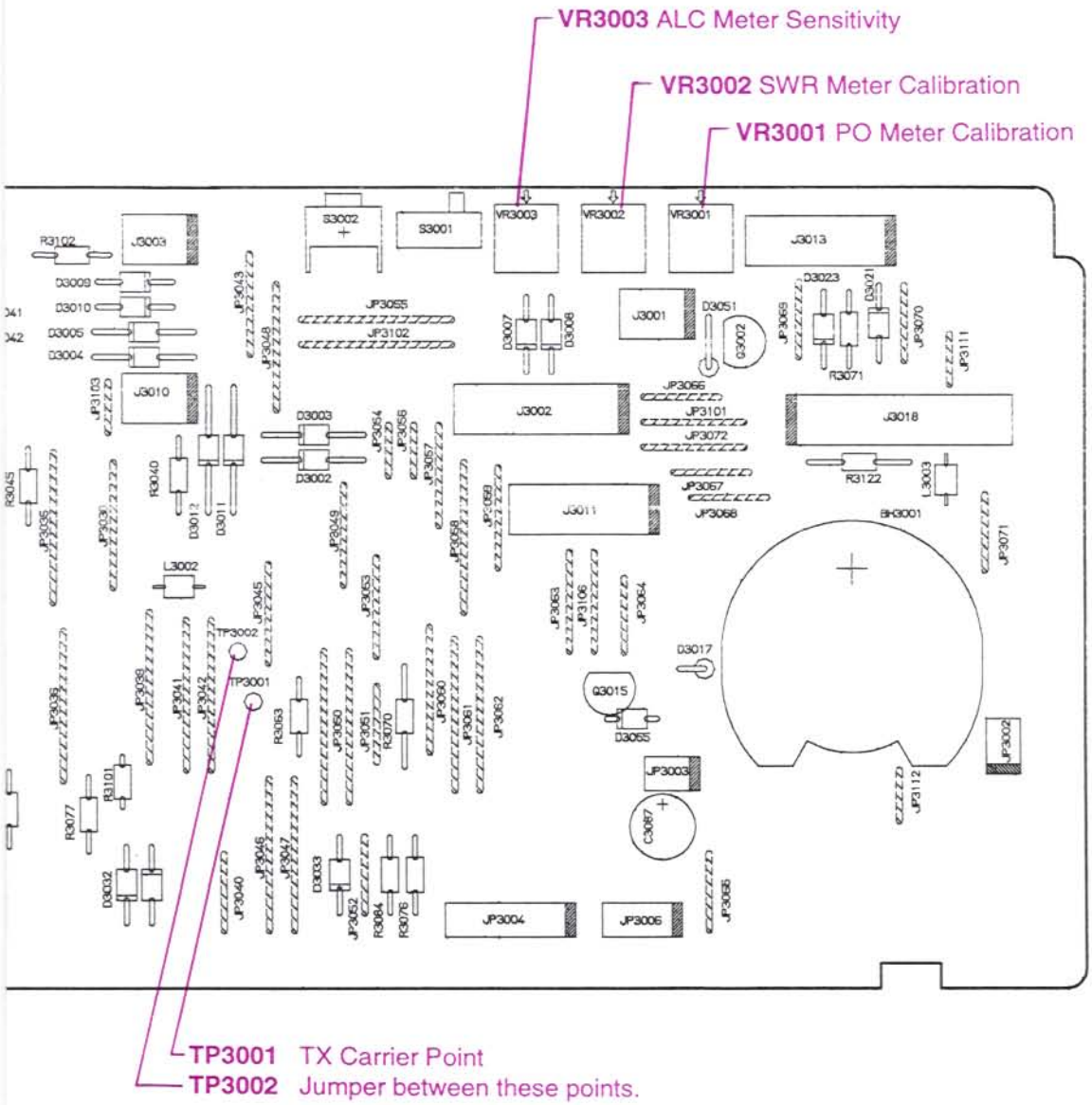


J6501
Tuner Impedance & Phase Detection: Connect 50-Ω load.

J6508 Pin 4
J6508 Pin 3
Phase Detection: Connect DC voltmeter (0V ±0.02V)

8 Pin 2
3 Pin 1
r Impedance: Connect DC voltmeter (0V ±0.08V)


B3003
J3014
J3005
J3004
J3017
J3012
J3007
D3013
JP3011
JP3023
D3001
Q3030
C3057
JP3012
JP3029
JP3030
JP3031
R3143
D3056
D3037
JP3110
D3054
J3016
J3024
J3023
J3006
JP3024
JP3025
JP3098
JP3092
JP3014
JP3015
D3053
D3048
C3077
Q3035
JP3017
JP3018
JP3019
JP3020
JP3021
JP3107
X3001
J3015
D3030
D3031
D3029
D3028
D3050
D3027
D3026
D3025
J3022
JP3105
JP3104
RB3001
JP3032
JP3033
JP3034
JP3005
R3062


VR3003 ALC Meter Sensitivity
VR3002 SWR Meter Calibration
VR3001 PO Meter Calibration
TP3001 TX Carrier Point
TP3002 Jumper between these points.

The block diagram and the following circuit description should provide you with a better understanding of the design of the FT-900. Refer to the schematic diagram for specific component details.

RF UNIT

Receive Circuitry

RF signals from the ANT jack pass through the TUNER-MAIN UNIT (if enabled) and LPF UNIT before delivery to RX ANT jack J2024 on the RF UNIT.

Here the signal passes through the attenuator network consisting of R2003& R2004 via relay RL2002. The signal then enters the low-pass filter (LPF) consisting of L2001, L2002, C2004~C2007, & C2010, before input to the band-pass filter (BPF) network.

Protection from strong out-of-band signals is provided by one of 8 selected BPF networks. The entire receiving frequency range (100 kHz ~ 30 MHz) is divided into eight bands, and the appropriate BPF is selected by switching diodes D2006-D2022.

After band-pass filtering, the signal is amplified by FETs Q2005 & Q2006, which use a dual grounded-gate configuration for superior linearity and low-noise before delivery to the 1st mixer. The RF amplifier is enabled or disabled via switching diodes D2023 & D2025 and the front-panel IPO switch. The signal is next applied to the 1st mixer circuit.

1st Mixer Circuit / 1st IF Circuit

The 1st mixer consists of FET double-balanced mixer Q2007-Q2010, providing excellent intercept characteristics. The 1st local signal (70.555 ~ 100.455 MHz) from the PLL-UNIT is buffer-amplified by Q2011, then applied to the gate of each FET, where it is mixed with the receive signal.

The resulting 70.455 MHz 1st IF (the difference between the local signal and receive signal) passes through dual monolithic crystal filters (MCF) XF2001 & XF2002 (BW: ± 6 kHz) to provide protection from in-band IMD while allowing sufficient bandwidth for noise blanking. The 1st IF is next amplified by FET Q2014 the impedance transformed by T2011 before input to the 2nd mixer circuit.

2nd Mixer Circuit / 2nd IF Circuit

The 2nd mixer consists of FETs Q2016 & Q2017. The 70.0 MHz 2nd local signal from the PLL-UNIT is amplified by Q2015 via diode switch D2035 before application to the gate of each FET.

The 70.0 MHz 2nd local signal mixes with the 70.455 MHz 1st IF to produce the 455 kHz 2nd IF. This passes through the BPF formed by T2015, T2016 and C2147, where unwanted mixer products are stripped away. A portion of the IF signal from the mixer output (at T2017) is fed to the noise blanker circuit and also to buffer-amplifier FET Q2040 in the FM subsystem circuit.

The filtered 2nd IF now enters the noise blanker gate (NB GATE) which consists of D2033 & D2034. It is then routed through either ceramic filter CF2001, CF1002 or crystal filter XF2003, selected according to receiving mode (CW, SSB or AM), and on to the 3rd mixer circuit.

Noise Blanker Circuit

The portion of the signal sampled from the 2nd IF circuit (at T1014) is amplified by FETs Q2036 & Q2038 on the RF-UNIT. When a carrier or noise-free signal is received, the amplified IF signal is detected by diodes D2038 & D2039. The noise pulse present in the output of D2038 & D2039 is detected by Q2037, producing an average AGC voltage at C2188 and the base of Q2035, and also controls FETs Q2036 & Q2038

Noise pulses have a very short duration, but high amplitude. Because of the very slow RC time constant of the R2122/C2188 discharge path, AGC voltage is not induced by

these short-duration pulses. Therefore, Q2036 and Q2038 operate at full gain, providing maximum voltage to the base of Q2035. When a noise pulse is received, Q2037 biases NB GATE D2033 & D2034 to momentarily block the signal path. When a noise pulse and the desired signal are received simultaneously, the blanking action is not impaired, because the relative amplitude difference between them is still high. The front-panel NB switch activates the DC voltage applied to the base of Q2037.

3rd Mixer Circuit/ 3rd IF Circuit

The 3rd mixer uses double-balanced mixer (DBM) IC Q2020 on the RF-UNIT. A 8.67 MHz local signal from the voltage-control crystal-oscillator (VCXO) is input to the local port of the DBM IC, which consists of Q2018, X2001, and varactor D2032, etc.

The VCXO varies the notch frequency by approximately ±1 kHz by manipulating the front panel NOTCH control. The VCXO output is also buffer-amplified by Q2019 and input 4th mixer.

The output from the 3rd mixer is stripped of unwanted signals by XF-2004 (BW: ± 7.5 kHz) where any unwanted mixer products are stripped away and the 8.215 MHz 3rd IF signal is fed to the NOTCH-UNIT.

NOTCH UNIT

The 3rd IF signal is controlled by Q7201, Q7202 and D7201 for turning on/off the notch and for input to the 4th mixer via the IF notch circuit, which consists of Q7204, Q7206, Q7207, X7201, and VR7201 for adjusting notch attenuation.

4th Mixer Circuit / 4th IF Circuit

The 3rd IF signal from the NOTCH UNIT and 8.67 MHz VCXO local signal are mixed at Q2021 on the RF-UNIT to produce the 455 kHz 4th IF, which is then amplified two-stages by Q2022 & Q2023.

The amplified 4th IF signal is applied to the SSB demodulator circuit on the LOCAL-UNIT via connector J2007. A portion is also supplied to the AGC circuit and AM detection circuit via buffer amplifier Q2043.

AGC Circuit/AM Detection Circuit

The AGC circuit consists of D2050, D2051 and Q2044 on the RF-UNIT. Its output is fed to the RF AGC circuit which consists of FET and PIN diodes of the IF amplifier stages.

AM envelope detection of the 4th IF occurs at D2052 and C2246. The demodulated signal is buffer-amplified by Q2043 & Q2045 before input to the LOCAL-UNIT via connector J2008.

FM IF Circuit/FM Demodulator Circuit

The portion of the 2nd IF signal is buffer -amplified by FET Q2040 on the RF-UNIT and passes through CF2004 (BW ± 4 kHz) before application to FM subsystem IC Q2041 for demodulation.

The FM Subsystem IC consists of a limiter amplifier, filter amplifier, squelch trigger and demodulator circuits. The IF input signal passes through the limiter amplifier section, which removes amplitude variations of the 455 kHz IF, before detection of speech by CD2001, producing an audio output corresponding to frequency variations in the 455 kHz IF. The demodulated audio is de-emphasized by the HPF circuit formed by R2162 and C2347. It then passes to the LOCAL-UNIT via connector J2008.

Squelch Circuit

The squelch circuit selectively amplifies the noise component of the demodulator output (signal detected at D2049) in the active band-pass filter in the filter amplifier section of the FM subsystem IC and also via an external RC network.

SSB Demodulator Circuit

The 4th IF from the RF-UNIT is fed to the SSB detector consisting of D1057~D1060 on the LOCAL-UNIT, and is demodulated into audio, and the carrier signal generated by the CAR-DDS-UNIT is re-inserted.

The SSB audio is stripped of it's high frequency component by op-amp IC Q1049, which is configured as a active low-pass filter.

Audio Amplifier Circuit

The SSB and AM/FM detected audio from the RF-UNIT are routed by diodes switches D1021~D1023 on the LOCAL-UNIT according to the selected mode. The audio passes through the squelch gate Q1050 before pre-amplification by Q1051. The low-level audio then passes through analog switch IC Q1076 and electronic volume control IC Q1026 before final power amplification up to 1.5 watts by audio amp Q1034 (TDA2003H) to drive the internal speaker or an external speaker via connector J1009.

Transmit Circuit

Microphone Audio Amplifier Circuit

Microphone audio from J9301 on the MIC-UNIT passes through connector JP9301 and is amplified by Q8001 on the CNTL-2-UNIT. It then passes through the active low-pass filter of op-amp IC Q80021 and buffered by Q2001 & Q2002 before input to timer IC Q8005.

The timer IC contains a dual circuits: one comprises a pulse-width modulation (PWM) circuit and the other circuit, together with R8016, R8017 and C8009, forms an astable multivibrator circuit.

The multivibrator signal output is used as a reference sampling frequency (about 35 kHz) by the PWM circuit for pulse width modulation and analog/digital (A/D) conversion of the speech audio input.

The A/D-converted (PWM) microphone audio passes through line driver IC Q8008 and then to line receiver IC Q3029 via connector J8001.

The signal then undergoes digital/analog (D/A) conversion by monostable multivibrator IC Q3009 on the CNT-1-UNIT, before passing through analog switch IC Q3014 and op-amp IC Q3003-2.

The D/A-converted audio is removed of its sampling frequency component by the active low-pass filter (f_c: 3 kHz) of op-amp IC Q3010 and passes through 2-ch analog switch IC Q1076 via board-in connector JP3003 and connector J1023 on the LOCAL-UNIT.

The switched audio is input to VR1003 (VOX), VR1019 (COMP), and VR1022 (FM MIC) on the LOCAL-UNIT and analog switch IC Q1077.

Analog switch IC Q1077 switches the audio path when the speech processor (PROC) is turned on/off. When the PROC is ON, audio passes through op-amp IC Q1088, limiter D1069, and the processor circuit formed by the active low-pass filter. When the PROC is OFF, audio bypasses the processor circuit and is input to the electronic volume IC Q1026, which is controlled by the front-panel MIC control.

Audio output from IC Q1026 passes through Q1069 & Q1070 and on to the balanced modulator (BM) circuit of IC Q1084.

When FM mode is selected, Tx audio level is adjusted by VR1022, undergoes pre-emphasized by the HPF formed by R1317 & C1309, and instantaneous deviation control (IDC) by op-amp IC Q1094, and the spurrata filter circuit, before input to the FM circuit on the RF-UNIT via connector J1028.

Balanced Modulator Circuit

Output from the CAR-DDS-UNIT is fed to BM IC Q1084 on the LOCAL UNIT according

to the selected mode (CW, SSB, AM) and is modulated by microphone audio.

The modulated audio (1st TX IF) from the BM IC passes through connectors J1029 & J2010 on the RF-UNIT and is fed to the appropriate ceramic or crystal filter on the RF-UNIT, depending on the selected mode.

1st TX IF Circuit/1st TX Mixer Circuit

The 455 kHz 1st TX IF signal modulated by the BM circuit is band-limited by CF2001, CF2002 or XF2003, depending on the selected mode (CW, SSB, AM), and is then amplified by FET Q2050 and fed to 1st TX mixer FET Q2048 & Q2049.

The 70.000 MHz local signal from the LOCAL-UNIT is fed to the 1st TX mixer where it is mixed with the 455 kHz 1st IF to produce the 70.455 MHz 2nd TX IF.

Gate 2 of FET Q2050 controls transmit output power by varying the bias voltage via the front-panel RF PWR control.

2nd TX IF Circuit/2nd TX Mixer Circuit

The 2nd TX IF signal passes through MCF XF2001, XF2002 and D2027 & D2028, which are also shared by the Rx circuitry. It is then amplified by FET Q2056 before input to the 2nd TX mixer circuit via transformer T2029.

The 72.255 ~ 100.455 MHz local signal from the LOCAL-UNIT PLL is fed to the 2nd TX mixer DBM IC Q2078. This local signal is mixed with the 2nd TX IF to produce the tx signal output (1.8 ~ 30 MHz).

TX Preamplifier Circuit

The TX output from the DBM IC is low-pass filtered by L2088, C2318, C2319 & C2337 on the RF-UNIT, then buffer-amplified by Q2053 & Q2051 before application to the PA-UNIT via connector J2026.

When CW mode is selected, keyer input controls the bias voltage of Q2053 and 1st TX mixer FET Q2048 & Q2049 via NAND gate IC Q2032, D2048, and Q2054.

Frequency Modulation Circuit

The frequency modulator circuit is a 70.455 MHz third-overtone oscillator comprised of Q2059, X2002, L2082, and varactor D2056.

The FM Tx audio from the LOCAL-UNIT together with the CTCSS audio generated by the CNTL-1-UNIT CPU are adjusted by VR2008 & VR2009 and input to the frequency modulator.

The frequency-modulated oscillator output passes through buffer amplifier Q2058 and is applied to gate 1 of FET Q2056 via diode D2054.

Power Amplifier Circuit

Three RF power output levels are available (100W, 25W or 10W) in three transceiver versions. The 100W version uses a 100W PA UNIT, while the 25W & 10W versions both utilize the common 25W PA UNIT. The TX output from the RF-UNIT is fed to the 100W PA-UNIT via connector J4001 (or J4501 on the 25W/10 W PA-UNIT).

The input TX signal input is fed to predriver Q4001, amplified by drivers Q4002 & Q4003, then applied to power amplifier Q4005 for amplification up to 100 watts. Both the driver and final PA stages are operated in push-pull configuration. The RF output then enters the LPF UNIT via connector J4005. In 25W/10W units, the TX is amplified by power s Q4501-04 before input to the LPF-UNIT via connector J4505.

Low-Pass Filter Circuit

The TX RF output from the power amplifier circuit is input to connector P5001 on the LPF-UNIT and is switched through the one of six Chebyshev LPF networks via RL5001-RL5012, and L5001-L5012. The 1-8 ~ 30 MHz Tx range is separated into six discrete bands assigned to its corresponding LPF network.

After low-pass filtering, the signal is sampled by CM coupler coil L5013 and enters ATU via switching relay RL5013, or else bypasses the ATU and goes directly to ANT relay RL5014.

The CM coupler consists of L5013, TC5001, C5048. The sampled TX RF is detected by D5001 ~ D5004 to provide a negative reference voltage used for ALC (Automatic Level Control).

PLLFrequency Synthesizer

Master Reference Oscillator Circuit

The master reference oscillator circuit consists of a 10.48576 MHz Colpitts Oscillator comprised of Q1002, X1001, TC1002, C1026 , C1043 and C1044.

The reference oscillator signal is fed to the CAR-DDS UNIT and SUB-DDS-UNIT via buffer amplifier Q1003. It is also applied to PLL IC Q1042 and mixer Q1030 via buffer amplifier s Q1040 & Q1043.

2nd Local Oscillator Circuit

The 70.0 MHz 2nd local oscillator circuit is comprised of Q1001, X1002, L1002, C1017, C1058, C1061 and C1379. The circuit output passes through buffer amplifier Q1005 and the LPF formed by L1010, L1011, C1035, C1036, C1052-C1054 and input to the RF-UNIT tx/rx mixer circuit via connector J1003.

A portion of the 70.0 MHz signal is buffer-amplified by FET Q1006 & Q1018 and also applied to mixer Q1030. Here it mixes with the 10.48576 MHz master reference signal to produce a difference frequency of 59.51424 MHz, which then passes through the BPF consisting of T1002, T1003 and C1082. The output signal is next input to the sub-PLL circuit.

CAR-DDS-UNIT/SUB-DDS-UNIT

Direct Digital Synthesizer (DDS) IC Q7003 & Q7102 each contain a shift register, selector, phase comparator, and ROM.

The DDS IC outputs digital amplitude data which corresponds to the frequency setting serial data read from CPU IC Q3024 on the CNTL-1-UNIT. The digital amplitude data is converted to analog data by latching ladder resistor banks RB7001 & RB7101. The analog data passes through buffer amplifiers Q7002, Q 7101 and a LPF to generate a sine wave.

The CAR-DDS output frequency ranges from 453.5 ~ 456.5 kHz, while the SUB-DDS ranges from 509.28 ~ 1,164.64 kHz.

SUB-PLL Circuit

The SUB-PLL circuit consists of a sub-VCO (SVCO), mixer, PLL IC, and loop filter.

The SVCO consists of FET oscillator Q1013, L1045, varactor D1011, C1075, C1076, C1084, C1111 & C1112. It oscillates from 59.64156 ~ 59.80540 MHz and its output is buffer-amplified by FET Q1016 & Q1019 before input to mixer Q1014.

The 59.51424 MHz output of Q1030 is buffer-amplified by Q1064 and then applied to mixer Q1014. Here the signal is mixed with the SVCO output (59.64156~ 59.80540 MHz) to produce a mixer product ranging from 127.32 ~ 291.16 kHz. This output passes through a LPF, is buffer-amplified Q1025,then enters hysterisis inverter IC Q1029, where a level-shifted square-wave is produced as a reference input to the phase comparator section of PLL IC Q1033.

The 509.28 ~ 1,164.64 kHz output from the SUB-DDS-UNIT is amplified by Q1039 and IC Q1041 then applied to the PLL IC. Simultaneously, the 127.32 ~ 291.16 kHz reference signal is divided into four bands in the reference divider section, then applied to the phase comparator section of the PLL IC.

Here an output pulse is produced corresponding to the comparative phase difference between the reference frequency and SUB-DDS input frequency. This pulse output is then applied to the loop filter of the next stage.

The active loop filter is comprised of Q1022, Q1024, Q1028, R1087, R1088, C1107 and C1125 and a secondary rag filter composed of R1086 and C1136. This integrates the pulse output from the phase comparator and converts it into a DC voltage which controls the SVCO frequency.

Main PLL Circuit

Like the sub PLL circuit, the Main PLL consists of the main VCO (MVCO), mixer, PLL IC, and loop filter, and theory of operation is similar to the SUB-PLL circuit.

The MVCO is composed of four VCO circuits; VCO1 ~ VCO4, each of which oscillates within an assigned portion of the total 70.555 MHz ~ 100.455 MHz range.

The MVCO uses 4 separate VCO circuits (VCO1-VCO4), each covering a discrete portion of the 70.555 ~ 100.455 MHz oscillator range. The circuit is comprised of FETs Q1004, Q1011, Q1021, Q1032, L1006, L1016, L1025, L1032, varactors D1004, D1207, D1014, D1017, and TC1001,TC1003, TC1004, TC1005. The MVCO output is amplified by FET Q1009 and passes through Q1007 & Q1008, and is then applied as the 1st local signal to the RF-UNIT tx/rx mixer via the LPF composed of L1007, L1008, L1009 and connector J1001. A portion of the oscillator signal from the output of Q1009 is buffer-amplified by Q1036 and is also input to mixer Q1036.

The 59.64156 ~ 59.80540 MHz SVCO signal passes through Q1017 and the BPF formed by T1005 & 06 and C1106 before input to mixer Q1036. This signal mixes with the 70.555~100.455 MHz MVCO output to produce a 10.81344~40.79616 MHz mixer output. This mixer output passes through the BPF formed by L1034-36, L1043 and C1172, C1182, C1183, C1200, C1201, C1220 and is applied to the programmable divider (PD) section of PLL IC Q1042 via Q1046 and the nine-pole Chebyshev LPF composed of L1039~L1042, C1032 ~ C1034, C1048 ~ C1051, and C1348.

Main PLL IC Q1042 consists of an input inverter, shift register, data latch, charge pump, phase comparator, reference, and programmable divider.

The serial frequency data from CPU IC Q3024 on the CNTL-1-UNIT is distributed by the shift register and data latch of the PLL IC. The 10.48576 MHz signal is divided by 64 in the reference divider section, and further divided by 66 ~ 249 in the shift register latch.

The 10.48576 MHz reference signal is input to the phase comparator along with the 163.84 kHz reference frequency obtained from the reference divider. The 10.81344 ~ 40.79616 MHz programmable divider output is fed to the phase comparator section using 163.64 kHz as the reference input.

A DC pulse output from the phase comparator is input to the loop filter via the charge pump. The loop filter consists of an active rag lead filter composed of FET Q1045, Q1044, Q1047, R1129, R1141, and C1194 and a rag filter composed of R1138, C1059, C1098, C1130, C1170, and C1213. This circuit integrates the output from the charge pump and converts it into a VCV to control the MVCO frequency via FET Q1045.

Carrier Oscillation Signal Circuit

The 435.5 ~ 465.5 kHz output from the CAR-DDS-UNIT passes through Q1012 & Q1015 of the LOCAL-UNIT, then through the LPF composed of coils L1019 & L1020. The signal route is switched by D1010, D1012 & D1013 during tx/rx and then input to the SSB demodulator and balanced modulator circuits.

Remote Control Circuitry

Microprocessor Circuit

CPU IC Q8014 on CNTL-2-UNIT processes the various front-panel functions, and performs data transfer with the CPU IC on CNTL-1-UNIT .

CPU IC Q8014 is an 8-bit microcomputer incorporating serial input/output ports, 384-byte RAM, 8K-byte ROM, D/A and A/D converters, and clock generator circuit. It controls the dial counter circuit, key matrix circuit, LCD drive circuit, LED drive circuit, and serial data communication circuit.

Dial Counter Circuit

The dial counter circuit consists of the front-panel rotary encoder, CLAR control and dial counter IC on the CNTL-2-UNIT.

DIAL S1 and CLAR S8002 on the CNTL-2-UNIT are rotary encoders that generate a 90° phase-shifted pulse which is input to dial counter IC Q8016.

The dial counter IC consists of a 2-channel up/down (U/D) control, dial pulse selector, 8-bit U/D counter and selector circuits. Input pulses are counted by a dual-phase pulse edge. 'Up' or 'Down' is judged by the condition (L or H) of other pulses during the pulse edge. As the pulses pass through the 8-bit U/D counter, the DIAL or CLAR side is determined by the selector and 8-bit parallel data is output to CPU IC Q8014 terminals KI0-7.

Key Matrix Circuit

The key matrix circuit reads key inputs from the front-panel key matrix, consisting of switches S8003-24. When a key is pressed, the corresponding switch is selected and read by CPU IC Q8014 on key matrix output ports KS0-2 and input ports KI0-7.

LED Drive Circuit

CPU IC Q8014 drives Q8012 & Q8013, Q8020 ~ Q8025 at the LED output ports (NB, IPO, ATT, PROC, NOTCH, CLAR, BUSY, TX) which turn on/off the corresponding LEDs.

Analog/Digital (A/D) Converter Circuit

The A/D converter circuit inputs the analog voltage levels from VR9201, VR9202 (AF, SQL, NOTCH, SHIFT) on the VR-UNIT to the SQL, SHIFT, AF, and NOTCH terminals of CPU IC Q8014 on the CNTL-2-UNIT for A/D conversion.

Serial Data Communication Circuit

Data processed by CPU IC Q8014 on the CNTL-2-UNIT is transferred from serial I/O ports R1RXD, R2RXD, R1TXD, and R2TXD via line driver IC Q8008 and connector J8001 to CPU IC Q3024 on CNTL-1-UNIT.

LCD Circuit

Control data from output ports LOAD, DATA, CLOCK, BLANK of CPU IC Q8014 on the CNTL-2-UNIT is input to the display via LCD driver IC Q8019.

The LCD driver IC consists of a 160-bit shift register, data latch, and 80 LCD driver pairs, and signal generating circuits. It converts input data signals SEG1-80, COM, A, B to voltages necessary drive the 80 LCD segments of DS8001.

Main Control Circuitry

Microprocessor Circuit

CPU IC Q3024 on CNTL-1-UNIT controls system circuitry in the main unit, data transfer with the front panel CPU IC, and controls the ATU Unit and CAT system interface.

CPU IC Q3024 is a 16-bit microprocessor consisting of serial I/O ports (UART), 2k-byte RAM, 32k-byte ROM, 8-bit A/D converter, and clock generator circuit.

10-Key Matrix Circuit

The appropriate 10-key matrix circuit is selected via key matrix I/O ports KI0-3, KS0-2 of CPU IC Q3024 via connector JP9102 and connector J3004 on CNTL-1-UNIT when key switches S9101-S9112 on the SW-UNIT are pressed.

Band Data Circuit

This inputs band/CTCSS data from ports B0-3, BST of CPU IC Q3024 to D-type latch IC Q3031 to obtain 4-bit binary band data.

The 4-bit band data is converted to decimal data by IC Q3025 and then synthesized to the required frequency range by D3025-D3031 & D3050. It is used by array IC Q3028 to drive the LPF relay on the LPF-UNIT. Conversely, the 4-bit data passes through connector J3022 to RF-UNIT connector J2016 for decoding by IC Q2062 to select the appropriate BPF network.

CTCSS Tone Generator Circuit

4-bit data output from Band/CTCSS ports B0~3 of CPU IC Q3024 are used to latch ladder resistor bank RB3001 to generate the CTCSS tone. This signal then passes through the LPF formed by R3082, R3083,C3048 & C3049 and audio level is controlled by VR2008. The tone is fed to the frequency modulator via connector JP3004 and RF-UNIT connector J2014.

PLL Data

PLL data consists of reference and programmable divider frequency division data for the main PLL circuit and frequency setting data for the SUB-DDS and CAR-DDS.

Operating frequency and mode data is processed by CPU IC Q3024, which provides clock (CK), PLL data (DT), main PLL strobe (STM), SUB-DDS and CAR-DDS strobes (STB & STC) port serial output signals. The serial PLL data is input to the PLL circuit via connector JP3005 and LOCAL-UNIT connector J1010.

External Memory Circuit

The external memory EEPROM IC Q3004 on CNTL-I-UNIT is a 1024-bit, non-volatile memory consisting of 64-word by 16-bit configuration. It is controlled by the EPROM serial clock (ESK), data I/O (EDI & EDO), and chip select (ECS) ports of CPU IC Q3024.

The EEPROM stores the optional settings (transmitter operating frequency range, transmitter output control) and carrier point settings according to transceiver version.

Digital/Analog (D/A) Converter Circuit

The D/A converter processes digital serial data about AF, SQL, and NOTCH variable settings from the front panel by CPU IC Q3024 on the CNTL-1-UNIT and outputs the processed data from 6-ch D/A clock (DAC), data-in (DAI), and strobe (DAS) ports to IC Q3013 for the 8-bit, 6-channel A/D converter.

The D/A converted voltage (AF, SQL, NOTCH) passes through connectors J3006 & 12, op-amp IC Q3003-1, and connector JP3002 to control the individual circuits on the LOCAL-UNIT and RF-UNIT.

Analog/Digital (A/D) Converter Circuit

Forward and Reflected wave voltage (FV & RV) and ALC voltage (ALCV) from the LOCAL-UNIT are applied to connector J3013 of the CNTL-1-UNIT. They then pass through VR3001(PO), VR3002(SWR), VR3003 (ALC) and are input to the FV, RV, and ALCV ports of CPU IC Q3024 for A/D conversion. Similarly, the S-meter level voltage(SM) from the RF-UNIT passes through connector JP3006 on the CNTL-1-UNIT for input to the A/D port of CPU IC SPO terminal for A/D conversion.

The individual voltages that have been converted to digital values are sent to the front panel via the serial data communication circuit for display as PO, SWR, ALC, and S-meter indications on the LCD.

Serial Data Communication Circuit

CNTL-1-UNIT use three separate data transfer circuits--one for data transfer with the front panel, one for communications with the ATU tuner (internal or external), and one for communications with the CAT system interface.

Data transfer with the front panel sends data processed by CPU IC Q3024 on the CNTL-1-UNIT from remote serial data I/O ports R1R, R2R, R1T, R2T through line driver IC Q3029 and connector J3018 to the remote control circuit for serial communications.

Serial communications with the ATU tuner are performed by passing data from tuner serial data I/O ports TR, TT of CPU IC Q3024 on CNTL-1-UNIT through Q3008, Q3011,Q3012 and IC Q3006 to TUNER-CNTL-UNIT and RF-UNIT DIN connector J2003 via connectors J3002 & J3003.

CAT data transfer between the CPU and a personal computer is done by sending data from CAT serial data I/O ports CRX & CTX of CPU IC Q3024 through D3032, D3033, Q3023, Q3033 and through connector JP3004 via RF-UNIT DIN connector J2021.

Electronic Keyer Circuit

The electronic keyer circuit is composed of IC Q3021 and IC Q3030 on the CNTL-1-UNIT, and keys the transmitter using a straight-key or keyer.

The keyer IC is a 4-bit microcontroller having 24 I/O ports, 1024 x 8-bit ROM, and 64 x 4-bit RAM. It has key input, weight control, delay time and mode settings (electronic key, bug key, manual), event clock I/O, and control output capabilities.

The IC Q3021 forms an astable multivibrator circuit which is connected to the electronic keyer speed control VR9103(speed) on the SW-UNIT and to the keyer IC.

The key input from the keyer IC is connected to key jack J2013(KEY) via CNTL-1-UNIT connector J3016, LOCAL-UNIT connectors J1032, J1020, and RF-UNIT connector J2011.

The control output from the keyer IC is applied through D3024 to CPU IC Q3024 key-down input port KD and Q3018 to control keying when CW mode is selected.

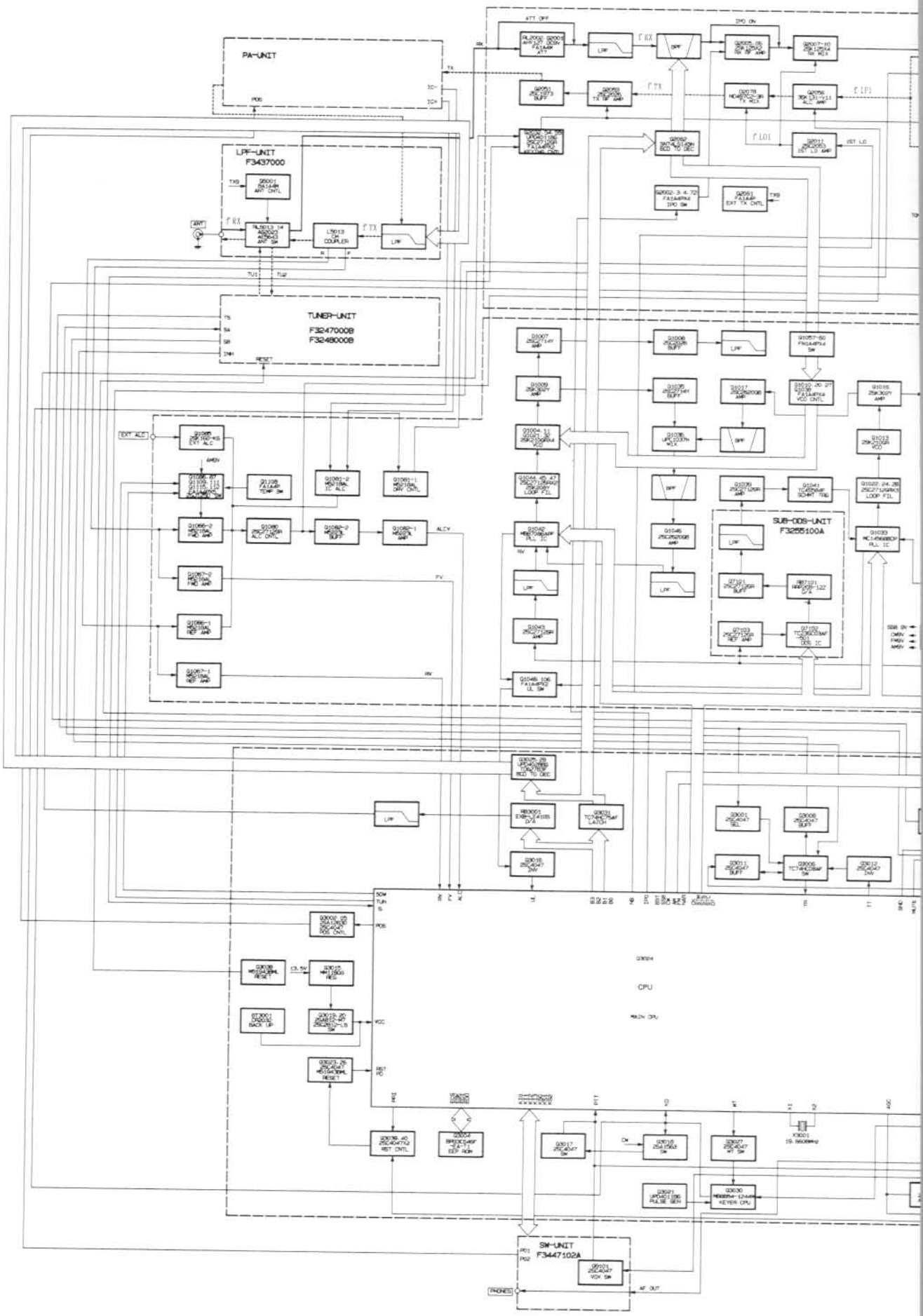
Other Control Circuits

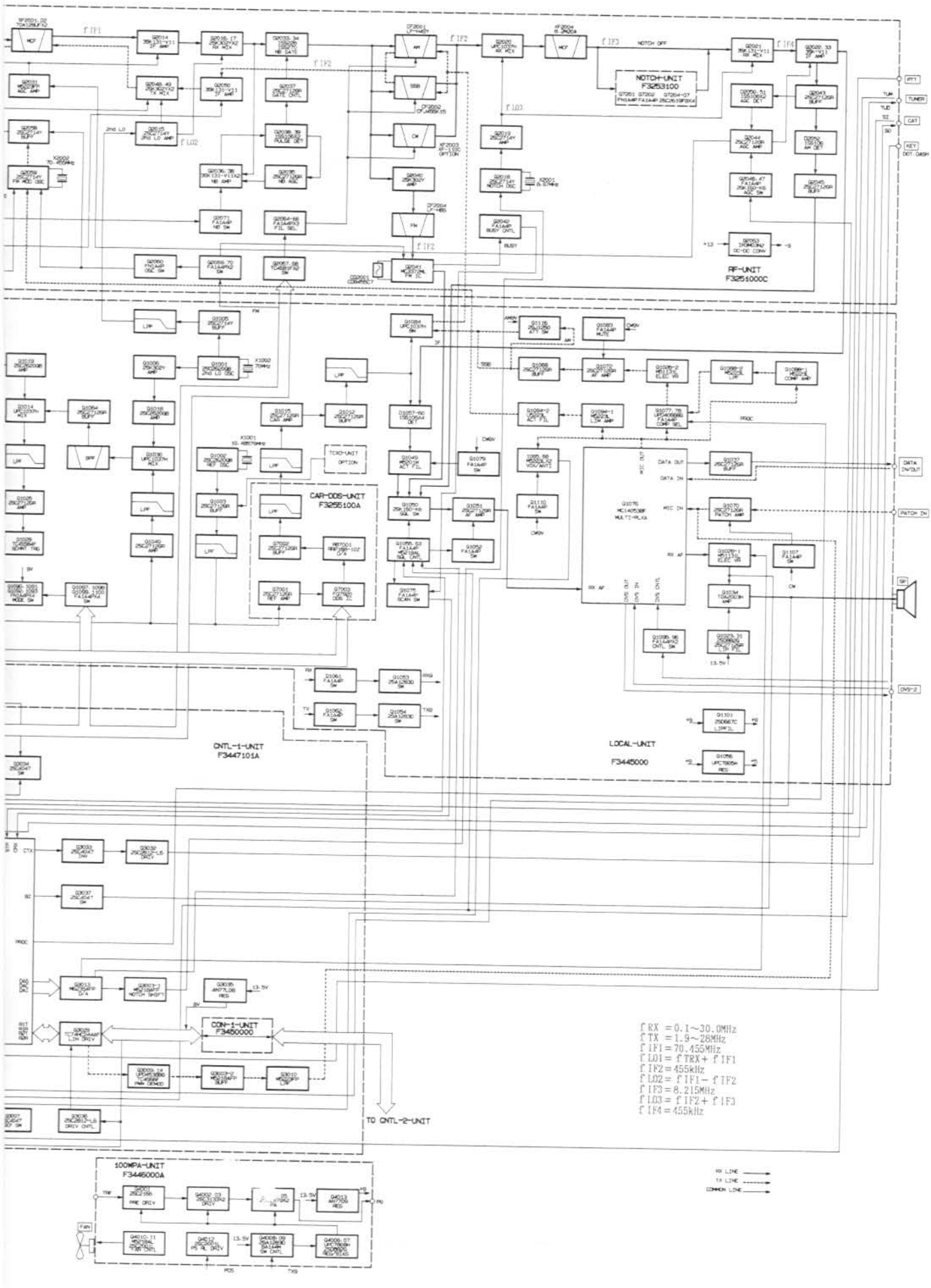
Other controls include control signals for tx/rx switching, mode selection and various switches, etc. During data transfer between CNTL-1-UNIT and CNTL-2-UNIT, control signals are processed by each CPU IC to control the tx/rx system circuits, panel displays (LCDs and LEDs), etc.

Reset Circuit

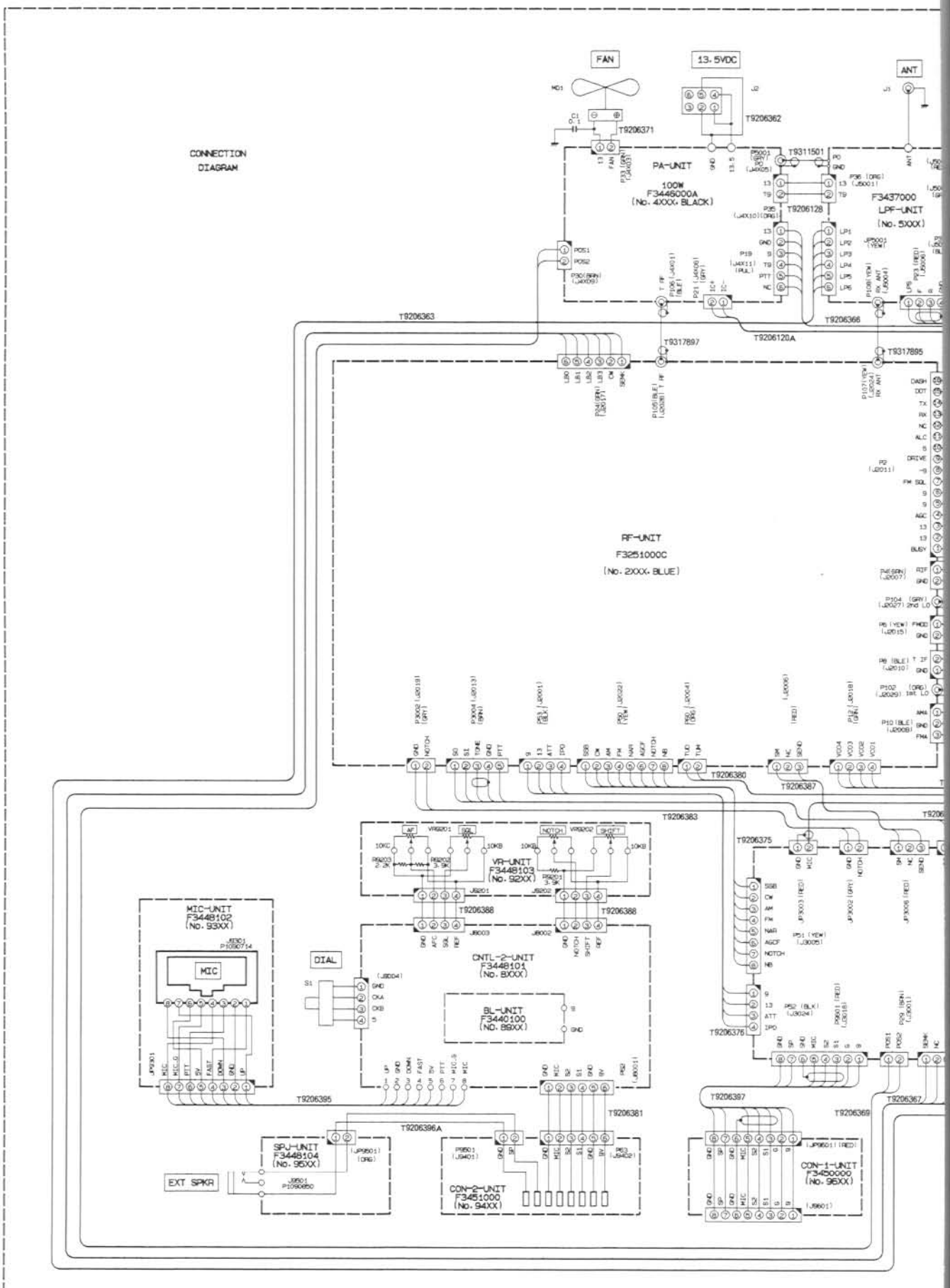
The reset circuit uses the 5V output of IC Q3015 for the 3-terminal regulator on the CNTL-1-UNIT to drive voltage detection reset IC Q3026. The output from the reset circuit controls the CPU reset input port RST via CPU IC Q3024 power-down input port PD and Q3023.

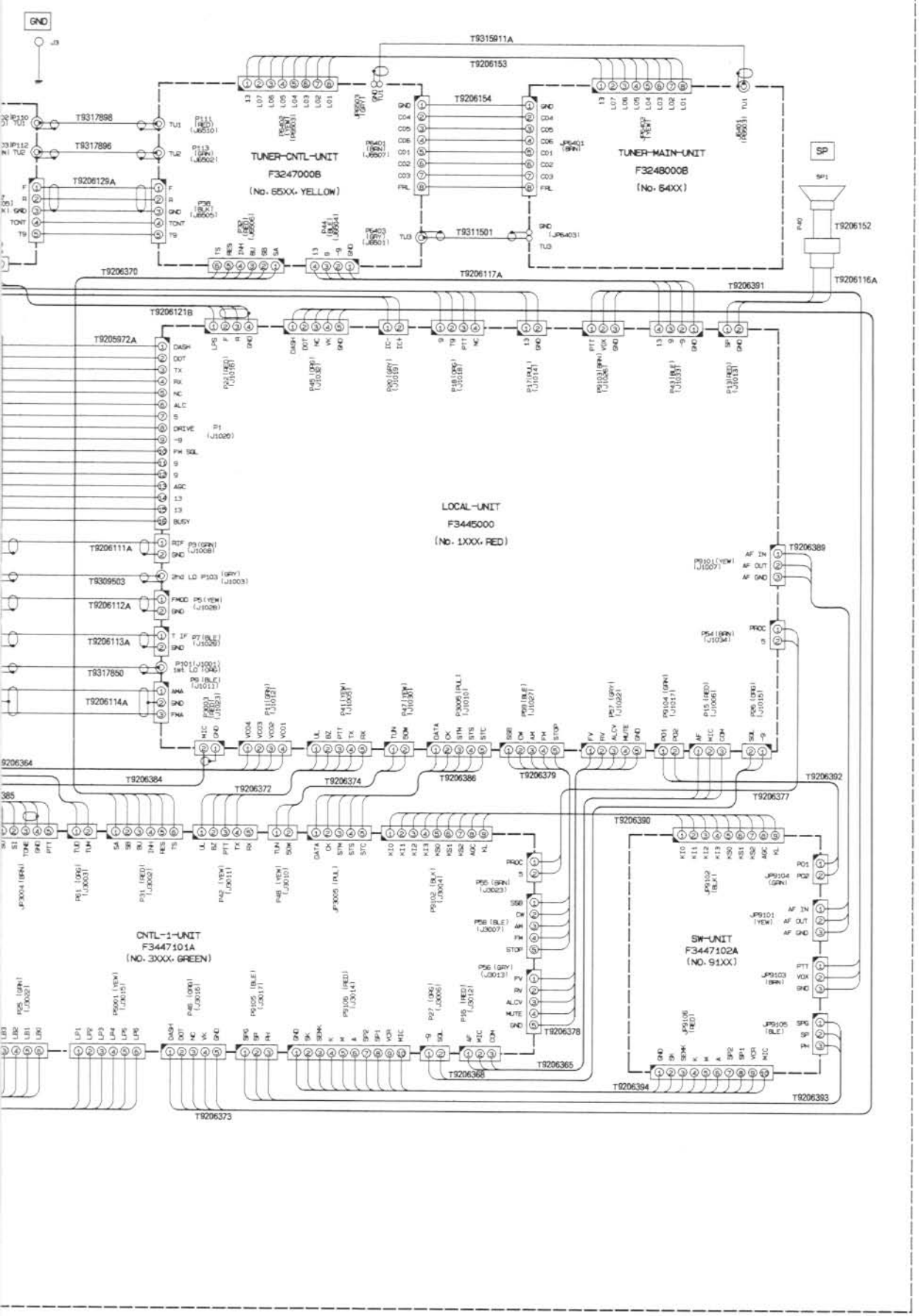
Notes


PA-UNIT
LPF-UNIT
F3437000
TUNER-UNIT
F32470008
F32480008
SUB-DDS-UNIT
F3255100A
CPU
SW-UNIT
F3447102A

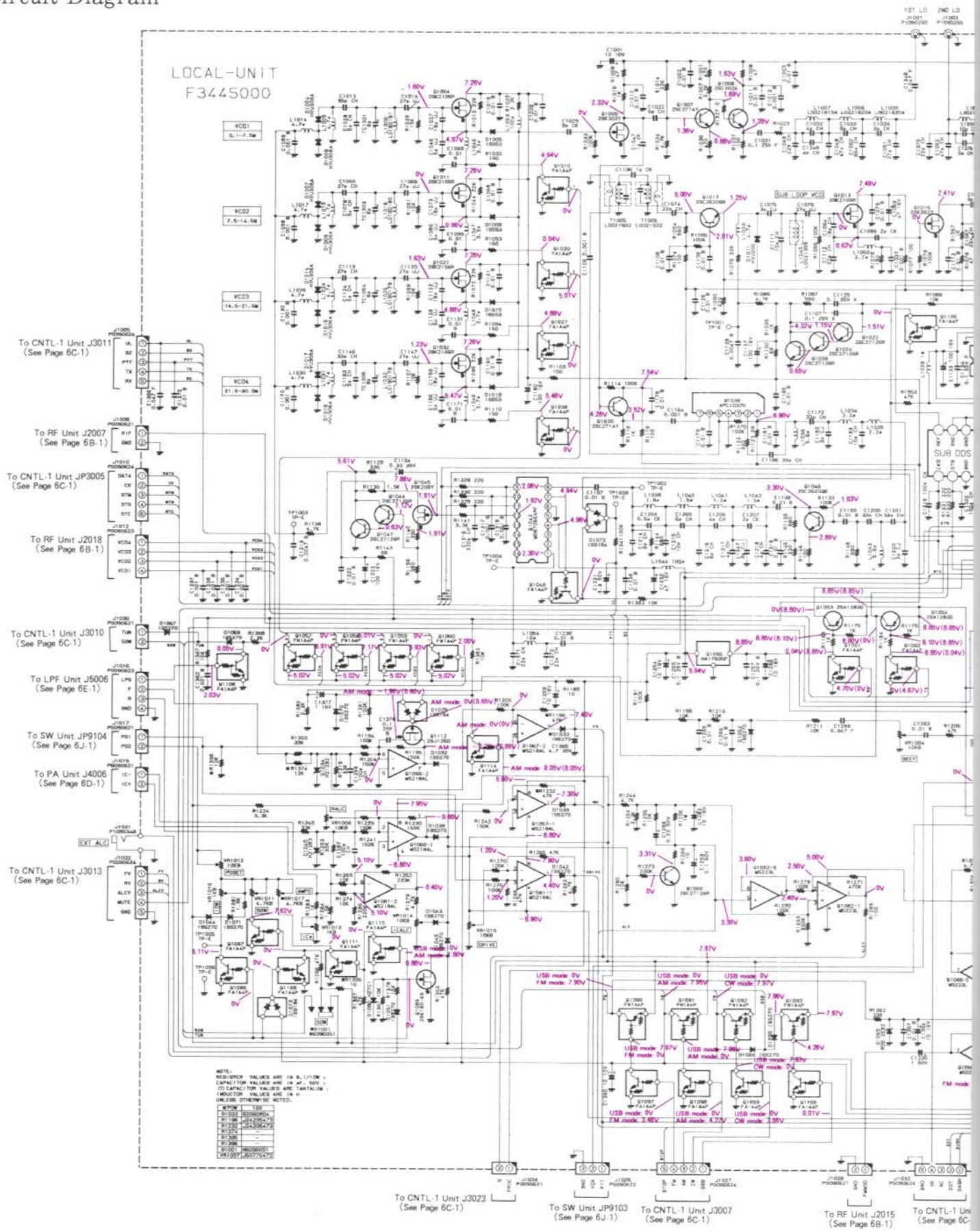

RF-UNIT
F3251000C
NOTCH-UNIT
F3253100
CAR-DDS-UNIT
F3256100A
CNTL-1-UNIT
F3447101A
LOCAL-UNIT
F3445000
CON-1-UNIT
F3450000
100MPA-UNIT
F3446000A
TO CNTL-2-UNIT
f RX = 0.1~30.0MHz
f TX = 1.9~28MHz
f IF1 = 70.455MHz
f LO1 = f TRX + f IF1
f IF2 = 455kHz
f LO2 = f IF1 - f IF2
f IF3 = 8.215MHz
f LO3 = f IF2 + f IF3
f IF4 = 455kHz
RX LINE
TX LINE
COMMON LINE

Interconnection Diagram



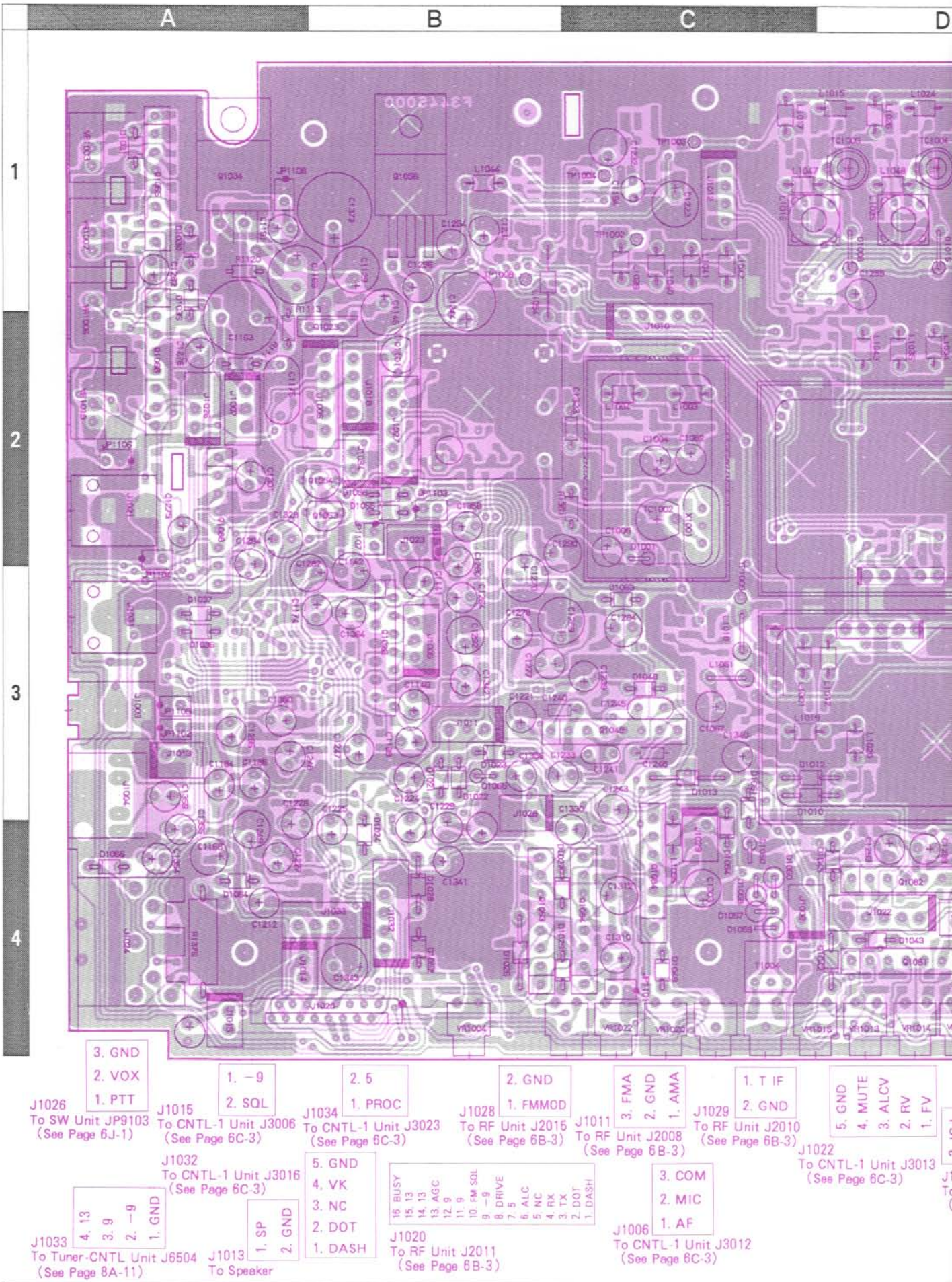

GND
T9315911A
T9206153
T9206154
T9317898
T9317896
T9206129A
TUNER-CNTL-UNIT
F3247000B
(No. 65XX, YELLOW)
TUNER-MAIN-UNIT
F3248000B
(No. 64XX)
SP
T9206152
T9206370
T9206117A
T9206116A
T9206391
T9206121B
T9205972A
LOCAL-UNIT
F3445000
(No. 1XXX, RED)
T9206111A
T9309503
T9206112A
T9206113A
T9317850
T9206114A
T9206389
T9206364
T9206384
T9206372
T9206374
T9206386
T9206379
T9206392
T9206377
T9206390
CNTL-1-UNIT
F3447101A
(NO. 3XXX, GREEN)
SW-UNIT
F3447102A
(NO. 91XX)
T9206378
T9206365
T9206368
T9206394
T9206393
T9206373

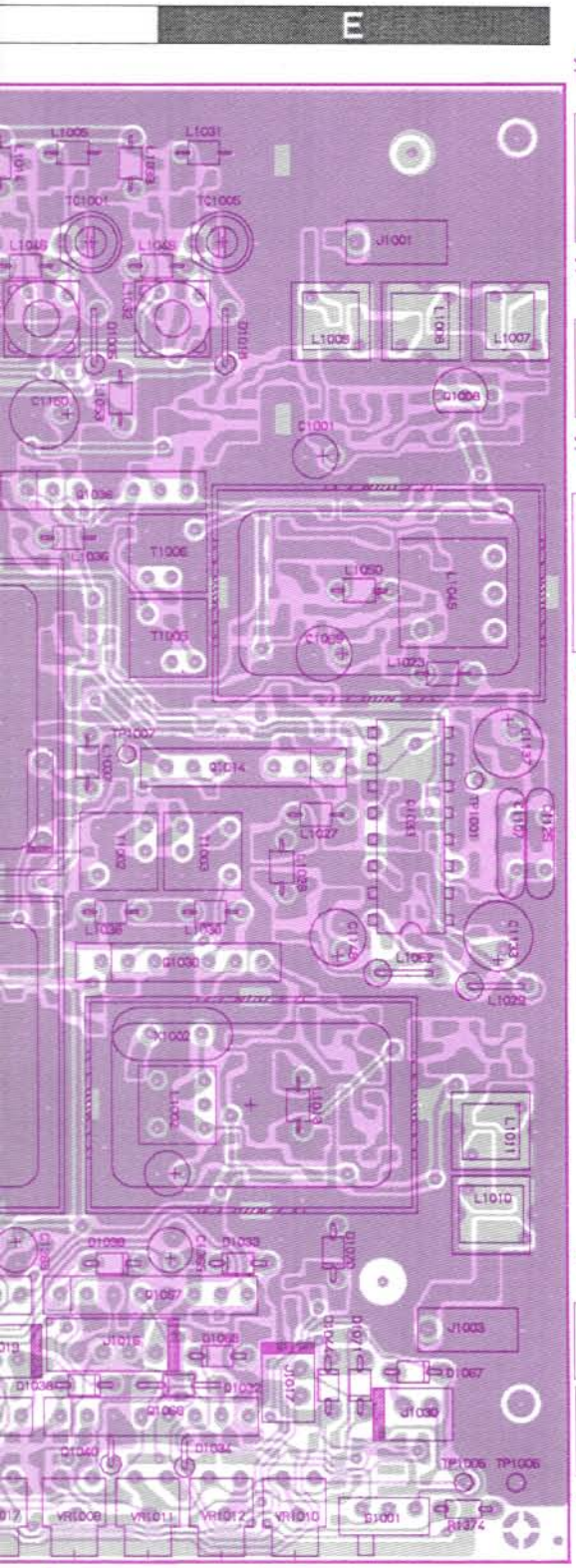
Circuit Diagram




CAR DDS UNIT
TCXO
(OPTION)
REF OSC
REF ADJ
DATA IN/OUT
To CNTL-1 Unit J3012
(See Page 6C-1)
To SW Unit JP9101
(See Page 6J-1)
EXT SPKR
To Speaker
To RF Unit J2008
(See Page 6B-1)
To CNTL-1 Unit J3006
(See Page 6C-1)
To Tuner-CNTL Unit J6504
(See Page 8A-9)
To PA Unit J4011
(See Page 6D-1)
To PA Unit J4011
(See Page 6D-1)
To RF Unit J2011
(See Page 6B-1)
To CNTL-1 Unit JP3003
(See Page 6C-1)
PATCH IN
To RF Unit J2010
(See Page 6B-1)
RX (TX) DC Voltage
Measuring Conditions
Frequency: 14.200MHz
Mode: USB

Parts Layout





J1012
To RF Unit J2018
(See Page 6B-3)

1. VCO4
2. VCO3
3. VCO2
4. VCO1

J1010
To CNTL-1 Unit JP3005
(See Page 6C-3)

1. DATA	2. CK	3. STM	4. STS	5. STC

J1005
To CNTL-1 Unit J3011
(See Page 6C-3)

1. UL
2. BZ
3. PTT
4. TX
5. RX

J1027
To CNTL-1 Unit J3007
(See Page 6C-3)

5. STOP
4. FM
3. AM
2. CW
1. SSB

J1007
To SW Unit JP9101
(See Page 6J-1)

1. AF OUT
2. AF IN
3. AF GND

J1018
To PA Unit J4011
(See Page 6D-3)

4. NC
3. PTT
2. T9
1. 9

J1023
To CNTL-1 Unit JP3003
(See Page 6C-3)

2. MIC	1. GND

J1008
To RF Unit J2007
(See Page 6B-3)

2. GND
1. RIF

J1030
To CNTL-1 Unit J3010
(See Page 6C-3)

1. TUN	2. 50W

J1014
To PA Unit J4011
(See Page 6D-3)

1. 13
2. GND

J1016
To LPF Unit J5006
(See Page 6E-3)

4. GND	3. R	2. F	1. LPS

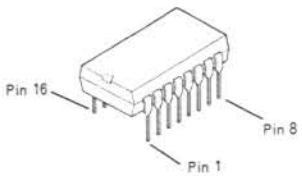
1. IC—

19
PA Unit J4006
ee Page 6D-3)

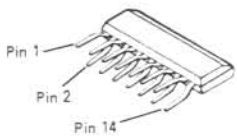
J1017
To SW Unit JP9104
(See Page 6J-1)

1. PO1
2. PO2

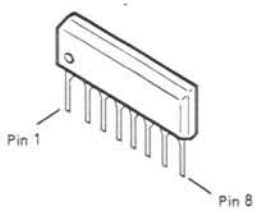
Obverse View of Component Side



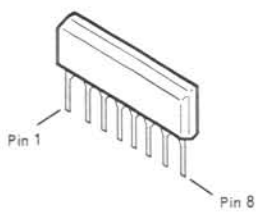
MC14568BCP
(Q1033)



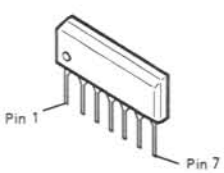
M51131L
(Q1026)



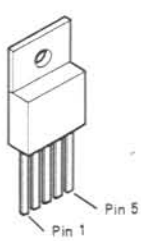
M5201AL
(Q1049)
M5218AL
(Q1063, 1066, 1067, 1081)



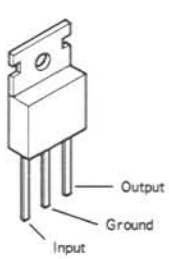
M5223L
(Q1065, 1068, 1082
1088, 1094)



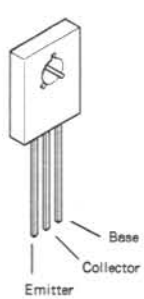
μPC1037H
(Q1014, 1030, 1036, 1084)



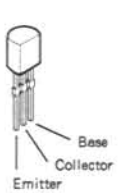
TDA2003H
(Q1034)



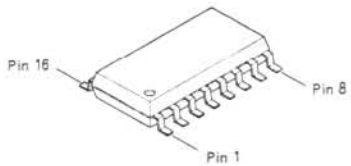
μPC7805H
(Q1056)



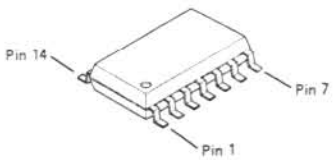
2SD882Q
(Q1023)



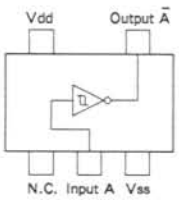
2SA1283D
(Q1053, 1054)
2SC2026
(Q1008)
2SD667C
(Q1101)



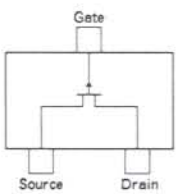
MB87086APF
(Q1042)
MC14053BF
(Q1076)



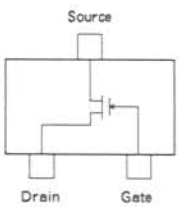
μPD4066BG
(Q1077)



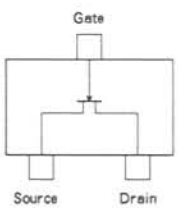
TC4S584F (CA)
(Q1029,1041)



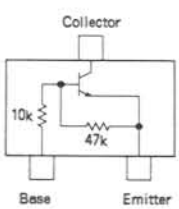
2SJ125D (JD)
(Q1112,1116)



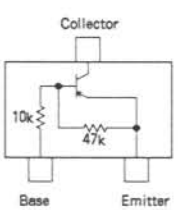
2SK210GR (YG)
(Q1004,1011,1013
1021,1032)
2SK302Y (TY)
(Q1006,1009,1016)



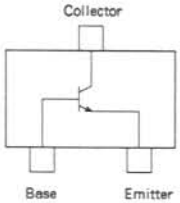
2SK160 (K6)
(Q1050,1085)
2SK208Y (JY)
(Q1045)



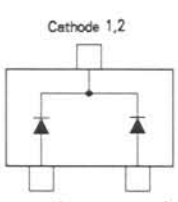
FA1A4P (L34)
(Q1010,1020,1027,1038,1048,1052
1055,1061,1062,1075,1078,1079
1083,1086,1087,1095,1096,1097
1098,1099,1100,1106,1107,1108
1109,1110,1111,1114,1115)



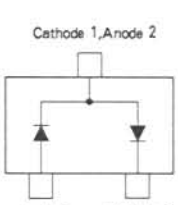
FN1A4P (M34)
(Q1057,1058,1059
1060,1090,1091
1092,1093)



2SC2620QBTR (QB)
(Q1001,1002,1017
1018,1019,1046)
2SC2712GR (LG)
(Q1003,1012,1015,1022,1024,1025
1028,1031,1037,1039,1040,1043
1044,1047,1051,1064,1069,1070
1072,1080)
2SC2714Y (JY)
(Q1005,1007,1035)

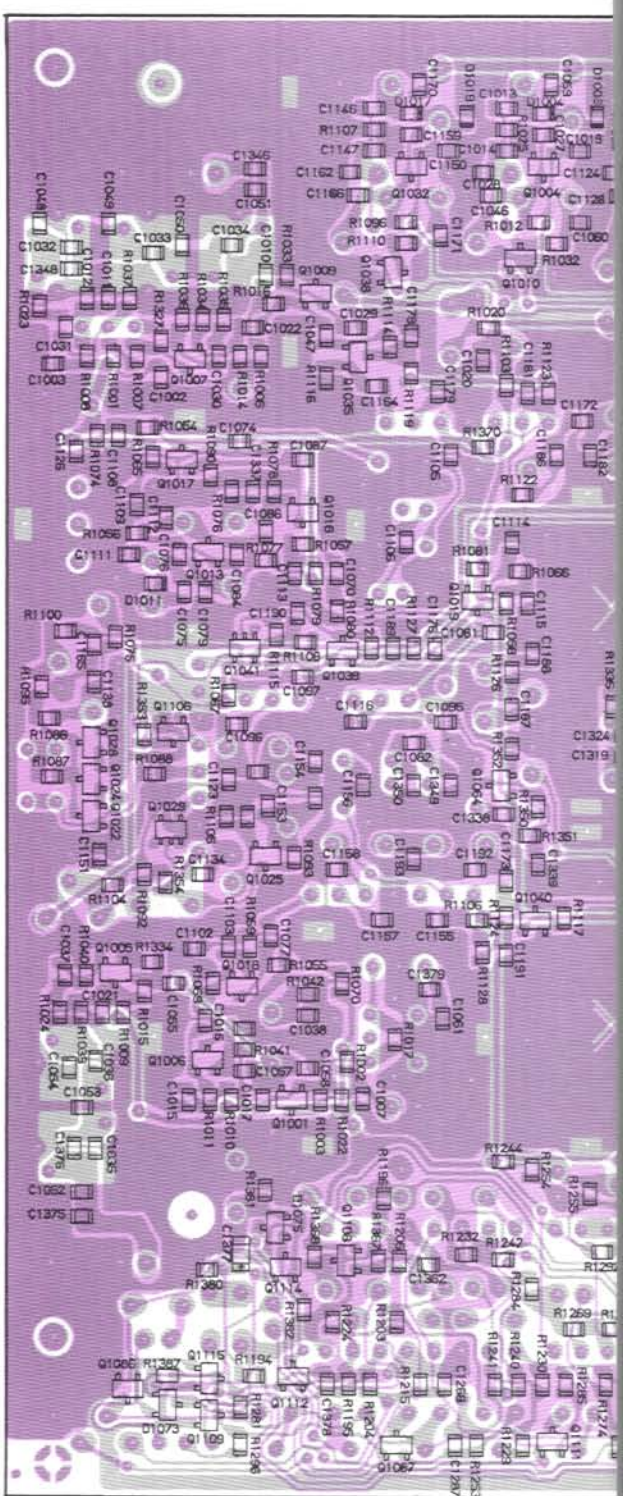


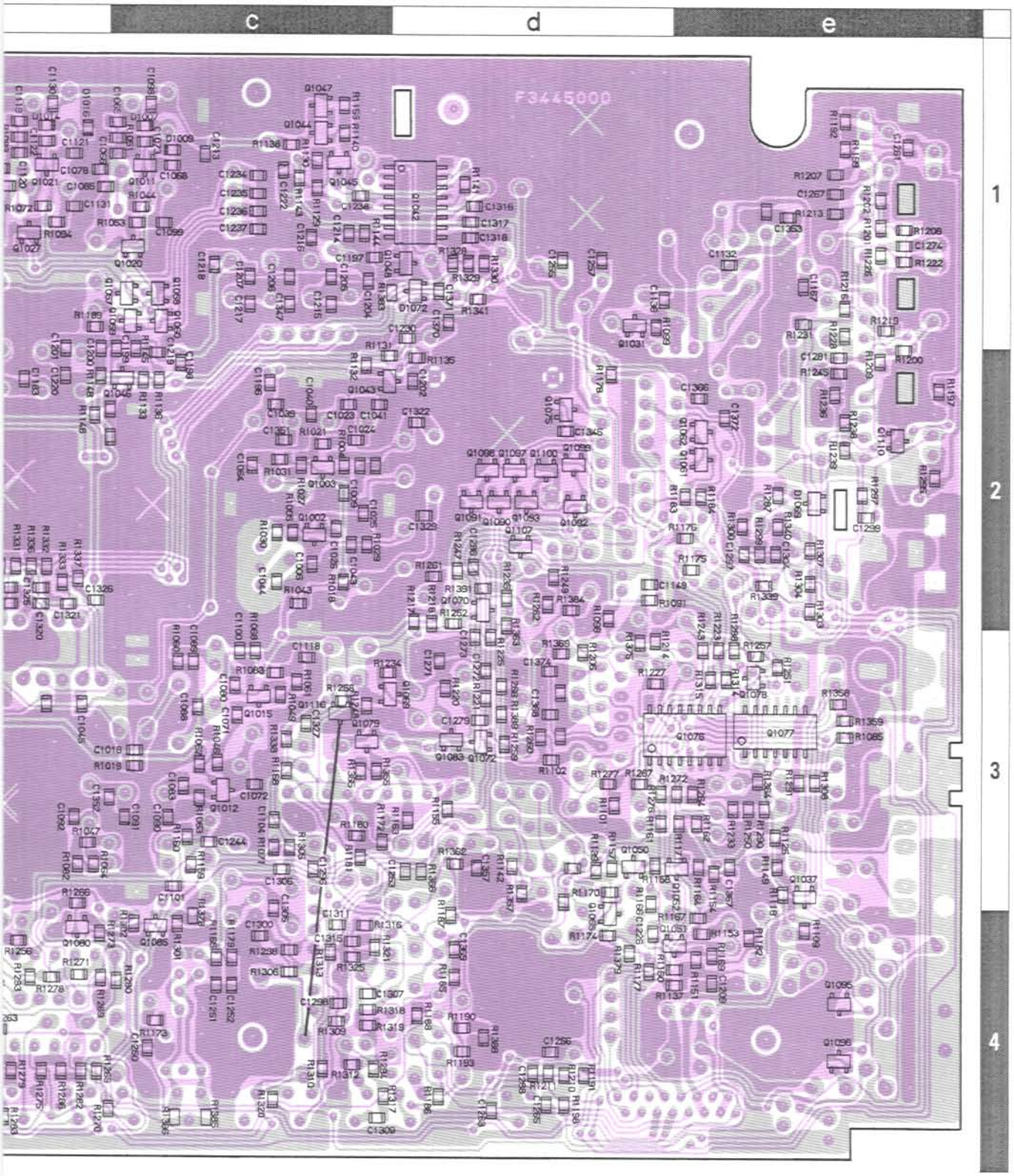
1SS184 (B3)
(D1072,1073,1075)



1SS226 (C3)
(D1069)

a b





Obverse View of Chip Side

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** LOCAL UNIT ***						
	PCB with Components(W/ CAR-DDS,SUB-DDS UNIT)					CP4852004		
	Printed Circuti Board					F3445000		
C 1001	AL.ELECTRO.CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1002	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1003	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1004	AL.ELECTRO.CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1005	AL.ELECTRO.CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1006	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817	TCXO-3 W/O	
C 1007	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1009	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1010	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1011	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1012	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1013	CHIP CAP.	39pF	50V	CH	GRM40CH390J50PT	K22170225		
C 1014	CHIP CAP.	27pF	50V	UJ	GRM40UJ270J50PT	K22170321		
C 1015	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1016	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1017	CHIP CAP.	39pF	50V	UJ	GRM40UJ390J50PT	K22170325		
C 1018	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239		
C 1019	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1020	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1021	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1022	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1023	CHIP CAP.	82pF	50V	CH	GRM40CH820J50PT	K22170233		
C 1024	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1025	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1026	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239	TCXO-3 W/O	
C 1027	CHIP CAP.	18pF	50V	UJ	GRM40UJ180J50PT	K22170317		
C 1028	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1029	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1031	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 1032	CHIP CAP.	4pF	50V	CH	GRM40CH040C50PT	K22170205		
C 1033	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1034	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1035	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1036	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1037	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1038	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1039	CHIP CAP.	390pF	50V	CH	GRM40CH391J50PT	K22170249		
C 1040	CHIP CAP.	390pF	50V	CH	GRM40CH391J50PT	K22170249		
C 1041	CHIP CAP.	390pF	50V	CH	GRM40CH391J50PT	K22170249		
C 1043	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235	TCXO-3 W/O	
C 1044	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219	TCXO-3 W/O	
C 1045	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1046	CHIP CAP.	5pF	50V	UJ	GRM40UJ050C50PT	K22170306		
C 1047	CHIP CAP.	1pF	50V	CK	GRM40CK010C50PT	K22170202		
C 1048	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1049	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 1050	CHIP CAP.	56pF	50V	CH	GRM40CH560J50PT	K22170229		
C 1051	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1052	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		
C 1053	CHIP CAP.	82pF	50V	CH	GRM40CH820J50PT	K22170233		
C 1054	CHIP CAP.	56pF	50V	CH	GRM40CH560J50PT	K22170229		
C 1055	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1057	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1058	CHIP CAP.	39pF	50V	UJ	GRM40UJ390J50PT	K22170325		
C 1059	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1060	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1061	CHIP CAP.	150pF	50V	UJ	GRM40UJ151J50PT	K22170339		
C 1062	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1064	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1065	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1066	CHIP CAP.	27pF	50V	UJ	GRM40UJ270J50PT	K22170321		
C 1067	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1068	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1069	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1070	CHIP CAP.	6pF	50V	CH	GRM40CH060D50PT	K22170207		
C 1071	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1072	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1073	CHIP CAP.	18pF	50V	UJ	GRM40UJ180J50PT	K22170317		
C 1074	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1075	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1076	CHIP CAP.	27pF	50V	UJ	GRM40UJ270J50PT	K22170321		
C 1077	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1078	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1079	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1080	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1081	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1082	CHIP CAP.	1pF	50V	CK	GRM40CK010C50PT	K22170202		
C 1083	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1084	CHIP CAP.	18pF	50V	CH	GRM40CH180J50PT	K22170217		
C 1085	CHIP CAP.	5pF	50V	UJ	GRM40UJ050C50PT	K22170306		
C 1086	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1087	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1088	CHIP CAP.	560pF	50V	B	GRM40B561M50PT	K22170802		
C 1089	CHIP CAP.	560pF	50V	B	GRM40B561M50PT	K22170802		
C 1090	CHIP CAP.	0.0012	50V	B	GRM40B122M50PT	K22170806		
C 1091	CHIP CAP.	0.0012	50V	B	GRM40B122M50PT	K22170806		
C 1092	CHIP CAP.	0.0012	50V	B	GRM40B122M50PT	K22170806		
C 1095	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1096	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1097	CHIP CAP.	0.022uF	50V	B	GRM40B223M50PT	K22170821		
C 1098	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1099	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1100	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1101	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1102	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1103	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1104	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1105	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 1106	CHIP CAP.	1pF	50V	CK	GRM40CK010C50PT	K22170202		
C 1107	CERAMIC CAP.	0.1uF	25V	X	UAT10X104K-L45AE	K19149025		
C 1108	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1109	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1111	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1112	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1113	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1114	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1115	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1116	CHIP CAP.	0.022uF	50V	B	GRM40B223M50PT	K22170821		
C 1118	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 1119	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1120	CHIP CAP.	27pF	50V	UJ	GRM40UJ270J50PT	K22170321		
C 1121	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1122	CHIP CAP.	18pF	50V	UJ	GRM40UJ180J50PT	K22170317		
C 1123	CHIP CAP.	560pF	50V	B	GRM40B561M50PT	K22170802		
C 1124	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1125	CERAMIC CAP.	0.1uF	25V	X	UAT10X104K-L45AE	K19149025		
C 1126	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1128	CHIP CAP.	5pF	50V	UJ	GRM40UJ050C50PT	K22170306		
C 1129	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 1130	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1131	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1132	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1133	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 1134	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 1136	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1137	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 1138	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 1139	AL. ELECTRO. CAP.	4.7uF	35V		35V4R7M4X7TR2	K46160004		
C 1140	AL. ELECTRO. CAP.	4.7uF	35V		35V4R7M4X7TR2	K46160004		
C 1141	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1142	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1145	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 1146	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1147	CHIP CAP.	27pF	50V	UJ	GRM40UJ270J50PT	K22170321		
C 1148	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1149	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1150	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1151	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1153	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 1154	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 1155	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1156	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1157	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1158	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1159	CHIP CAP.	18pF	50V	UJ	GRM40UJ180J50PT	K22170317		
C 1160	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 1161	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1162	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1163	AL. ELECTRO. CAP.	470uF	16V		RE2-16V471M	K40129049		
C 1164	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 1165	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1166	CHIP CAP.	5pF	50V	UJ	GRM40UJ050C50PT	K22170306		
C 1167	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1168	AL. ELECTRO. CAP.	100uF	10V		10V101M5X11TR5	K46100004		
C 1169	AL. ELECTRO. CAP.	470uF	6.3V		RE2-6V471M	K40089025		
C 1170	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1171	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1172	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1173	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1174	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1175	FILM CAP.	0.1	50V		50F2U104M	K50177104		
C 1176	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1178	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1179	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1181	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1182	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1183	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1184	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1185	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1186	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1187	CHIP CAP.	180pF	50V	CH	GRM40CH181J50PT	K22170241		
C 1188	CHIP CAP.	180pF	50V	CH	GRM40CH181J50PT	K22170241		
C 1189	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 1190	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1191	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1192	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 1193	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		
C 1194	TANTALUM CAP.	0.33uF	35V		DN1VR33M1S	K70167334		
C 1196	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1197	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1198	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1199	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1200	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1201	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1202	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1204	CHIP CAP.	0.5pF	50V	CK	GRM40CK0R5C50PT	K22170201		
C 1205	CHIP CAP.	6pF	50V	CH	GRM40CH060D50PT	K22170207		
C 1206	CHIP CAP.	4pF	50V	CH	GRM40CH040C50PT	K22170205		
C 1207	CHIP CAP.	2pF	50V	CK	GRM40CK020C50PT	K22170203		
C 1209	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1212	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1213	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 1214	CHIP CAP.	6pF	50V	CH	GRM40CH060D50PT	K22170207		
C 1215	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1216	CHIP CAP.	6pF	50V	CH	GRM40CH060D50PT	K22170207		
C 1217	CHIP CAP.	4pF	50V	CH	GRM40CH040C50PT	K22170205		
C 1218	CHIP CAP.	4pF	50V	CH	GRM40CH040C50PT	K22170205		
C 1219	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1220	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1221	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1222	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1223	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 1224	AL. ELECTRO. CAP.	0.22uF	50V		50VR22M4X7TR2	K46170027		
C 1225	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1226	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 1227	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1228	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1229	AL. ELECTRO. CAP.	2.2uF	50V		50V2R2M4X7TR2	K46170031		
C 1230	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1231	AL. ELECTRO. CAP.	3.3uF	50V		50V3R3M4X7TR2	K46170032		
C 1232	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1233	AL. ELECTRO. CAP.	4.7uF	35V		35V4R7M4X7TR2	K46160004		
C 1234	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1235	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1236	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1237	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1238	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1239	AL. ELECTRO. CAP.	2.2uF	50V		50V2R2M4X7TR2	K46170031		
C 1240	CERAMIC CAP.	0.001uF	50V	B	UP050B102K-A-B	K28179001		
C 1241	FILM CAP.	0.018	50V		50F2D183M	K50170025		
C 1243	AL. ELECTRO. CAP.	4.7uF	35V		35V4R7M4X7TR2	K46160004		
C 1244	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1245	FILM CAP.	0.027	50V		50F2D273M	K50170024		
C 1246	CERAMIC CAP.	0.0022uF	16V	X	EP050X222M-A-B	K28129003		
C 1247	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1248	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1249	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1250	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1251	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1252	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1253	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 1254	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1255	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1256	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1257	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1259	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1261	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1262	AL. ELECTRO. CAP.	2.2uF	50V		50V2R2M4X7TR2	K46170031		
C 1263	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1264	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1265	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1266	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1267	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1268	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1269	AL. ELECTRO. CAP.	220uF	10V		10V221M6X11TR5	K46100005		
C 1270	AL. ELECTRO. CAP.	220uF	10V		10V221M6X11TR5	K46100005		
C 1271	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1272	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1273	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1274	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1275	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1276	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1277	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1278	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 1279	CHIP CAP.	220pF	50V	CH	GRM40CH221J50PT	K22170243		
C 1280	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1281	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1282	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1283	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1284	AL. ELECTRO. CAP.	22uF	16V		16V220M5X7TR2	K46120005		
C 1286	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1287	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1288	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1289	AL. ELECTRO. CAP.	0.22uF	50V		50VR22M4X7TR2	K46170027		
C 1290	AL. ELECTRO. CAP.	100uF	10V		RE2-10V101M	K40109024		
C 1292	AL. ELECTRO. CAP.	22uF	16V		16V220M5X7TR2	K46120005		
C 1293	AL. ELECTRO. CAP.	0.1uF	50V		50VR10M4X7TR2	K46170026		
C 1294	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1295	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1296	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1297	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 1298	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1299	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1300	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1301	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1303	AL. ELECTRO. CAP.	47uF	16V		RC2-16V470M-T34	K46120010		
C 1304	CHIP CAP.	0.0033uF	50V	B	GRM40B332M50PT	K22170811		
C 1305	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1306	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1307	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 1309	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 1310	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1311	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1312	AL. ELECTRO. CAP.	22uF	16V		16V220M5X7TR2	K46120005		
C 1315	CHIP CAP.	0.0033uF	50V	B	GRM40B332M50PT	K22170811		
C 1316	CHIP CAP.	220pF	50V	CH	GRM40CH221J50PT	K22170243		
C 1317	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1318	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1319	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1320	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1321	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1322	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 1323	CERAMIC CAP.	0.01uF	16V	Y	EP050Y103N-A	K28129001	TCXO-3 W/O	
C 1324	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1325	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1326	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 1327	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1328	AL. ELECTRO. CAP.	22uF	16V		16V220M5X7TR2	K46120005		
C 1329	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1330	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1337	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1338	CHIP CAP.	10pF	50V	CH	GRM40CH100D50PT	K22170211		
C 1339	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1340	AL. ELECTRO. CAP.	3.3uF	50V		50V3R3M4X7TR2	K46170032		
C 1341	AL. ELECTRO. CAP.	0.47uF	50V		50VR47M4X7TR2	K46170029		
C 1342	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 1343	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 1344	AL. ELECTRO. CAP.	330uF	16V		16V331M8X11TR5	K46120002		
C 1345	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1346	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1347	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1348	CHIP CAP.	4pF	50V	CH	GRM40CH040C50PT	K22170205		
C 1349	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1350	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 1351	CHIP CAP.	390pF	50V	CH	GRM40CH391J50PT	K22170249		
C 1352	CHIP CAP.	0.0012	50V	B	GRM40B122M50PT	K22170806		
C 1353	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1354	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1355	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1356	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1357	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1358	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 1359	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1360	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1362	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 1364	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 1365	AL. ELECTRO. CAP.	4.7uF	35V		35V4R7M4X7TR2	K46160004		
C 1366	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1367	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 1368	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1369	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1370	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1371	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1372	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 1373	AL. ELECTRO. CAP.	470uF	16V		RE2-16V471M	K40129049		
C 1374	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 1375	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 1376	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 1377	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1378	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1379	CHIP CAP.	10pF	50V	UJ	GRM40UJ100D50PT	K22170311		
C 1380	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
D 1001	DIODE				HZ5B	G2090242		
D 1004	DIODE				HVU306A5TRF	G2070132		
D 1005	DIODE				1SS53-TB	G2050008		
D 1006	DIODE				HVU306A5TRF	G2070132		
D 1007	DIODE				HVU306A5TRF	G2070132		
D 1008	DIODE				1SS53-TB	G2050008		
D 1009	DIODE				HVU306A5TRF	G2070132		
D 1010	DIODE				1SS270TJ	G2060004		
D 1011	DIODE				HVU200-5TRP	G2070090		
D 1012	DIODE				1SS270TJ	G2060004		
D 1013	DIODE				1SS270TJ	G2060004		
D 1014	DIODE				HVU306A5TRF	G2070132		
D 1015	DIODE				1SS53-TB	G2050008		
D 1016	DIODE				HVU306A5TRF	G2070132		
D 1017	DIODE				HVU306A5TRF	G2070132		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
D 1018	DIODE				1SS53-TB	G2050008		
D 1019	DIODE				HVU306A5TRF	G2070132		
D 1021	DIODE				1SS270TJ	G2060004		
D 1022	DIODE				1SS270TJ	G2060004		
D 1023	DIODE				1SS270TJ	G2060004		
D 1024	DIODE				1SS270TJ	G2060004		
D 1026	DIODE				1SS270TJ	G2060004		
D 1027	DIODE				1SS270TJ	G2060004		
D 1028	DIODE				1SS270TJ	G2060004		
D 1029	DIODE				1SS270TJ	G2060004		
D 1030	DIODE				1SS270TJ	G2060004		
D 1031	DIODE				1SS270TJ	G2060004		
D 1032	DIODE				1SS270TJ	G2060004		
D 1033	DIODE				1SS270TJ	G2060004		
D 1034	DIODE				HZ12B2	G2090149		
D 1035	DIODE				1SS270TJ	G2060004		
D 1036	DIODE				1SS270TJ	G2060004		
D 1037	DIODE				1SS270TJ	G2060004		
D 1038	DIODE				1SS270TJ	G2060004		
D 1039	DIODE				1SS270TJ	G2060004		
D 1040	DIODE				HZ12B2	G2090149		
D 1042	DIODE				1SS270TJ	G2060004		
D 1043	DIODE				1SS270TJ	G2060004		
D 1044	DIODE				1SS270TJ	G2060004		
D 1045	DIODE				1SS270TJ	G2060004		
D 1048	DIODE				1SS270TJ	G2060004		
D 1049	DIODE				1SS270TJ	G2060004		
D 1050	DIODE				HZ7C1	G2090405		
D 1051	DIODE				1SS270TJ	G2060004		
D 1052	DIODE				1SS270TJ	G2060004		
D 1054	DIODE				1SS270TJ	G2060004		
D 1055	DIODE				1SS270TJ	G2060004		
D 1056	DIODE				1SS270TJ	G2060004		
D 1057	DIODE				1SS106	G2090244		
D 1058	DIODE				1SS106	G2090244		
D 1059	DIODE				1SS106	G2090244		
D 1060	DIODE				1SS106	G2090244		
D 1063	DIODE				1SS270TJ	G2060004		
D 1064	DIODE				1SS270TJ	G2060004		
D 1065	DIODE				RD6.2EB2	G2090246		
D 1067	DIODE				1SS270TJ	G2060004		
D 1068	DIODE				1SS270TJ	G2060004		
D 1069	DIODE				1SS226 TE85R	G2070003		
D 1070	DIODE				1SS270TJ	G2060004		
D 1071	DIODE				1SS270TJ	G2060004		
D 1072	DIODE				1SS184 TE85R	G2070009		
D 1073	DIODE				1SS184 TE85R	G2070009		
D 1075	DIODE				1SS184 TE85R	G2070009		
J 1001	CONNECTOR				TMP-J01X-A2	P1090255		
J 1003	CONNECTOR				TMP-J01X-A2	P1090255		
J 1004	CONNECTOR				HSJ0916-01-010	P1090546		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
J 1005	CONNECTOR				SC25-05WS	P0090624		
J 1006	CONNECTOR				SC25-03WS	P0090622		
J 1007	CONNECTOR				SC25-03WS	P0090622		
J 1008	CONNECTOR				SC25-02WS	P0090621		
J 1009	CONNECTOR				SG8035#01	P1090350		
J 1010	CONNECTOR				SC25-05WS	P0090624		
J 1011	CONNECTOR				SC25-03WS	P0090622		
J 1012	CONNECTOR				SC25-04WS	P0090623		
J 1013	CONNECTOR				SC25-02WS	P0090621		
J 1014	CONNECTOR				SC25-02WS	P0090621		
J 1015	CONNECTOR				SC25-02WS	P0090621		
J 1016	CONNECTOR				SC25-04WS	P0090623		
J 1017	CONNECTOR				SC25-02WS	P0090621		
J 1018	CONNECTOR				SC25-04WS	P0090623		
J 1019	CONNECTOR				SC25-02WS	P0090621		
J 1020	CONNECTOR				52030-1610	P1090657		
J 1021	CONNECTOR				S-Q3097-01	P1090348		
J 1022	CONNECTOR				SC25-05WS	P0090624		
J 1023	CONNECTOR				SC25-02WS	P0090621		
J 1024	CONNECTOR				TCS5073-17-4151	P1090648		
J 1026	CONNECTOR				SC25-03WS	P0090622		
J 1027	CONNECTOR				SC25-05WS	P0090624		
J 1028	CONNECTOR				SC25-02WS	P0090621		
J 1029	CONNECTOR				SC25-02WS	P0090621		
J 1030	CONNECTOR				SC25-02WS	P0090621		
J 1031	CONNECTOR				S-Q3097-01	P1090348		
J 1032	CONNECTOR				SC25-05WS	P0090624		
J 1033	CONNECTOR				SC25-04WS	P0090623		
J 1034	CONNECTOR				SC25-02WS	P0090621		
JP1101	WIRE-ASSY					T9206163		
JP1103	WIRE-ASSY					T9206162A		
JP1105	WIRE-ASSY					T9206162A		
JP1107	WIRE-ASSY					T9206163		
L 1001	M.RFC	0.82uH			LAP02TAR82K	L1790045		
L 1002	COIL				0.29U R12-6493X	L0021382		
L 1003	M.RFC	0.68uH			LAP02TAR68K	L1790044		
L 1004	M.RFC	0.68uH			LAP02TAR68K	L1790044		
L 1005	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1006	COIL				S7-M1 R12-L722H	L0190181		
L 1007	COIL				4.5T3.5D0.6UEW R	L0021819A		
L 1008	COIL				5.5T3.5D0.6UEW R	L0021820A		
L 1009	COIL				5.5T3.5D0.6UEW R	L0021820A		
L 1010	COIL				6.5T3.5D0.6UEW R	L0021821A		
L 1011	COIL				5.5T3.5D0.6UEW R	L0021820A		
L 1012	M.RFC	0.82uH			LAP02TAR82K	L1790045		
L 1013	M.RFC	1uH			LAP02TA1R0K	L1790046		
L 1014	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1015	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1016	COIL				S7-M1 R12-L722G	L0190180		
L 1017	M.RFC	4.7uH			LAP02TA4R7K	L1790054		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
L 1018	M.RFC	330uH			LAL03VB331K	L1790158		
L 1019	M.RFC	100uH			LAP02TA101K	L1790070		
L 1020	M.RFC	100uH			LAP02TA101K	L1790070		
L 1023	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1024	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1025	COIL				S7-M1 R12-L722F	L0190179		
L 1026	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1027	M.RFC	100uH			LAP02TA101K	L1790070		
L 1028	M.RFC	120uH			LAP02TA121K	L1790071		
L 1029	M.RFC	1mH			LAL03VB102K	L1790164		
L 1030	M.RFC	12uH			LAP02TA120K	L1790059		
L 1031	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1032	COIL				S7-M1 R12-L722E	L0190178		
L 1033	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 1034	M.RFC	2.2uH			LAP02TA2R2K	L1790050		
L 1035	M.RFC	2.2uH			LAP02TA2R2K	L1790050		
L 1036	M.RFC	5.6uH			LAP02TA5R6K	L1790055		
L 1037	M.RFC	120uH			LAP02TA121K	L1790071		
L 1038	M.RFC	12uH			LAP02TA120K	L1790059		
L 1039	M.RFC	1.8u			LAP02TA1R8K	L1790049		
L 1040	M.RFC	1.5u			LAP02TA1R5K	L1790048		
L 1041	M.RFC	1.2u			LAP02TA1R2K	L1790047		
L 1042	M.RFC	1.5u			LAP02TA1R5K	L1790048		
L 1043	M.RFC	5.6uH			LAP02TA5R6K	L1790055		
L 1044	M.RFC	100uH			LAP02TA101K	L1790070		
L 1045	COIL				0.42U	L0021399		
L 1046	M.RFC	3.3uH			LAP02TA3R3K	L1790052		
L 1047	M.RFC	3.3uH			LAP02TA3R3K	L1790052		
L 1048	M.RFC	2.7u			LAP02TA2R7K	L1790051		
L 1049	M.RFC	2.7u			LAP02TA2R7K	L1790051		
L 1050	M.RFC	2.7u			LAP02TA2R7K	L1790051		
L 1051	M.RFC	1mH			LAL03VB102K	L1790164		
L 1052	M.RFC	1mH			LAL03VB102K	L1790164		
L 1053	M.RFC	100uH			LAP02TA101K	L1790070		
L 1054	M.RFC	10uH			LAP02TA100K	L1790058		
L 1055	M.RFC	220uH			LAP02TA221K	L1790074		
Q 1001	TRANSISTOR				2SC2620QBTR	G3326207B		a3
Q 1002	TRANSISTOR				2SC2620QBTR	G3326207B	TCXO-3 W/O	c2
Q 1003	TRANSISTOR				2SC2712GR TE85R	G3327127G		c2
Q 1004	FET				2SK210GR TE85R	G3802107G		b1
Q 1005	TRANSISTOR				2SC2714YTE85R	G3327147Y		a3
Q 1006	FET				2SK302Y TE85R	G3803027Y		a3
Q 1007	TRANSISTOR				2SC2714YTE85R	G3327147Y		a1
Q 1008	TRANSISTOR				2SC2026	G3320260		E1
Q 1009	FET				2SK302Y TE85R	G3803027Y		a1
Q 1010	TRANSISTOR				FA1A4P-T2B	G3070006		b1
Q 1011	FET				2SK210GR TE85R	G3802107G		c1
Q 1012	TRANSISTOR				2SC2712GR TE85R	G3327127G		c3
Q 1013	FET				2SK210GR TE85R	G3802107G		a2
Q 1014	IC				UPC1037H	G1090101		E2
Q 1015	TRANSISTOR				2SC2712GR TE85R	G3327127G		c3

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 1016	FET				2SK302Y TE85R	G3803027Y		a2
Q 1017	TRANSISTOR				2SC2620QBTR	G3326207B		a2
Q 1018	TRANSISTOR				2SC2620QBTR	G3326207B		a3
Q 1019	TRANSISTOR				2SC2620QBTR	G3326207B		b2
Q 1020	TRANSISTOR				FA1A4P-T2B	G3070006		c1
Q 1021	FET				2SK210GR TE85R	G3802107G		b1
Q 1022	TRANSISTOR				2SC2712GR TE85R	G3327127G		a3
Q 1023	TRANSISTOR				2SD882Q	G3408820Q		B2
Q 1024	TRANSISTOR				2SC2712GR TE85R	G3327127G		a3
Q 1025	TRANSISTOR				2SC2712GR TE85R	G3327127G		a3
Q 1026	IC				M51131L	G1091077		B3
Q 1027	TRANSISTOR				FA1A4P-T2B	G3070006		b1
Q 1028	TRANSISTOR				2SC2712GR TE85R	G3327127G		a2
Q 1029	IC				TC4S584F TE85R	G1090974		a3
Q 1030	IC				UPC1037H	G1090101		D3
Q 1031	TRANSISTOR				2SC2712GR TE85R	G3327127G		d1
Q 1032	FET				2SK210GR TE85R	G3802107G		b1
Q 1033	IC				MC14568BCP	G1090347		E2
Q 1034	IC				TDA2003H	G1090815		A1
Q 1035	TRANSISTOR				2SC2714YTE85R	G3327147Y		a1
Q 1036	IC				UPC1037H	G1090101		D2
Q 1037	TRANSISTOR				2SC2712GR TE85R	G3327127G		e3
Q 1038	TRANSISTOR				FA1A4P-T2B	G3070006		a1
Q 1039	TRANSISTOR				2SC2712GR TE85R	G3327127G		a2
Q 1040	TRANSISTOR				2SC2712GR TE85R	G3327127G		b3
Q 1041	IC				TC4S584F TE85R	G1090974		a2
Q 1042	IC				MB87086APF	G1091419		d1
Q 1043	TRANSISTOR				2SC2712GR TE85R	G3327127G		c2
Q 1044	TRANSISTOR				2SC2712GR TE85R	G3327127G		c1
Q 1045	FET				2SK208Y TE85R	G3802087Y		c1
Q 1046	TRANSISTOR				2SC2620QBTR	G3326207B		c2
Q 1047	TRANSISTOR				2SC2712GR TE85R	G3327127G		c1
Q 1048	TRANSISTOR				FA1A4P-T2B	G3070006		d1
Q 1049	IC				M5201AL	G1091175		C3
Q 1050	FET				2SK160-T2B K6	G3801607F		d3
Q 1051	TRANSISTOR				2SC2712GR TE85R	G3327127G		d4
Q 1052	TRANSISTOR				FA1A4P-T2B	G3070006		d3
Q 1053	TRANSISTOR				2SA1283D	G3112830D		A2
Q 1054	TRANSISTOR				2SA1283D	G3112830D		A2
Q 1055	TRANSISTOR				FA1A4P-T2B	G3070006		d4
Q 1056	IC				HA17805P	G1090936		B1
Q 1057	TRANSISTOR				FN1A4P-T2B	G3070011		c1
Q 1058	TRANSISTOR				FN1A4P-T2B	G3070011		c1
Q 1059	TRANSISTOR				FN1A4P-T2B	G3070011		c1
Q 1060	TRANSISTOR				FN1A4P-T2B	G3070011		c1
Q 1061	TRANSISTOR				FA1A4P-T2B	G3070006		e2
Q 1062	TRANSISTOR				FA1A4P-T2B	G3070006		e2
Q 1063	IC				M5218AL	G1091140		B4
Q 1064	TRANSISTOR				2SC2712GR TE85R	G3327127G		b3
Q 1065	IC				M5223L	G1090988		A1
Q 1066	IC				M5218AL	G1091140		D4
Q 1067	IC				M5218AL	G1091140		D4

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 1068	IC				M5223L	G1090988		A2
Q 1069	TRANSISTOR				2SC2712GR TE85R	G3327127G		c3
Q 1070	TRANSISTOR				2SC2712GR TE85R	G3327127G		d2
Q 1072	TRANSISTOR				2SC2712GR TE85R	G3327127G		d3
Q 1075	TRANSISTOR				FA1A4P-T2B	G3070006		d2
Q 1076	IC				MC14053BFR1	G1091524		e3
Q 1077	IC				UPD4066BG-T2	G1091035		e3
Q 1078	TRANSISTOR				FA1A4P-T2B	G3070006		e3
Q 1079	TRANSISTOR				FA1A4P-T2B	G3070006		c3
Q 1080	TRANSISTOR				2SC2712GR TE85R	G3327127G		b4
Q 1081	IC				M5218AL	G1091140		D4
Q 1082	IC				M5223L	G1090988		D4
Q 1083	TRANSISTOR				FA1A4P-T2B	G3070006		d3
Q 1084	IC				UPC1037H	G1090101		D4
Q 1085	FET				2SK160-T2B K6	G3801607F		c4
Q 1086	TRANSISTOR				FA1A4P-T2B	G3070006		a4
Q 1087	TRANSISTOR				FA1A4P-T2B	G3070006		a4
Q 1088	IC				M5223L	G1090988		A2
Q 1090	TRANSISTOR				FN1A4P-T2B	G3070011		d2
Q 1091	TRANSISTOR				FN1A4P-T2B	G3070011		d2
Q 1092	TRANSISTOR				FN1A4P-T2B	G3070011		d2
Q 1093	TRANSISTOR				FN1A4P-T2B	G3070011		d2
Q 1094	IC				M5223L	G1090988		A4
Q 1095	TRANSISTOR				FA1A4P-T2B	G3070006		e4
Q 1096	TRANSISTOR				FA1A4P-T2B	G3070006		e4
Q 1097	TRANSISTOR				FA1A4P-T2B	G3070006		d2
Q 1098	TRANSISTOR				FA1A4P-T2B	G3070006		d2
Q 1099	TRANSISTOR				FA1A4P-T2B	G3070006		d2
Q 1100	TRANSISTOR				FA1A4P-T2B	G3070006		d2
Q 1101	TRANSISTOR				2SD667C	G3406670C		B2
Q 1106	TRANSISTOR				FA1A4P-T2B	G3070006		a2
Q 1107	TRANSISTOR				FA1A4P-T2B	G3070006		d2
Q 1108	TRANSISTOR				FA1A4P-T2B	G3070006		a4
Q 1109	TRANSISTOR				FA1A4P-T2B	G3070006		a4
Q 1110	TRANSISTOR				FA1A4P-T2B	G3070006		e2
Q 1111	TRANSISTOR				FA1A4P-T2B	G3070006		b4
Q 1112	FET				2SJ125D-T12-1D	G3701257D		a4
Q 1114	TRANSISTOR				FA1A4P-T2B	G3070006		a4
Q 1115	TRANSISTOR				FA1A4P-T2B	G3070006		a4
Q 1116	FET				2SJ125D-T12-1D	G3701257D		c3
R 1001	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1002	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1003	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1004	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1005	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223	TCXO-3 W/O	
R 1006	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1007	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1008	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1009	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1010	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1011	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 1012	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1014	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1015	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1016	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1017	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1018	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1019	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1020	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1021	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1022	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1023	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1024	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1025	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1027	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1029	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102	TCXO-3 W/O	
R 1030	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1031	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1032	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1033	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1034	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1036	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1037	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1039	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1040	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1041	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1042	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1043	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1044	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1046	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1047	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1049	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1051	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1053	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1054	CHIP RES.	560	1/10W	5%	RMC1/10T 561J	J24205561		
R 1055	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1056	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1057	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1058	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1059	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1060	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1061	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1062	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1063	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1064	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1065	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1066	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1067	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1068	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1069	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1070	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1071	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1072	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 1074	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1075	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1076	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1077	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1078	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1079	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1080	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1081	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1082	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1083	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1085	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1086	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1087	CHIP RES.	560	1/10W	5%	RMC1/10T 561J	J24205561		
R 1088	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1089	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1090	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1091	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1092	CHIP RES.	820	1/10W	5%	RMC1/10T 821J	J24205821		
R 1093	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1094	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1095	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1096	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1098	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1099	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 1100	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1101	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1102	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1103	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1104	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1105	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1106	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1107	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1108	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1109	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1110	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1111	CARBON FILM RES.	1	1/6W	5%	RD16TPJ010 1	J07225010		
R 1112	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1113	CARBON FILM RES.	270	1/6W	5%	RD16TPJ271 270	J07225271		
R 1114	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1115	CHIP RES.	820	1/10W	5%	RMC1/10T 821J	J24205821		
R 1116	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1117	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1118	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1119	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1120	CARBON FILM RES.	2.2	1/6W	5%	RD16TPJ2R2 2.2	J07225229		
R 1122	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1123	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1124	CHIP RES.	560	1/10W	5%	RMC1/10T 561J	J24205561		
R 1125	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1126	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1127	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1128	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 1129	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1130	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 1131	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1132	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1133	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1135	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1136	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1137	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1138	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1139	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1140	CHIP RES.	390	1/10W	5%	RMC1/10T 391J	J24205391		
R 1141	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1142	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1143	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1144	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1145	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1146	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 1148	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1149	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1150	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 1151	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1153	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1154	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1155	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1156	CHIP RES.	560	1/10W	5%	RMC1/10T 561J	J24205561		
R 1157	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1158	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1159	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1160	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1161	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1162	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1163	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1164	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 1165	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1166	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1167	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1168	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1169	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1170	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1171	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1172	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1173	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 1174	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1175	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1176	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1177	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1178	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 1179	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1180	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1181	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1182	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1183	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 1184	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1185	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1186	CHIP RES.	2.2M	1/10W	5%	RMC1/10T 225J	J24205225		
R 1187	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1188	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1189	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 1190	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 1191	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1192	CHIP RES.	3.3M	1/10W	5%	RMC1/10T 335J	J24205335		
R 1193	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 1194	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1195	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 1196	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1197	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1198	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1199	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1200	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1201	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1202	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1203	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1204	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 1205	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1206	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1207	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1208	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1209	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1210	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1211	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1213	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474		
R 1214	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1215	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1216	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1217	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1218	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1219	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 1220	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1221	CHIP RES.	82K	1/10W	5%	RMC1/10T 823J	J24205823		
R 1222	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1223	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1224	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1225	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1226	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1227	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1228	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1229	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1230	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 1231	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474		
R 1232	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1233	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1234	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1235	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1236	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		

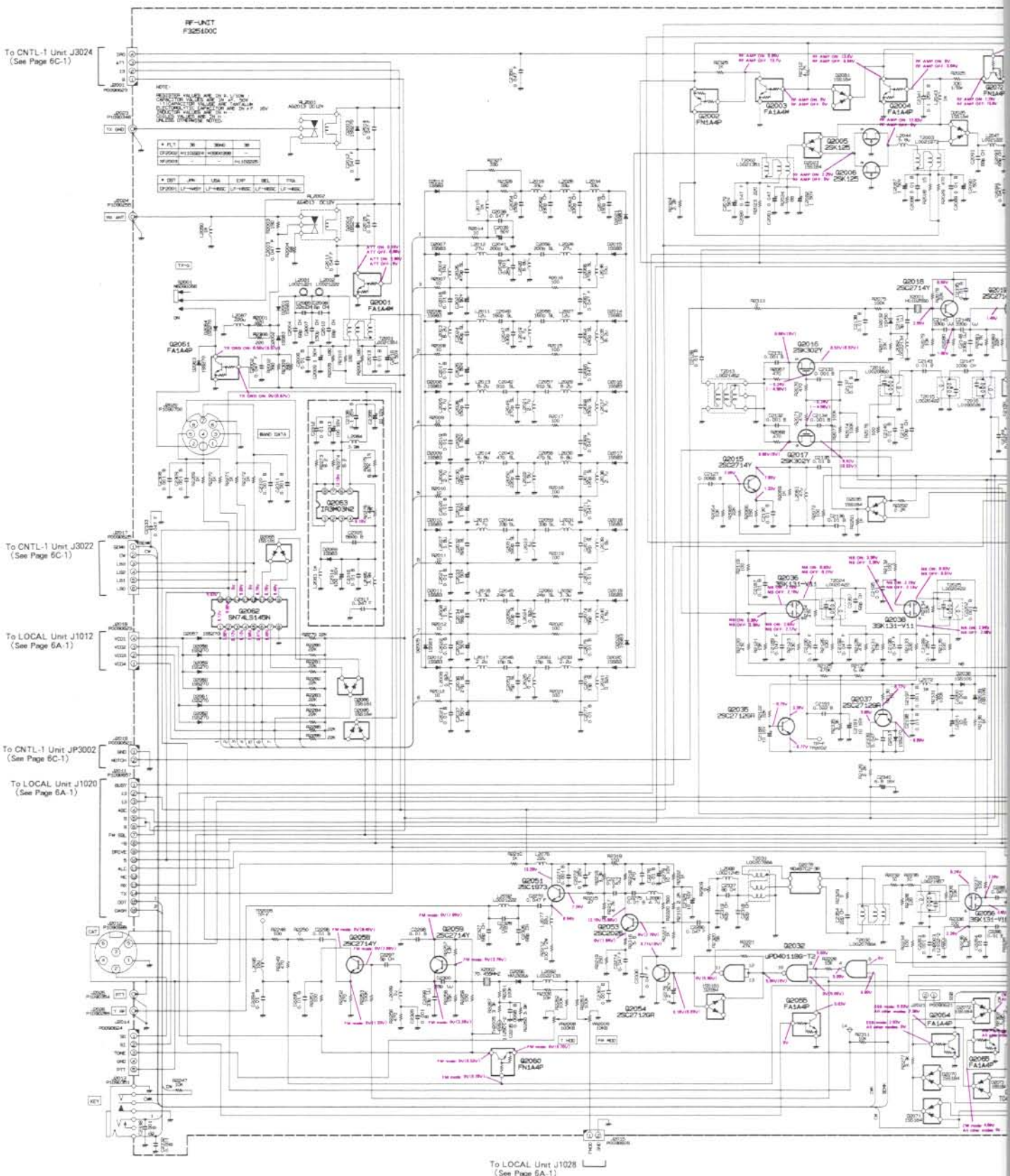
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R 1238	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1239	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1240	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1241	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 1242	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1243	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1244	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1245	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1247	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1248	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1249	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1250	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1251	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 1252	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1253	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1254	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1255	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1256	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 1257	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1258	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1259	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1260	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1261	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1262	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1263	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 1264	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1265	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1266	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 1267	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1268	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1269	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1270	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1271	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474		
R 1272	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1273	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 1274	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1275	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1276	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1277	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1278	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1279	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1280	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1281	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 1282	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1283	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1284	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 1285	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 1286	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1287	CHIP RES.	2.2M	1/10W	5%	RMC1/10T 225J	J24205225		
R 1288	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1289	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1290	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		

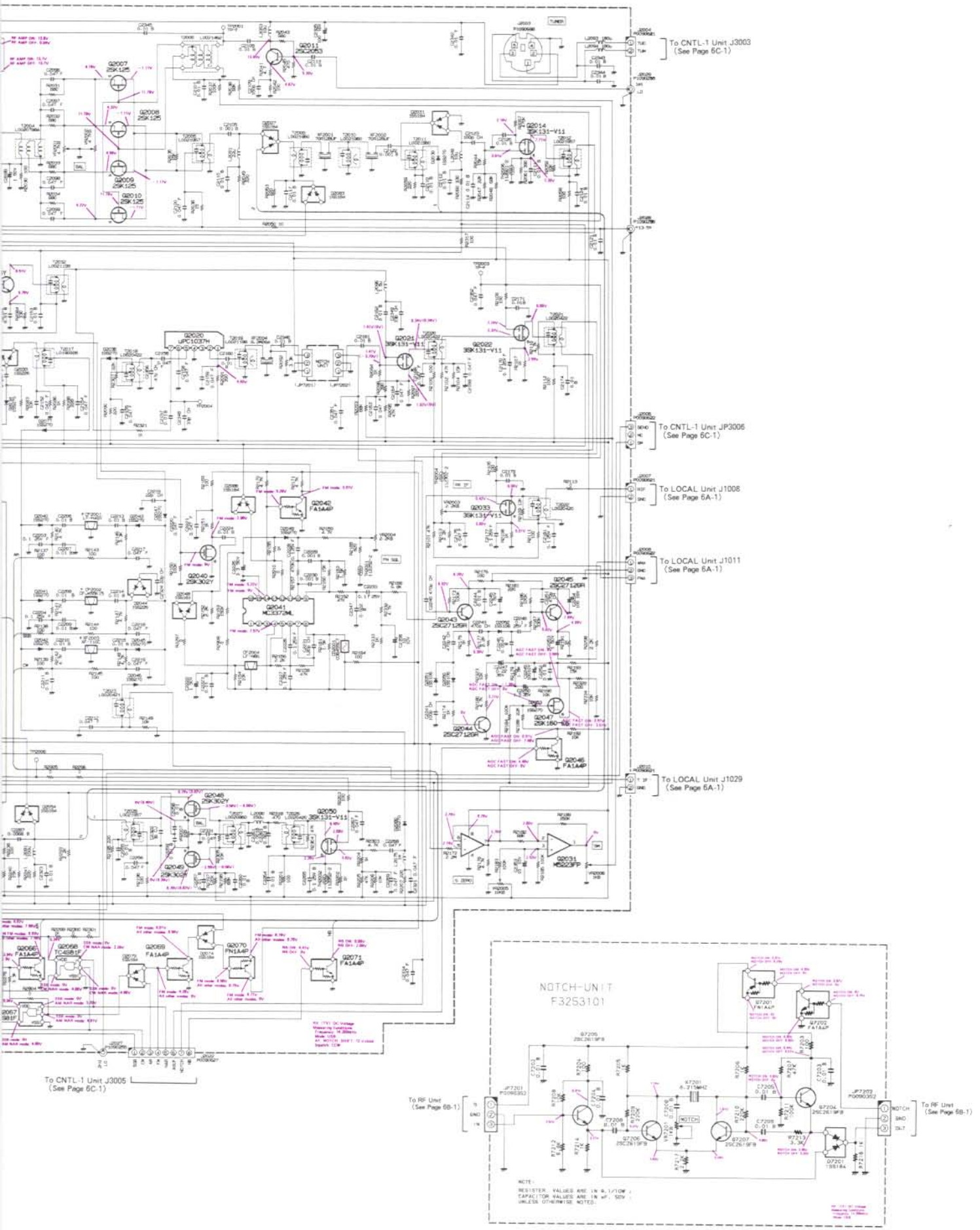
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R 1291	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1292	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1293	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 1294	CHIP RES.	3.3M	1/10W	5%	RMC1/10T 335J	J24205335		
R 1295	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1296	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1297	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1298	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1299	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 1300	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 1301	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1302	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1303	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1304	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1305	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1306	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1307	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 1308	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1309	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 1310	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1312	CHIP RES.	3.3M	1/10W	5%	RMC1/10T 335J	J24205335		
R 1313	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1314	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1315	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1316	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1317	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1318	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 1319	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 1320	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1321	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 1325	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1327	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1328	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1329	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1330	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1331	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1332	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1333	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1334	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1335	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1336	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1337	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 1338	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1339	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 1340	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1341	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1350	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 1351	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1352	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 1353	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1354	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1355	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		

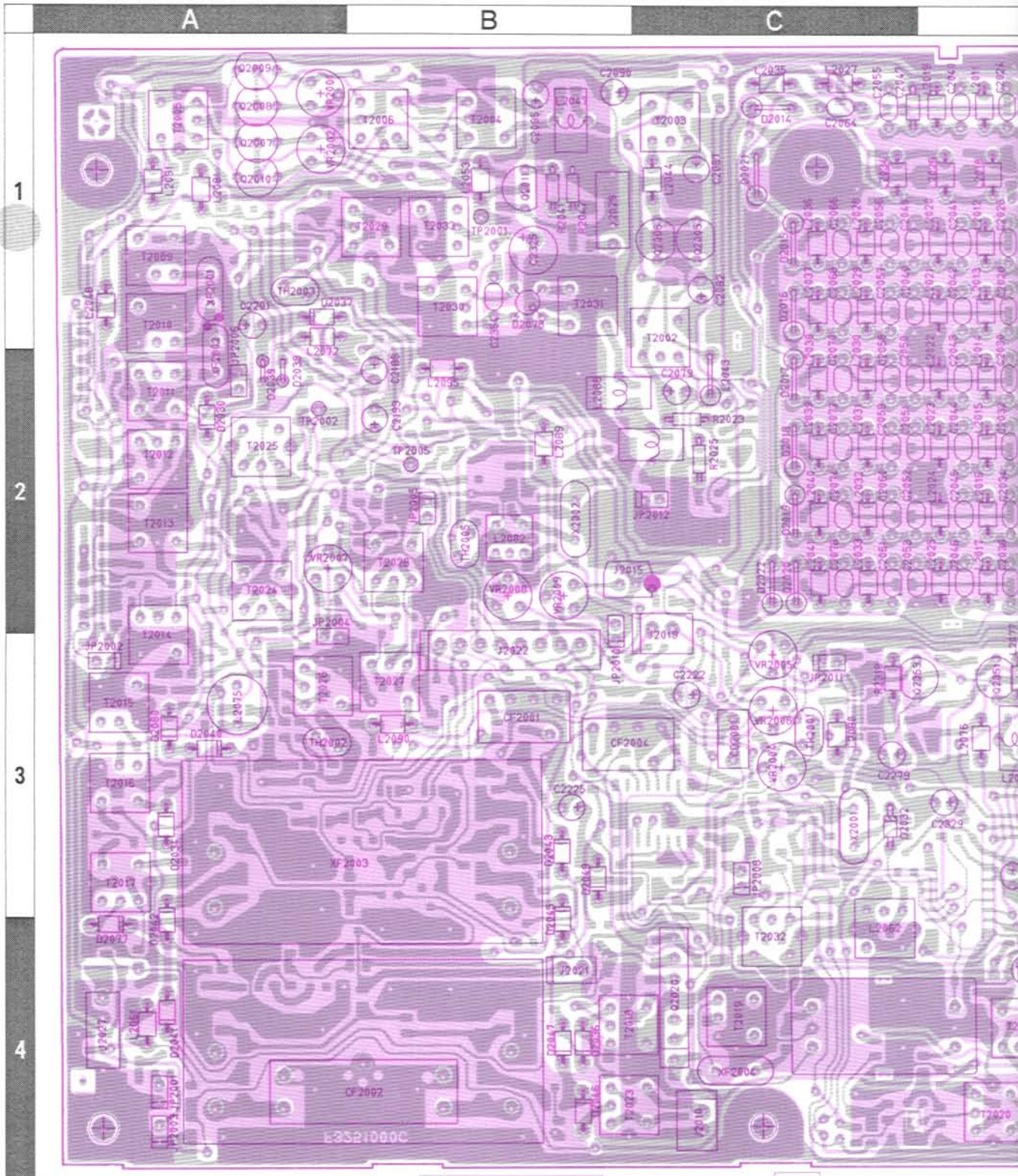
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R 1357	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1358	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 1359	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1361	CARBON FILM RES.	1	1/6W	5%	RD16TPJ010 1	J07225010	TCXO-3 W/O	
R 1362	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1363	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 1364	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1365	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1366	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1367	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1368	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1369	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 1370	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1375	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 1376	METAL FILM RES.	3.3	1W	10%	RS1B 1W K 3.3	J20306339		
R 1378	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 1379	CARBON FILM RES.	1M	1/6W	5%	RD16TPJ105 1M	J07225105		
R 1380	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 1381	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 1382	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1383	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 1384	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1385	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1386	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 1387	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 1388	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 1389	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1391	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 1392	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 1393	CARBON FILM RES.	100K	1/6W	5%	RD16TPJ104 100K	J07225104		
R 1394	CARBON FILM RES.	1K	1/6W	5%	RD16TPJ102 1K	J07225102		
S 1001	SLIDE SWITCH				SSS212299	N6090051		
T 1002	COIL				61.44M R12-M416A	L0021932		
T 1003	COIL				61.44M R12-M416A	L0021932		
T 1004	COIL				4-1 2D3 TR6X3	L0020788A		
T 1005	COIL				61.44M R12-M416A	L0021932		
T 1006	COIL				61.44M R12-M416A	L0021932		
TC1001	TRIMMER CAP.	6pF			ECV1ZW06X53T	K91000055		
TC1002	TRIMMER CAP.	20p			VCT51E117	K91000086	TCXO-3 W/O	
TC1003	TRIMMER CAP.	6pF			ECV1ZW06X53T	K91000055		
TC1004	TRIMMER CAP.	6pF			ECV1ZW06X53T	K91000055		
TC1005	TRIMMER CAP.	6pF			ECV1ZW06X53T	K91000055		
TP1001	TP-E/				TP-E/MS-60124	Q5000016		
TP1002	TP-E/				TP-E/MS-60124	Q5000016		
TP1003	TP-E/				TP-E/MS-60124	Q5000016		
TP1004	TP-E/				TP-E/MS-60124	Q5000016		
TP1005	TP-E/				TP-E/MS-60124	Q5000016		
TP1006	TP-E/				TP-E/MS-60124	Q5000016		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
TP1007	TP-E/				TP-E/MS-60124	Q5000016		
TP1008	TP-E/				TP-E/MS-60124	Q5000016		
TP1009	TP-E/				TP-E/MS-60124	Q5000016		
VR1003	POT.	10KB			K091B0Z09-10KB	J60800124		
VR1004	POT.	10KB			H0652A013-10KB	J50770103		
VR1006	POT.	500KB			K091B0Z09-500KB	J60800126		
VR1007	POT.	10KB			K091B0Z09-10KB	J60800124		
VR1008	POT.	10KB			H0652A013-10KB	J50770103		
VR1010	POT.	1KB			H0652A007-1KB	J50770102		
VR1011	POT.	4.7KB			H0652A011-4.7KB	J50770472		
VR1012	POT.	10KB			H0652A013-10KB	J50770103		
VR1013	POT.	1KB			H0652A007-1KB	J50770102		
VR1014	POT.	10KB			H0652A013-10KB	J50770103		
VR1015	POT.	10KB			H0652A013-10KB	J50770103		
VR1017	POT.	4.7KB			H0652A011-4.7KB	J50770472		
VR1019	POT.	10KB			K091B0Z09-10KB	J60800124		
VR1020	POT.	10KB			H0652A013-10KB	J50770103		
VR1022	POT.	10KB			H0652A013-10KB	J50770103		
X 1001	XTAL	10.48576MH				H0102990	TCXO-3 W/O	
X 1002	XTAL	70.000MHZ				H0103009		
	THERMAL CONDUCTOR				45T-TO-220	Q9000548		
	VCO CASE					R0124120		
	VCO COVER					R0124130		
	LEAF SPRING(3pcs)					R0125240		
	SHIELD COVER(2pcs)					R0131640		
	SHIELD CASE(3pcs)					R0131670A		
	SHIELD COVER(3pcs)					R0131680		
	LEAF SPRING(2pcs)					R0140031		
	HEATSINK PLATE					R0140810B		
	FIBER(2pcs)					R7107410		
	NYLON RIVET				FNRP 3.0X4.5	S6000031		
	MIINI CLAMP				UAMS-11-0	S6000295		

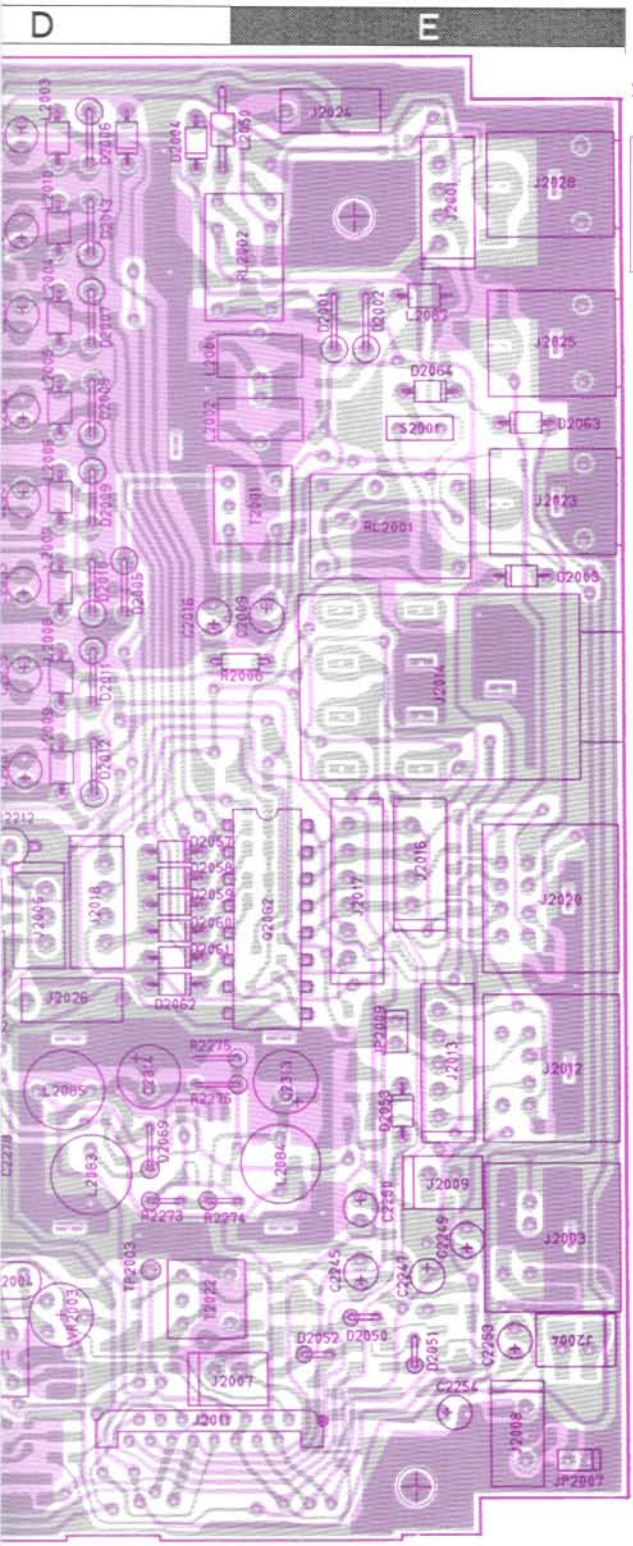
Circuit Diagram




To CNTL-1 Unit J3003
(See Page 6C-1)
To CNTL-1 Unit JP3006
(See Page 6C-1)
To LOCAL Unit J1008
(See Page 6A-1)
To LOCAL Unit J1011
(See Page 6A-1)
To LOCAL Unit J1029
(See Page 6A-1)
To CNTL-1 Unit J3005
(See Page 6C-1)
NOTCH-UNIT
F3253101
To RF Unit
(See Page 6B-1)
To RF Unit
(See Page 6B-1)

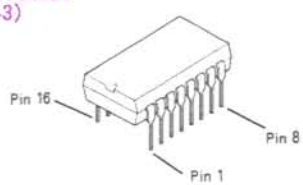


Obverse View of Component Side

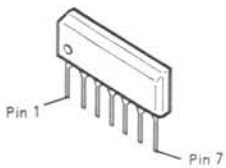


J2001
To CNTL-1 Unit J3024
(See Page 6C-3)

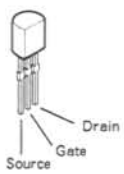
4. IPO
3. ATT
2. 13
1. 9



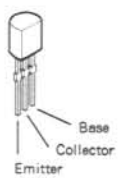
SN74LS145N
(Q2062)



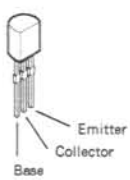
μPC1037H
(Q2020)



2SK125
(Q2005, 2006, 2007
2008, 2009, 2010)



2SC1973
(Q2051)
2SC2026
(Q2053)



2SC2053
(Q2011)

J2017
To CNTL-1 Unit J3022
(See Page 6C-3)

6. LB0
5. LB1
4. LB2
3. LB3
2. CW
1. SEMK

J2018
To LOCAL Unit J1012
(See Page 6A-3)

1. VCO4
2. VCO3
3. VCO2
4. VCO1

1. SM
2. NC
3. SEND

J2006
To CNTL-1 Unit JP3006
(See Page 6C-3)

J2004
To CNTL-1 Unit J3003
(See Page 6C-3)

2. TUM
1. TUD

1. RIF
2. GND

J2007
To LOCAL Unit J1008
(See Page 6A-3)

16. DASH
15. DOT
14. TX
13. RX
12. NC
11. ALC
10. 5
9. DRIVE
8. −9
7. FM SQL
6. 9
5. 9
4. AGC
3. 13
2. 13
1. BUSY

J2011
To LOCAL Unit J1020
(See Page 6A-3)

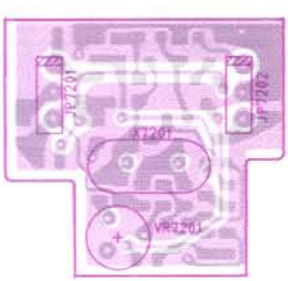
1. AMA
2. GND
3. FMA

J2008
To LOCAL Unit J1011
(See Page 6A-3)

Unit

1. 9
2. GND
3. IN

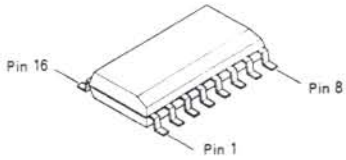
Unit
Page 6B-3)



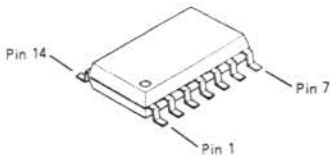
1. NOTCH
2. GND
3. OUT

To RF Unit
(See Page 6B-3)

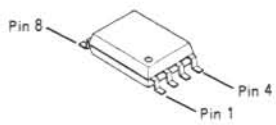
Obverse View of Component Side



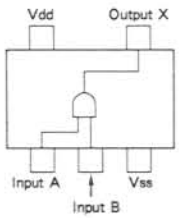
MC3372ML
(Q2041)



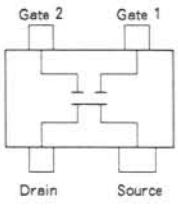
μPD4011BG
(Q2032)



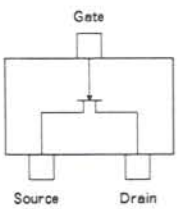
IR3M03N2
(Q2063)
M5223FP
(Q2031)



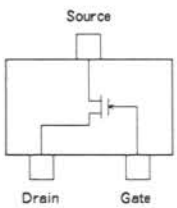
TC4S81F (C2)
(Q2067,2068)



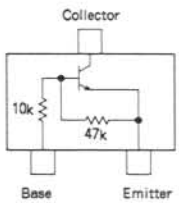
3SK131 (V11)
(Q2014,2021,2022
2033,2036,2038
2050,2056)



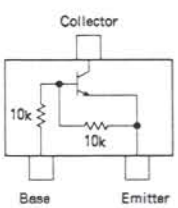
2SK160 (K6)
(Q2047)



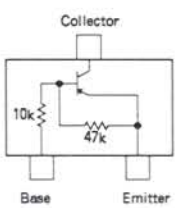
2SK302Y (TY)
(Q2016,2017,2040
2048,2049)



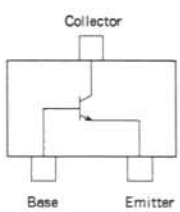
FA1A4P (L34)
(Q2004,2042,2046
2055,2061,2064
2065,2066,2069
2071,7202)



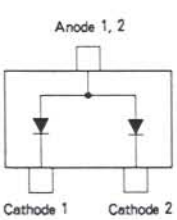
FA1A4M (L33)
(Q2001,2003)



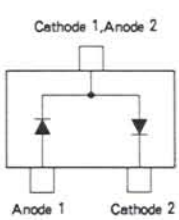
FN1A4P (M34)
(Q2002,2060,2070
2072,7201)



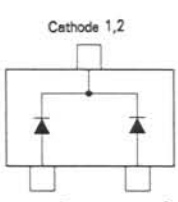
2SC2712GR (LG)
(Q2035,2037,2043
2044,2045,2054)
2SC2714Y (JY)
(Q2015,2018,2019
2058,2059)
2SC2619 (FB)
(Q7204,7205,7206
7207)



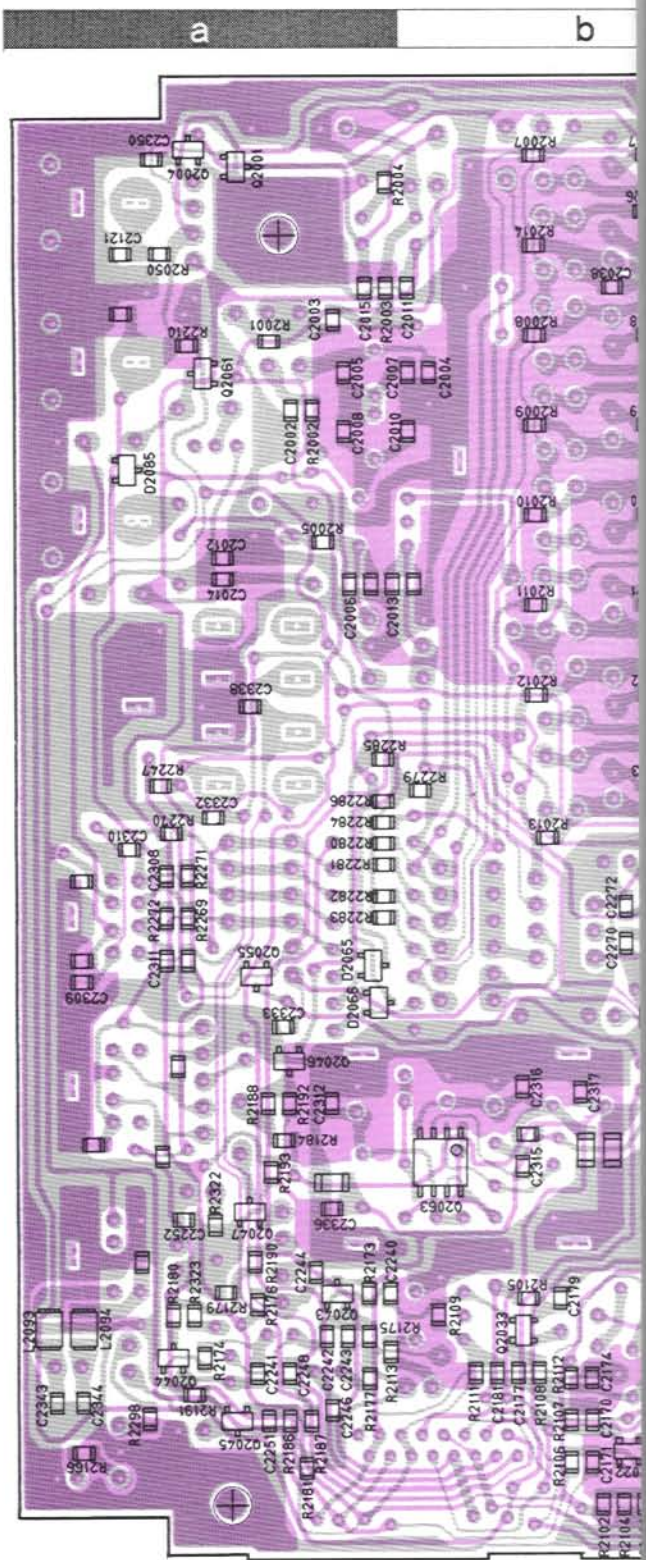
1SS181 (A3)
(D2048,2065,2066,2084)



1SS226 (C3)
(D2033,2044)

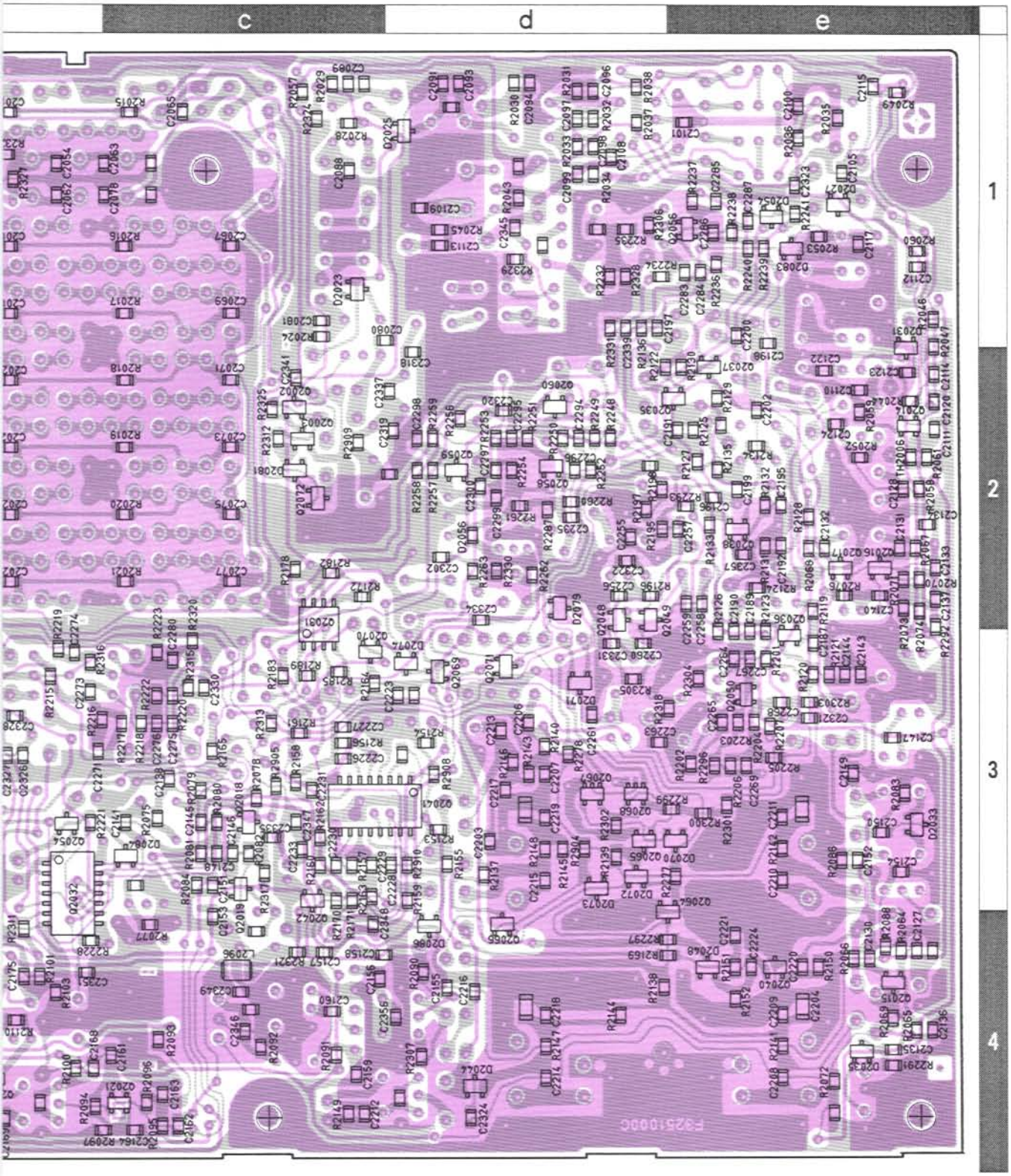


1SS184 (B3)
(D2023,2025,2027,2031
2035,2054,2070,2071
2072,2073,2074,2079
2081,2083,2085,2086
2087,7201)

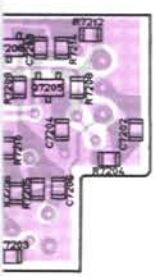


Notch Unit





Obverse View of Chip Side



Obverse View of Chip Side

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** RF UNIT ***						
	PCB with Components					CP4893001		
	Printed Circuti Board					F3251000C		
C 2002	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2003	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2004	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2005	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 2006	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2007	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239		
C 2008	CHIP CAP.	6pF	50V	CH	GRM40CH060D50PT	K22170207		
C 2009	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2010	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2011	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2012	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2013	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2014	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2015	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2016	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2017	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2018	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2019	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2020	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2021	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2022	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2023	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2024	CERAMIC CAP.	240p	50V	SL	DD107-979SL241J50	K26171038		
C 2025	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2026	CERAMIC CAP.	470pF	50V	SL	DD109-979SL471J50	K26171045		
C 2027	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2028	CERAMIC CAP.	150pF	50V	SL	DD106-979SL151J50	K26171033		
C 2029	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2030	CERAMIC CAP.	120pF	50V	SL	DD105-979SL121J50	K26171031		
C 2031	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2032	CERAMIC CAP.	82pF	50V	SL	DD104-979SL820J50	K26171027		
C 2033	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2034	CERAMIC CAP.	56pF	50V	SL	DD104-979SL560J50	K26171023		
C 2035	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2036	CERAMIC CAP.	27pF	50V	SL	DD104SL270J50	K00175270		
C 2037	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2038	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2039	AL.ELECTRO.CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2040	CERAMIC CAP.	160p	50V	SL	DD106-979SL161J50	K26171034		
C 2041	CERAMIC CAP.	200p	50V	SL	DD106-979SL201J50	K26171036		
C 2042	CERAMIC CAP.	91p	50V	SL	DD105-979SL910J50	K26171028		
C 2043	CERAMIC CAP.	47pF	50V	SL	DD104-979SL470J50	K26171021		
C 2044	CERAMIC CAP.	33pF	50V	SL	DD104-979SL330J50	K26171017		
C 2045	CERAMIC CAP.	24p	50V	SL	DD104-979SL240J50	K26171014		
C 2046	CERAMIC CAP.	15pF	50V	SL	DD104-979SL150J50	K26171009		
C 2047	CERAMIC CAP.	430p	50V	SL	DD109-979SL431J50	K26171044		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 2048	CERAMIC CAP.	0.001uF	25V	X	UAT04X102K-L05AE	K19149001		
C 2049	CERAMIC CAP.	270pF	50V	SL	DD107-979SL271J50	K26171039		
C 2050	CERAMIC CAP.	220pF	50V	SL	DD107-979SL221J50	K26171037		
C 2051	CERAMIC CAP.	160p	50V	SL	DD106-979SL161J50	K26171034		
C 2052	CERAMIC CAP.	100pF	50V	SL	DD105-979SL101J50	K26171029		
C 2053	CERAMIC CAP.	75p	50V	SL	DD104SL750J50	K00175750		
C 2054	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239		
C 2055	CERAMIC CAP.	160p	50V	SL	DD106-979SL161J50	K26171034		
C 2056	CERAMIC CAP.	200p	50V	SL	DD106-979SL201J50	K26171036		
C 2057	CERAMIC CAP.	91p	50V	SL	DD105-979SL910J50	K26171028		
C 2058	CERAMIC CAP.	47pF	50V	SL	DD104-979SL470J50	K26171021		
C 2059	CERAMIC CAP.	33pF	50V	SL	DD104-979SL330J50	K26171017		
C 2060	CERAMIC CAP.	24p	50V	SL	DD104-979SL240J50	K26171014		
C 2061	CERAMIC CAP.	15pF	50V	SL	DD104-979SL150J50	K26171009		
C 2062	CHIP CAP.	330pF	50V	CH	GRM40CH331J50PT	K22170247		
C 2063	CHIP CAP.	330pF	50V	CH	GRM40CH331J50PT	K22170247		
C 2064	CERAMIC CAP.	240p	50V	SL	DD107-979SL241J50	K26171038		
C 2065	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2066	CERAMIC CAP.	470pF	50V	SL	DD109-979SL471J50	K26171045		
C 2067	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2068	CERAMIC CAP.	150pF	50V	SL	DD106-979SL151J50	K26171033		
C 2069	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2070	CERAMIC CAP.	120pF	50V	SL	DD105-979SL121J50	K26171031		
C 2071	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2072	CERAMIC CAP.	82pF	50V	SL	DD104-979SL820J50	K26171027		
C 2073	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2074	CERAMIC CAP.	56pF	50V	SL	DD104-979SL560J50	K26171023		
C 2075	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2076	CERAMIC CAP.	33pF	50V	SL	DD104-979SL330J50	K26171017		
C 2077	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2078	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239		
C 2079	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2080	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2081	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2082	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2087	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2088	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2089	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2090	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2091	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2093	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2094	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2095	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2096	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2097	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2098	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2099	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2100	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2101	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2105	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2108	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2109	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 2110	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2111	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2112	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2113	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2114	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2115	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2117	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2120	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2121	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2122	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2123	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 2124	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2127	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 2128	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2130	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2131	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2132	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2133	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2134	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2135	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2136	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2137	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2138	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2140	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2141	CHIP CAP.	3pF	50V	UJ	GRM40UJ030C50PT	K22170304		
C 2143	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2144	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 2145	CHIP CAP.	330pF	50V	UJ	GRM40UJ331J50PT	K22170347		
C 2146	CHIP CAP.	330pF	50V	UJ	GRM40UJ331J50PT	K22170347		
C 2147	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 2148	CHIP CAP.	330pF	50V	UJ	GRM40UJ331J50PT	K22170347		
C 2149	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2150	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2151	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2152	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2153	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2154	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2155	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2156	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2157	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2158	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2159	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2160	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2161	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2162	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2163	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2164	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2168	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2169	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2170	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2171	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2174	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 2175	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2177	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2179	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2181	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2187	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2188	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 2189	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2190	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2191	CHIP CAP.	0.022uF	50V	B	GRM40B223M50PT	K22170821		
C 2192	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2193	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 2195	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2196	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2197	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2198	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2199	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2200	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2201	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 2202	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2203	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2204	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2206	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2207	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2208	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2209	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2210	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2211	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2212	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2213	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2214	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2215	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2216	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 2217	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2218	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2219	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2220	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2221	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2222	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2223	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2224	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2225	AL. ELECTRO. CAP.	3.3uF	50V		50V3R3M4X7TR2	K46170032		
C 2226	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2227	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2228	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2229	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2230	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2231	CHIP CAP.	120pF	50V	CH	GRM40CH121J50PT	K22170237		
C 2233	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2235	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 2240	CHIP CAP.	470pF	50V	CH	GRM40CH471J50PT	K22170251		
C 2241	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 2242	CHIP CAP.	470pF	50V	CH	GRM40CH471J50PT	K22170251		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 2243	CHIP CAP.	470pF	50V	CH	GRM40CH471J50PT	K22170251		
C 2244	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2245	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2246	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 2247	TANTALUM CAP.	0.22uF	35V		DN1VR22M1S	K70167224		
C 2248	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2249	AL. ELECTRO. CAP.	100uF	10V		RC2-10V101M(6X7)	K40109015		
C 2250	TANTALUM CAP.	1.5	35V		DN1V1R5M1S	K70167155		
C 2251	CHIP CAP.	470pF	50V	CH	GRM40CH471J50PT	K22170251		
C 2252	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2253	AL. ELECTRO. CAP.	1uF	50V		50V010M4X7TR2	K46170030		
C 2254	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 2255	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2256	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2257	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2258	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2259	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2260	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2261	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2263	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2264	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2265	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2267	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2268	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2269	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2270	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2271	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2272	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 2273	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2274	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2275	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2276	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2278	AL. ELECTRO. CAP.	2.2uF	50V		50V2R2M4X7TR2	K46170031		
C 2279	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 2280	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2283	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2284	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2285	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2286	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2287	CHIP CAP.	0.0068uF	50V	B	GRM40B682M50PT	K22170815		
C 2294	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2295	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2296	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2297	CHIP CAP.	5pF	50V	CH	GRM40CH050C50PT	K22170206		
C 2298	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2299	CHIP CAP.	33pF	50V	UJ	GRM40UJ330J50PT	K22170323		
C 2300	CHIP CAP.	33pF	50V	UJ	GRM40UJ330J50PT	K22170323		
C 2302	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2308	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2309	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2310	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2311	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 2312	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2313	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 2314	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 2315	CHIP CAP.	560pF	50V	B	GRM40B561M50PT	K22170802		
C 2316	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2317	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2318	CHIP CAP.	82pF	50V	CH	GRM40CH820J50PT	K22170233		
C 2319	CHIP CAP.	82pF	50V	CH	GRM40CH820J50PT	K22170233		
C 2320	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2321	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2322	CHIP CAP.	3pF	50V	CJ	GRM40CJ030C50PT	K22170204		
C 2323	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2324	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 2325	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 2326	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2327	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2328	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 2329	AL. ELECTRO. CAP.	10uF	16V		16V100M4X7TR2	K46120004		
C 2330	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2331	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2332	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2333	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2334	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2335	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2336	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2337	CHIP CAP.	8pF	50V	CH	GRM40CH080D50PT	K22170209		
C 2338	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 2339	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2340	TANTALUM CHIP CAP.	6.8uF	16V		F951C685MWCAF1	K78120004		
C 2341	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2342	CERAMIC CAP.	0.01uF	16V	Y	EP050Y103N-A	K28129001		
C 2343	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2344	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2345	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2346	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2347	CHIP CAP.	0.022uF	50V	B	GRM40B223M50PT	K22170821		
C 2348	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 2349	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 2350	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2351	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2352	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 2353	TANTALUM CAP.	10uF	10V		DN1A100M1S	K70107106		
C 2354	CERAMIC CAP.	22pF	50V	CH	DD104CH220J50	K02179009		
C 2355	TANTALUM CAP.	10uF	10V		DN1A100M1S	K70107106		
C 2356	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		
C 2357	CHIP CAP.	68pF	50V	CH	GRM40CH680J50PT	K22170231		
C 2358	TANTALUM CAP.	10uF	10V		DN1A100M1S	K70107106		
CD2001	CERAMIC DISC				CDB455C7	H7900180		
CF2001	CERAMIC FILTER				LF-H6SC	H3900377	DST USA	
CF2001	CERAMIC FILTER				LF-H6SC	H3900377	DST EXP	

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
CF2001	CERAMIC FILTER				LF-H6SC	H3900377	DST BEL	
CF2001	CERAMIC FILTER				LF-H6SC	H3900377	DST FRA	
CF2002	CERAMIC FILTER				CFJ455K15	H3900398		
CF2004	CERAMIC FILTER				LF-H8S	H3900387		
D 2001	DIODE				1SS83RE	G2050007		
D 2002	DIODE				1SS83RE	G2050007		
D 2003	DIODE				1SS270TJ	G2060004		
D 2004	DIODE				1SS270TJ	G2060004		
D 2005	DIODE				1SS83RE	G2050007		
D 2006	DIODE				1SS83RE	G2050007		
D 2007	DIODE				1SS83RE	G2050007		
D 2008	DIODE				1SS83RE	G2050007		
D 2009	DIODE				1SS83RE	G2050007		
D 2010	DIODE				1SS83RE	G2050007		
D 2011	DIODE				1SS83RE	G2050007		
D 2012	DIODE				1SS83RE	G2050007		
D 2013	DIODE				1SS83RE	G2050007		
D 2014	DIODE				1SS83RE	G2050007		
D 2015	DIODE				1SS83RE	G2050007		
D 2016	DIODE				1SS83RE	G2050007		
D 2017	DIODE				1SS83RE	G2050007		
D 2018	DIODE				1SS83RE	G2050007		
D 2019	DIODE				1SS83RE	G2050007		
D 2020	DIODE				1SS83RE	G2050007		
D 2021	DIODE				1SS83RE	G2050007		
D 2022	DIODE				1SS83RE	G2050007		
D 2023	DIODE				1SS184 TE85R	G2070009		
D 2025	DIODE				1SS184 TE85R	G2070009		
D 2027	DIODE				1SS184 TE85R	G2070009		
D 2030	DIODE				1SS270TJ	G2060004		
D 2031	DIODE				1SS184 TE85R	G2070009		
D 2032	DIODE				1SV50	G2090023		
D 2033	DIODE				1SS226 TE85R	G2070003		
D 2034	DIODE				1SS270TJ	G2060004		
D 2035	DIODE				1SS184 TE85R	G2070009		
D 2036	DIODE				1SS270TJ	G2060004		
D 2037	DIODE				1SS270TJ	G2060004		
D 2038	DIODE				1SS106	G2090244		
D 2039	DIODE				1SS106	G2090244		
D 2040	DIODE				1SS270TJ	G2060004		
D 2041	DIODE				1SS270TJ	G2060004		
D 2042	DIODE				1SS270TJ	G2060004		
D 2043	DIODE				1SS270TJ	G2060004		
D 2044	DIODE				1SS226 TE85R	G2070003		
D 2045	DIODE				1SS270TJ	G2060004		
D 2046	DIODE				1SS270TJ	G2060004		
D 2047	DIODE				1SS270TJ	G2060004		
D 2048	DIODE				1SS181 TE85R	G2070001		
D 2049	DIODE				1SS270TJ	G2060004		
D 2050	DIODE				1SS106	G2090244		
D 2051	DIODE				1SS106	G2090244		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
D 2052	DIODE				1SS106	G2090244		
D 2053	DIODE				1SS270TJ	G2060004		
D 2054	DIODE				1SS184 TE85R	G2070009		
D 2056	DIODE				HVU306A5TRF	G2070132		
D 2057	DIODE				1SS270TJ	G2060004		
D 2058	DIODE				1SS270TJ	G2060004		
D 2059	DIODE				1SS270TJ	G2060004		
D 2060	DIODE				1SS270TJ	G2060004		
D 2061	DIODE				1SS270TJ	G2060004		
D 2062	DIODE				1SS270TJ	G2060004		
D 2063	DIODE				1SS270TJ	G2060004		
D 2064	DIODE				1SS270TJ	G2060004		
D 2065	DIODE				1SS181 TE85R	G2070001		
D 2066	DIODE				1SS181 TE85R	G2070001		
D 2069	DIODE				1SS83RE	G2050007		
D 2070	DIODE				1SS184 TE85R	G2070009		
D 2071	DIODE				1SS184 TE85R	G2070009		
D 2072	DIODE				1SS184 TE85R	G2070009		
D 2073	DIODE				1SS184 TE85R	G2070009		
D 2074	DIODE				1SS184 TE85R	G2070009		
D 2077	DIODE				1SS270TJ	G2060004		
D 2078	DIODE				ND487C2-3R	G2090135		
D 2079	DIODE				1SS184 TE85R	G2070009		
D 2080	DIODE				1SS270TJ	G2060004		
D 2081	DIODE				1SS184 TE85R	G2070009		
D 2083	DIODE				1SS184 TE85R	G2070009		
D 2084	DIODE				1SS181 TE85R	G2070001		
D 2085	DIODE				1SS184 TE85R	G2070009		
D 2086	DIODE				1SS184 TE85R	G2070009		
J 2001	CONNECTOR				SC25-04WS	P0090623		
J 2003	CONNECTOR				TCS7930-15-401	P1090698		
J 2004	CONNECTOR				SC25-02WS	P0090621		
J 2006	CONNECTOR				SC25-03WS	P0090622		
J 2007	CONNECTOR				SC25-02WS	P0090621		
J 2008	CONNECTOR				SC25-03WS	P0090622		
J 2010	CONNECTOR				SC25-02WS	P0090621		
J 2011	CONNECTOR				52030-1610	P1090657		
J 2012	CONNECTOR				TCS7930-16-401	P1090699		
J 2013	CONNECTOR				SC25-05WS	P0090624		
J 2014	CONNECTOR				S-G4617#03	P1090351		
J 2015	CONNECTOR				SB20-02WS	P0090609		
J 2017	CONNECTOR				SC25-06WS	P0090625		
J 2018	CONNECTOR				SC25-04WS	P0090623		
J 2019	CONNECTOR				SC25-02WS	P0090621		
J 2020	CONNECTOR				TCS7930-18-401	P1090700		
J 2021	CONNECTOR				SC25-02WS	P0090621		
J 2022	CONNECTOR				SC25-08WS	P0090627		
J 2023	CONNECTOR				S-Q3097-01	P1090348		
J 2024	CONNECTOR				TMP-J01X-A2	P1090255		
J 2025	CONNECTOR				S-Q3097-04	P1090354		
J 2026	CONNECTOR				TMP-J01X-A2	P1090255		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
J 2027	CONNECTOR				TMP-J01X-A2	P1090255		
J 2028	CONNECTOR				S-Q3097-02	P1090296		
J 2029	CONNECTOR				TMP-J01X-A2	P1090255		
JP2001	WIRE-ASSY					T9206158		
JP2003	WIRE-ASSY					T9206159		
JP2005	WIRE-ASSY					T9206160		
JP2007	WIRE-ASSY					T9206161		
JP2009	WIRE-ASSY					T9206161		
JP2011	WIRE-ASSY					T9206158		
L 2001	COIL				0.170U T25-6	L0021221		
L 2002	COIL				0.240U T25-6	L0021222		
L 2003	M.RFC	8.2uH			LAP02TA8R2K	L1790057		
L 2004	M.RFC	10uH			LAP02TA100K	L1790058		
L 2005	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 2006	M.RFC	2.7u			LAP02TA2R7K	L1790051		
L 2007	M.RFC	1.8u			LAP02TA1R8K	L1790049		
L 2008	M.RFC	1.5u			LAP02TA1R5K	L1790048		
L 2009	M.RFC	0.82uH			LAP02TAR82K	L1790045		
L 2010	M.RFC	1mH			LAL03VB102K	L1790164		
L 2011	M.RFC	12uH			LAP02TA120K	L1790059		
L 2012	M.RFC	27uH			LAP02TA270K	L1790063		
L 2013	M.RFC	8.2uH			LAP02TA8R2K	L1790057		
L 2014	M.RFC	6.8uH			LAP02TA6R8K	L1790056		
L 2015	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 2016	M.RFC	3.3uH			LAP02TA3R3K	L1790052		
L 2017	M.RFC	2.2uH			LAP02TA2R2K	L1790050		
L 2018	M.RFC	33uH			LAP02TA330K	L1790064		
L 2019	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 2020	M.RFC	6.8uH			LAP02TA6R8K	L1790056		
L 2021	M.RFC	2.7u			LAP02TA2R7K	L1790051		
L 2022	M.RFC	1.5u			LAP02TA1R5K	L1790048		
L 2023	M.RFC	1uH			LAP02TA1R0K	L1790046		
L 2024	M.RFC	0.82uH			LAP02TAR82K	L1790045		
L 2025	M.RFC	0.47uH			LAP02TAR47K	L1790042		
L 2026	M.RFC	33uH			LAP02TA330K	L1790064		
L 2027	M.RFC	12uH			LAP02TA120K	L1790059		
L 2028	M.RFC	27uH			LAP02TA270K	L1790063		
L 2029	M.RFC	8.2uH			LAP02TA8R2K	L1790057		
L 2030	M.RFC	6.8uH			LAP02TA6R8K	L1790056		
L 2031	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 2032	M.RFC	3.3uH			LAP02TA3R3K	L1790052		
L 2033	M.RFC	2.2uH			LAP02TA2R2K	L1790050		
L 2034	M.RFC	33uH			LAP02TA330K	L1790064		
L 2035	M.RFC	8.2uH			LAP02TA8R2K	L1790057		
L 2036	M.RFC	10uH			LAP02TA100K	L1790058		
L 2037	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 2038	M.RFC	2.7u			LAP02TA2R7K	L1790051		
L 2039	M.RFC	1.8u			LAP02TA1R8K	L1790049		
L 2040	M.RFC	1.5u			LAP02TA1R5K	L1790048		
L 2041	M.RFC	0.82uH			LAP02TAR82K	L1790045		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
L 2043	M.RFC	1mH			LAL03VB102K	L1790164		
L 2044	M.RFC	6.8uH			LAP02TA6R8K	L1790056		
L 2047	COIL				0.240U T25-6	L0021222		
L 2048	M.RFC	10uH			LAP02TA100K	L1790058		
L 2050	M.RFC	1mH			LAL03TA102K	L1790119		
L 2053	M.RFC	10uH			LAP02TA100K	L1790058		
L 2061	M.RFC	47uH			LAP02TA470K	L1790066		
L 2062	COIL				8.67M R12-L721X	L0022134		
L 2072	M.RFC	1mH			LAL03VB102K	L1790164		
L 2075	M.RFC	1mH			RCR-875D-102K	L1190392		
L 2076	M.RFC	22uH			LAP02TA220K	L1790062		
L 2077	M.RFC	22uH			LAP02TA220K	L1790062		
L 2080	M.RFC	4.7uH			LAP02TA4R7K	L1790054		
L 2081	M.RFC	100uH			LAP02TA101K	L1790070		
L 2082	COIL				0.75U R12-L720X	L0022133		
L 2083	M.RFC	1mH			RCR-875D-102K	L1190392		
L 2084	M.RFC	3.9m			RCR-875D-392K	L1190383		
L 2085	M.RFC	3.9m			RCR-875D-392K	L1190383		
L 2087	M.RFC	220uH			LAP02TA221K	L1790074		
L 2088	COIL				0.420U T25-6	L0021245		
L 2089	M.RFC	1uH			LAP02TA1R0K	L1790046		
L 2090	M.RFC	150uH			LAP02TA151K	L1790072		
L 2091	M.RFC	22uH			LAP02TA220K	L1790062		
L 2092	COIL				0.240U T25-6	L0021222		
L 2093	COIL	100uH			32CS 380HB-101K=P	L1690051		
L 2094	COIL	100uH			32CS 380HB-101K=P	L1690051		
L 2095	M.RFC	10uH			LAP02TA100K	L1790058		
L 2096	COIL	1.5u			32CS 380LB-1R5M=P	L1690031		
Q 2001	TRANSISTOR				FA1A4M-T2B	G3070001		a1
Q 2002	TRANSISTOR				FN1A4P-T2B	G3070011		c2
Q 2003	TRANSISTOR				FA1A4M-T2B	G3070001		c2
Q 2004	TRANSISTOR				FA1A4P-T2B	G3070006		a1
Q 2005	FET				2SK125	G3801250		C1
Q 2006	FET				2SK125	G3801250		C1
Q 2007	FET				2SK125	G3801250		A1
Q 2008	FET				2SK125	G3801250		A1
Q 2009	FET				2SK125	G3801250		A1
Q 2010	FET				2SK125	G3801250		A1
Q 2011	TRANSISTOR				2SC2053	G3320530		B1
Q 2014	FET				3SK131-T2B V11	G4801317A		e2
Q 2015	TRANSISTOR				2SC2714YTE85R	G3327147Y		e4
Q 2016	FET				2SK302Y TE85R	G3803027Y		e2
Q 2017	FET				2SK302Y TE85R	G3803027Y		e2
Q 2018	TRANSISTOR				2SC2714YTE85R	G3327147Y		c3
Q 2019	TRANSISTOR				2SC2714YTE85R	G3327147Y		c3
Q 2020	IC				UPC1037H	G1090101		C4
Q 2021	FET				3SK131-T2B V11	G4801317A		c4
Q 2022	FET				3SK131-T2B V11	G4801317A		b4
Q 2031	IC				M5223FP-600C	G1090990		c3
Q 2032	IC				UPD4011BG-T2	G1091026		b3
Q 2033	FET				3SK131-T2B V11	G4801317A		b4

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 2035	TRANSISTOR				2SC2712GR TE85R	G3327127G		e2
Q 2036	FET				3SK131-T2B V11	G4801317A		e3
Q 2037	TRANSISTOR				2SC2712GR TE85R	G3327127G		e2
Q 2038	FET				3SK131-T2B V11	G4801317A		e2
Q 2040	FET				2SK302Y TE85R	G3803027Y		e4
Q 2041	IC				MC3372ML	G1091108		c3
Q 2042	TRANSISTOR				FA1A4P-T2B	G3070006		c4
Q 2043	TRANSISTOR				2SC2712GR TE85R	G3327127G		a4
Q 2044	TRANSISTOR				2SC2712GR TE85R	G3327127G		a4
Q 2045	TRANSISTOR				2SC2712GR TE85R	G3327127G		a4
Q 2046	TRANSISTOR				FA1A4P-T2B	G3070006		a3
Q 2047	FET				2SK160-T2B K6	G3801607F		a4
Q 2048	FET				2SK302Y TE85R	G3803027Y		d2
Q 2049	FET				2SK302Y TE85R	G3803027Y		d2
Q 2050	FET				3SK131-T2B V11	G4801317A		e3
Q 2051	TRANSISTOR				2SC1973	G3319730		D3
Q 2053	TRANSISTOR				2SC2026	G3320260		C3
Q 2054	TRANSISTOR				2SC2712GR TE85R	G3327127G		b3
Q 2055	TRANSISTOR				FA1A4P-T2B	G3070006		a3
Q 2056	FET				3SK131-T2B V11	G4801317A		e1
Q 2058	TRANSISTOR				2SC2714YTE85R	G3327147Y		d2
Q 2059	TRANSISTOR				2SC2714YTE85R	G3327147Y		d2
Q 2060	TRANSISTOR				FN1A4P-T2B	G3070011		d2
Q 2061	TRANSISTOR				FA1A4P-T2B	G3070006		a1
Q 2062	IC				SN74LS145N	G1090395		E3
Q 2063	IC				IR3M03N2	G1091300		b3
Q 2064	TRANSISTOR				FA1A4P-T2B	G3070006		d4
Q 2065	TRANSISTOR				FA1A4P-T2B	G3070006		d3
Q 2066	TRANSISTOR				FA1A4P-T2B	G3070006		d4
Q 2067	IC				TC4S81F TE85R	G1090895		d3
Q 2068	IC				TC4S81F TE85R	G1090895		d3
Q 2069	TRANSISTOR				FA1A4P-T2B	G3070006		d3
Q 2070	TRANSISTOR				FN1A4P-T2B	G3070011		c3
Q 2071	TRANSISTOR				FA1A4P-T2B	G3070006		d3
Q 2072	TRANSISTOR				FN1A4P-T2B	G3070011		c2
R 2001	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2002	CHIP RES.	390	1/10W	5%	RMC1/10T 391J	J24205391		
R 2003	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 2004	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 2005	CHIP RES.	180	1/10W	5%	RMC1/10T 181J	J24205181		
R 2006	CARBON FILM RES.	180	1/4W	5%	RD14SJ181 180	J02245181		
R 2007	CARBON FILM RES.	10	1/6W	5%	RD16TPJ100 10	J07225100		
R 2008	CARBON FILM RES.	10	1/6W	5%	RD16TPJ100 10	J07225100		
R 2009	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2010	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2011	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2012	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2013	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2014	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2015	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2016	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 2017	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2018	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2019	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2020	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2021	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2023	CARBON FILM RES.	220	1/4W	5%	RD14SJ221 220	J02245221		
R 2024	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 2025	CARBON FILM RES.	330	1/6W	5%	RD16TPJ331 330	J07225331		
R 2028	CHIP RES.	15	1/10W	5%	RMC1/10T 150J	J24205150		
R 2029	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2030	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2031	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 2032	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 2033	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 2034	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 2035	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2036	CHIP RES.	15	1/10W	5%	RMC1/10T 150J	J24205150		
R 2037	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2038	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 2041	CARBON FILM RES.	4.7	1/4W	5%	RD14SJ4R7 4.7	J02245479		
R 2042	CARBON FILM RES.	100	1/4W	5%	RD14SJ101 100	J02245101		
R 2043	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 2044	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2045	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2046	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 2047	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2049	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2050	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2052	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2053	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2057	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474		
R 2058	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2059	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2060	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 2061	CHIP RES.	390	1/10W	5%	RMC1/10T 391J	J24205391		
R 2064	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2065	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2066	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 2067	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2068	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2069	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2070	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2071	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2072	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2073	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2074	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2075	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2076	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2077	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2078	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2079	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2080	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 2081	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2082	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2083	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2084	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 2086	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2088	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2090	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2091	CHIP RES.	390	1/10W	5%	RMC1/10T 391J	J24205391		
R 2092	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2093	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 2094	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2095	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2096	CHIP RES.	390	1/10W	5%	RMC1/10T 391J	J24205391		
R 2097	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2100	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2101	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2102	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2103	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2104	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2105	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2106	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2107	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2108	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2109	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2110	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2111	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2112	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2113	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2119	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2120	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2121	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2122	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2123	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 2124	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2125	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474		
R 2126	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2127	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 2128	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2129	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2130	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2131	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2132	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2133	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2134	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2135	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2136	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2137	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2138	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2139	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2140	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2141	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2142	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 2143	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2144	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2145	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2146	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2147	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2148	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2149	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2150	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2151	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2152	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2153	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 2154	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2155	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2156	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2157	CHIP RES.	470K	1/10W	5%	RMC1/10T 474J	J24205474		
R 2158	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2159	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2160	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2161	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 2162	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2163	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 2164	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2165	CHIP RES.	820	1/10W	5%	RMC1/10T 821J	J24205821		
R 2166	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 2169	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2170	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2171	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2172	CHIP RES.	2.2M	1/10W	5%	RMC1/10T 225J	J24205225		
R 2173	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2174	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2175	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2176	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2177	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2178	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2179	CHIP RES.	1.5M	1/10W	5%	RMC1/10T 155J	J24205155		
R 2180	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2181	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2182	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 2183	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2184	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2185	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2186	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2187	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 2188	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2189	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 2190	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2191	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2192	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2193	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2195	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2196	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2197	CHIP RES.	120K	1/10W	5%	RMC1/10T 124J	J24205124		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 2198	CHIP RES.	68K	1/10W	5%	RMC1/10T 683J	J24205683		
R 2201	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2202	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2203	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2204	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2205	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2206	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2207	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2210	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2212	CARBON FILM RES.	100	1/2W	5%	RD12TJ101 100	J01275101		
R 2215	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 2216	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2217	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2218	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2219	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 2220	CHIP RES.	560	1/10W	5%	RMC1/10T 561J	J24205561		
R 2221	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2222	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2223	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2228	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2232	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2234	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2235	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 2236	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 2237	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2238	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2239	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2240	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2241	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2247	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2248	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2249	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2250	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2251	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2252	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2253	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2256	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2257	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 2258	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 2259	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2260	CHIP RES.	3.9K	1/10W	5%	RMC1/10T 392J	J24205392		
R 2261	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2262	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2263	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2269	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2270	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2271	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2272	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2273	CARBON FILM RES.	8.2	1/4W	5%	RD14SJ8R2 8.2	J02245829		
R 2274	CARBON FILM RES.	8.2	1/4W	5%	RD14SJ8R2 8.2	J02245829		
R 2275	METAL FILM RES.	8.87K	1/4W	1%	MRS25F 8.87K	J20249046		
R 2276	METAL FILM RES.	1.43K	1/4W	1%	MRS25F 1.43K	J20249102		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 2277	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2278	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2279	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2280	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2281	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2282	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2283	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2284	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2285	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2286	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2287	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2291	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2292	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2293	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2296	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2297	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2298	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2299	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2300	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2301	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2302	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 2303	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2304	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 2305	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2306	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2307	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 2308	CARBON FILM RES.	220	1/6W	5%	RD16TPJ221 220	J07225221		
R 2309	CARBON FILM RES.	390	1/6W	5%	RD16TPJ391 390	J07225391		
R 2310	CARBON FILM RES.	180	1/6W	5%	RD16TPJ181 180	J07225181		
R 2311	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2312	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 2313	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2315	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2316	CHIP RES.	5.6	1/10W	5%	RMC1/10T 5R6J	J24205569		
R 2317	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2318	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 2319	CARBON FILM RES.	100	1/6W	5%	RD16TPJ101 100	J07225101		
R 2320	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		
R 2321	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2322	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 2323	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2324	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 2325	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 2326	CHIP RES.	180	1/10W	5%	RMC1/10T 181J	J24205181		
R 2327	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 2328	CHIP RES.	120	1/10W	5%	RMC1/10T 121J	J24205121		
R 2329	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2330	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 2331	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 2332	CARBON FILM RES.	4.7K	1/6W	5%	RD16TPJ472 4.7K	J07225472		
R 2333	CARBON FILM RES.	1K	1/6W	5%	RD16TPJ102 1K	J07225102		
R 2334	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 2335	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 2336	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 2904	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2905	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2908	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2909	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 2910	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
RL2001	RELAY		DC12V		AG2013	M1190045		
RL2002	RELAY		DC12V		AG4013	M1190090		
S 2001	SLIDE SWITCH				SS912L4NS	N6090066		
T 2001	COIL				4-1 2001F FR6	L0021351		
T 2002	COIL				4-1 2001F FR6	L0021351		
T 2003	COIL				- 2001F	L0021973		
T 2004	COIL				4-1 2D3 TR6X3	L0020788A		
T 2005	COIL				73.62M R12-J757A	L0021957		
T 2006	WIDE TRANS				4-1 3A	L0021462		
T 2009	COIL				73.62M S-135-214	L0021960		
T 2010	COIL				73.62M S-135-214	L0021960		
T 2011	COIL				73.62M S-135-214	L0021960		
T 2012	COIL				73.62M R12-J757A	L0021957		
T 2013	WIDE TRANS				4-1 3A	L0021462		
T 2014	COIL				455K	L0020860		
T 2015	COIL				R12-7947C	L0020422		
T 2016	COIL				455K R12-5898C	L0190026		
T 2017	COIL				455K R12-5898C	L0190026		
T 2018	COIL				R12-7947C	L0020422		
T 2019	COIL				8.20M R12-4043A	L0021199		
T 2020	COIL				R12-7947C	L0020422		
T 2021	COIL				R12-7947C	L0020422		
T 2022	COIL				R12-7943B	L0020420		
T 2023	COIL				R12-7935A	L0020421		
T 2024	COIL				R12-7947C	L0020422		
T 2025	COIL				R12-7947C	L0020422		
T 2026	COIL				R12-7943B	L0020420		
T 2027	COIL				455K	L0020860		
T 2028	COIL				73.62M R12-J757A	L0021957		
T 2029	COIL				73.62M R12-J757A	L0021957		
T 2030	COIL				4-1 2D3 TR6X3	L0020788A		
T 2031	COIL				4-1 2D3 TR6X3	L0020788A		
T 2032	COIL				8.20M R12-4043A	L0021199		
TH2001	THERMISTOR				112252-2	G9090016		
TH2002	THERMISTOR				112252-2	G9090016		
TH2003	THERMISTOR				112102-2	G9090008		
TH2004	THERMISTOR				112302-2	G9090010		
TH2005	THERMISTOR				112501-2	G9090013		
TH2006	THERMISTOR				112501-2	G9090013		
TP2001	TP-F				TP-F IPS-1032	Q5000026		

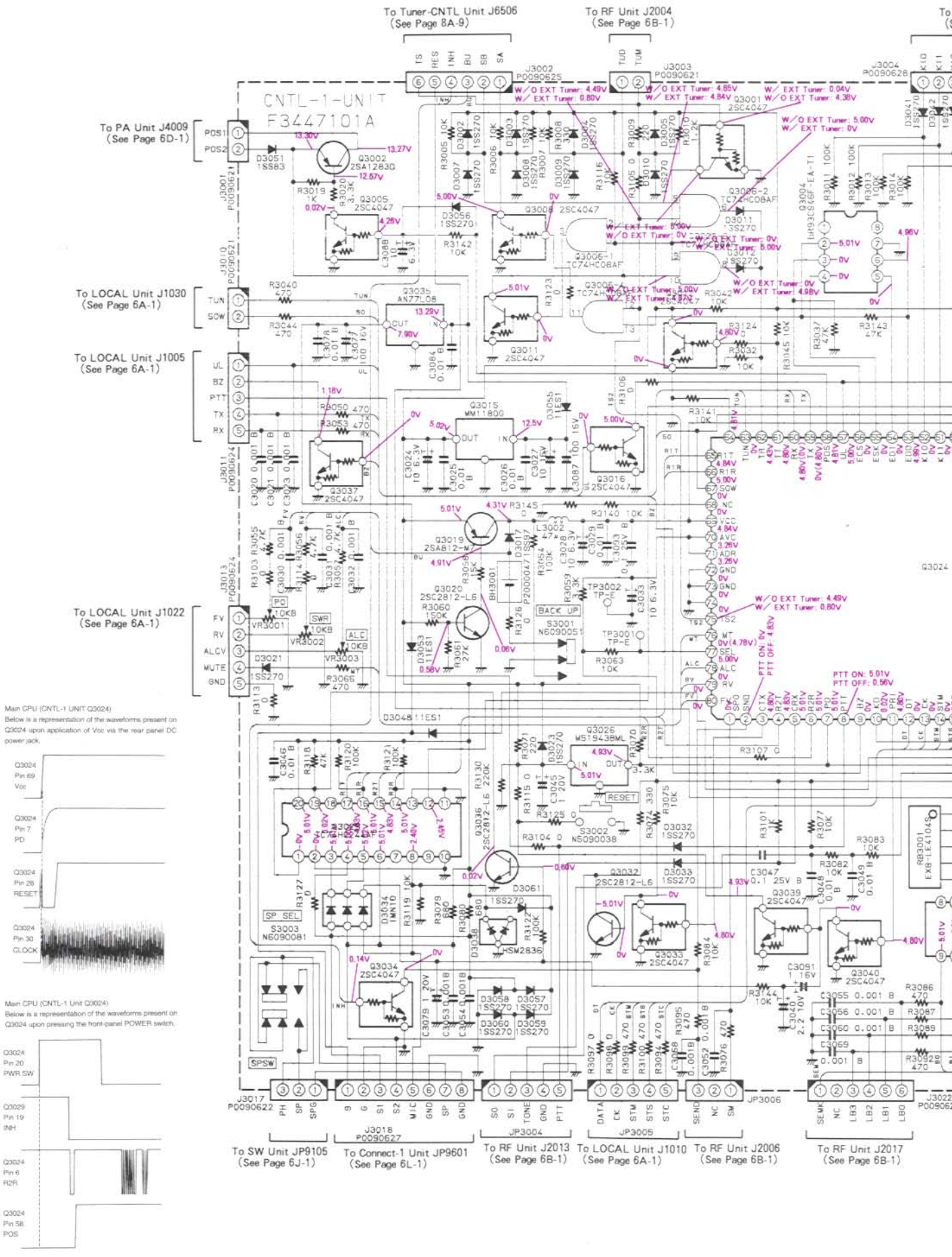
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TP2002	TP-F				TP-F IPS-1032	Q5000026		
TP2003	TP-F				TP-F IPS-1032	Q5000026		
TP2005	TP-F				TP-F IPS-1032	Q5000026		
VR2001	POT.	4.7KB			H0651A011-4.7KB	J51745472		
VR2002	POT.	4.7KB			H0651A011-4.7KB	J51745472		
VR2003	POT.	2.2KB			H0651A009-2.2KB	J51745222		
VR2004	POT.	2.2KB			H0651A009-2.2KB	J51745222		
VR2005	POT.	10KB			H0651A013-10KB	J51745103		
VR2006	POT.	1KB			H0651A007-1KB	J51745102		
VR2007	POT.	1KB			H0651A007-1KB	J51745102		
VR2008	POT.	100KB			H0651A019-100KB	J51745104		
VR2009	POT.	10KB			H0651A013-10KB	J51745103		
X 2001	XTAL					H0102550		
X 2002	XTAL	70.455MHz				H0103010		
XF2001	XTAL				70R12BUF	H1102202		
XF2002	XTAL				70R12BUF	H1102202		
XF2003	XTAL				XF-110C	H1102226		
XF2004	XTAL				8.2M20A	H1102050		
P 0073	WIRE-ASSY					T9206217		
	LEAF SPRING(2pcs)					R0140031		
	SHIELD CASE					R0140190		
	SHIELD COVER					R0140200		
	SHIELD CASE					R0140210		
	SHIELD COVER					R0140220		
	SHIELD PLATE					R0140820		
	SHIELD PLATE(2pcs)					R0140840		
	XTAL HOLDER(2pcs)					R3129530		
	FIBER(3pcs)					R7107410		
	SPONGE					R7121310		

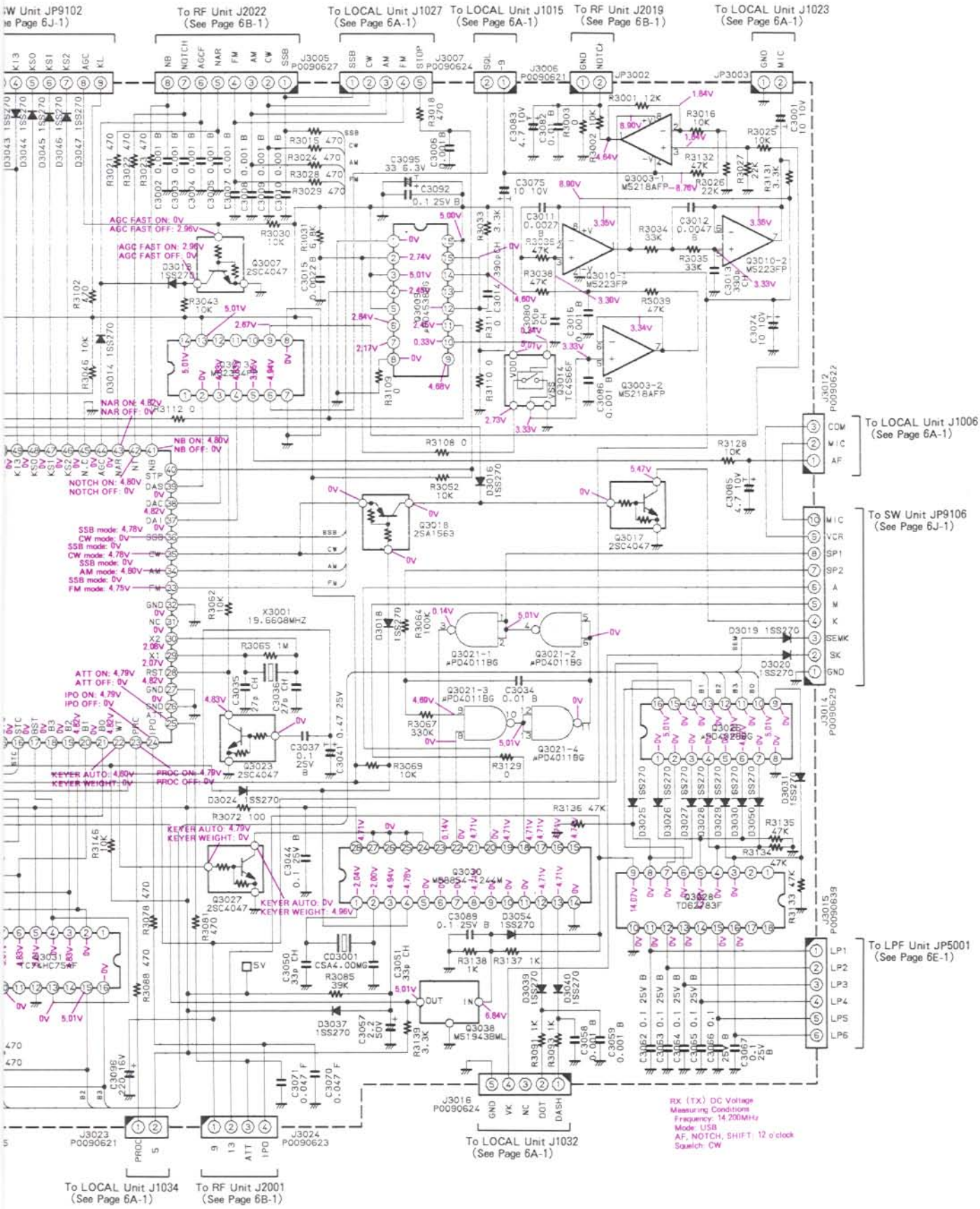
Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** NOTCH UNIT ***						
	PCB with Components					CP4896001		
	Printed Circuti Board					F3253101		
C 7202	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7203	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7204	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7205	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7206	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7208	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7209	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
D 7201	DIODE				1SS184 TE85R	G2070009		
JP7201	CONNECTOR				3022-03A	P0090352		
JP7202	CONNECTOR				3022-03A	P0090352		
Q 7201	TRANSISTOR				FN1A4P-T2B	G3070011		
Q 7202	TRANSISTOR				FA1A4P-T2B	G3070006		
Q 7204	TRANSISTOR				2SC2619FBTR	G3326197B		
Q 7205	TRANSISTOR				2SC2619FBTR	G3326197B		
Q 7206	TRANSISTOR				2SC2619FBTR	G3326197B		
Q 7207	TRANSISTOR				2SC2619FBTR	G3326197B		
R 7203	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 7204	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 7205	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 7206	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 7207	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 7208	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 7209	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 7210	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 7211	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 7212	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 7213	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 7214	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 7216	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 7217	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
VR7201	POT.	1KB			H0651A007-1KB	J51745102		
X 7201	XTAL	8.215MHz				H0102968		

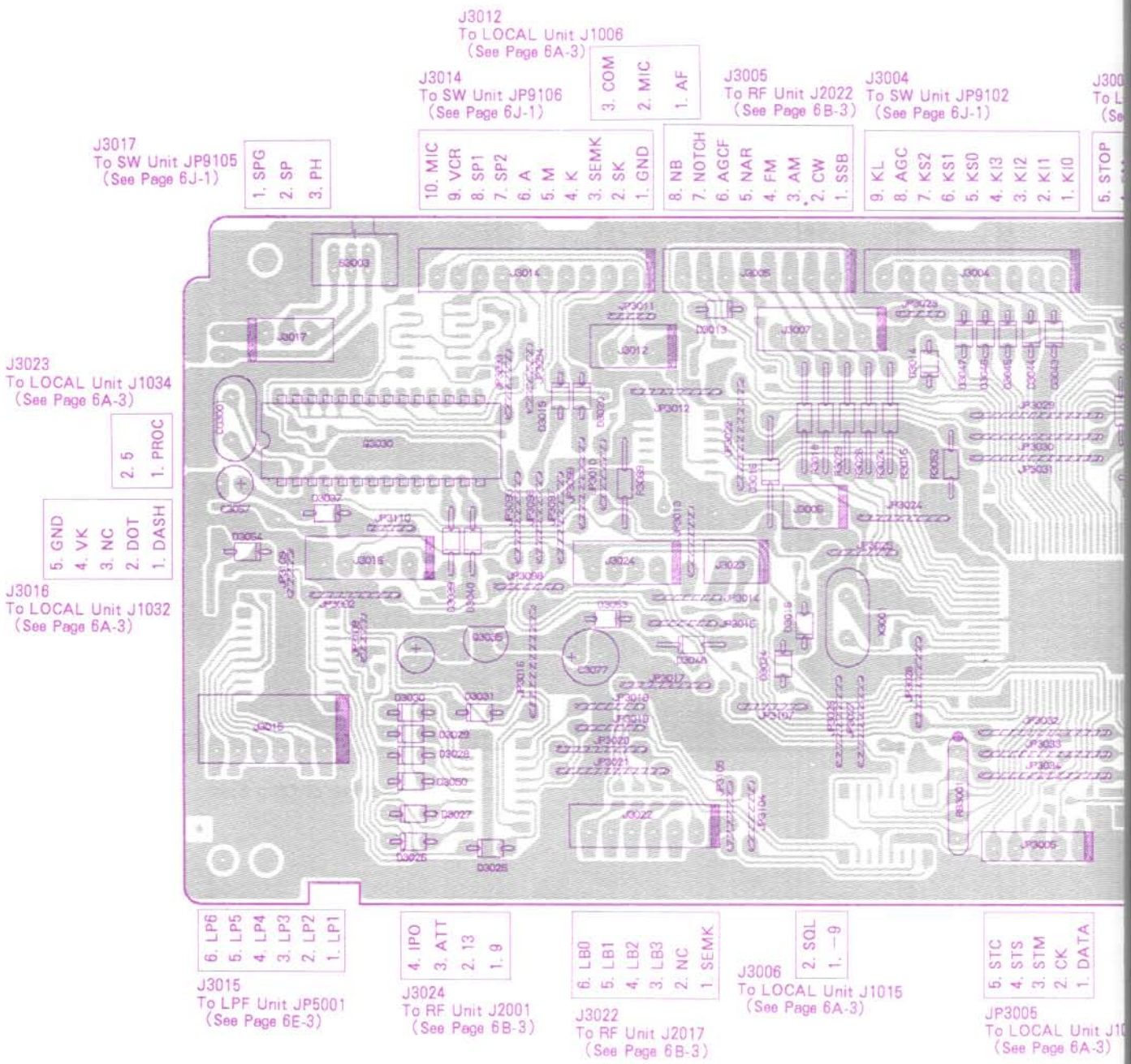
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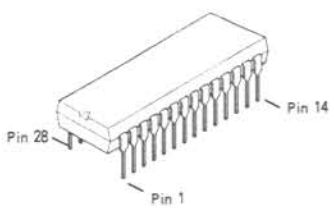
Circuit Diagram



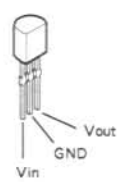

To RF Unit J2022 (See Page 6B-1)
To LOCAL Unit J1027 (See Page 6A-1)
To LOCAL Unit J1015 (See Page 6A-1)
To RF Unit J2019 (See Page 6B-1)
To LOCAL Unit J1023 (See Page 6A-1)
To LOCAL Unit J1006 (See Page 6A-1)
To SW Unit JP9106 (See Page 6J-1)
To LPF Unit JP5001 (See Page 6E-1)
To LOCAL Unit J1032 (See Page 6A-1)
To LOCAL Unit J1034 (See Page 6A-1)
To RF Unit J2001 (See Page 6B-1)
Q3007 2SC4047
Q3018 2SA1563
Q3017 2SC4047
Q3021-1 µPD4011BG
Q3021-2 µPD4011BG
Q3021-3 µPD4011BG
Q3021-4 µPD4011BG
Q3023 2SC4047
Q3027 2SC4047
Q3030 MB88154-424M
Q3038 MS1943BML
Q3003-1 M5218AFP
Q3003-2 M5218AFP
Q3010-1 M5223FP
Q3010-2 M5223FP
X3001 19.6608MHZ
CO3001 CSA4.00MG
IC74HC75AF
TD62783F
TC4S66F
RX (TX) DC Voltage Measuring Conditions
Frequency: 14.200MHz
Mode: USB
AF, NOTCH, SHIFT: 12 o'clock
Squelch: CW

Parts Layout

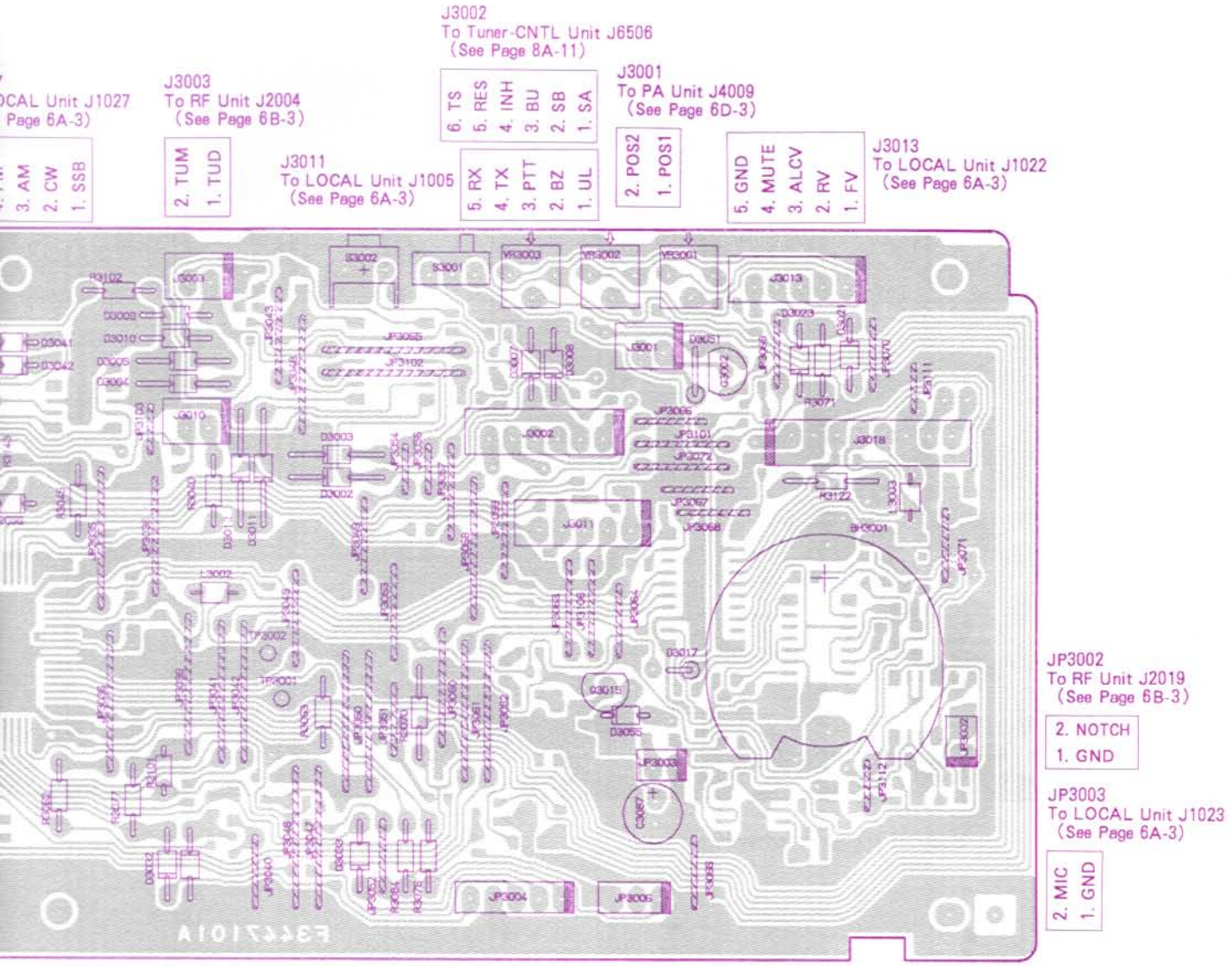




MB8854
(Q3030)



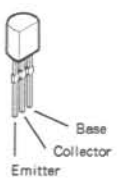
M1180GTT
(Q3015)



Obverse View of Component Side

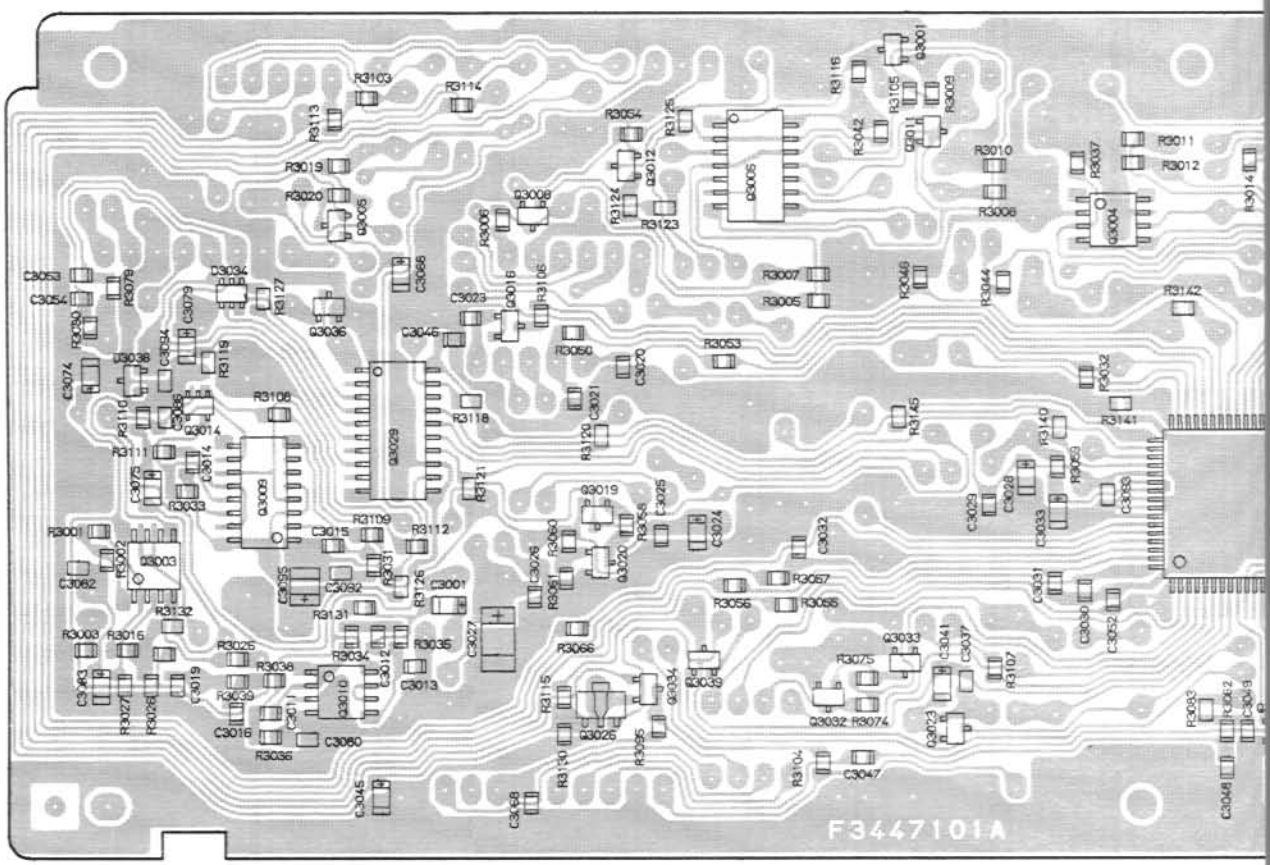


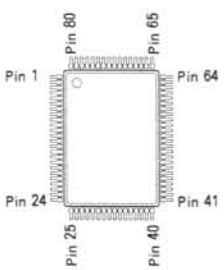
N77L08
Q3035)



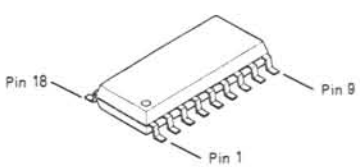
2SA1283D
(Q3002)

Control (CNTL)-1 Unit

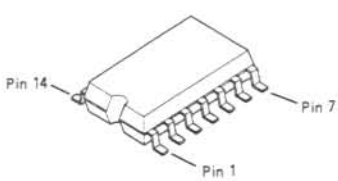




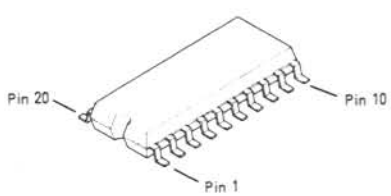
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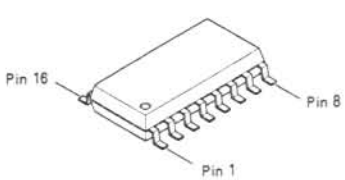
TD62783F
(Q3028)



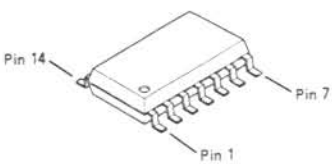
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TC74HC08AF
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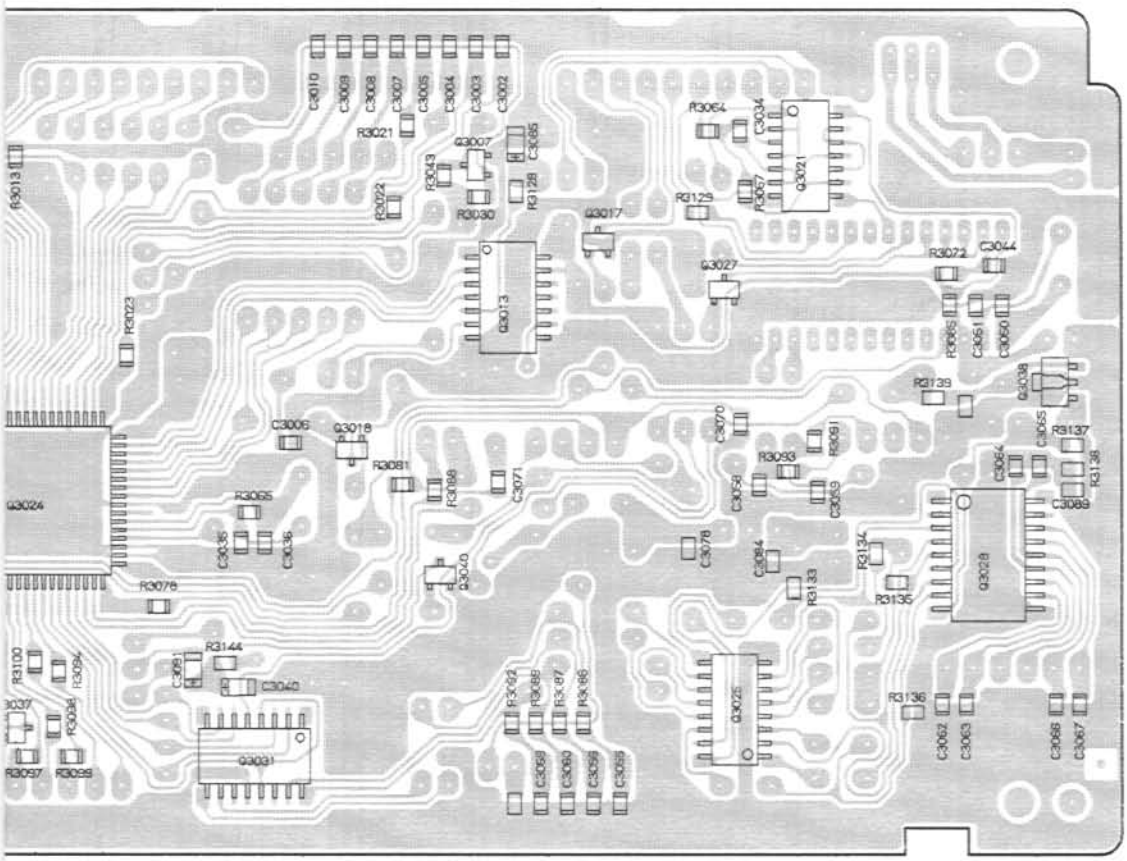
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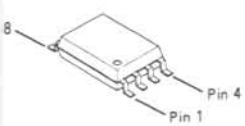
μPD4028BG
(Q3025)
μPD4538BG
(Q3009)
TC74HC75AF
(Q3031)



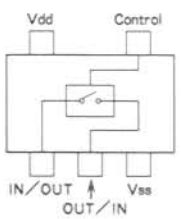
μPD4011BG
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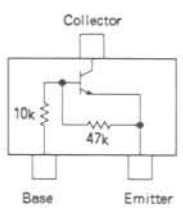
Obverse View of Chip Side



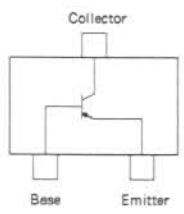
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BR93CS46F
(Q3004)
M5223FP
(Q3010)



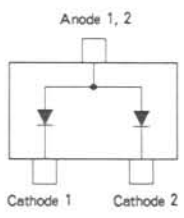
TC4S66F (C9)
(Q3014)



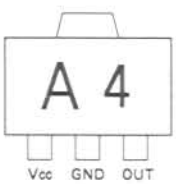
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(Q3001,3005,3007
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3016,3017,3023
3027,3033,3034
3037,3039,3040)



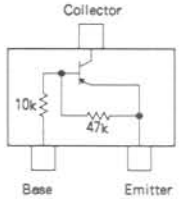
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(Q3019)



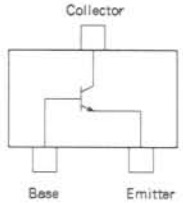
HSM2836 (A4)
(D3038)



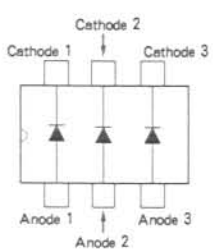
M51943BML (A4)
(Q3026,3038)



2SA1563
(Q3018)



2SC2812L6 (JY)
(Q3020,3032,3036)



IMN10 (N10)
(D3034)

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** CNTL-1 UNIT ***						
	PCB with Components (with out LITHIUM BATTERY)					CA1298001		
	Printed Circuti Board					F3447101		
BH3001	BATTERY HOLDER				CR2032HOLDER	P2000047		
BT3001	LITHIUM BATTERY				CR2032	Q9000564		
C 3001	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 3002	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3003	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3004	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3005	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3006	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3007	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3008	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3009	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3010	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3011	CHIP CAP.	0.0027	50V	B	GRM40B272M50PT	K22170810		
C 3012	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 3013	CHIP CAP.	390pF	50V	CH	GRM40CH391J50PT	K22170249		
C 3014	CHIP CAP.	390pF	50V	CH	GRM40CH391J50PT	K22170249		
C 3015	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 3016	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3020	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3021	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3023	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3024	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		
C 3025	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3026	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3027	TANTALUM CHIP CAP.	10uF	16V		TESVC1C106M12R	K78120011		
C 3028	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		
C 3029	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3030	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3031	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3032	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3033	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		
C 3034	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3035	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 3036	CHIP CAP.	27pF	50V	CH	GRM40CH270J50PT	K22170221		
C 3037	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3040	TANTALUM CHIP CAP.	2.2uF	10V		TESVA1A225M1-8R	K78100021		
C 3041	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 3044	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3045	TANTALUM CHIP CAP.	1uF	20V		TEMSVA21D105M-8R	K78130019		
C 3046	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3047	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3048	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3049	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3050	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		

Control (CNTL)-1 Unit

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 3051	CHIP CAP.	33pF	50V	CH	GRM40CH330J50PT	K22170223		
C 3052	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3053	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3054	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3055	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3056	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3057	AL. ELECTRO. CAP.	2.2uF	50V		50V2R2M4X7TR2	K46170031		
C 3058	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3059	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3060	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3062	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3063	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3064	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3065	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3066	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3067	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3068	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3069	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3070	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 3071	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 3074	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 3075	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 3077	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 3078	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3079	TANTALUM CHIP CAP.	1uF	20V		TEMSVA21D105M-8R	K78130019		
C 3080	CHIP CAP.	150pF	50V	CH	GRM40CH151J50PT	K22170239		
C 3082	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3083	TANTALUM CHIP CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		
C 3084	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 3085	TANTALUM CHIP CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		
C 3086	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 3087	AL. ELECTRO. CAP.	100uF	16V		16V101M6X7TR2	K46120007		
C 3088	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVA0J106M-8R	K78080027		
C 3089	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3091	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 3092	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3093	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3095	TANTALUM CHIP CAP.	33uF	6.3V		TEMSVB20J336M-8R	K78080030		
C 3096	AL. ELECTRO. CAP.	220uF	16V		ECE-A1CU221	K40129041		
CO3001	CERAMIC OSC				CSA4.00MG5	H7900170		
D 3002	DIODE				1SS270TJ	G2060004		
D 3003	DIODE				1SS270TJ	G2060004		
D 3004	DIODE				1SS270TJ	G2060004		
D 3005	DIODE				1SS270TJ	G2060004		
D 3007	DIODE				1SS270TJ	G2060004		
D 3008	DIODE				1SS270TJ	G2060004		
D 3009	DIODE				1SS270TJ	G2060004		
D 3010	DIODE				1SS270TJ	G2060004		
D 3011	DIODE				1SS270TJ	G2060004		
D 3012	DIODE				1SS270TJ	G2060004		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
D 3013	DIODE				1SS270TJ	G2060004		
D 3014	DIODE				1SS270TJ	G2060004		
D 3016	DIODE				1SS270TJ	G2060004		
D 3017	DIODE				1SS97	G2090118		
D 3018	DIODE				1SS270TJ	G2060004		
D 3019	DIODE				1SS270TJ	G2060004		
D 3020	DIODE				1SS270TJ	G2060004		
D 3021	DIODE				1SS270TJ	G2060004		
D 3023	DIODE				1SS270TJ	G2060004		
D 3024	DIODE				1SS270TJ	G2060004		
D 3025	DIODE				1SS270TJ	G2060004		
D 3026	DIODE				1SS270TJ	G2060004		
D 3027	DIODE				1SS270TJ	G2060004		
D 3028	DIODE				1SS270TJ	G2060004		
D 3029	DIODE				1SS270TJ	G2060004		
D 3030	DIODE				1SS270TJ	G2060004		
D 3031	DIODE				1SS270TJ	G2060004		
D 3032	DIODE				1SS270TJ	G2060004		
D 3033	DIODE				1SS270TJ	G2060004		
D 3034	DIODE				IMN10 T108	G2070078		
D 3037	DIODE				1SS270TJ	G2060004		
D 3038	DIODE				HSM2836-TR	G2070110		
D 3039	DIODE				1SS270TJ	G2060004		
D 3040	DIODE				1SS270TJ	G2060004		
D 3041	DIODE				1SS270TJ	G2060004		
D 3042	DIODE				1SS270TJ	G2060004		
D 3043	DIODE				1SS270TJ	G2060004		
D 3044	DIODE				1SS270TJ	G2060004		
D 3045	DIODE				1SS270TJ	G2060004		
D 3046	DIODE				1SS270TJ	G2060004		
D 3047	DIODE				1SS270TJ	G2060004		
D 3048	DIODE				11ES1-TA1B2	G2060009		
D 3050	DIODE				1SS270TJ	G2060004		
D 3051	DIODE				1SS83RE	G2050007		
D 3053	DIODE				11ES1-TA1B2	G2060009		
D 3054	DIODE				1SS270TJ	G2060004		
D 3055	DIODE				11ES1-TA1B2	G2060009		
D 3056	DIODE				1SS270TJ	G2060004		
D 3057	DIODE				1SS270TJ	G2060004		
D 3058	DIODE				1SS270TJ	G2060004		
D 3059	DIODE				1SS270TJ	G2060004		
D 3060	DIODE				1SS270TJ	G2060004		
D 3061	DIODE				1SS270TJ	G2060004		
J 3001	CONNECTOR				SC25-02WS	P0090621		
J 3002	CONNECTOR				SC25-06WS	P0090625		
J 3003	CONNECTOR				SC25-02WS	P0090621		
J 3004	CONNECTOR				SC25-09WS	P0090628		
J 3005	CONNECTOR				SC25-08WS	P0090627		
J 3006	CONNECTOR				SC25-02WS	P0090621		
J 3007	CONNECTOR				SC25-05WS	P0090624		
J 3010	CONNECTOR				SC25-02WS	P0090621		

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REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
J 3011	CONNECTOR				SC25-05WS	P0090624		
J 3012	CONNECTOR				SC25-03WS	P0090622		
J 3013	CONNECTOR				SC25-05WS	P0090624		
J 3014	CONNECTOR				SC25-10WS	P0090629		
J 3015	CONNECTOR				SC25-06WL	P0090639		
J 3016	CONNECTOR				SC25-05WS	P0090624		
J 3017	CONNECTOR				SC25-03WS	P0090622		
J 3018	CONNECTOR				SC25-08WS	P0090627		
J 3022	CONNECTOR				SC25-06WS	P0090625		
J 3023	CONNECTOR				SC25-02WS	P0090621		
J 3024	CONNECTOR				SC25-04WS	P0090623		
JP3001	WIRE-ASSY					T9206382		
JP3002	WIRE-ASSY					T9206383		
JP3003	WIRE-ASSY					T9206384		
JP3004	WIRE-ASSY					T9206385		
JP3005	WIRE-ASSY					T9206386		
JP3006	WIRE-ASSY					T9206387		
JP3081	JUMPER-ASSY					T95201181		
JP3082	JUMPER-ASSY					T95201181		
JP3083	JUMPER-ASSY					T95201181		
JP3084	JUMPER-ASSY					T95201750		
JP3085	JUMPER-ASSY					T95201181		
JP3086	JUMPER-ASSY					T95201600		
JP3087	JUMPER-ASSY					T95201171		
JP3088	JUMPER-ASSY					T95201500		
JP3089	JUMPER-ASSY					T95201500		
JP3090	JUMPER-ASSY					T95201111		
JP3091	JUMPER-ASSY					T95201500		
JP3092	JUMPER-ASSY					T95201181		
L 3002	M.RFC	47uH			LAP02TA470K	L1790066		
Q 3001	TRANSISTOR				2SC4047-TA	G3340477		
Q 3002	TRANSISTOR				2SA1283D	G3112830D		
Q 3003	IC				M5218AFP-600C	G1091607		
Q 3004	IC				BR93CS46F-EA-T1	G1091205		
Q 3005	TRANSISTOR				2SC4047-TA	G3340477		
Q 3006	IC				TC74HC08AF TP2	G1090975		
Q 3007	TRANSISTOR				2SC4047-TA	G3340477		
Q 3008	TRANSISTOR				2SC4047-TA	G3340477		
Q 3009	IC				UPD4538BG-E2	G1091047		
Q 3010	IC				M5223FP-600C	G1090990		
Q 3011	TRANSISTOR				2SC4047-TA	G3340477		
Q 3012	TRANSISTOR				2SC4047-TA	G3340477		
Q 3013	IC				M62354FP-75NC	G1091842		
Q 3014	IC				TC4S66F TE85R	G1090893		
Q 3015	IC				MM1180G	G1091902		
Q 3016	TRANSISTOR				2SC4047-TA	G3340477		
Q 3017	TRANSISTOR				2SC4047-TA	G3340477		
Q 3018	TRANSISTOR				2SA1563-TB	G3115638		
Q 3019	TRANSISTOR				2SA812-T2B M7B	G3108127G		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 3020	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 3021	IC				UPD4011BG-T2	G1091026		
Q 3023	TRANSISTOR				2SC4047-TA	G3340477		
Q 3024	IC				M37702E4BFP R0016	G1091928		
Q 3025	IC				UPD4028BG-T2	G1091137		
Q 3026	IC				M51943BML-600C	G1090991		
Q 3027	TRANSISTOR				2SC4047-TA	G3340477		
Q 3028	IC				TD62783F TP1	G1091620		
Q 3029	IC				TC74HC244AF(EL)	G1091566		
Q 3030	IC				MB8854-1244M	G1090999		
Q 3031	IC				TC74HC75AF TP2	G1091184		
Q 3032	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 3033	TRANSISTOR				2SC4047-TA	G3340477		
Q 3034	TRANSISTOR				2SC4047-TA	G3340477		
Q 3035	IC				AN77L08	G1091901		
Q 3036	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 3037	TRANSISTOR				2SC4047-TA	G3340477		
Q 3038	IC				M51943BML-600C	G1090991		
Q 3039	TRANSISTOR				2SC4047-TA	G3340477		
Q 3040	TRANSISTOR				2SC4047-TA	G3340477		
R 3001	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 3002	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3003	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3005	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3006	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3007	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3008	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 3009	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
R 3010	CHIP RES.	1.2K	1/10W	5%	RMC1/10T 122J	J24205122		
R 3011	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3012	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3013	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3014	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3015	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3016	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3018	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3019	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 3020	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 3021	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3022	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3023	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3024	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3025	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3026	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 3027	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 3028	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3029	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3030	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3031	CHIP RES.	6.8K	1/10W	5%	RMC1/10T 682J	J24205682		
R 3032	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3033	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		

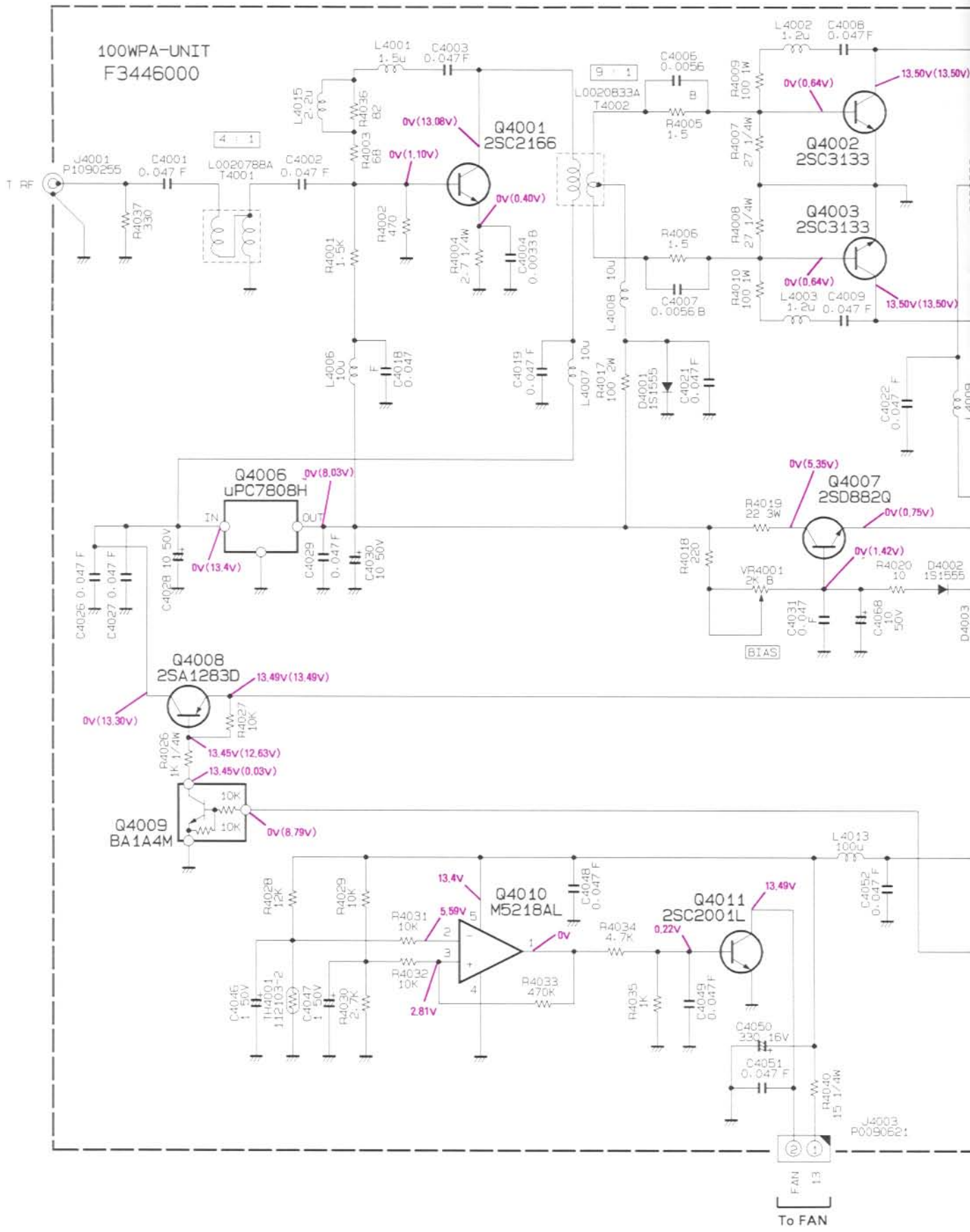
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 3034	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 3035	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 3036	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3037	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3038	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3039	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3040	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3042	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3043	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3044	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3045	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3046	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3050	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3052	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3053	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3054	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3055	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 3056	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 3057	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 3058	CHIP RES.	15K	1/10W	5%	RMC1/10T 153J	J24205153		
R 3059	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 3060	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 3061	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 3062	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3063	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3064	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3065	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 3066	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3067	CHIP RES.	330K	1/10W	5%	RMC1/10T 334J	J24205334		
R 3069	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3070	CARBON FILM RES.	3.3K	1/6W	5%	RD16TPJ332 3.3K	J07225332		
R 3071	CARBON FILM RES.	220	1/6W	5%	RD16TPJ221 220	J07225221		
R 3072	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 3074	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 3075	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3076	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3077	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3078	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3079	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 3080	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 3081	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3082	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3083	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3084	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 3085	CHIP RES.	39K	1/10W	5%	RMC1/10T 393J	J24205393		
R 3086	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3087	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3088	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3089	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3091	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 3092	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3093	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		

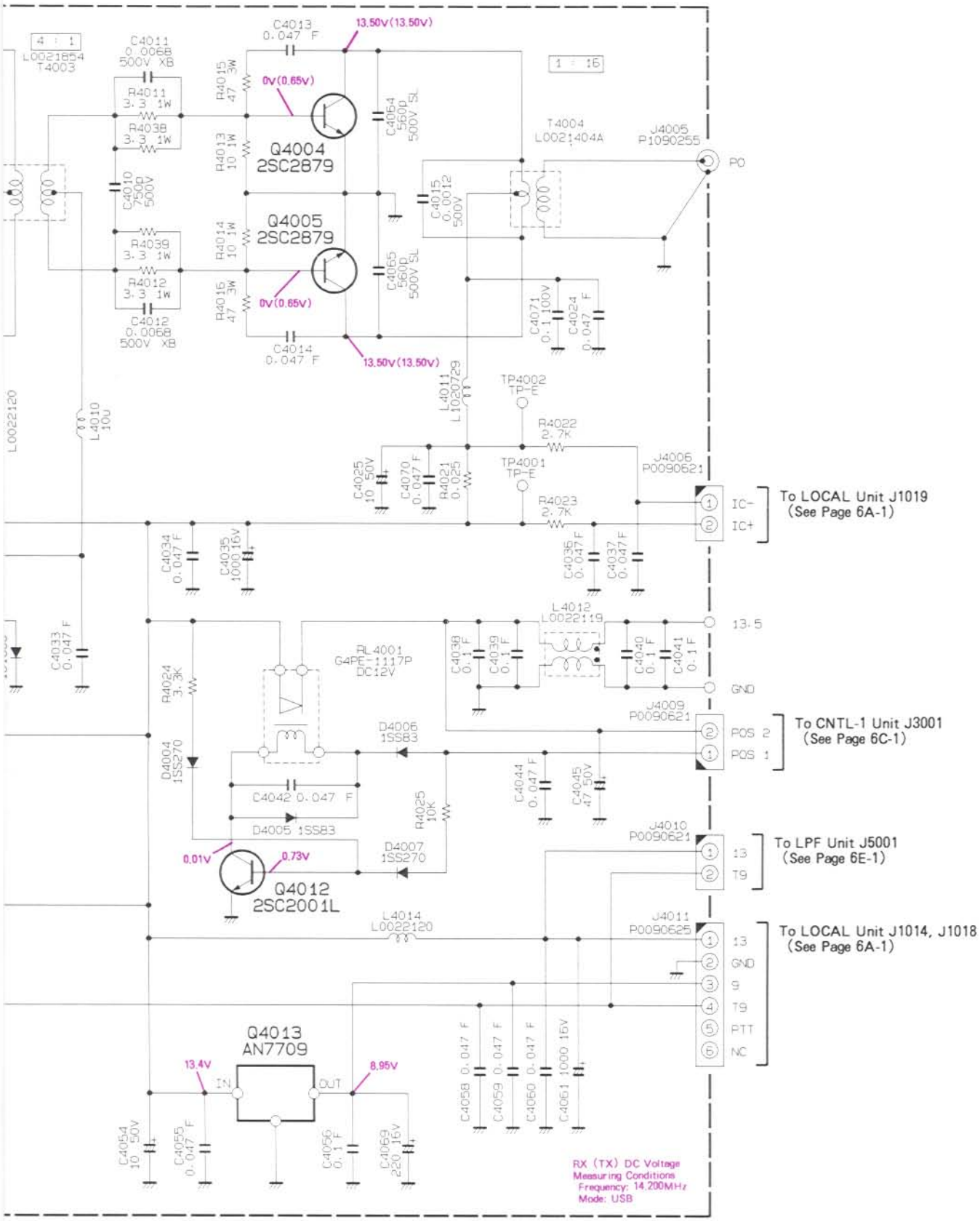
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R 3094	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3095	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3097	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3098	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3099	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3100	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 3101	CARBON FILM RES.	1K	1/6W	5%	RD16TPJ102 1K	J07225102		
R 3102	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 3103	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3104	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3105	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3106	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3107	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3108	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3109	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3110	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3111	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3112	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3113	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3114	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3115	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3116	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3118	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3119	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3120	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3121	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 3122	CARBON FILM RES.	100K	1/6W	5%	RD16TPJ104 100K	J07225104		
R 3123	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3124	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3125	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3126	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3127	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3128	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3129	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3130	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 3131	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 3132	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3133	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3134	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3135	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3136	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 3137	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 3138	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 3139	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 3140	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3141	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3142	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3143	CARBON FILM RES.	47K	1/6W	5%	RD16PJ473 47K	J01225473		
R 3144	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 3145	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 3146	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		

Control (CNTL)-1 Unit

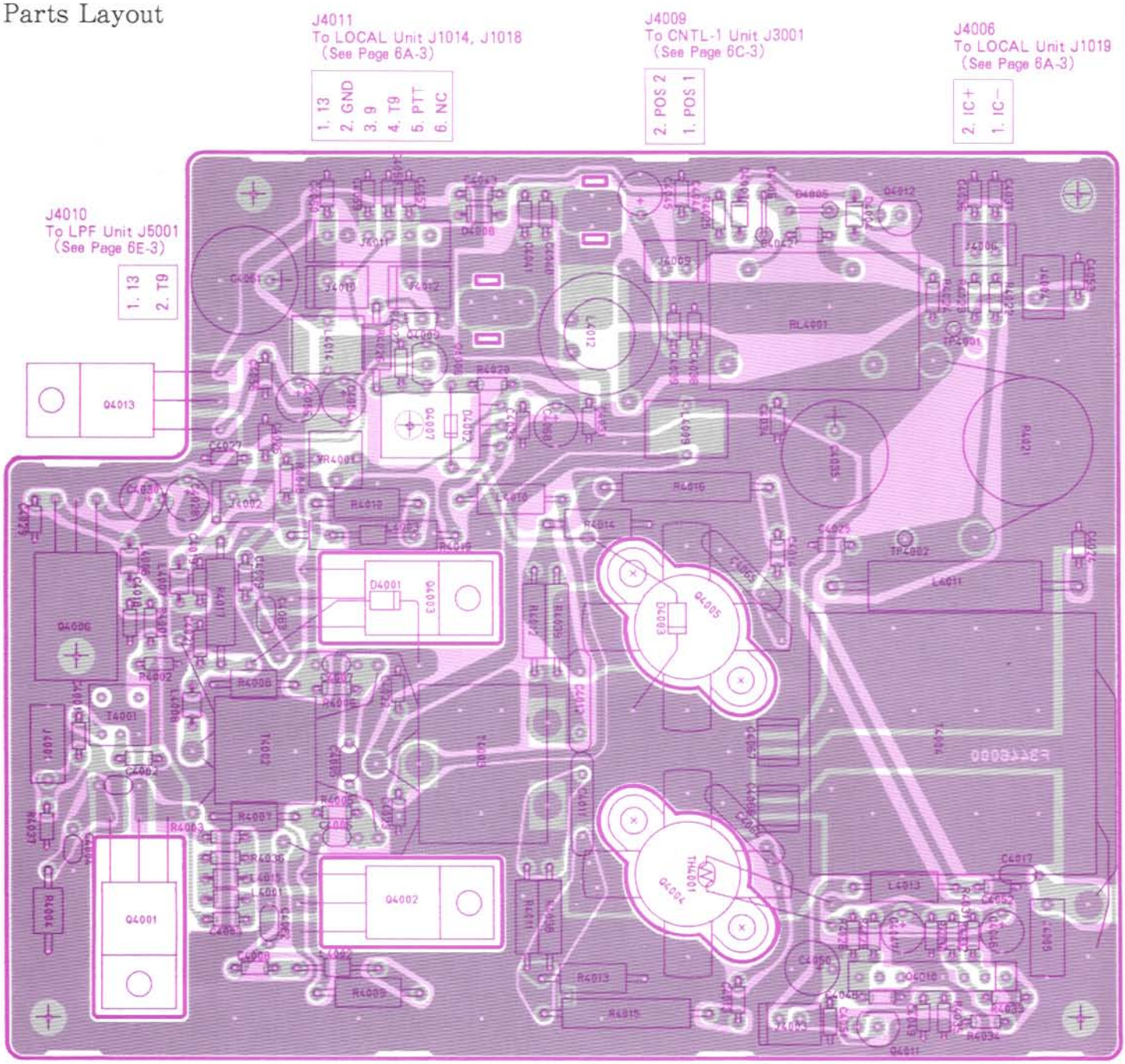
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RB3001	BLOCK RES.	EXB-LE4104			EXB-LE4104S	J40900176		
S 3001	SLIDE SWITCH				SSS212299	N6090051		
S 3002	TACT SWITCH				SKHHLM	N5090038		
S 3003	SLIDE SWITCH				HSW0805-01-010	N6090081		
TP3001	TP-E/				TP-E/MS-60124	Q5000016		
TP3002	TP-E/				TP-E/MS-60124	Q5000016		
VR3001	POT.	10KB			RH063LC14R 10KB	J50795103		
VR3002	POT.	10KB			RH063LC14R 10KB	J50795103		
VR3003	POT.	10KB			RH063LC14R 10KB	J50795103		
X 3001	XTAL	19.6608MHz				H0103052		

Circuit Diagram

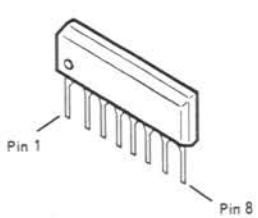



4 : 1
L0021854
T4003
C4011
0.0068
500V XB
R4011
3.3 1W
R4038
3.3 1W
C4010
750P
500V
R4039
3.3 1W
R4012
3.3 1W
C4012
0.0068
500V XB
C4013
0.047 F
13.50V(13.50V)
R4015
47 3W
0V(0.65V)
R4013
10 1W
Q4004
2SC2879
C4064
560P
500V SL
R4014
10 1W
Q4005
2SC2879
C4065
560P
500V SL
R4016
47 3W
0V(0.65V)
C4014
0.047 F
13.50V(13.50V)
1 : 16
T4004
L0021404A
J4005
P1090255
P0
C4015
0.0012
500V
C4071
0.1 100V
C4024
0.047 F
L4011
L1020729
TP4002
R4022
2.7K
L0022120
L4010
10U
C4025
10 50V
C4070
0.047 F
R4021
0.025
TP4001
J4006
P0090621
R4023
2.7K
IC-
IC+
To LOCAL Unit J1019
(See Page 6A-1)
C4034
0.047 F
C4035
1000 16V
C4036
0.047 F
C4037
0.047 F
L4012
L0022119
13.5
C4033
0.047 F
RL4001
G4PE-1117P
DC12V
C4038
0.1 F
C4039
0.1 F
C4040
0.1 F
C4041
0.1 F
GND
J4009
P0090621
POS 2
POS 1
To CNTL-1 Unit J3001
(See Page 6C-1)
R4024
3.3K
D4004
1SS270
D4006
1SS83
C4042 0.047 F
D4005 1SS83
C4044
0.047 F
C4045
47 50V
R4025
10K
J4010
P0090621
13
T9
To LPF Unit J5001
(See Page 6E-1)
0.01V
0.73V
Q4012
2SC2001L
D4007
1SS270
L4014
L0022120
J4011
P0090625
13
GND
9
T9
PTT
NC
To LOCAL Unit J1014, J1018
(See Page 6A-1)
Q4013
AN7709
13.4V
IN
OUT
8.95V
C4058
0.047 F
C4059
0.047 F
C4060
0.047 F
C4061
1000 16V
C4054
10 50V
C4055
0.047 F
C4056
0.1 F
C4069
220 16V
RX (TX) DC Voltage
Measuring Conditions
Frequency: 14.200MHz
Mode: USB

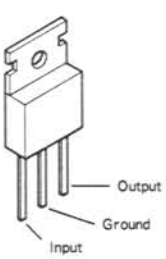
Parts Layout



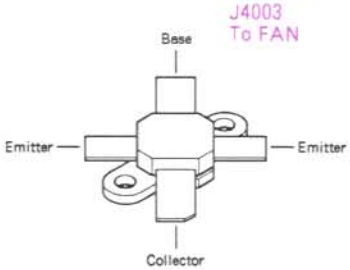
Obverse View of Component Side



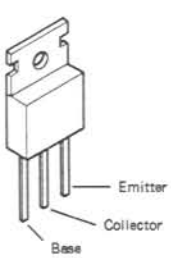
M5218AL
(Q4010)



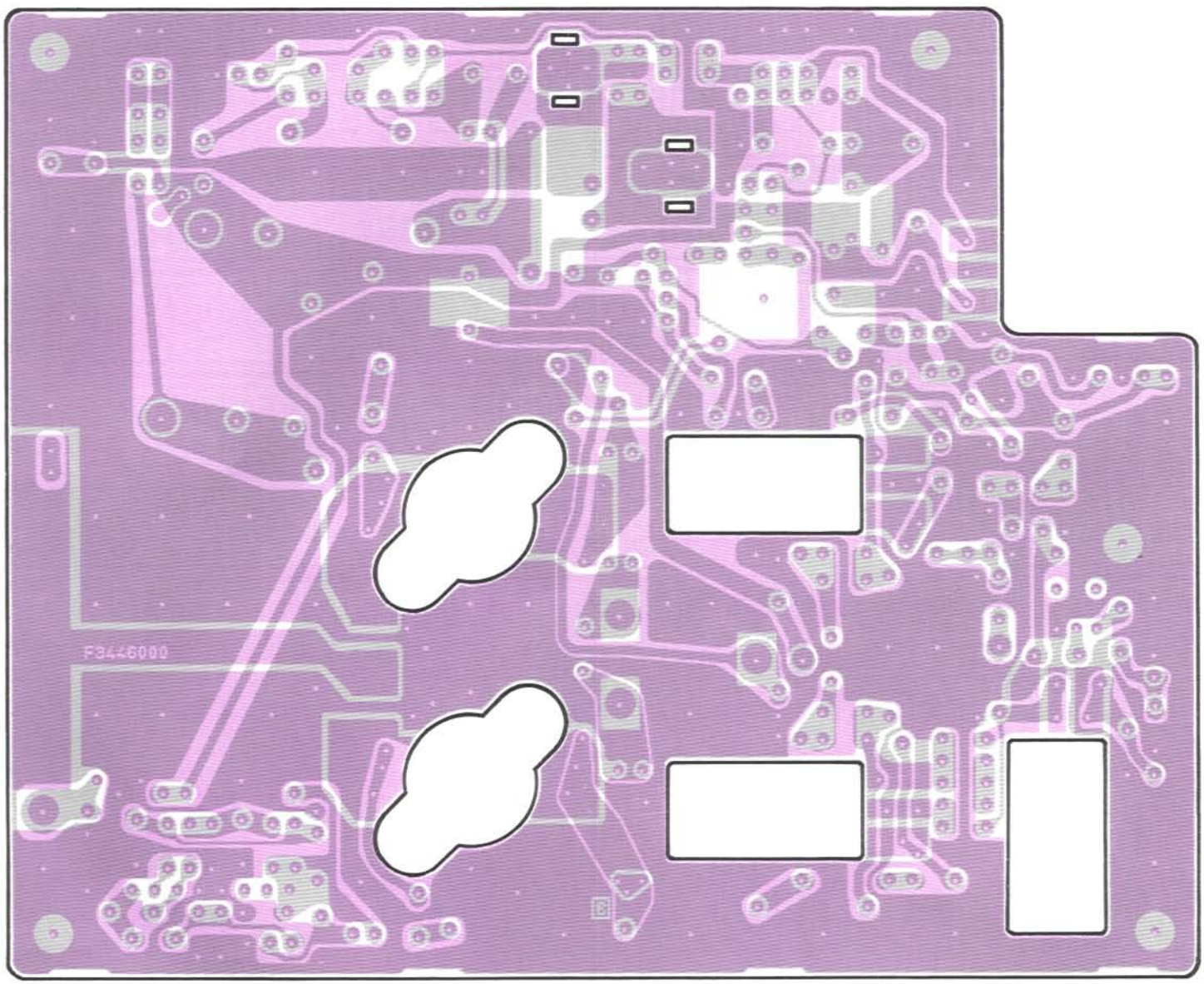
μPC7808H
(Q4006)
AN7709
(Q4013)



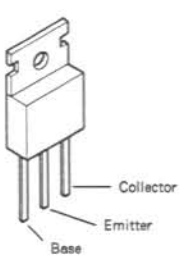
2SC2879
(Q4004,4005)



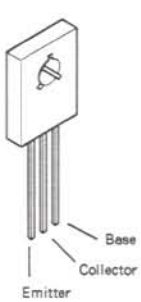
2SC2166
(Q4001)



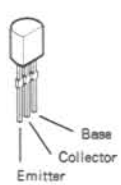
Obverse View of Chip Side



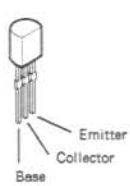
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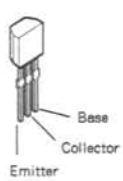
2SD882Q
(Q4007)



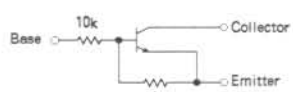
2SA1283
(Q4008)



2SC2001
(Q4011,4012)



BA1A4M
(Q4009)



BA1A4M Circuit Diagram

Parts List

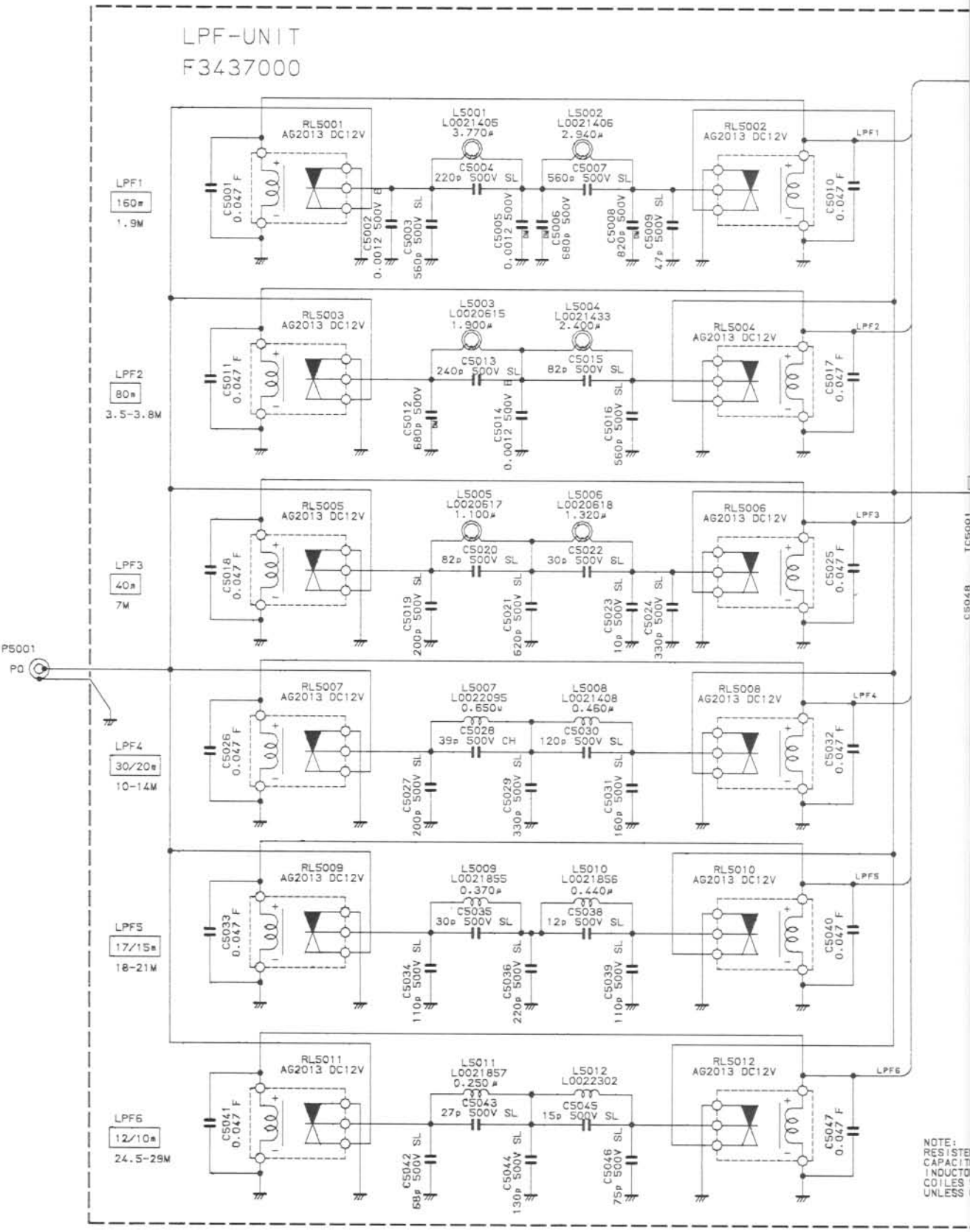
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		*** PA UNIT ***						
	PCB with Components					CS1400001		
	Printed Circuti Board					F3446000		
C 4001	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4002	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4003	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4004	CERAMIC CAP.	0.0033uF	50V	B	DD107-979B332K50	K26171620		
C 4006	CERAMIC CAP.	0.0056uF	50V	B	DD109-979B562K50	K26171623		
C 4007	CERAMIC CAP.	0.0056uF	50V	B	DD109-979B562K50	K26171623		
C 4008	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4009	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4010	MICA CAP.	750p	500V		DM19D751J5	K30279092		
C 4011	CERAMIC CAP.	0.0068uF	500V	XB	CD130XB682K500	K10276682		
C 4012	CERAMIC CAP.	0.0068uF	500V	XB	CD130XB682K500	K10276682		
C 4013	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4014	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4015	MICA CAP.	0.0012	500V		DM19D122J5	K30279095		
C 4018	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4019	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4021	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4022	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4024	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 4025	AL. ELECTRO. CAP.	10uF	50V		50V100M5X11TR5	K46170021		
C 4026	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4027	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4028	AL. ELECTRO. CAP.	10uF	50V		50V100M5X11TR5	K46170021		
C 4029	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4030	AL. ELECTRO. CAP.	10uF	50V		50V100M5X11TR5	K46170021		
C 4031	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4033	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4034	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4035	AL. ELECTRO. CAP.	1000uF	16V		16R102S 13X16	K40129021		
C 4036	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4037	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4038	CERAMIC CAP.	0.1uF	50V	F	UP050F104Z-A-B	K28179003		
C 4039	CERAMIC CAP.	0.1uF	50V	F	UP050F104Z-A-B	K28179003		
C 4040	CERAMIC CAP.	0.1uF	50V	F	UP050F104Z-A-B	K28179003		
C 4041	CERAMIC CAP.	0.1uF	50V	F	UP050F104Z-A-B	K28179003		
C 4042	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4044	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4045	AL. ELECTRO. CAP.	47uF	50V		50V470M6X11TR5	K46170024		
C 4046	AL. ELECTRO. CAP.	1uF	50V		50V010M5X11TR5	K46170017		
C 4047	AL. ELECTRO. CAP.	1uF	50V		50V010M5X11TR5	K46170017		
C 4048	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4049	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4050	AL. ELECTRO. CAP.	330uF	16V		16V331M8X11TR5	K46120002		
C 4051	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4052	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4054	AL. ELECTRO. CAP.	10uF	50V		50V100M5X11TR5	K46170021		

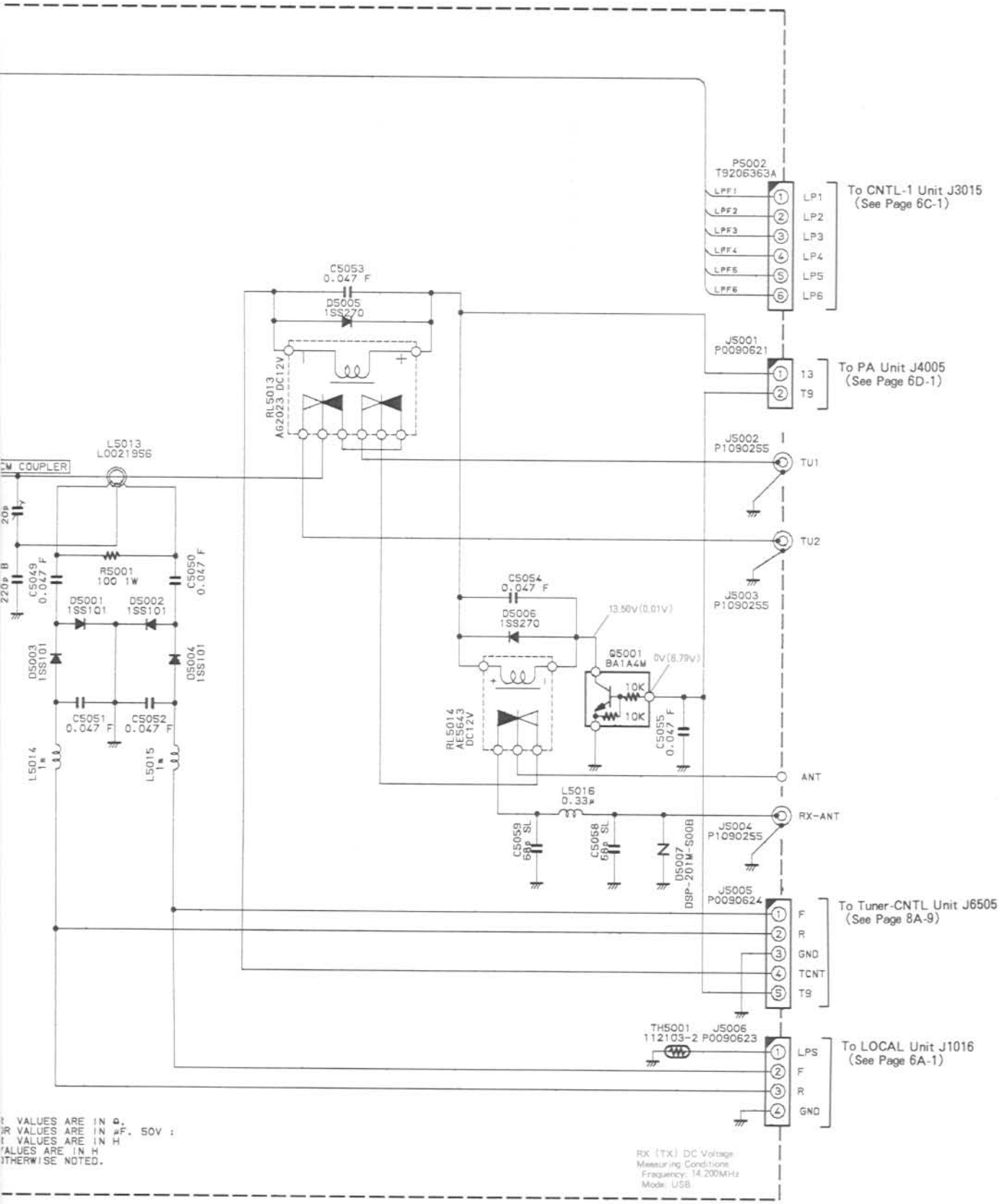
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C 4055	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4056	CERAMIC CAP.	0.1uF	50V	F	UP050F104Z-A-B	K28179003		
C 4058	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4059	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4060	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4061	AL.ELECTRO.CAP.	1000uF	16V		16R102S 13X16	K40129021		
C 4064	CERAMIC CAP.	560pF	500V	SL	DD12SL561K500	K00279005		
C 4065	CERAMIC CAP.	560pF	500V	SL	DD12SL561K500	K00279005		
C 4068	AL.ELECTRO.CAP.	10uF	50V		50V100M5X11TR5	K46170021		
C 4069	AL.ELECTRO.CAP.	220uF	16V		RE2-16V221M	K40129048		
C 4070	CERAMIC CAP.	0.047uF	50V	F	UP050F473Z-A-B	K28179002		
C 4071	FILM CAP. ECQ-B1104	0.1	100V		ECQ-B1104JF	K50205104		
D 4001	DIODE				1S1555	G2015550		
D 4002	DIODE				1S1555	G2015550		
D 4003	DIODE				1S1555	G2015550		
D 4004	DIODE				1SS270TJ	G2060004		
D 4005	DIODE				1SS83RE	G2050007		
D 4006	DIODE				1SS83RE	G2050007		
D 4007	DIODE				1SS270TJ	G2060004		
J 4001	CONNECTOR				TMP-J01X-A2	P1090255		
J 4003	CONNECTOR				SC25-02WS	P0090621		
J 4005	CONNECTOR				TMP-J01X-A2	P1090255		
J 4006	CONNECTOR				SC25-02WS	P0090621		
J 4009	CONNECTOR				SC25-02WS	P0090621		
J 4010	CONNECTOR				SC25-02WS	P0090621		
J 4011	CONNECTOR				SC25-06WS	P0090625		
L 4001	M.RFC	1.5u			LAP02TA1R5K	L1790048		
L 4002	M.RFC	1.2u			LAL03TA1R2M	L1790084		
L 4003	M.RFC	1.2u			LAL03TA1R2M	L1790084		
L 4006	M.RFC	10uH			LAP02TA100K	L1790058		
L 4007	M.RFC	10uH			LAP02TA100K	L1790058		
L 4008	M.RFC	10uH			LAP02TA100K	L1790058		
L 4009	COIL				10U 3A EI9.3	L0022120		
L 4010	M.RFC	10uH			LAL04NA100K	L1190138		
L 4011	RFC				3A RI5.8X6.4-2	L1020729		
L 4012	COIL				D12A RI16X8X8	L0022119		
L 4013	M.RFC	100uH			LAL04NA101K	L1190133		
L 4014	COIL				10U 3A EI9.3	L0022120		
L 4015	M.RFC	2.2uH			LAP02TA2R2K	L1790050		
Q 4001	TRANSISTOR				2SC2166	G3321660		
Q 4002	TRANSISTOR				2SC3133-21	G3090086		
Q 4003	TRANSISTOR				2SC3133-21	G3090086		
Q 4004	TRANSISTOR				2SC2879	G3328790		
Q 4005	TRANSISTOR				2SC2879	G3328790		
Q 4006	IC				UPC7808H	G1090294		
Q 4007	TRANSISTOR				2SD882Q	G3408820Q		
Q 4008	TRANSISTOR				2SA1283-T11-D	G3112834D		
Q 4009	TRANSISTOR				BA1A4M-T	G3050001		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 4010	IC				M5218AL	G1091140		
Q 4011	TRANSISTOR				2SC2001-L	G3320010L		
Q 4012	TRANSISTOR				2SC2001-L	G3320010L		
Q 4013	IC				AN7709	G1091753		
R 4001	CARBON FILM RES.	1.5K	1/6W	5%	RD16TPJ152 1.5K	J07225152		
R 4002	CARBON FILM RES.	470	1/6W	5%	RD16TPJ471 470	J07225471		
R 4003	CARBON FILM RES.	68	1/6W	5%	RD16TPJ680 68	J07225680		
R 4004	CARBON FILM RES.	2.7	1/4W	5%	RD14TJ2R7 2.7	J01245279		
R 4005	CARBON FILM RES.	1.5	1/6W	5%	RD16TPJ1R5 1.5	J07225159		
R 4006	CARBON FILM RES.	1.5	1/6W	5%	RD16TPJ1R5 1.5	J07225159		
R 4007	CARBON FILM RES.	27	1/4W	5%	RD14TJ270 27	J01245270		
R 4008	CARBON FILM RES.	27	1/4W	5%	RD14TJ270 27	J01245270		
R 4009	METAL FILM RES.	100	1W	5%	ERG-1SJ101P 100	J22309010		
R 4010	METAL FILM RES.	100	1W	5%	ERG-1SJ101P 100	J22309010		
R 4011	METAL FILM RES.	3.3	1W	5%	ERX-1SJ3R3P 3.3	J22309020		
R 4012	METAL FILM RES.	3.3	1W	5%	ERX-1SJ3R3P 3.3	J22309020		
R 4013	METAL FILM RES.	10	1W	5%	ERG-1SJ100P 10	J22309024		
R 4014	METAL FILM RES.	10	1W	5%	ERG-1SJ100P 10	J22309024		
R 4015	METAL FILM RES.	47	3W	5%	ERG-3SJ470P 47	J22359024		
R 4016	METAL FILM RES.	47	3W	5%	ERG-3SJ470P 47	J22359024		
R 4017	METAL FILM RES.	100	2W	5%	ERG-2SJ101P 100	J22339006		
R 4018	CARBON FILM RES.	220	1/6W	5%	RD16TPJ221 220	J07225221		
R 4019	METAL FILM RES.	22	3W	5%	ERG-3SJ220P 22	J22359025		
R 4020	CARBON FILM RES.	10	1/6W	5%	RD16TPJ100 10	J07225100		
R 4021	SHUNT RES. R025J	0.025			R025J	J32009016		
R 4022	CARBON FILM RES.	2.7K	1/6W	5%	RD16TPJ272 2.7K	J07225272		
R 4023	CARBON FILM RES.	2.7K	1/6W	5%	RD16TPJ272 2.7K	J07225272		
R 4024	CARBON FILM RES.	3.3K	1/6W	5%	RD16TPJ332 3.3K	J07225332		
R 4025	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 4026	CARBON FILM RES.	1K	1/4W	5%	RD14TJ102 1K	J01245102		
R 4027	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 4028	CARBON FILM RES.	12K	1/6W	5%	RD16TPJ123 12K	J07225123		
R 4029	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 4030	CARBON FILM RES.	2.7K	1/6W	5%	RD16TPJ272 2.7K	J07225272		
R 4031	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 4032	CARBON FILM RES.	10K	1/6W	5%	RD16TPJ103 10K	J07225103		
R 4033	CARBON FILM RES.	470K	1/6W	5%	RD16TPJ474 470K	J07225474		
R 4034	CARBON FILM RES.	4.7K	1/6W	5%	RD16TPJ472 4.7K	J07225472		
R 4035	CARBON FILM RES.	1K	1/6W	5%	RD16TPJ102 1K	J07225102		
R 4036	CARBON FILM RES.	82	1/6W	5%	RD16TPJ820 82	J07225820		
R 4037	CARBON FILM RES.	330	1/6W	5%	RD16TPJ331 330	J07225331		
R 4038	METAL FILM RES.	3.3	1W	5%	ERX-1SJ3R3P 3.3	J22309020		
R 4039	METAL FILM RES.	3.3	1W	5%	ERX-1SJ3R3P 3.3	J22309020		
R 4040	CORBON FILM RES.	RD15	1/4W	5%	RD25UJ150T 15	J06245150		
RL4001	RELAY		DC12V		G4PE-1117P DC12V	M1190095		
T 4001	COIL				4-1 2D3 TR6X3	L0020788A		
T 4002	COIL				3A RIB8X14	L0020833A		
T 4003	COIL				D12A RIB10	L0021854		
T 4004	COIL				D12A RIB16	L0021404A		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
TH4001	THERMISTOR				112103-2	G9090043		
TP4001	TP-E/				TP-E/MS-60124	Q5000016		
TP4002	TP-E/				TP-E/MS-60124	Q5000016		
VR4001	POT.	2K			EVN-DXAA03B23 2K	J51783202		
	MYLAR SHEET					Q9000030		
	INSULATOR					Q9000125		
	THERMAL CONDUCTOR					Q9000548		
	NYLON RIVET					S6000031		
	NYLON RIVET					S6000033		

Circuit Diagram

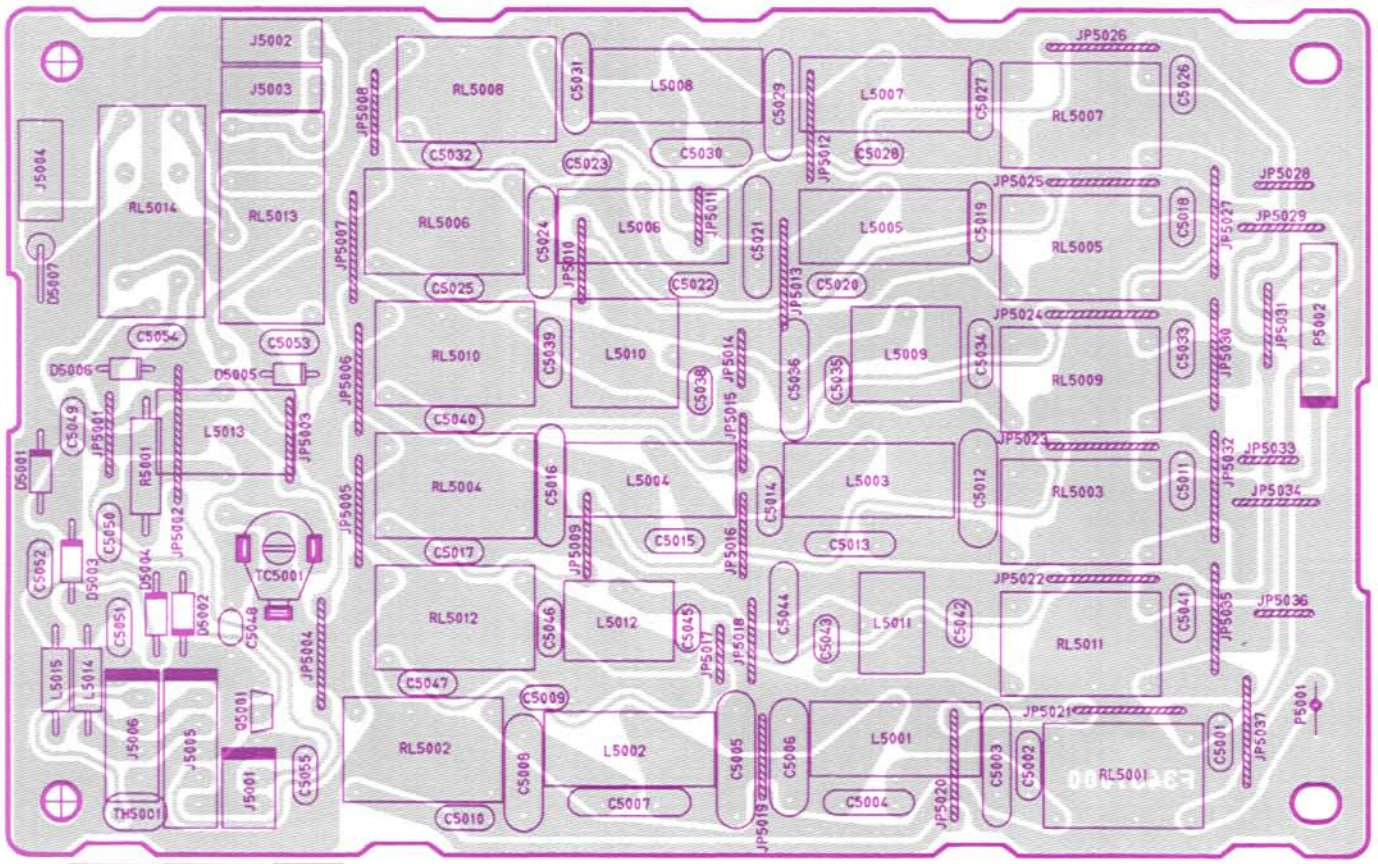



P5002
T92063634
LPF1
LPF2
LPF3
LPF4
LPF5
LPF6
LP1
LP2
LP3
LP4
LP5
LP6
To CNTL-1 Unit J3015
(See Page 6C-1)
C5053
0.047 F
D5005
1SS270
RL5013
AG2023 DC12V
J5001
P0090621
13
T9
To PA Unit J4005
(See Page 6D-1)
L5013
L0021956
CM COUPLER
J5002
P1090255
TU1
TU2
J5003
P1090255
C5054
0.047 F
D5006
1SS270
13.50V(0.01V)
Q5001
BA1A4M
0V(8.79V)
10K
10K
C5055
0.047 F
RL5014
AE5643
DC12V
ANT
L5016
0.33μ
RX-ANT
J5004
P1090255
C5059
68p SL
C5058
68p SL
D5007
DSP-201M-S008
J5005
P0090624
F
R
GND
TCNT
T9
To Tuner-CNTL Unit J6505
(See Page 8A-9)
TH5001
112103-2
J5006
P0090623
LPS
F
R
GND
To LOCAL Unit J1016
(See Page 6A-1)
R5001
100 1W
C5049
0.047 F
C5050
0.047 F
D5001
1SS1Q1
D5002
1SS101
D5003
1SS101
D5004
1SS101
C5051
0.047 F
C5052
0.047 F
L5014
1μ
L5015
1μ
20p
220p B
VALUES ARE IN Ω.
VALUES ARE IN μF. 50V
VALUES ARE IN H
OTHERWISE NOTED.
RX (TX) DC Voltage
Measuring Conditions
Frequency: 14.200MHz
Mode: USB

Parts Layout

P5002
To CNTL-1 Unit J3015
(See Page 6C-3)

6. LP6
5. LP5
4. LP4
3. LP3
2. LP2
1. LP1



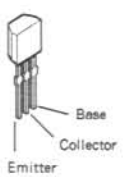
1. LPS	1. F	1. 13
2. F	2. R	2. T9
3. R	3. GND	
4. GND	4. TCNT	
	5. T9	

J5006
To LOCAL Unit J1016
(See Page 6A-3)

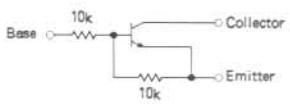
J5005
To Tuner-CNTL Unit J6505
(See Page 8A-11)

J5001
To PA Unit J4005
(See Page 6D-3)

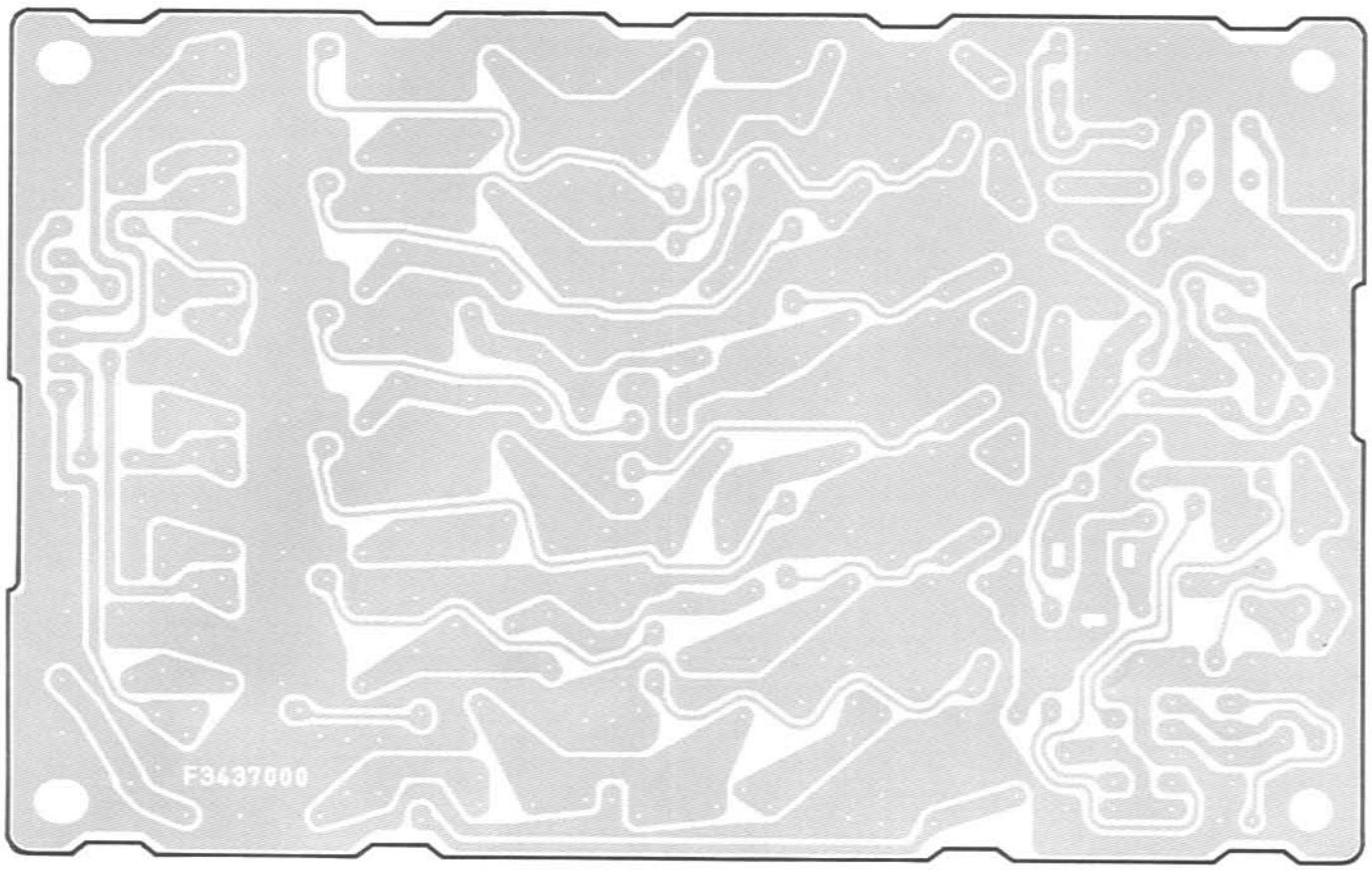
Obverse View of Component Side



BA1A4M
(Q5001)



BA1A4M Circuit Diagram



Obverse View of Chip Side

Parts List

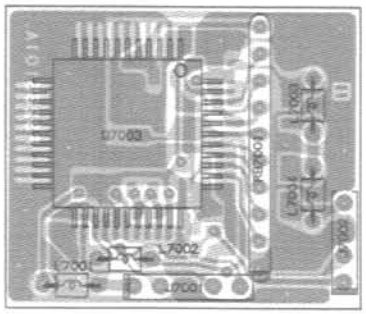
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** LPF UNIT ***						
	PCB with Components					CA1311001		
	Printed Circuti Board					F3437000		
C 5001	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5002	CERAMIC CAP.	0.0012	500V	B	DD07-959B122K500	K26270614		
C 5003	CERAMIC CAP.	560pF	500V	SL	DD12SL561K500	K00279005		
C 5004	CERAMIC CAP.	220pF	500V	SL	DD09-979SL221K500	K26270045		
C 5005	MICA CAP.	0.0012	500V		LCQ21122J5	K30275122		
C 5006	MICA CAP.	680pF	500V		LCQ18681J5	K30275681		
C 5007	CERAMIC CAP.	560pF	500V	SL	DD12SL561K500	K00279005		
C 5008	MICA CAP.	820pF	500V		LCQ18821J5	K30275821		
C 5009	CERAMIC CAP.	47pF	500V	SL	DD05-979SL470K500	K26270029		
C 5010	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5011	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5012	MICA CAP.	680pF	500V		LCQ18681J5	K30275681		
C 5013	CERAMIC CAP.	240p	500V	SL	DD09-979SL241K500	K26270046		
C 5014	CERAMIC CAP.	0.0012	500V	B	DD07-959B122K500	K26270614		
C 5015	CERAMIC CAP.	82pF	500V	SL	DD06-979SL820K500	K26270035		
C 5016	CERAMIC CAP.	560pF	500V	SL	DD12SL561K500	K00279005		
C 5017	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5018	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5019	CERAMIC CAP.	200p	500V	SL	DD08SL201K500	K00276201		
C 5020	CERAMIC CAP.	82pF	500V	SL	DD06-979SL820K500	K26270035		
C 5021	CERAMIC CAP.	620p	500V	SL	DD12SL621K500	K00279006		
C 5022	CERAMIC CAP.	30p	500V	SL	DD05-979SL300K500	K26270024		
C 5023	CERAMIC CAP.	10pF	500V	SL	DD05-979SL100D500	K26270013		
C 5024	CERAMIC CAP.	330pF	500V	SL	DD14SL331J500	K00275331		
C 5025	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5026	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5027	CERAMIC CAP.	200p	500V	SL	DD08SL201K500	K00276201		
C 5028	CERAMIC CAP.	39pF	500V	CH	DD07-979CH390J500	K26270126		
C 5029	CERAMIC CAP.	330pF	500V	SL	DD10-979SL331K500	K26270049		
C 5030	CERAMIC CAP.	120pF	500V	SL	DD10SL121J500	K00275121		
C 5031	CERAMIC CAP.	160p	500V	SL	DD07-979SL161K500	K26270042		
C 5032	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5033	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5034	CERAMIC CAP.	110p	500V	SL	DD07-979SL111K500	K26270038		
C 5035	CERAMIC CAP.	30p	500V	SL	DD05-979SL300K500	K26270024		
C 5036	CERAMIC CAP.	220pF	500V	SL	DD12SL221J500	K00275221		
C 5038	CERAMIC CAP.	12pF	500V	SL	DD05-979SL120K500	K26270015		
C 5039	CERAMIC CAP.	110p	500V	SL	DD07-979SL111K500	K26270038		
C 5040	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5041	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5042	CERAMIC CAP.	68pF	500V	SL	DD05-979SL680K500	K26270033		
C 5043	CERAMIC CAP.	27pF	500V	SL	DD05-979SL270K500	K26270023		
C 5044	CERAMIC CAP.	130p	500V	SL	DD10SL131J500	K00275131		
C 5045	CERAMIC CAP.	15pF	500V	SL	DD05-979SL150K500	K26270017		
C 5046	CERAMIC CAP.	75p	500V	SL	DD06-979SL750K500	K26270034		
C 5047	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		

LPF Unit

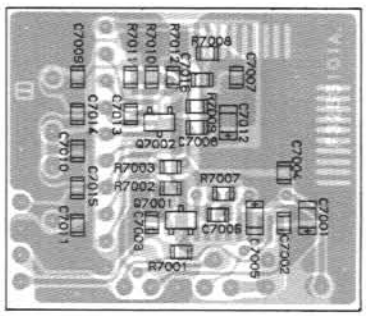
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C 5048	CERAMIC CAP.	220pF	50V	B	DD104-979B221K50	K26171606		
C 5049	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5050	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5051	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5052	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5053	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5054	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5055	CERAMIC CAP.	0.047uF	50V	F	DD306-979F473Z50	K26170726		
C 5058	CERAMIC CAP.	68pF	50V	SL	DD104-979SL680J50	K26171025		
C 5059	CERAMIC CAP.	68pF	50V	SL	DD104-979SL680J50	K26171025		
D 5001	DIODE				1SS101	G2090223		
D 5002	DIODE				1SS101	G2090223		
D 5003	DIODE				1SS101	G2090223		
D 5004	DIODE				1SS101	G2090223		
D 5005	DIODE				1SS270TJ	G2060004		
D 5006	DIODE				1SS270TJ	G2060004		
D 5007	SURGE ABSORBER				DSP201M-S00B	Q9000375		
J 5001	CONNECTOR				SC25-02WS	P0090621		
J 5002	CONNECTOR				TMP-J01X-A2	P1090255		
J 5003	CONNECTOR				TMP-J01X-A2	P1090255		
J 5004	CONNECTOR				TMP-J01X-A2	P1090255		
J 5005	CONNECTOR				SC25-05WS	P0090624		
J 5006	CONNECTOR				SC25-04WS	P0090623		
JP5001	WIRE-ASSY					T9206363A		
L 5001	COIL				3.770U T50-2	L0021405		
L 5002	COIL				2.940U T50-2	L0021406		
L 5003	COIL				1.900U T50-2	L0020615		
L 5004	COIL				2.400U T-50-2	L0021433		
L 5005	COIL				1.100U T50-6	L0020617		
L 5006	COIL				1.320U T50-6	L0020618		
L 5007	COIL				0.65U T50-6	L0022095		
L 5008	COIL				0.460U T50-6	L0021408		
L 5009	COIL				8.0T8.5D0.9UEW R	L0021855		
L 5010	COIL				9.0T8.5D0.9UEW R	L0021856		
L 5011	COIL				6.0T8.0D0.8UEW R	L0021857		
L 5012	COIL				7.0T7.5D0.9UEW R	L0022302		
L 5013	COIL				U 2001F FR9.5	L0021956		
L 5014	M.RFC	1mH			LAL03TA102K	L1790119		
L 5015	M.RFC	1mH			LAL03TA102K	L1790119		
L 5016	M.RFC	0.33uH			LAP02TAR33K	L1790040		
Q 5001	TRANSISTOR				BA1A4M-T	G3050001		
R 5001	METAL FILM RES.	100	1W	5%	ERG-1SJ101P 100	J22309010		
RL5001	RELAY		DC12V		AG2013	M1190045		
RL5002	RELAY		DC12V		AG2013	M1190045		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
RL5003	RELAY		DC12V		AG2013	M1190045		
RL5004	RELAY		DC12V		AG2013	M1190045		
RL5005	RELAY		DC12V		AG2013	M1190045		
RL5006	RELAY		DC12V		AG2013	M1190045		
RL5007	RELAY		DC12V		AG2013	M1190045		
RL5008	RELAY		DC12V		AG2013	M1190045		
RL5009	RELAY		DC12V		AG2013	M1190045		
RL5010	RELAY		DC12V		AG2013	M1190045		
RL5011	RELAY		DC12V		AG2013	M1190045		
RL5012	RELAY		DC12V		AG2013	M1190045		
RL5013	RELAY		DC12V		AG2023	M1190102		
RL5014	RELAY		DC12V		AE5643	M1190109		
TC5001	TRIMMER CAP.	20pF			ECV1ZW20X32	K91000013		
TH5001	THERMISTOR				112103-2	G9090043		

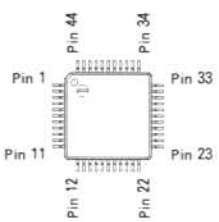
Parts Layout



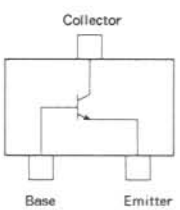
Obverse View of Component Side



Obverse View of Chip Side

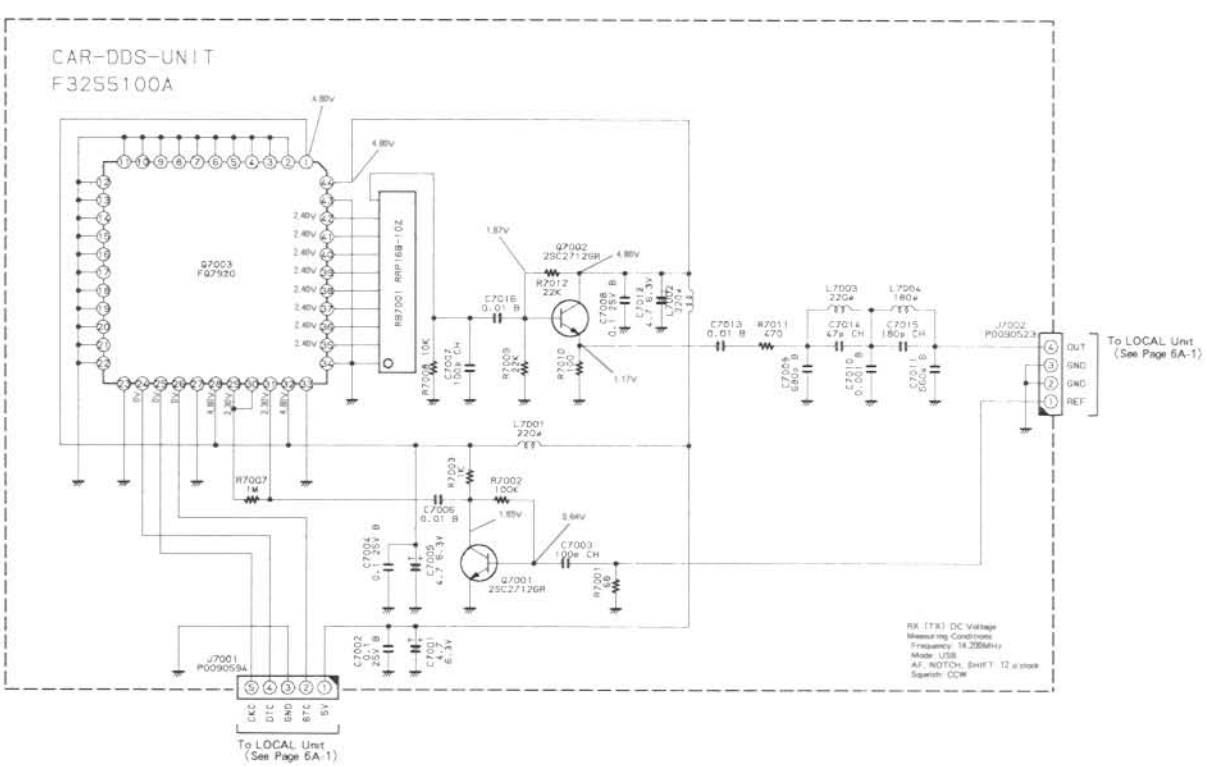


FQ7920 (CF77399FS)
(Q7003)



2SC2712GR (LG)
(Q7001, 7002)

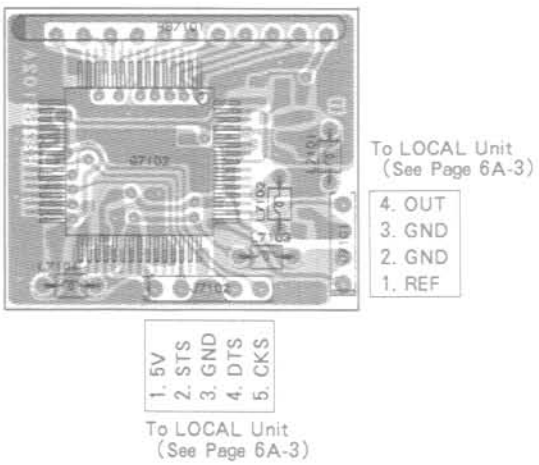
Circuit Diagram



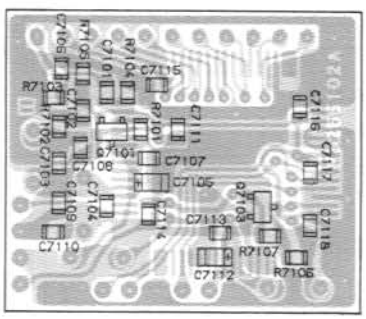
Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** CAR-DDS UNIT ***						
	PCB with Components					CA1348001		
	Printed Circuti Board					F3255101A		
C 7001	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 7002	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7003	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 7004	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7005	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 7006	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7007	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 7008	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7009	CHIP CAP.	680pF	50V	B	GRM40B681M50PT	K22170803		
C 7010	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 7011	CHIP CAP.	560pF	50V	B	GRM40B561M50PT	K22170802		
C 7012	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 7013	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7014	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		
C 7015	CHIP CAP.	180pF	50V	CH	GRM40CH181J50PT	K22170241		
C 7016	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
J 7001	CONNECTOR				3022-05B	P0090594		
J 7002	CONNECTOR				3022-04B	P0090523		
L 7001	M.RFC	220uH			LAP02TA221K	L1790074		
L 7002	M.RFC	220uH			LAP02TA221K	L1790074		
L 7003	M.RFC	220uH			LAP02TA221K	L1790074		
L 7004	M.RFC	180uH			LAP02TA181K	L1790073		
Q 7001	TRANSISTOR				2SC2712GR TE85R	G3327127G		
Q 7002	TRANSISTOR				2SC2712GR TE85R	G3327127G		
Q 7003	IC				FQ7920(CF77399FS)	G1090952		
R 7001	CHIP RES.	68	1/10W	5%	RMC1/10T 680J	J24205680		
R 7002	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 7003	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 7007	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 7008	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 7009	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 7010	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 7011	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 7012	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
RB7001	BLOCK RES.	10K/20K			RRP16B-10Z-10K/20K	J40900181		
	SHIELD CASE					R0131630		

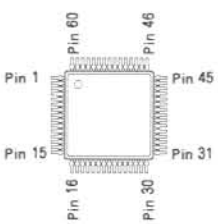
Parts Layout



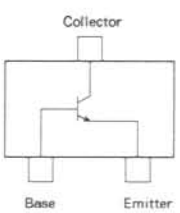
Obverse View of Component Side



Obverse View of Chip Side

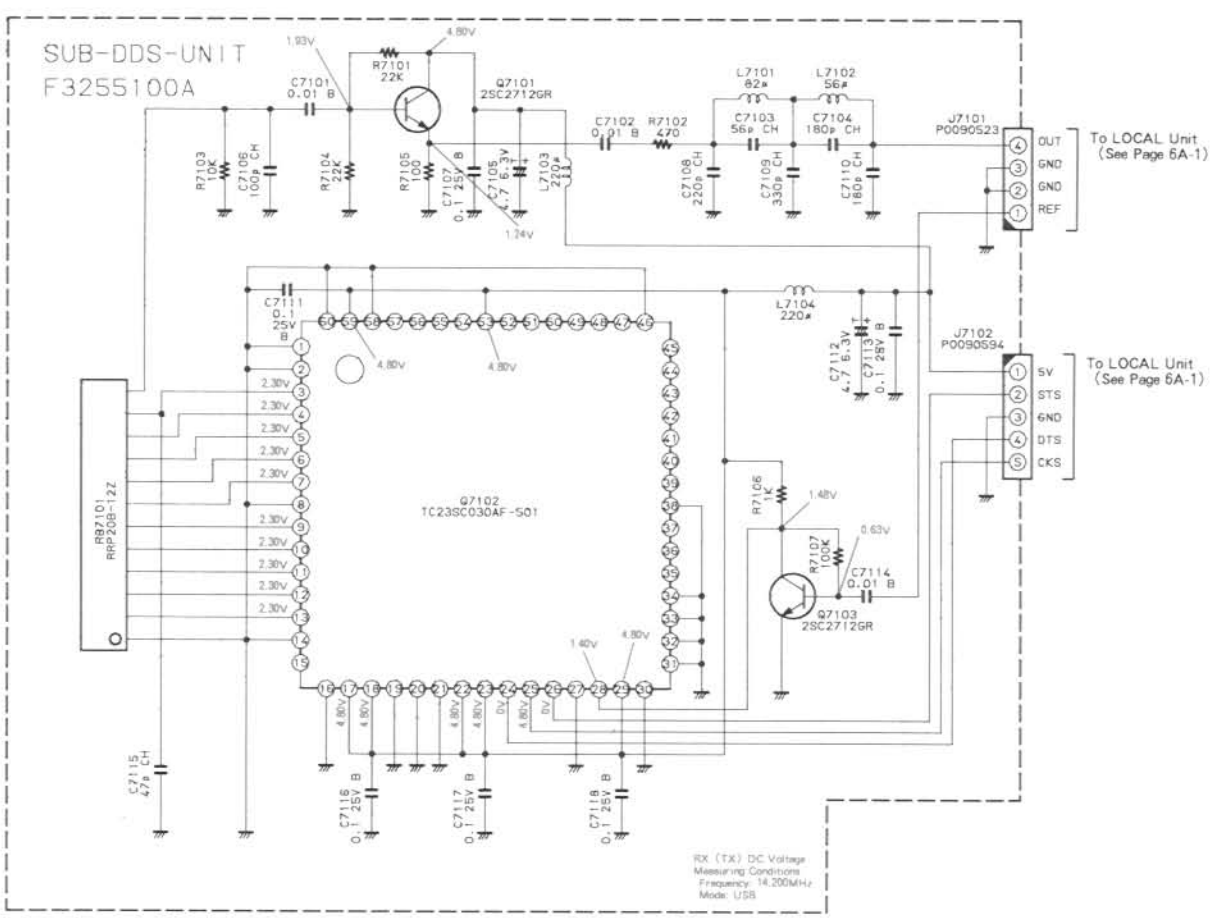


TC23SC030AF
(Q7102)



2SC2712GR (LG)
(Q7101, 7103)

Circuit Diagram

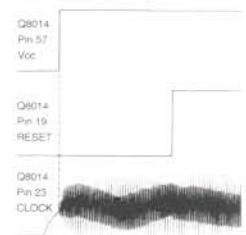


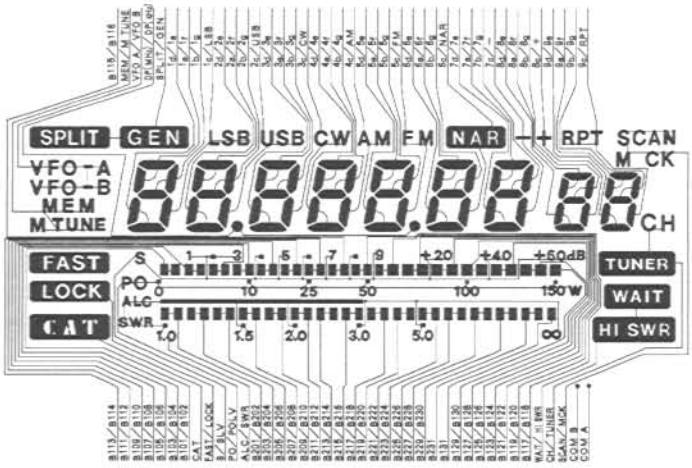
Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** SUB-DDS UNIT ***						
	PCB with Components					CA1347001		
	Printed Circuti Board					F3255102A		
C 7101	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7102	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7103	CHIP CAP.	56pF	50V	CH	GRM40CH560J50PT	K22170229		
C 7104	CHIP CAP.	180pF	50V	CH	GRM40CH181J50PT	K22170241		
C 7105	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 7106	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235		
C 7107	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7108	CHIP CAP.	220pF	50V	CH	GRM40CH221J50PT	K22170243		
C 7109	CHIP CAP.	330pF	50V	CH	GRM40CH331J50PT	K22170247		
C 7110	CHIP CAP.	180pF	50V	CH	GRM40CH181J50PT	K22170241		
C 7111	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7112	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 7113	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7114	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 7115	CHIP CAP.	47pF	50V	CH	GRM40CH470J50PT	K22170227		
C 7116	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7117	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7118	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
J 7101	CONNECTOR				3022-04B	P0090523		
J 7102	CONNECTOR				3022-05B	P0090594		
L 7101	M.RFC	82uH			LAP02TA820K	L1790069		
L 7102	M.RFC	56uH			LAP02TA560K	L1790067		
L 7103	M.RFC	220uH			LAP02TA221K	L1790074		
L 7104	M.RFC	220uH			LAP02TA221K	L1790074		
Q 7101	TRANSISTOR				2SC2712GR TE85R	G3327127G		
Q 7102	IC				TC23SC030AF-501	G1090970		
Q 7103	TRANSISTOR				2SC2712GR TE85R	G3327127G		
R 7101	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 7102	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 7103	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 7104	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 7105	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 7106	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 7107	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
RB7101	BLOCK RES.	10K/20K			RRP20B-12Z-10K/20K	J40900180		
	SHIELD CASE					R0131630		

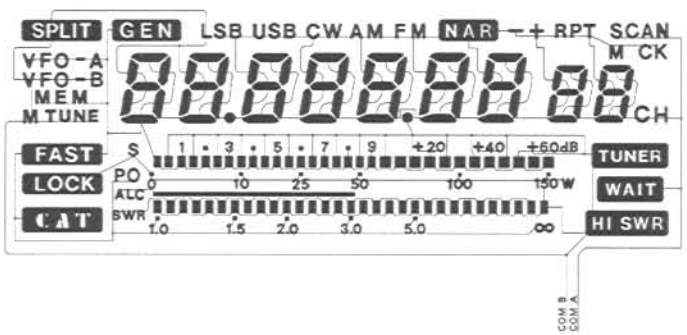
Notes

Sub CPU (CNTL-2 UNIT Q8014)
Below is a representation of the waveforms present on Q3024 upon application of Vcc via the rear panel DC power jack.

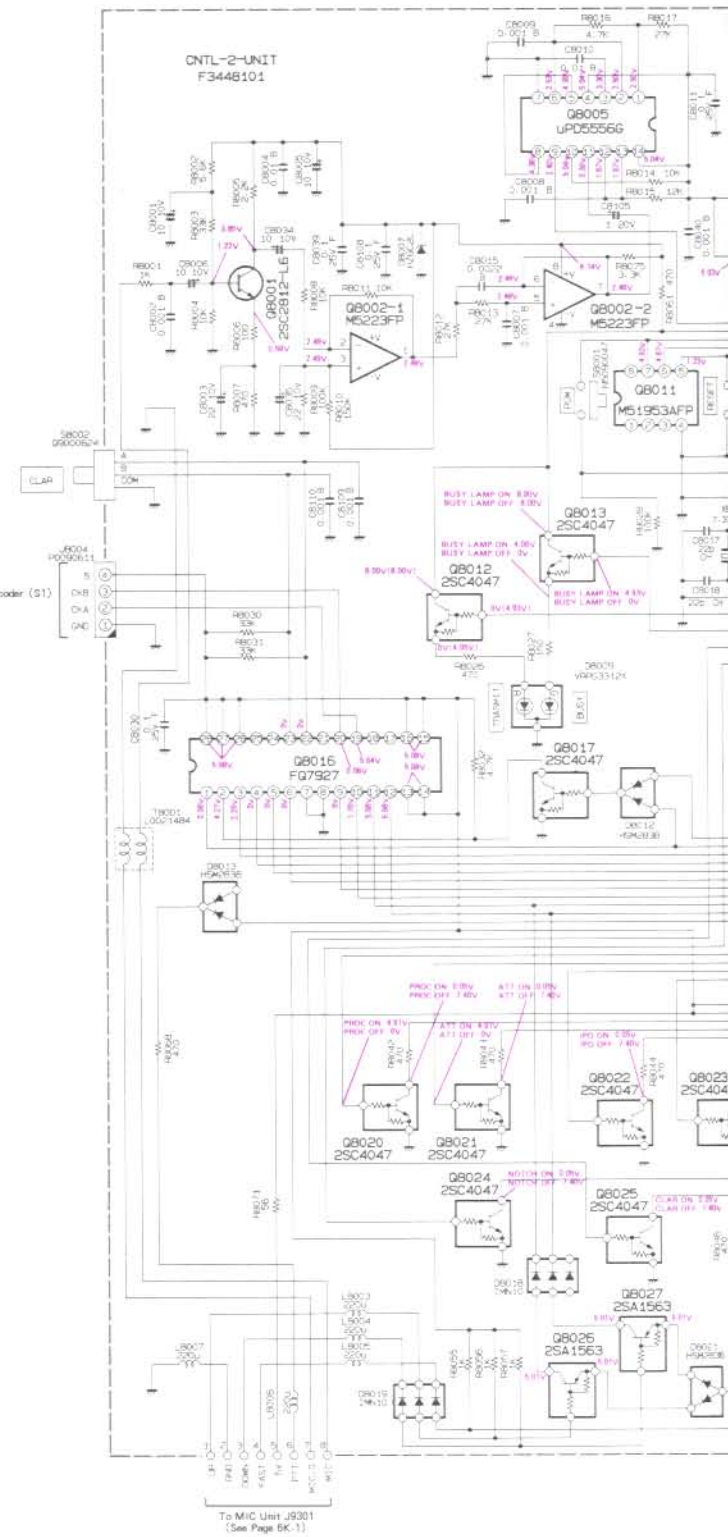


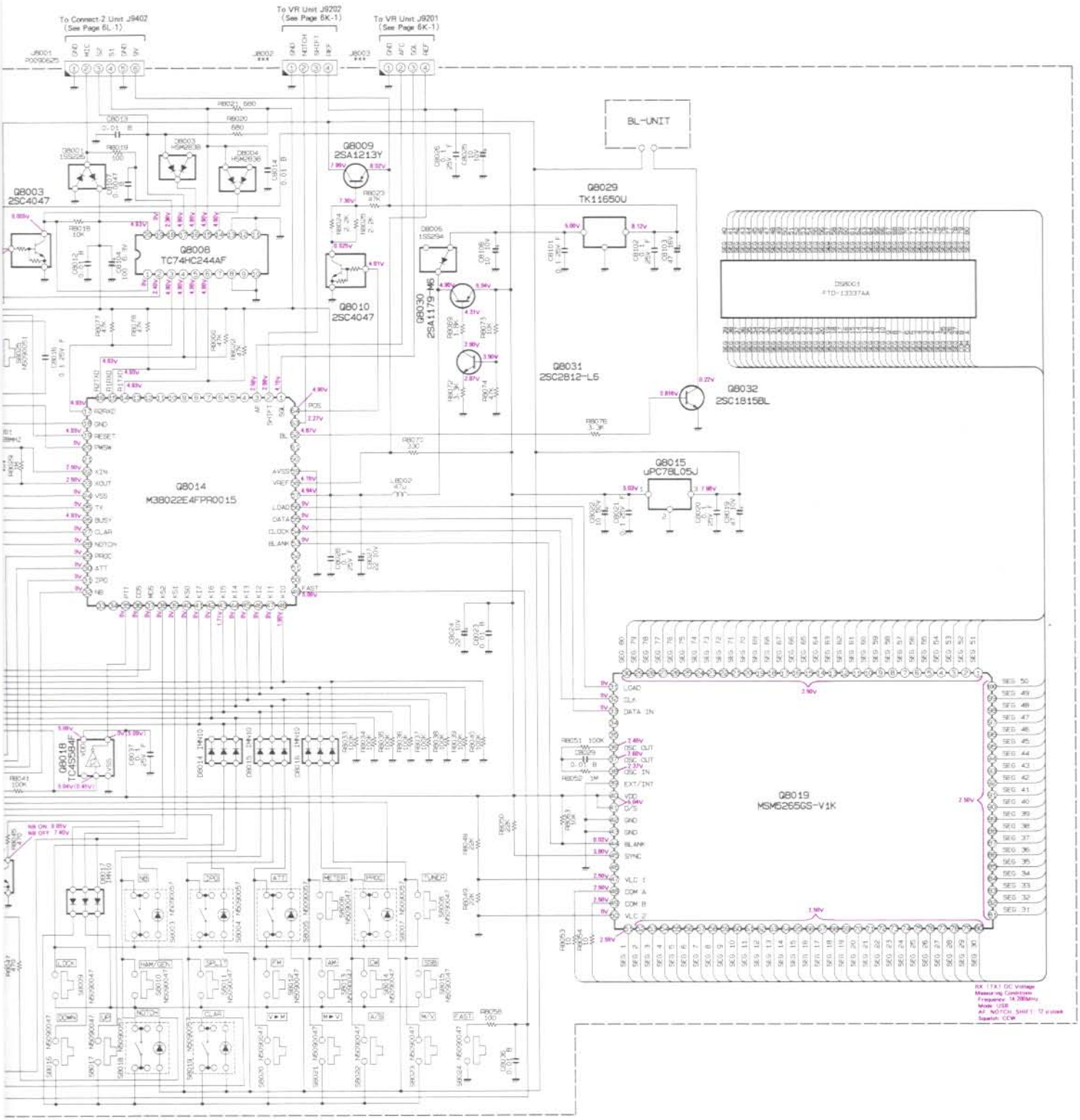


LCD Segmentation Circuit Diagram

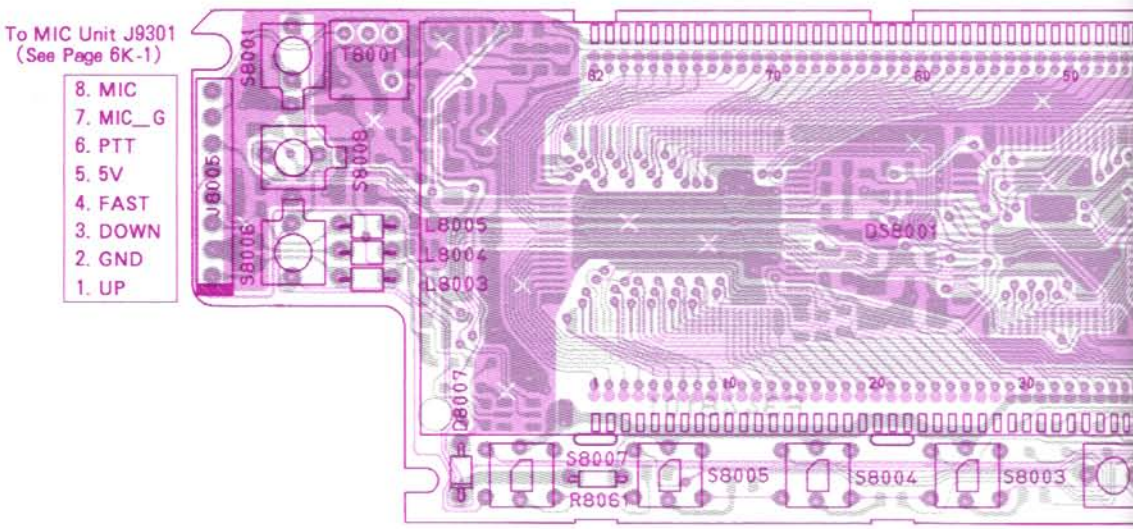


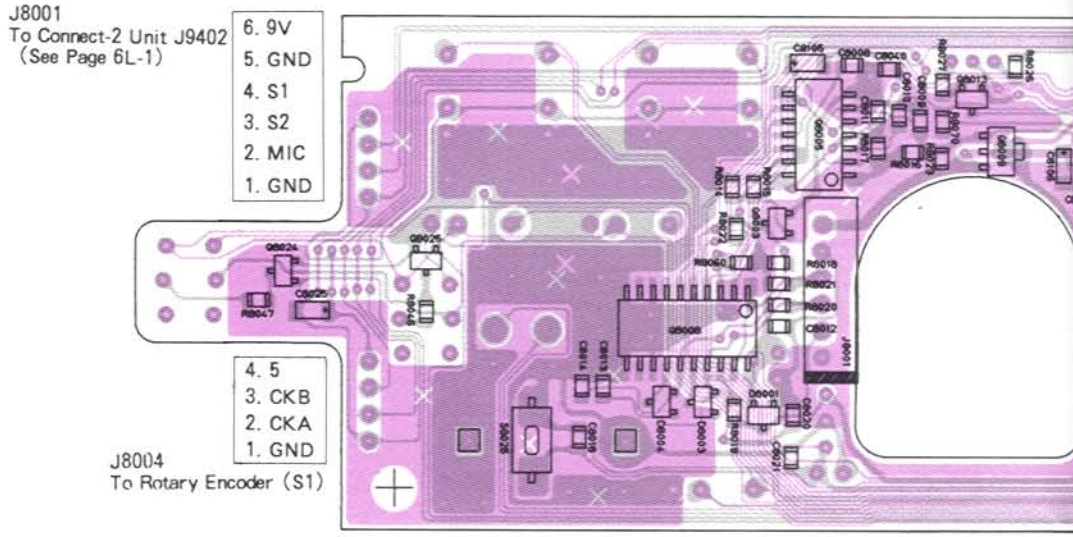
LCD Backplane Circuit Diagram

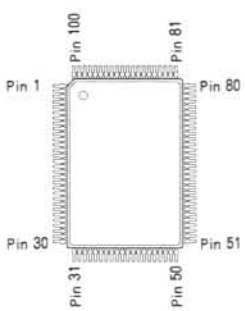



To Connect-2 Unit J9402
(See Page 6L-1)
To VR Unit J9202
(See Page 6K-1)
To VR Unit J9201
(See Page 6K-1)
BL-UNIT
Q8003
2SC4047
Q8009
2SA1213Y
Q8029
TK11650U
Q8008
TC74HC244AF
Q8010
2SC4047
Q8030
2SA1179-M6
Q8031
2SC2812-L5
Q8032
2SC1815BL
Q8014
M38022E4FPR0015
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Q8018
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MSM5265GS-V1K
DS8001
FTDI3337AA

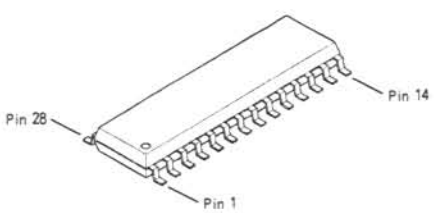
Parts Layout



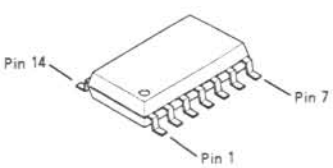




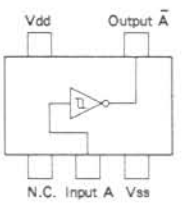
MSM5265GS
(Q8019)



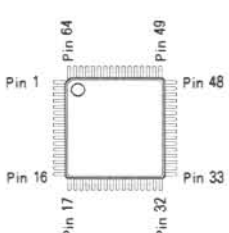
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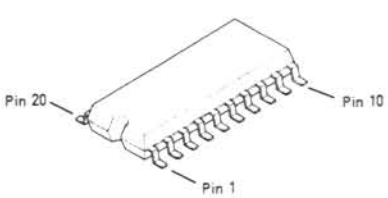
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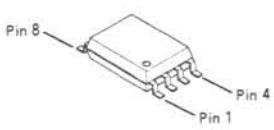
TC4S584F (CA)
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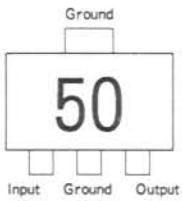
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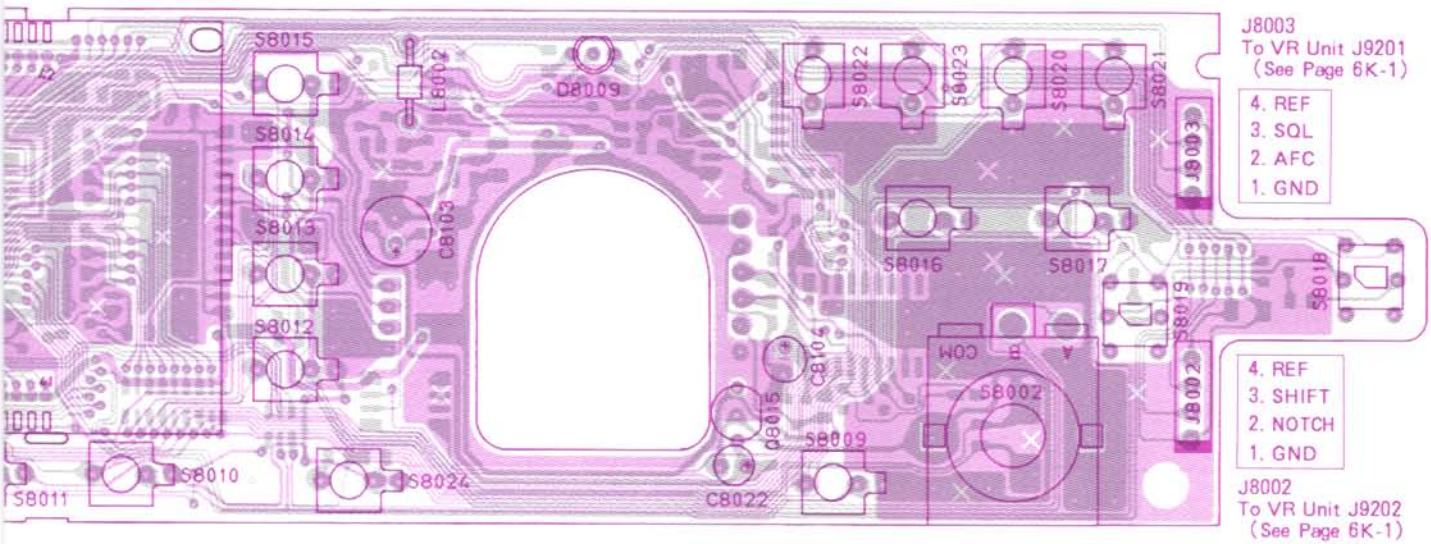
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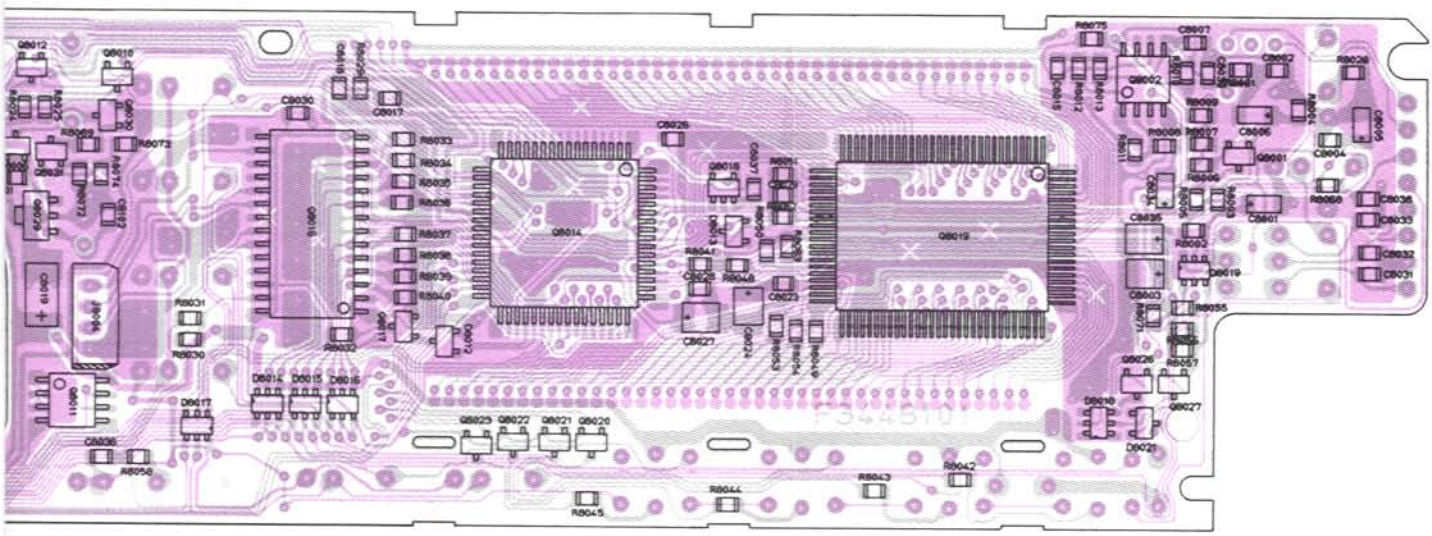
M5223FP
(Q8002)
M51953AFP
(Q8011)



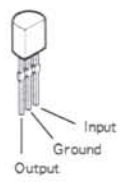
TK11650UTL (50)
(Q8029)



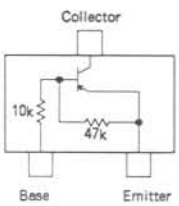
Obverse View of Component Side



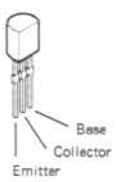
Obverse View of Chip Side



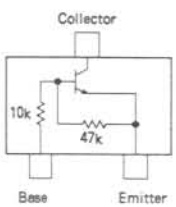
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(Q8015)



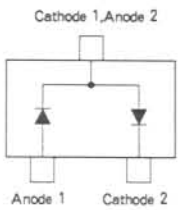
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(Q8026,8027)



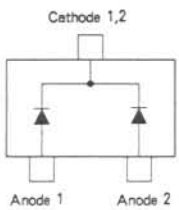
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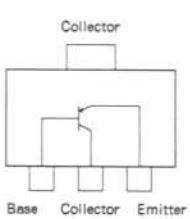
2SC4047 (ZY)
(Q8003,8010,8012
8013,8017,8020
8021,8022,8023
8024,8025)



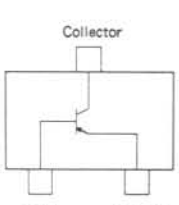
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(D8001)



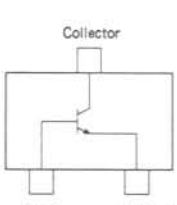
HSM2838 (A6)
(D8003,8004,8012,8013)



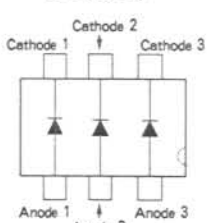
2SA1213Y (NY)
(Q8009)



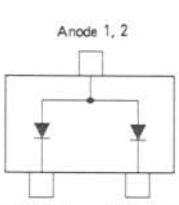
2SA1179 (M6)
(Q8030)



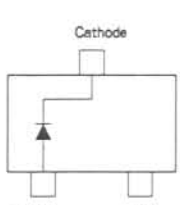
2SC2812 (L6)
(Q8001,8031)



IMN10 (N10)
(D8014,8015,8016
8017,8018,8019)



HSM2836 (A4)
(D8021)



1SS294 (A9)
(D8006)

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** CNTL-2 UNIT ***						
	PCB with Components(W/ BL UNIT)					CP4864001		
	Printed Circuti Board					F3448101		
C 8001	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 8002	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 8003	TANTALUM CHIP CAP.	22uF	10V		TEMSVB21A226M-8R	K78100029		
C 8004	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8005	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 8006	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 8007	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 8008	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 8009	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 8010	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8011	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8012	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8013	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8014	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8015	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 8016	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8017	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 8018	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219		
C 8019	TANTALUM CHIP CAP.	47uF	10V		TEMSVC1A476M12R	K78100024		
C 8020	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8021	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8022	AL.ELECTRO.CAP.	10uF	50V		RC2-50V100M-T34	K46170036		
C 8023	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8024	TANTALUM CHIP CAP.	22uF	10V		TEMSVB21A226M-8R	K78100029		
C 8025	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 8026	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8027	TANTALUM CHIP CAP.	22uF	10V		TEMSVB21A226M-8R	K78100029		
C 8028	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8029	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8030	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8034	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 8035	TANTALUM CHIP CAP.	22uF	10V		TEMSVB21A226M-8R	K78100029		
C 8036	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 8037	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8039	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8040	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 8101	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8102	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8103	AL.ELECTRO.CAP.	47uF	16V		16V470M6X7TR2	K46120006		
C 8104	AL.ELECTRO.CAP.	100uF	6.3V		RC2-6V101M-T34	K46080006		
C 8105	TANTALUM CHIP CAP.	1uF	20V		TEMSVA21D105M-8R	K78130019		
C 8106	TANTALUM CHIP CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		
C 8107	CHIP CAP.	0.0047uF	50V	B	GRM40B472M50PT	K22170813		
C 8108	CHIP CAP.	0.1uF	25V	F	GRM40F104Z25PT	K22141005		
C 8109	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		
C 8110	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805		

Control (CNTL)-2 Unit

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
D 8001	DIODE				1SS226 TE85R	G2070003		
D 8003	DIODE				HSM2838-TR	G2070108		
D 8004	DIODE				HSM2838-TR	G2070108		
D 8006	DIODE				1SS294 TE85R	G2070058		
D 8007	DIODE				HZ6C2L	G2090225		
D 8009	LED				VRPG3312X	G2090557		
D 8012	DIODE				HSM2838-TR	G2070108		
D 8013	DIODE				HSM2838-TR	G2070108		
D 8014	DIODE				IMN10 T108	G2070078		
D 8015	DIODE				IMN10 T108	G2070078		
D 8016	DIODE				IMN10 T108	G2070078		
D 8017	DIODE				IMN10 T108	G2070078		
D 8018	DIODE				IMN10 T108	G2070078		
D 8019	DIODE				IMN10 T108	G2070078		
D 8021	DIODE				HSM2836-TR	G2070110		
DS8001	LCD				FTD-13337AA	G6090108		
J 8001	CONNECTOR				SC25-06WS	P0090625		
J 8002	WIRE-ASSY					T9206388		
J 8003	WIRE-ASSY					T9206388		
J 8004	CONNECTOR				SB20-04WS	P0090611		
L 8002	M.RFC	47uH			LAP02TA470K	L1790066		
L 8003	M.RFC	220uH			LAP02TA221K	L1790074		
L 8004	M.RFC	220uH			LAP02TA221K	L1790074		
L 8005	M.RFC	220uH			LAP02TA221K	L1790074		
L 8006	M.RFC	220uH			LAP02TA221K	L1790074		
L 8007	M.RFC	220uH			LAP02TA221K	L1790074		
Q 8001	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 8002	IC				M5223FP-600C	G1090990		
Q 8003	TRANSISTOR				2SC4047-TA	G3340477		
Q 8005	IC				UPD5556G-T2	G1091843		
Q 8008	IC				TC74HC244AF(EL)	G1091566		
Q 8009	TRANSISTOR				2SA1213Y TE12R	G3112137Y		
Q 8010	TRANSISTOR				2SC4047-TA	G3340477		
Q 8011	IC				M51953AFP-600C	G1091145		
Q 8012	TRANSISTOR				2SC4047-TA	G3340477		
Q 8013	TRANSISTOR				2SC4047-TA	G3340477		
Q 8014	IC				M38022E4FP R0015	G1091917		
Q 8015	IC				UPC78L05J	G1090848		
Q 8016	IC				FQ7927	G1091854		
Q 8017	TRANSISTOR				2SC4047-TA	G3340477		
Q 8018	IC				TC4S584F TE85R	G1090974		
Q 8019	IC				MSM5265GS-V1K	G1091497		
Q 8020	TRANSISTOR				2SC4047-TA	G3340477		
Q 8021	TRANSISTOR				2SC4047-TA	G3340477		
Q 8022	TRANSISTOR				2SC4047-TA	G3340477		
Q 8023	TRANSISTOR				2SC4047-TA	G3340477		
Q 8024	TRANSISTOR				2SC4047-TA	G3340477		

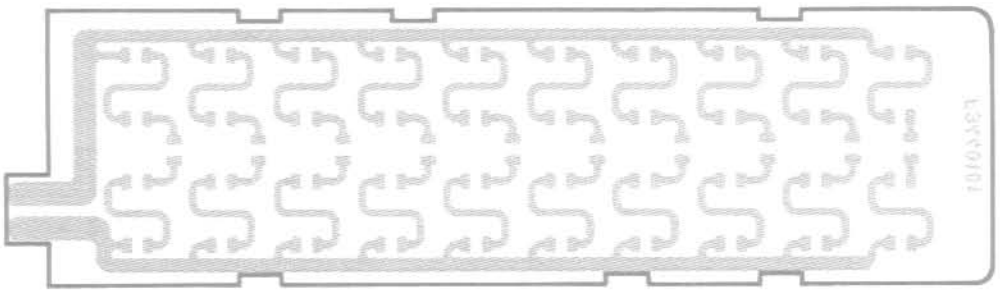
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 8025	TRANSISTOR				2SC4047-TA	G3340477		
Q 8026	TRANSISTOR				2SA1563-TB	G3115638		
Q 8027	TRANSISTOR				2SA1563-TB	G3115638		
Q 8029	IC				TK11650UTL	G1091663		
Q 8030	TRANSISTOR				2SA1179M6-TA	G3111797F		
Q 8031	TRANSISTOR				2SC2812L6-TA	G3328127F		
Q 8032	TRANSISTOR				2SC1815-BL	G3318150B		
R 8001	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 8002	CHIP RES.	5.6K	1/10W	5%	RMC1/10T 562J	J24205562		
R 8003	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 8004	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8005	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 8006	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 8007	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8008	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8009	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8010	CHIP RES.	150K	1/10W	5%	RMC1/10T 154J	J24205154		
R 8011	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8012	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 8013	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 8014	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8015	CHIP RES.	12K	1/10W	5%	RMC1/10T 123J	J24205123		
R 8016	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 8017	CHIP RES.	27K	1/10W	5%	RMC1/10T 273J	J24205273		
R 8018	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8019	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 8020	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 8021	CHIP RES.	680	1/10W	5%	RMC1/10T 681J	J24205681		
R 8022	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 8023	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 8024	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 8025	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 8026	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8027	CHIP RES.	150	1/10W	5%	RMC1/10T 151J	J24205151		
R 8028	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8029	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 8030	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 8031	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 8032	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 8033	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8034	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8035	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8036	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8037	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8038	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8039	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8040	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8041	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8042	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8043	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8044	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		

Control (CNTL)-2 Unit

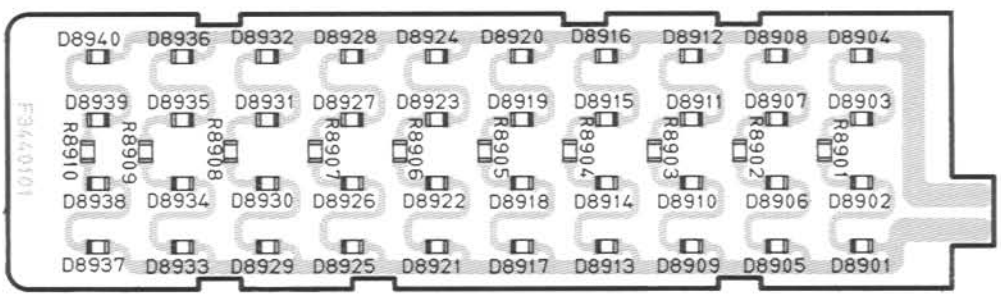
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 8045	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8046	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8047	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8048	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 8049	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 8050	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 8051	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 8052	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 8053	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 8054	CHIP RES.	10	1/10W	5%	RMC1/10T 100J	J24205100		
R 8055	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 8056	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 8057	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 8058	CHIP RES.	100	1/10W	5%	RMC1/10T 101J	J24205101		
R 8060	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 8061	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8063	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8068	CHIP RES.	470	1/10W	5%	RMC1/10T 471J	J24205471		
R 8069	CHIP RES.	1.8K	1/10W	5%	RMC1/10T 182J	J24205182		
R 8070	CHIP RES.	330	1/10W	5%	RMC1/10T 331J	J24205331		
R 8071	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		
R 8072	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 8073	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 8074	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 8075	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 8076	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
R 8077	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 8078	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
S 8001	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8002	ROTARY CODE SW				EC16B2410406A	Q9000624		
S 8003	TACT SWITCH				SKHQFE	N5090057		
S 8004	TACT SWITCH				SKHQFE	N5090057		
S 8005	TACT SWITCH				SKHQFE	N5090057		
S 8006	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8007	TACT SWITCH				SKHQFE	N5090057		
S 8008	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8009	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8010	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8011	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8012	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8013	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8014	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8015	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8016	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8017	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8018	TACT SWITCH				SKHQFE	N5090057		
S 8019	TACT SWITCH				SKHQFE	N5090057		
S 8020	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8021	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8022	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8023	TACT SWITCH				EVQ-333 H=9.5	N5090047		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
S 8024	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 8025	TACT SWITCH				SKQDAA	N5090051		
T 8001	COIL					L0021484		
X 8001	XTAL	7.3728MHz				H0103090		
	METAL HOLDER					R0149790		
	LIGHT GUIDE					R3520500		
	SHEET					R7149860		
	INTER CONNECTOR(2pcs)					R7149910		

Parts Layout

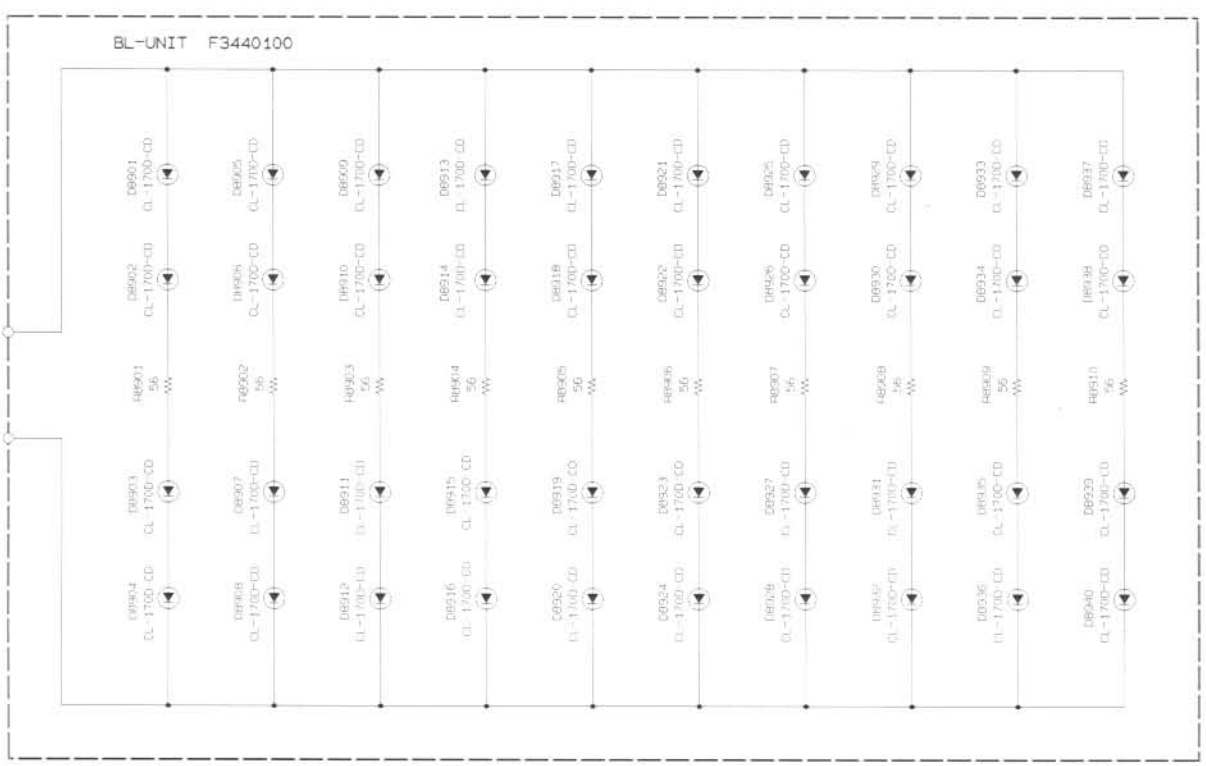


Obverse View of PCB



Obverse View of Chip Side

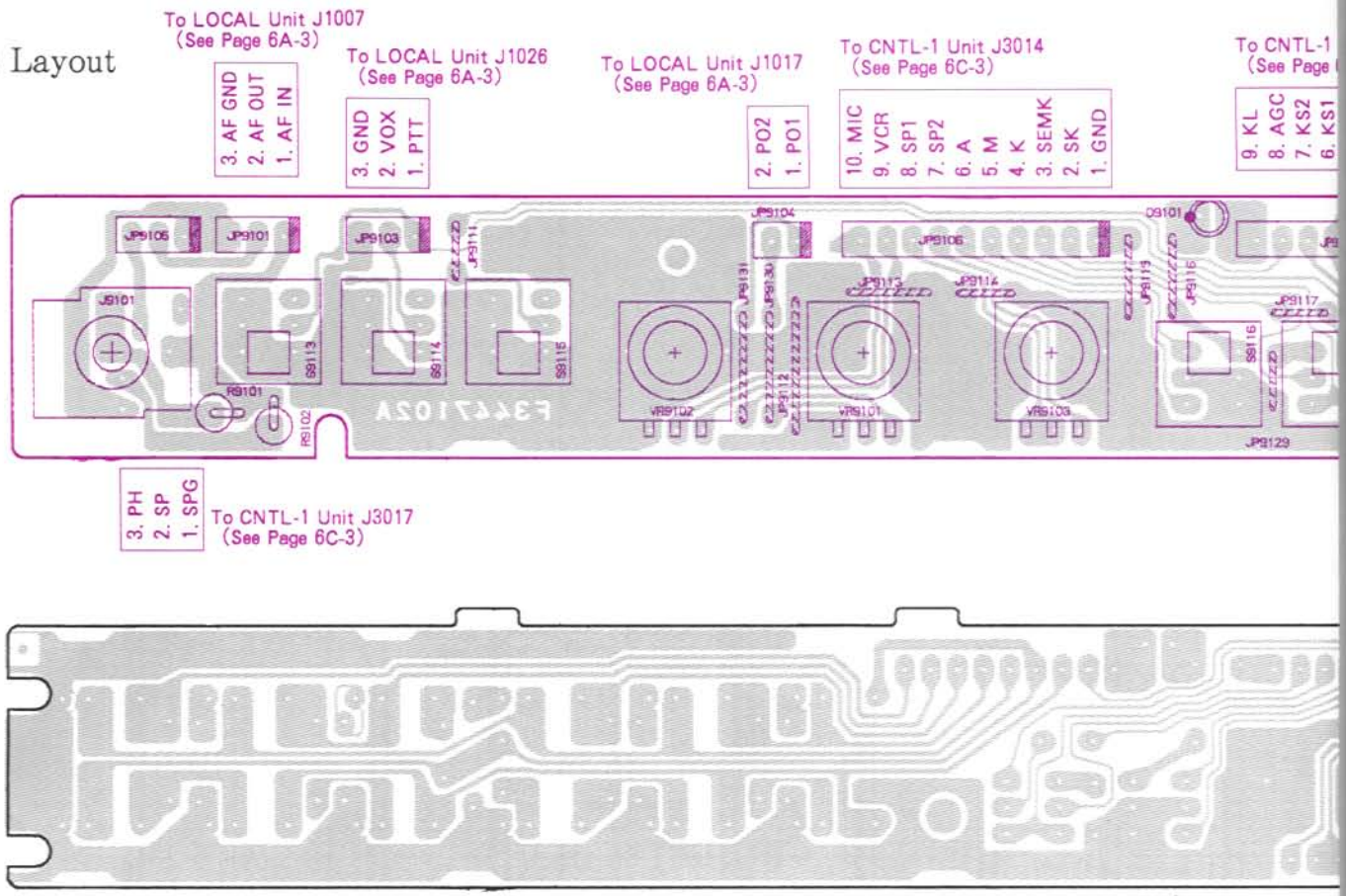
Circuit Diagram

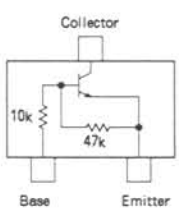


Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** BL UNIT ***						
	PCB with Components					CA1324001		
	Printed Circuti Board					F3440101		
D 8901	LED				CL-170D-CD-T	G2070344		
D 8902	LED				CL-170D-CD-T	G2070344		
D 8903	LED				CL-170D-CD-T	G2070344		
D 8904	LED				CL-170D-CD-T	G2070344		
D 8905	LED				CL-170D-CD-T	G2070344		
D 8906	LED				CL-170D-CD-T	G2070344		
D 8907	LED				CL-170D-CD-T	G2070344		
D 8908	LED				CL-170D-CD-T	G2070344		
D 8909	LED				CL-170D-CD-T	G2070344		
D 8910	LED				CL-170D-CD-T	G2070344		
D 8911	LED				CL-170D-CD-T	G2070344		
D 8912	LED				CL-170D-CD-T	G2070344		
D 8913	LED				CL-170D-CD-T	G2070344		
D 8914	LED				CL-170D-CD-T	G2070344		
D 8915	LED				CL-170D-CD-T	G2070344		
D 8916	LED				CL-170D-CD-T	G2070344		
D 8917	LED				CL-170D-CD-T	G2070344		
D 8918	LED				CL-170D-CD-T	G2070344		
D 8919	LED				CL-170D-CD-T	G2070344		
D 8920	LED				CL-170D-CD-T	G2070344		
D 8921	LED				CL-170D-CD-T	G2070344		
D 8922	LED				CL-170D-CD-T	G2070344		
D 8923	LED				CL-170D-CD-T	G2070344		
D 8924	LED				CL-170D-CD-T	G2070344		
D 8925	LED				CL-170D-CD-T	G2070344		
D 8926	LED				CL-170D-CD-T	G2070344		
D 8927	LED				CL-170D-CD-T	G2070344		
D 8928	LED				CL-170D-CD-T	G2070344		
D 8929	LED				CL-170D-CD-T	G2070344		
D 8930	LED				CL-170D-CD-T	G2070344		
D 8931	LED				CL-170D-CD-T	G2070344		
D 8932	LED				CL-170D-CD-T	G2070344		
D 8933	LED				CL-170D-CD-T	G2070344		
D 8934	LED				CL-170D-CD-T	G2070344		
D 8935	LED				CL-170D-CD-T	G2070344		
D 8936	LED				CL-170D-CD-T	G2070344		
D 8937	LED				CL-170D-CD-T	G2070344		
D 8938	LED				CL-170D-CD-T	G2070344		
D 8939	LED				CL-170D-CD-T	G2070344		
D 8940	LED				CL-170D-CD-T	G2070344		
R 8901	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		
R 8902	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		
R 8903	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		
R 8904	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		
R 8905	CHIP RES.	56	1/10W	5%	RMC1/10T 560J	J24205560		

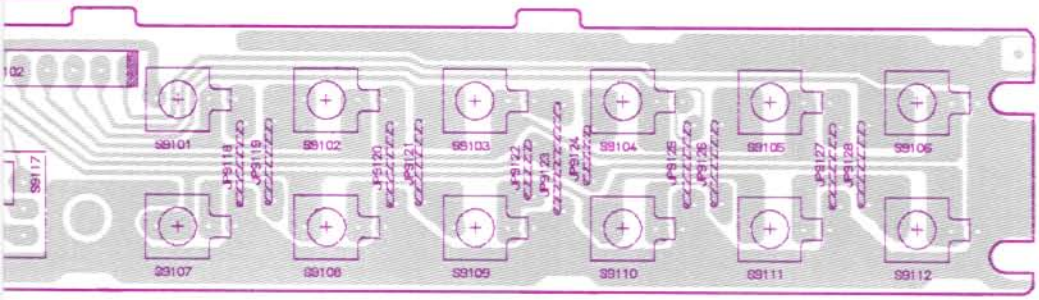
Parts Layout



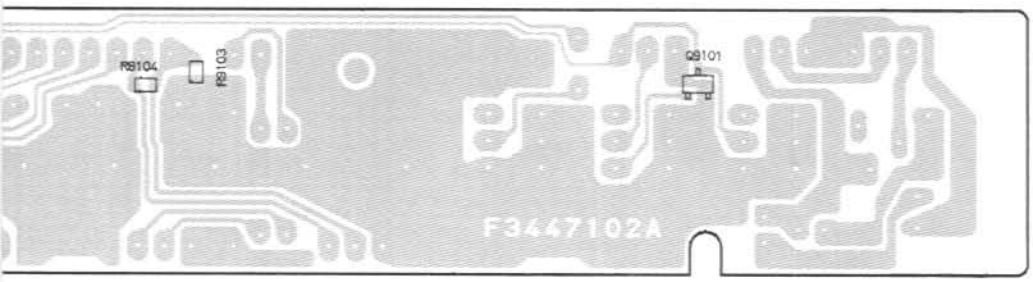


2SC4047 (ZY)
(Q9101)

Unit J3004
3C-3)

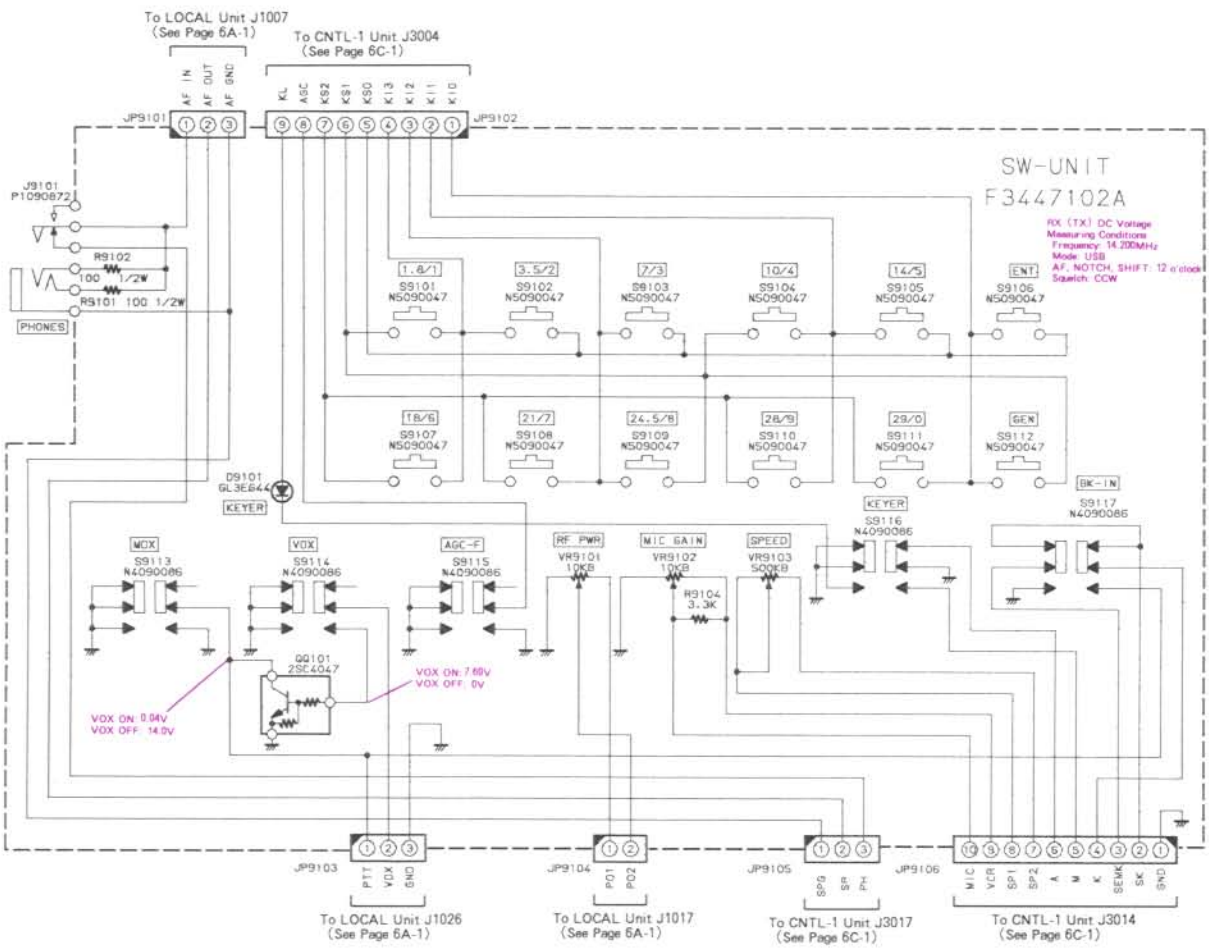


Obverse View of Component Side



Obverse View of Chip Side

Circuit Diagram

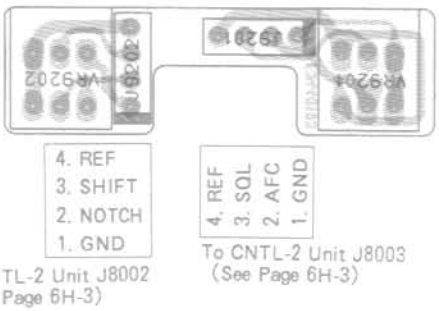


Parts List

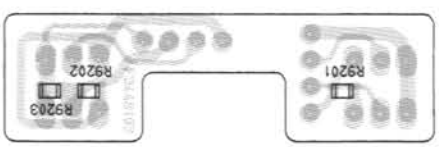
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** SW UNIT ***						
	PCB with Components					CA1299001		
	Printed Circuti Board					F3447102		
D 9101	LED				GL3EG44	G2090565		
J 9101	CONNECTOR				LGM1509-0200	P1090872		
JP9101	WIRE-ASSY					T9206389		
JP9102	WIRE-ASSY					T9206390		
JP9103	WIRE-ASSY					T9206391		
JP9104	WIRE-ASSY					T9206392		
JP9105	WIRE-ASSY					T9206393		
JP9106	WIRE-ASSY					T9206394		
Q 1101	TRANSISTOR				2SC4047-TA	G3340477		
R 9101	CARBON FILM RES.	100	1/2W	5%	RD12TJ101 100	J01275101		
R 9102	CARBON FILM RES.	100	1/2W	5%	RD12TJ101 100	J01275101		
R 9104	CHIP RES.	3.3K	1/10W	5%	RMC1/10T 332J	J24205332		
S 9101	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9102	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9103	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9104	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9105	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9106	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9107	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9108	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9109	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9110	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9111	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9112	TACT SWITCH				EVQ-333 H=9.5	N5090047		
S 9113	PUSH SWITCH				SPH121A94	N4090086		
S 9114	PUSH SWITCH				SPH121A94	N4090086		
S 9115	PUSH SWITCH				SPH121A94	N4090086		
S 9116	PUSH SWITCH				SPH121A94	N4090086		
S 9117	PUSH SWITCH				SPH121A94	N4090086		
VR9101	POT.	10K		B	RK09L1140A1XA	J60800197		
VR9102	POT.	10K		B	RK09L1140A1XA	J60800197		
VR9103	POT.	500K		B	RK09L1140A1YA	J60800198		
	LED SPACER					S6000236		

VR Unit

Parts Layout

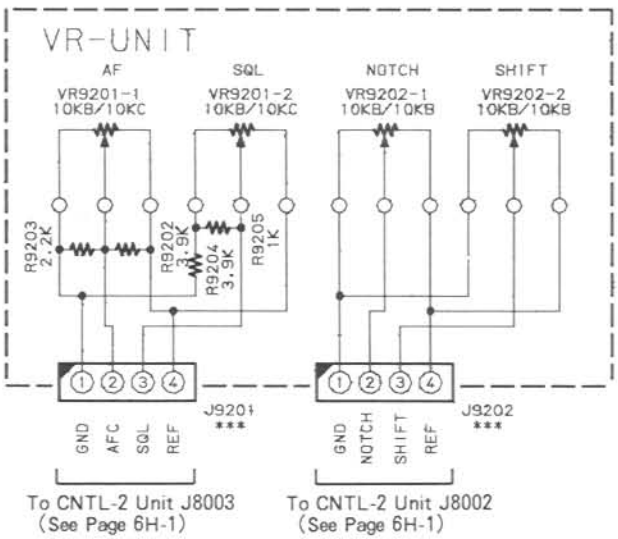


Obverse View of Component Side



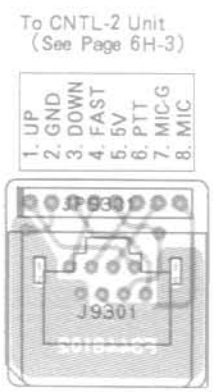
Obverse View of Chip Side

Circuit Diagram

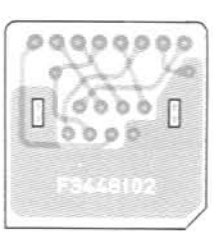


MIC Unit

Parts Layout

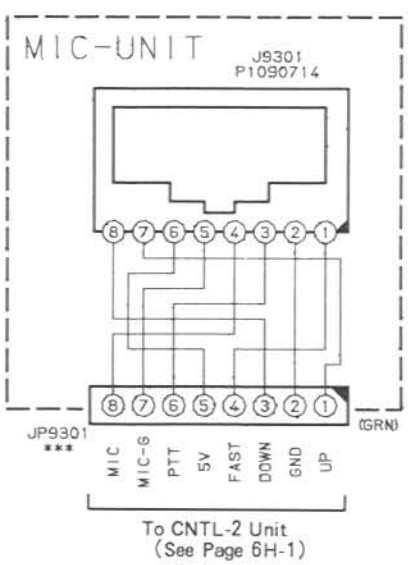


Obverse View of Component Side



Obverse View of Solder Side

Circuit Diagram



VR Unit

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** VR UNIT ***						
	PCB with Components(W/O J8002,J8003)					CS1398001		
	Printed Circuti Board					F3448103		
J9201	WIRE-ASSY(from J8003)					T9206388		
J9202	WIRE-ASSY(from J8002)					T9206388		
R 9202	CHIP RES.	3.9K	1/10W	5%	RMC1/10T 392J	J24205392		
R 9203	CHIP RES.	2.2K	1/10W	5%	RMC1/10T 222J	J24205222		
R 9204	CARBON FILM RES.	3.9K	1/6W	5%	RD16TPJ392 3.9K	J07225392		
R 9205	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
VR9201	POT.	10KB/10KC			RK097221003CA	J62800123		
VR9202	POT.	10KB/10KB			RK097221003DA	J62800124		

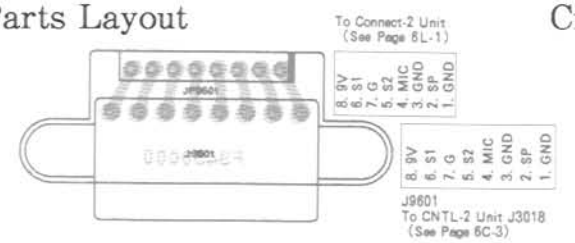
MIC Unit

Parts List

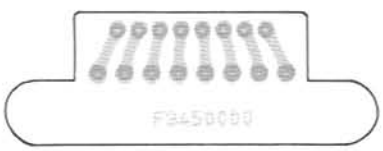
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** MIC UNIT ***						
	PCB with Components(W/O JP9301)					CS1399001		
	Printed Circuti Board					F3448102		
J 9301	CONNECTOR				R41-2509H	P1090714		
JP9301	WIRE-ASSY(from CNTL-2 UNIT)					T9206395		

Connect-1 Unit

Parts Layout

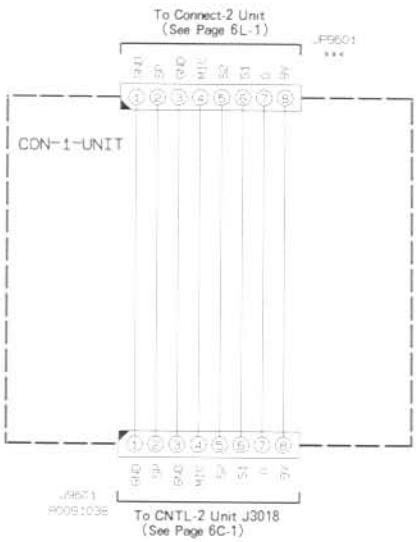


Obverse View of Component Side



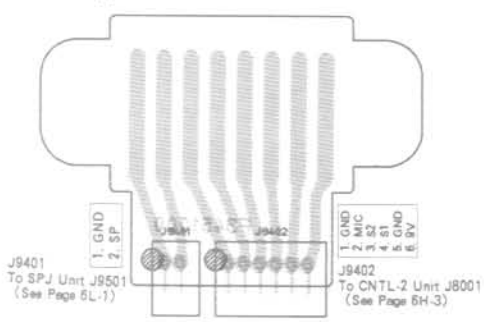
Obverse View of Solder Side

Circuit Diagram

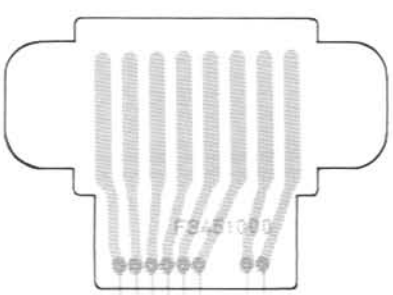


Connect-2 Unit

Parts Layout

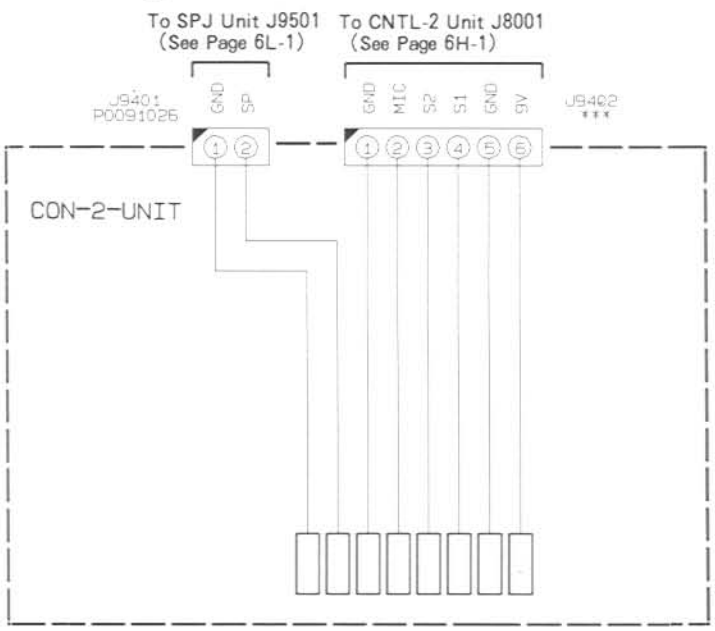


Obverse View of Component Side



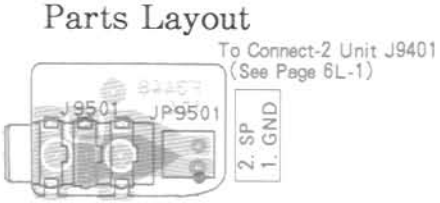
Obverse View of Solder Side

Circuit Diagram

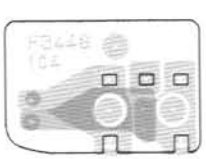


SPJ Unit

Parts Layout

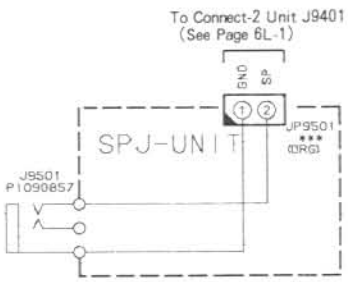


Obverse View of Component Side



Obverse View of Solder Side

Circuit Diagram



Connect-1 Unit

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
	*** CONNECT-1 UNIT ***							
	PCB with Components					CA1325001		
	Printed Circuti Board					F3450000		
J 9601	CONNECTOR				CLE9008-0201R	P0091038		
JP9601	WIRE-ASSY(from J3108)					T9206397		

Connect-2 Unit

Parts List

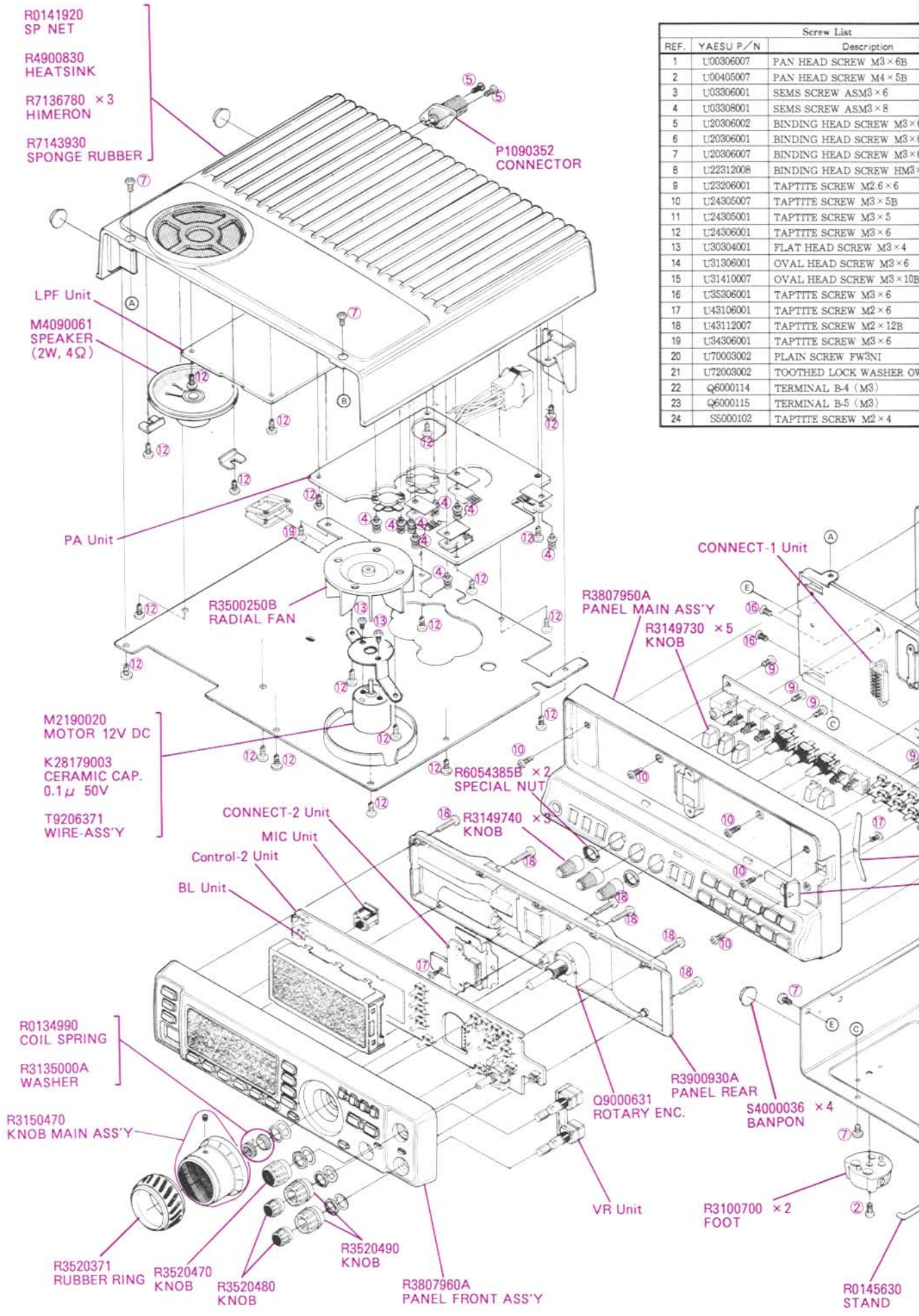
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
	*** CONNECT-2 UNIT ***							
	PCB with Components					CA1326001		
	Printed Circuti Board					F3451000		
J 9401	CONNECTOR				IL-Y-2P-S15L2-EF	P0091026		
J 9402	CONNECTOR				IL-Y-6P-S15L2-EF	P0091042		

SPJ Unit

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
	*** SPJ UNIT ***							
	PCB with Components					CA1329001		
	Printed Circuti Board					F3448104		
J 9501	CONNECTOR				HSJ1715-01-110	P1090857		
JP9501	WIRE-ASSY(from J9401)					T9206396A		

Notes

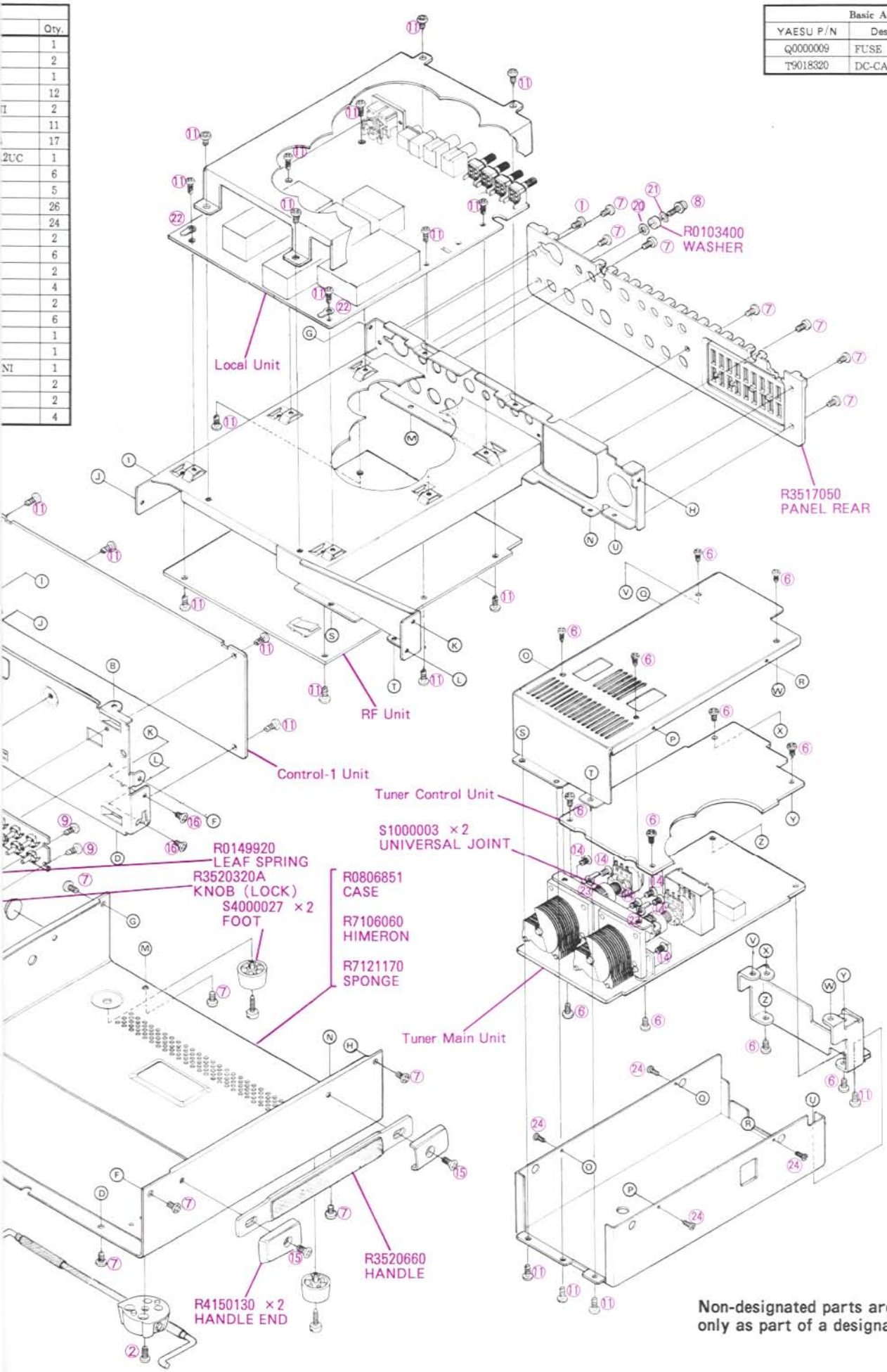


Screw List		
REF.	YAESU P/N	Description
1	U00306007	PAN HEAD SCREW M3×6B
2	U00405007	PAN HEAD SCREW M4×5B
3	U03306001	SEMS SCREW ASM3×6
4	U03308001	SEMS SCREW ASM3×8
5	U20306002	BINDING HEAD SCREW M3×
6	U20306001	BINDING HEAD SCREW M3×
7	U20306007	BINDING HEAD SCREW M3×
8	U22312008	BINDING HEAD SCREW HM3
9	U23206001	TAPTITE SCREW M2.6×6
10	U24305007	TAPTITE SCREW M3×5B
11	U24305001	TAPTITE SCREW M3×5
12	U24306001	TAPTITE SCREW M3×6
13	U30304001	FLAT HEAD SCREW M3×4
14	U31306001	OVAL HEAD SCREW M3×6
15	U31410007	OVAL HEAD SCREW M3×10B
16	U35306001	TAPTITE SCREW M3×6
17	U43106001	TAPTITE SCREW M2×6
18	U43112007	TAPTITE SCREW M2×12B
19	U34306001	TAPTITE SCREW M3×6
20	U70003002	PLAIN SCREW FW3NI
21	U72003002	TOOTHED LOCK WASHER OV
22	Q6000114	TERMINAL B-4 (M3)
23	Q6000115	TERMINAL B-5 (M3)
24	S5000102	TAPTITE SCREW M2×4

Exploded View & Miscellaneous Parts

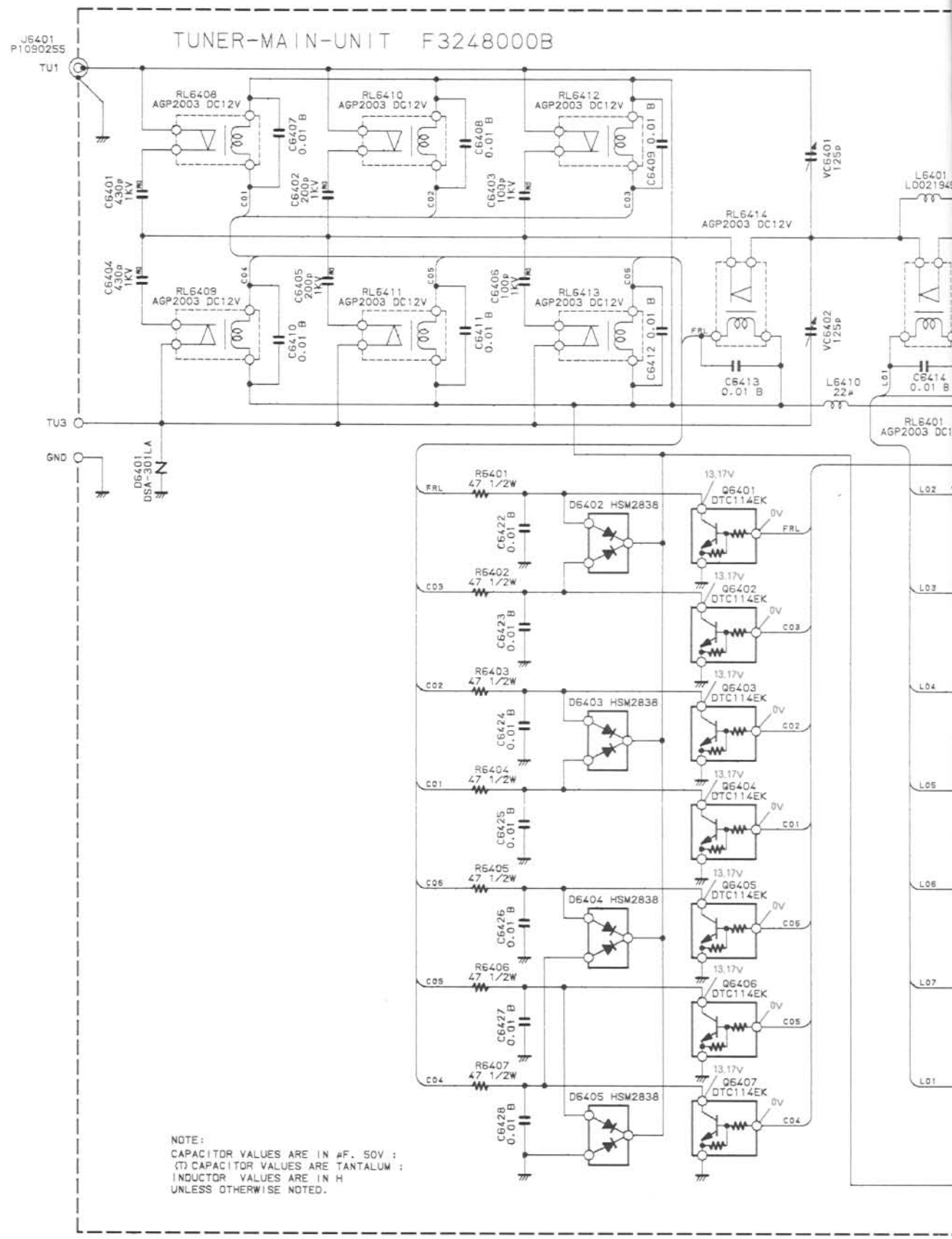
	Qty.
	1
	2
	1
	12
I	2
	11
	17
2UC	1
	6
	5
	26
	24
	2
	6
	2
	4
	2
	6
	1
	1
NI	1
	2
	2
	4

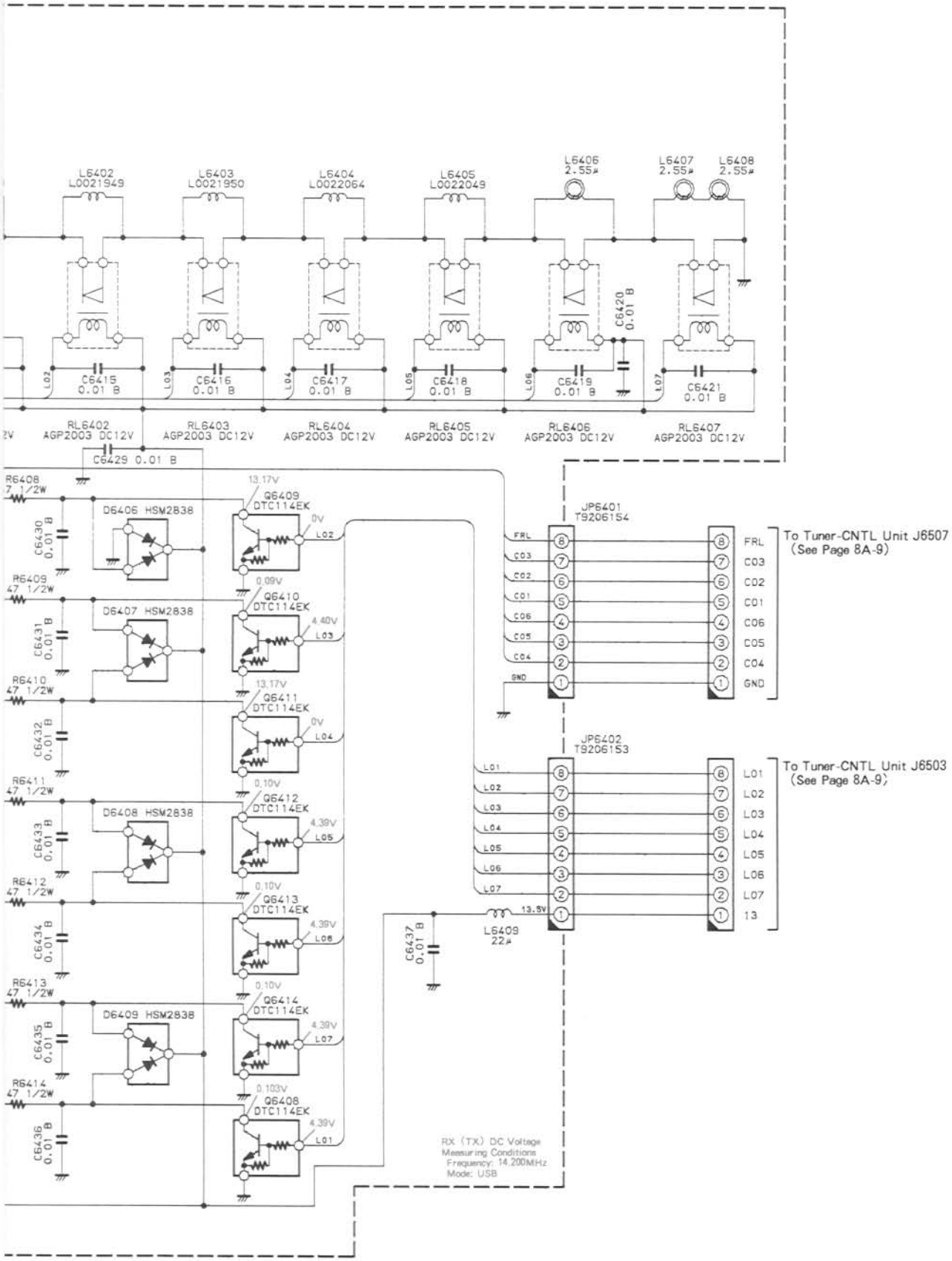
Basic Accessories		
YAESU P/N	Description	Qty.
Q0000009	FUSE 20A	2
T9018320	DC-CABLE	1



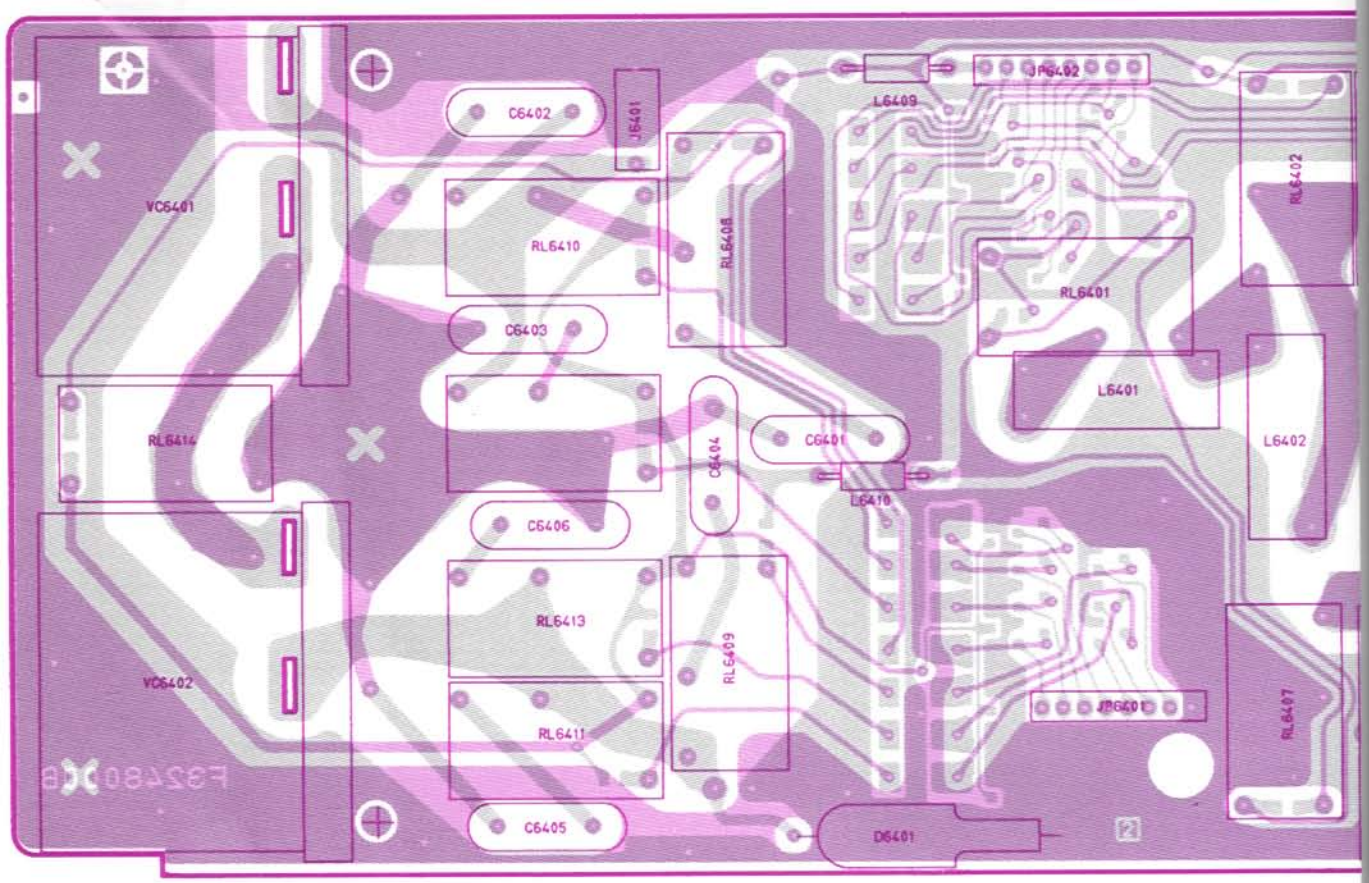
Non-designated parts are available only as part of a designated assembly.

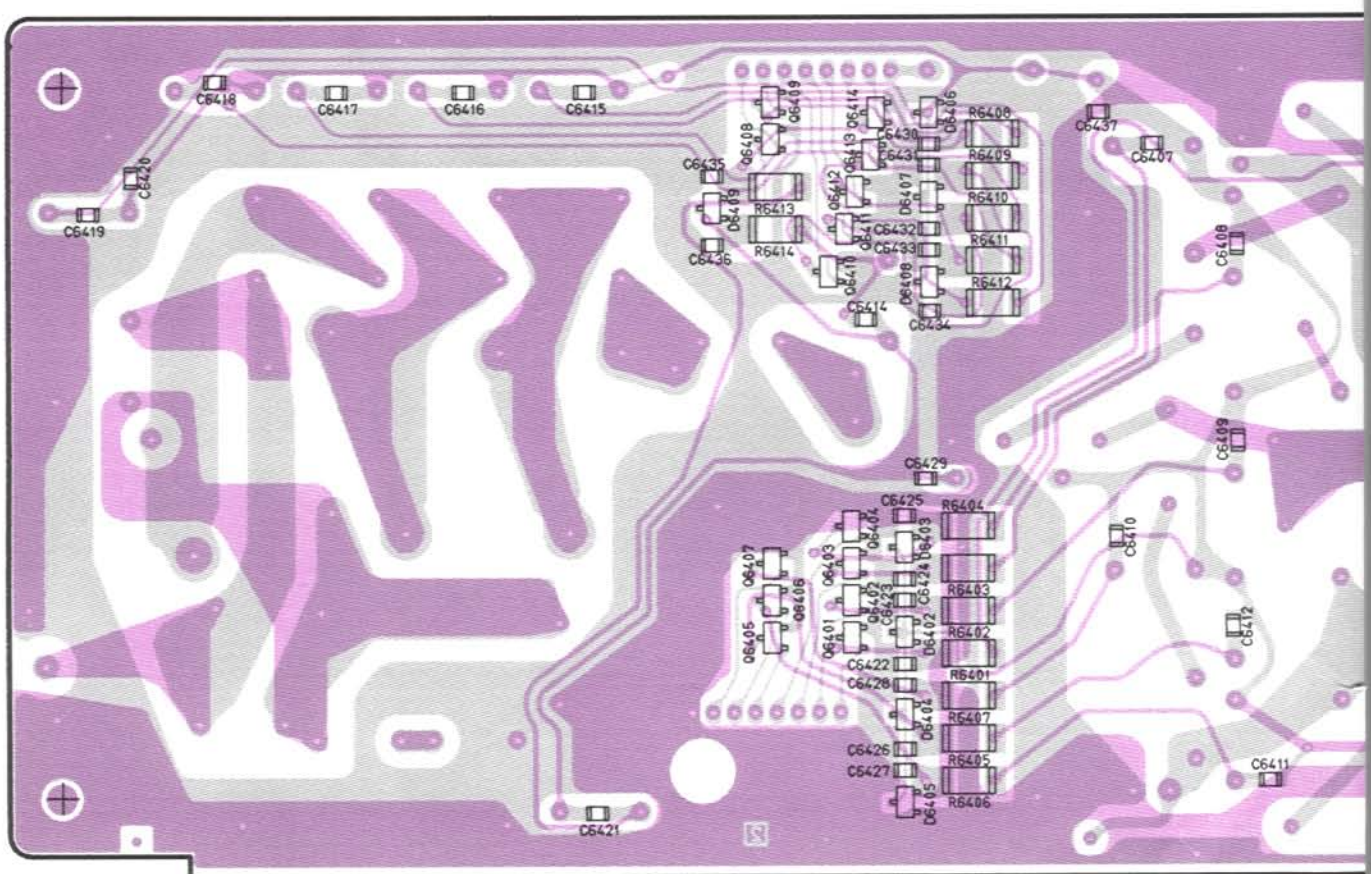
Tuner-Main Unit Circuit Diagram

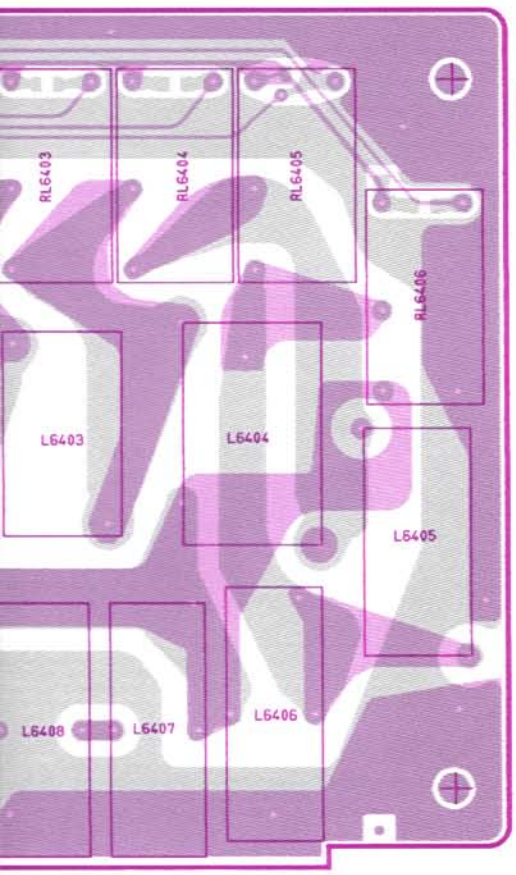



L6402 L0021949
L6403 L0021950
L6404 L0022064
L6405 L0022049
L6406 2.55μ
L6407 2.55μ
L6408 2.55μ
C6420 0.01 B
C6415 0.01 B
C6416 0.01 B
C6417 0.01 B
C6418 0.01 B
C6419 0.01 B
C6421 0.01 B
RL6402 AGP2003 DC12V
RL6403 AGP2003 DC12V
RL6404 AGP2003 DC12V
RL6405 AGP2003 DC12V
RL6406 AGP2003 DC12V
RL6407 AGP2003 DC12V
C6429 0.01 B
R6408 47 1/2W
C6430 0.01 B
D6406 HSM2838
13.17V
Q6409 DTC114EK
0V
L02
R6409 47 1/2W
C6431 0.01 B
D6407 HSM2838
0.09V
Q6410 DTC114EK
4.40V
L03
R6410 47 1/2W
C6432 0.01 B
13.17V
Q6411 DTC114EK
0V
L04
R6411 47 1/2W
C6433 0.01 B
D6408 HSM2838
0.10V
Q6412 DTC114EK
4.39V
L05
R6412 47 1/2W
C6434 0.01 B
0.10V
Q6413 DTC114EK
4.39V
L06
R6413 47 1/2W
C6435 0.01 B
D6409 HSM2838
0.10V
Q6414 DTC114EK
4.39V
L07
R6414 47 1/2W
C6436 0.01 B
0.103V
Q6408 DTC114EK
4.39V
L01
RX (TX) DC Voltage
Measuring Conditions
Frequency: 14.200MHz
Mode: USB
JP6401 T9206154
FRL
C03
C02
C01
C06
C05
C04
GND
To Tuner-CNTL Unit J6507
(See Page 8A-9)
JP6402 T9206153
L01
L02
L03
L04
L05
L06
L07
13.5V
L6409 22μ
C6437 0.01 B
13
To Tuner-CNTL Unit J6503
(See Page 8A-9)

Tuner-Main Unit Parts Layout







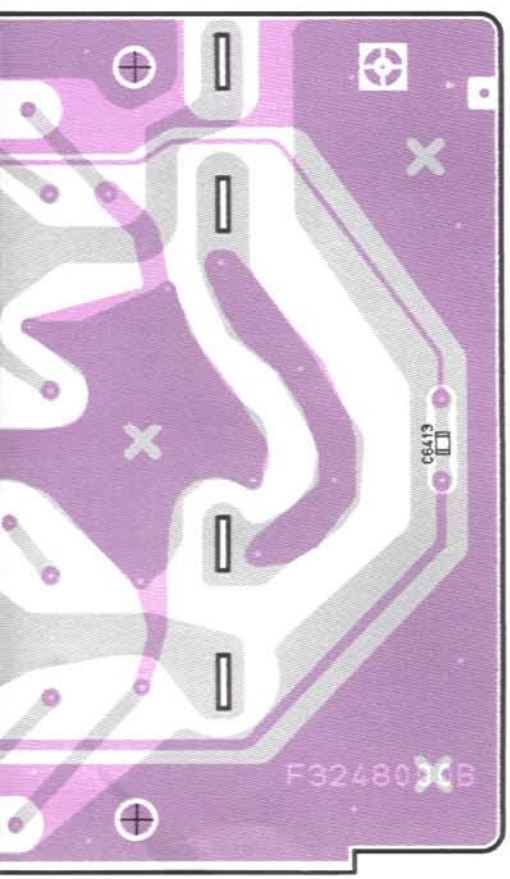
JP6402
To Tuner-CNTL Unit J6503
(See Page 8A-11)

1.	13
2.	L07
3.	L06
4.	L05
5.	L04
6.	L03
7.	L02
8.	L01

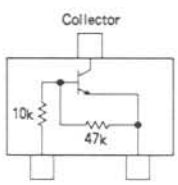
8.	FRL
6.	C03
7.	C02
5.	C01
4.	C06
3.	C05
2.	C04
1.	GND

JP6401
To Tuner-CNTL Unit J6507
(See Page 8A-11)

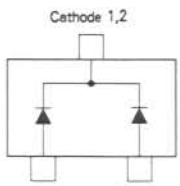
Obverse View of Component Side



Obverse View of Chip Side



DTC114EK (24)
(Q6401, 6402, 6403
6404, 6405, 6406
6407, 6408, 6409
6410, 6411, 6412
6413, 6414)



HSM2838 (A6)
(D6402, 6403, 6404
6405, 6406, 6407
6408, 6409)

Tuner-Main Unit Parts List

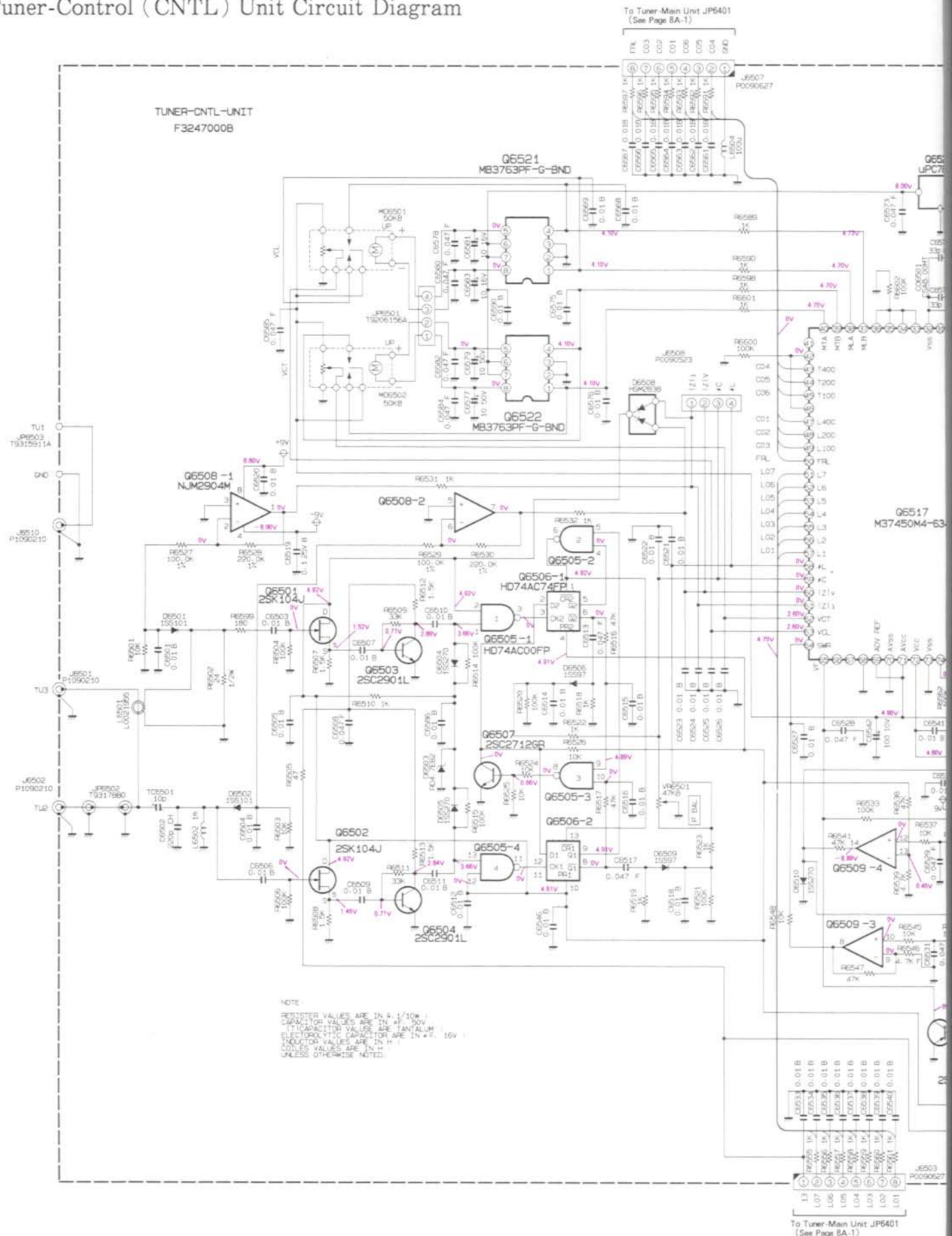
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** TUNER MAIN UNIT ***						
	PCB with Components					CA1314001		
	Printed Circuti Board					F3248000B		
C 6401	MICA CAP.	430p	1KV		DML2 431J10	K30309018		
C 6402	MICA CAP.	200p	1KV		DML2 201J10	K30309026		
C 6403	MICA CAP.	100pF	1KV		DML2 101J10	K30309040		
C 6404	MICA CAP.	430p	1KV		DML2 431J10	K30309018		
C 6405	MICA CAP.	200p	1KV		DML2 201J10	K30309026		
C 6406	MICA CAP.	100pF	1KV		DML2 101J10	K30309040		
C 6407	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6408	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6409	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6410	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6411	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6412	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6413	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6414	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6415	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6416	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6417	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6418	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6419	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6420	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6421	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6422	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6423	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6424	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6425	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6426	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6427	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6428	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6429	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6430	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6431	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6432	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6433	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6434	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6435	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6436	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6437	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
D 6401	SURGE ABSORBER				DSA-301LA	Q9000371		
D 6402	DIODE				HSM2838-TR	G2070108		
D 6403	DIODE				HSM2838-TR	G2070108		
D 6404	DIODE				HSM2838-TR	G2070108		
D 6405	DIODE				HSM2838-TR	G2070108		
D 6406	DIODE				HSM2838-TR	G2070108		
D 6407	DIODE				HSM2838-TR	G2070108		
D 6408	DIODE				HSM2838-TR	G2070108		

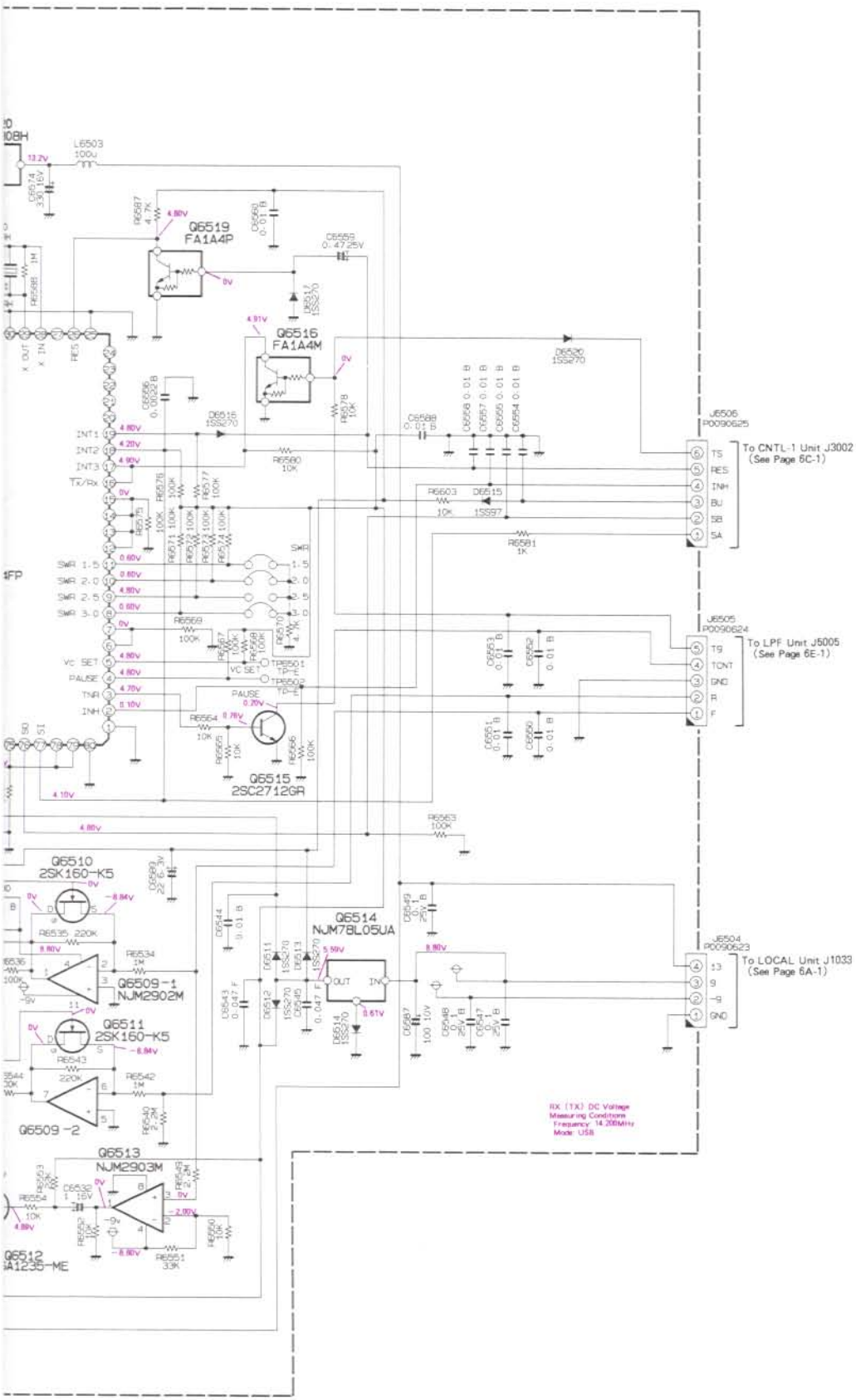
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
D 6409	DIODE				HSM2838-TR	G2070108		
J 6401	CONNECTOR				TMP-J01X-A2	P1090255		
JP6401	WIRE-ASSY					T9206154		
JP6402	WIRE-ASSY					T9206153		
JP6403	WIRE-ASSY					T9311501		
L 6401	COIL				2.5T15D2.0PVF R	L0021949		
L 6402	COIL				2.5T15D2.0PVF R	L0021949		
L 6403	COIL				4.5T15D2.0PVF R	L0021950		
L 6404	COIL				6.5T19D2.0PVF R	L0022064		
L 6405	COIL				7.5T20D1.2UEW R	L0022049		
L 6406	COIL				2.55U T-80-2	L0021978		
L 6407	COIL				2.55U T-80-2	L0021978		
L 6408	COIL				2.55U T-80-2	L0021978		
L 6409	M.RFC	22uH			LAL03TA220K	L1790099		
L 6410	M.RFC	22uH			LAL03TA220K	L1790099		
Q 6401	TRANSISTOR				DTC114EK T96	G3070002		
Q 6402	TRANSISTOR				DTC114EK T96	G3070002		
Q 6403	TRANSISTOR				DTC114EK T96	G3070002		
Q 6404	TRANSISTOR				DTC114EK T96	G3070002		
Q 6405	TRANSISTOR				DTC114EK T96	G3070002		
Q 6406	TRANSISTOR				DTC114EK T96	G3070002		
Q 6407	TRANSISTOR				DTC114EK T96	G3070002		
Q 6408	TRANSISTOR				DTC114EK T96	G3070002		
Q 6409	TRANSISTOR				DTC114EK T96	G3070002		
Q 6410	TRANSISTOR				DTC114EK T96	G3070002		
Q 6411	TRANSISTOR				DTC114EK T96	G3070002		
Q 6412	TRANSISTOR				DTC114EK T96	G3070002		
Q 6413	TRANSISTOR				DTC114EK T96	G3070002		
Q 6414	TRANSISTOR				DTC114EK T96	G3070002		
R 6401	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6402	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6403	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6404	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6405	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6406	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6407	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6408	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6409	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6410	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6411	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6412	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6413	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
R 6414	CHIP RES.	47	1/2W	5%	RMC1/2 470JCTP	J24275470		
RL6401	RELAY		DC12V		AGP2003	M1190075		
RL6402	RELAY		DC12V		AGP2003	M1190075		
RL6403	RELAY		DC12V		AGP2003	M1190075		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
RL6404	RELAY		DC12V		AGP2003	M1190075		
RL6405	RELAY		DC12V		AGP2003	M1190075		
RL6406	RELAY		DC12V		AGP2003	M1190075		
RL6407	RELAY		DC12V		AGP2003	M1190075		
RL6408	RELAY		DC12V		AGP2003	M1190075		
RL6409	RELAY		DC12V		AGP2003	M1190075		
RL6410	RELAY		DC12V		AGP2003	M1190075		
RL6411	RELAY		DC12V		AGP2003	M1190075		
RL6412	RELAY		DC12V		AGP2003	M1190075		
RL6413	RELAY		DC12V		AGP2003	M1190075		
RL6414	RELAY		DC12V		AGP2003	M1190075		
VC6401	TRIMMER CAP.	125p			YV-125-05	K90000049		
VC6402	TRIMMER CAP.	125p			YV-125-05	K90000049		

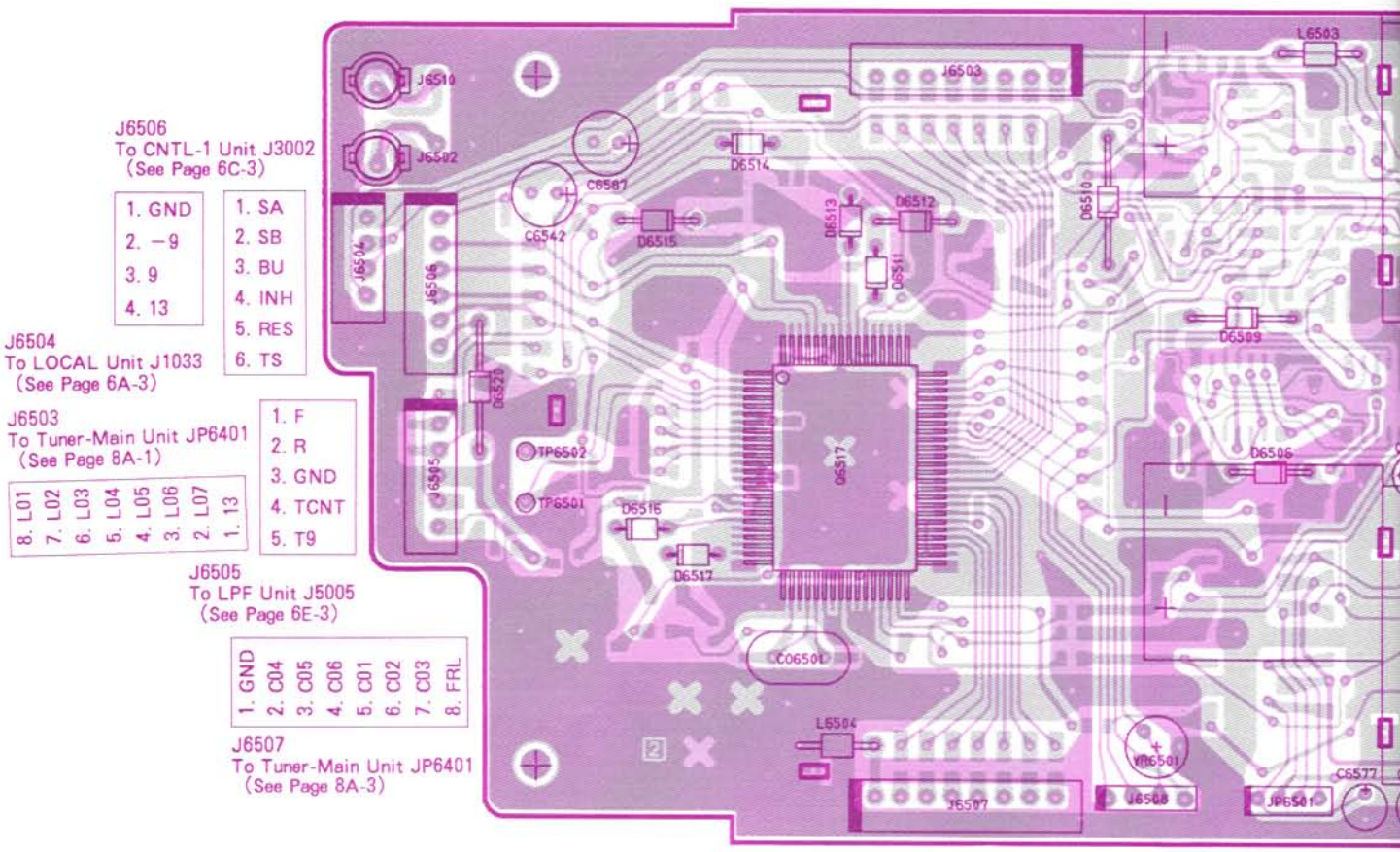
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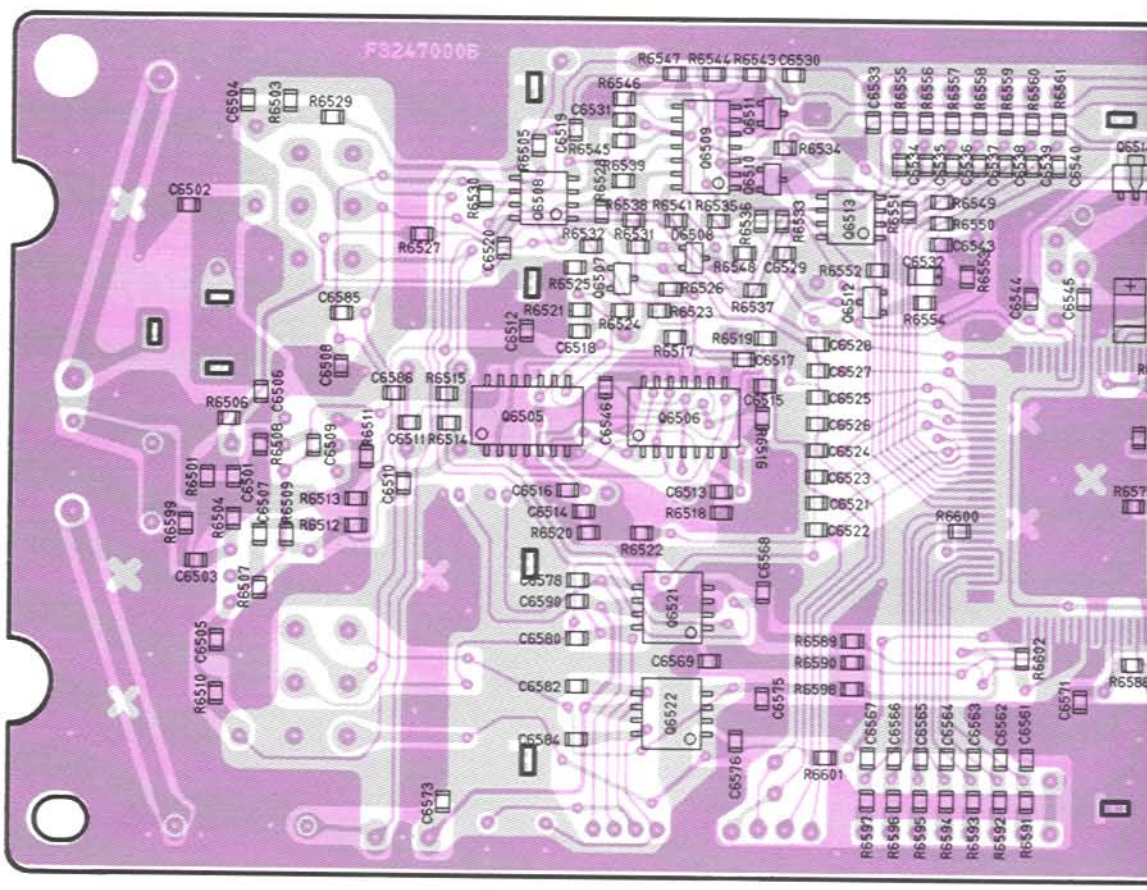
Tuner-Control (CNTL) Unit Circuit Diagram

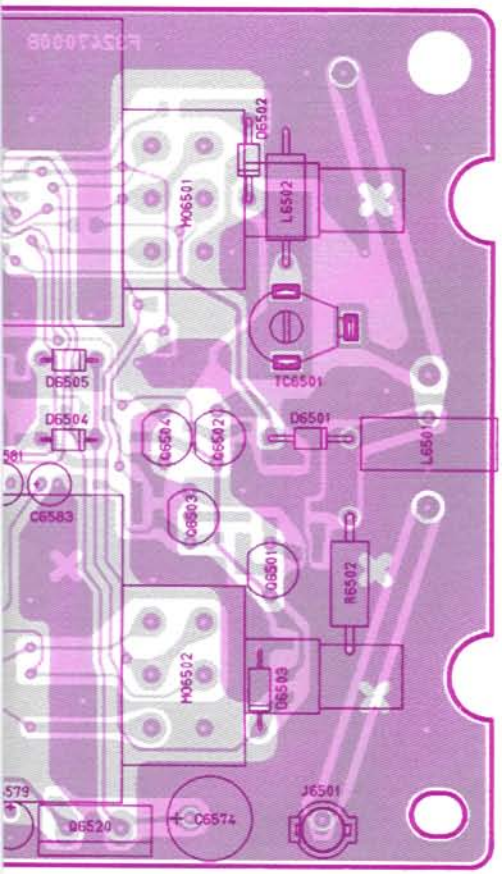



L6503
100u
Q6519
FA1A4P
Q6516
FA1A4M
Q6515
2SC2712GR
Q6510
2SK160-K5
Q6511
2SK160-K5
Q6509-1
NJM2902M
Q6509-2
Q6513
NJM2903M
Q6514
NJM7BL05UA
Q6512
J6506
P0090625
To CNTL-1 Unit J3002
(See Page 6C-1)
J6505
P0090624
To LPF Unit J5005
(See Page 6E-1)
J6504
P0090623
To LOCAL Unit J1033
(See Page 6A-1)
TS
RES
INH
BU
SB
SA
TG
CONT
GND
F
13
9
-9
GND
INT1
INT2
INT3
TX/RX
SWR 1.5
SWR 2.0
SWR 2.5
SWR 3.0
VC SET
PAUSE
TNR
INH
RX (TX) DC Voltage
Measuring Conditions
Frequency: 14.200MHz
Mode: USB

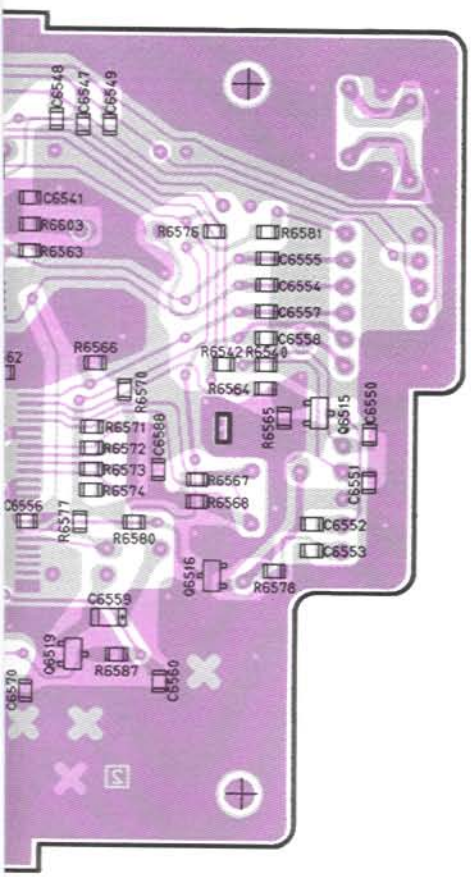
Tuner-Control (CNTL) Unit Parts Layout



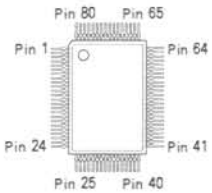




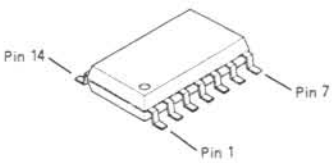
Obverse View of Component Side



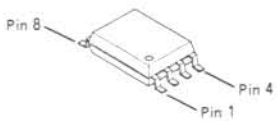
Obverse View of Chip Side



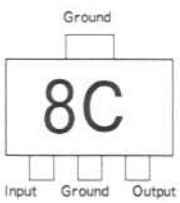
M37450M4
(Q6517)



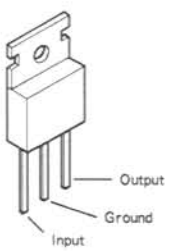
HD74AC00FP
(Q6505)
HD74AC74FP
(Q6506)
NJM2902M
(Q6509)



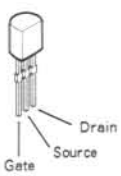
MB3763PF
(Q6521,6522)
NJM2903M
(Q6513)
NJM2904M
(Q6508)



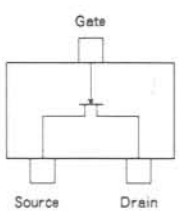
NJM78L05UA (8C)
(Q6514)



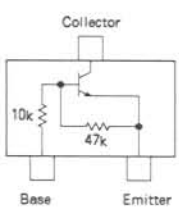
μPC7808H
(Q6520)



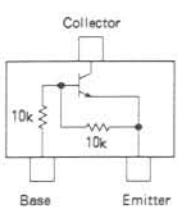
2SK104J
(Q6501,6502)



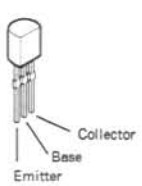
2SK160 (K5)
(Q6510,6511)



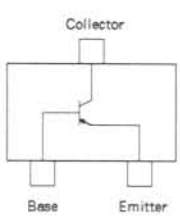
FA1A4P (L34)
(Q6519)



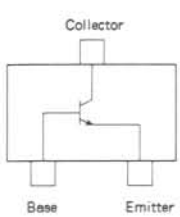
FA1A4M (L33)
(Q6516)



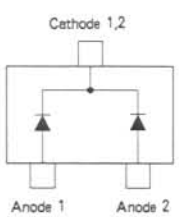
2SC2901L
(Q6503,6504)



2SA1235 (ME)
(Q6512)



2SC2712GR (LG)
(Q6507,6515)



HSM2838 (A6)
(D6508)

Tuner-Control (CNTL) Unit Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** TUNER CNTL UNIT ***						
	PCB with Components					CA1315001		
	Printed Circuti Board					F3247000A		
C 6501	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6502	CHIP CAP.	220pF	50V	CH	GRM40CH221J50PT	K22170243		
C 6503	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6504	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6505	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6506	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6507	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6508	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6509	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6510	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6511	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6512	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6513	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6514	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6515	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6516	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6517	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6518	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6519	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 6520	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6521	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6522	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6523	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6524	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6525	CHIP CAP.	0.01uF	50V	B	GRM40B1G3M50PT	K22170817		
C 6526	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6527	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6528	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6529	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6530	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6531	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6532	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 6533	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6534	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6535	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6536	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6537	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6538	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6539	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6540	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6541	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6542	AL.ELECTRO.CAP.	100uF	10V		RC2-10V101M(6X7)	K40109015		
C 6543	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6544	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6545	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6546	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
C 6547	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 6548	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 6549	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 6550	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6551	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6552	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6553	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6554	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6555	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6556	CHIP CAP.	0.0022uF	50V	B	GRM40B222M50PT	K22170809		
C 6557	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6558	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6559	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 6560	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6561	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6562	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6563	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6564	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6565	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6566	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6567	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6568	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6569	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6570	CHIP CAP.	33pF	50V	RH	GRM40RH330J50PT	K22170523		
C 6571	CHIP CAP.	33pF	50V	RH	GRM40RH330J50PT	K22170523		
C 6573	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6574	AL. ELECTRO. CAP.	330uF	16V		RE2-16V331M	K40129043		
C 6575	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6576	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6577	AL. ELECTRO. CAP.	10uF	50V		RE2-50V100M	K40179041		
C 6578	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6579	AL. ELECTRO. CAP.	10uF	50V		RE2-50V100M	K40179041		
C 6580	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6581	AL. ELECTRO. CAP.	10uF	16V		RC2-16V100M(4X7)	K40129012		
C 6582	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6583	AL. ELECTRO. CAP.	10uF	16V		RC2-16V100M(4X7)	K40129012		
C 6584	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6585	CHIP CAP.	0.047uF	50V	F	GRM40F473Z50PT	K22171008		
C 6586	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6587	AL. ELECTRO. CAP.	100uF	10V		RC2-10V101M(6X7)	K40109015		
C 6588	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 6589	TANTALUM CHIP CAP.	22uF	6.3V		TESVC0J226M12R	K78080011		
C 6590	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
CO6501	CERAMIC OSC				CSA8.00MT	H7900580		
D 6501	DIODE				1SS101	G2090223		
D 6502	DIODE				1SS101	G2090223		
D 6503	DIODE				RD4.7EB2-T1	G2060006		
D 6504	DIODE				1SS270TJ	G2060004		
D 6505	DIODE				1SS270TJ	G2060004		
D 6506	DIODE				1SS97	G2090118		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
D 6508	DIODE				HSM2838-TR	G2070108		
D 6509	DIODE				1SS97	G2090118		
D 6510	DIODE				1SS270TJ	G2060004		
D 6511	DIODE				1SS270TJ	G2060004		
D 6512	DIODE				1SS270TJ	G2060004		
D 6513	DIODE				1SS270TJ	G2060004		
D 6514	DIODE				1SS270TJ	G2060004		
D 6515	DIODE				1SS97	G2090118		
D 6516	DIODE				1SS270TJ	G2060004		
D 6517	DIODE				1SS270TJ	G2060004		
D 6520	DIODE				1SS270TJ	G2060004		
J 6501	CONNECTOR				TMP-J01X-V6	P1090210		
J 6502	CONNECTOR				TMP-J01X-V6	P1090210		
J 6503	CONNECTOR				SC25-08WS	P0090627		
J 6504	CONNECTOR				SC25-04WS	P0090623		
J 6505	CONNECTOR				SC25-05WS	P0090624		
J 6506	CONNECTOR				SC25-06WS	P0090625		
J 6507	CONNECTOR				SC25-08WS	P0090627		
J 6508	CONNECTOR				3022-04B	P0090523		
J 6510	CONNECTOR				TMP-J01X-V6	P1090210		
JP6501	WIRE-ASSY					T9206156A		
JP6502	WIRE-ASSY					T9317880		
JP6503	TMP-PLUG WIRE-ASSY					T9315911A		
L 6501	COIL				U 2001F FR9.5	L0021955		
L 6502	M.RFC	1mH			LAL04NA102K	L1190090		
L 6503	M.RFC	100uH			LAL03TA101K	L1790107		
L 6504	M.RFC	100uH			LAL03TA101K	L1790107		
MO6501	MOTOR POT.	50K		B	RK16312MA	Q9000563		
MO6502	MOTOR POT.	50K		B	RK16312MA	Q9000563		
Q 6501	FET				2SK104J	G3801040J		
Q 6502	FET				2SK104J	G3801040J		
Q 6503	TRANSISTOR				2SC2901L	G3329010L		
Q 6504	TRANSISTOR				2SC2901L	G3329010L		
Q 6505	IC				HD74AC00FP-TR	G1091226		
Q 6506	IC				HD74AC74FP-TR	G1091225		
Q 6507	TRANSISTOR				2SC2712GR TE85R	G3327127G		
Q 6508	IC				NJM2904M-T2	G1091374		
Q 6509	IC				NJM2902M-T2	G1090908		
Q 6510	FET				2SK160-T2B K5	G3801607E		
Q 6511	FET				2SK160-T2B K5	G3801607E		
Q 6512	TRANSISTOR				2SA1235-T12-2E	G3112357E		
Q 6513	IC				NJM2903M T2	G1091073		
Q 6514	IC				NJM78L05UA TE2	G1091325		
Q 6515	TRANSISTOR				2SC2712GR TE85R	G3327127G		
Q 6516	TRANSISTOR				FA1A4M-T2B	G3070001		
Q 6517	IC				M37450M4-634FP	G1091601		
Q 6519	TRANSISTOR				FA1A4P-T2B	G3070006		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
Q 6520	IC				UPC7808H	G1090294		
Q 6521	IC				MB3763PF-G-BND-TF	G1091224		
Q 6522	IC				MB3763PF-G-BND-TF	G1091224		
R 6501	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6502	CARBPM FILM RES.	24	1/2W	5%	RD12TJ240 24	J01275240		
R 6503	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6504	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6505	CHIP RES.	47	1/10W	5%	RMC1/10T 470J	J24205470		
R 6506	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6507	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 6508	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 6509	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 6510	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6511	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 6512	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 6513	CHIP RES.	1.5K	1/10W	5%	RMC1/10T 152J	J24205152		
R 6514	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6515	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6516	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 6517	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 6518	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6519	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6520	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6521	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6522	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6523	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6524	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6525	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6526	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6527	CHIP RES.	100.0K	1/10W	1%	RMC1/10 1003FTP	J24209009		
R 6528	CHIP RES.	220.0K	1/10W	1%	RMC1/10 2203FTP	J24209041		
R 6529	CHIP RES.	100.0K	1/10W	1%	RMC1/10 1003FTP	J24209009		
R 6530	CHIP RES.	220.0K	1/10W	1%	RMC1/10 2203FTP	J24209041		
R 6531	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6532	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6533	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6534	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 6535	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 6536	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6537	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6538	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 6539	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 6540	CHIP RES.	2.2M	1/10W	5%	RMC1/10T 225J	J24205225		
R 6541	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 6542	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 6543	CHIP RES.	220K	1/10W	5%	RMC1/10T 224J	J24205224		
R 6544	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6545	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6546	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 6547	CHIP RES.	47K	1/10W	5%	RMC1/10T 473J	J24205473		
R 6548	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
R 6549	CHIP RES.	2.2M	1/10W	5%	RMC1/10T 225J	J24205225		
R 6550	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6551	CHIP RES.	33K	1/10W	5%	RMC1/10T 333J	J24205333		
R 6552	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6553	CHIP RES.	22K	1/10W	5%	RMC1/10T 223J	J24205223		
R 6554	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6555	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6556	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6557	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6558	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6559	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6560	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6561	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6562	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6563	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6564	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6565	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6566	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6567	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6568	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6569	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6570	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 6571	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6572	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6573	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6574	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6575	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6576	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6577	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6578	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6580	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
R 6581	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6587	CHIP RES.	4.7K	1/10W	5%	RMC1/10T 472J	J24205472		
R 6588	CHIP RES.	1M	1/10W	5%	RMC1/10T 105J	J24205105		
R 6589	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6590	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6591	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6592	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6593	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6594	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6595	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6596	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6597	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6598	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6599	CHIP RES.	180	1/10W	5%	RMC1/10T 181J	J24205181		
R 6600	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6601	CHIP RES.	1K	1/10W	5%	RMC1/10T 102J	J24205102		
R 6602	CHIP RES.	100K	1/10W	5%	RMC1/10T 104J	J24205104		
R 6603	CHIP RES.	10K	1/10W	5%	RMC1/10T 103J	J24205103		
TC6501	TRIMMER CAP.	10pF			ECV1ZW10X32	K91000012		

ATU-2 (option)

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
TP6501	TP-E/				TP-E/MS-60124	Q5000016		
TP6502	TP-E/				TP-E/MS-60124	Q5000016		
VR6501	POT.	47K		B	H0651A017-47KB	J51745473		

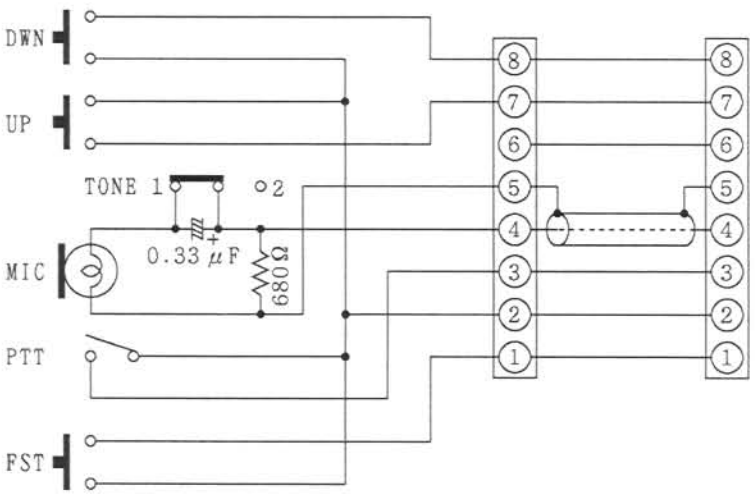
Specification

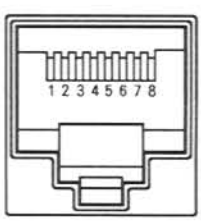
Type: Dynamic
Impedance: 190Ω ±30% at 1kHz
Sensitivity: −78dB±3dB at 1kHz (0dB=1V/0.1 Pa)
Weight: 170g



MH-31$_{A8J}$ Hand-held Microphone

Circuit Diagram





1. FST Button
2. GND
3. PTT Button
4. Mic Tx Audio
5. MIC GND
6. +5V DC
7. Up Button
8. Down Button

Microphone Connector
Pin-Out Diagram

Parts List

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.	ADDR.
		*** MH-31A8J ***						
	MIC ELEMENT					S8100376		
	PTT SWITCH					S8100377		
	TONE SWITCH					S8100378		
	UP/DWN/FST SWITCH					S8100379		
	CURL CORD (W/ BUSH)					S8100380		

YAESU

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TECHNICAL BULLETIN

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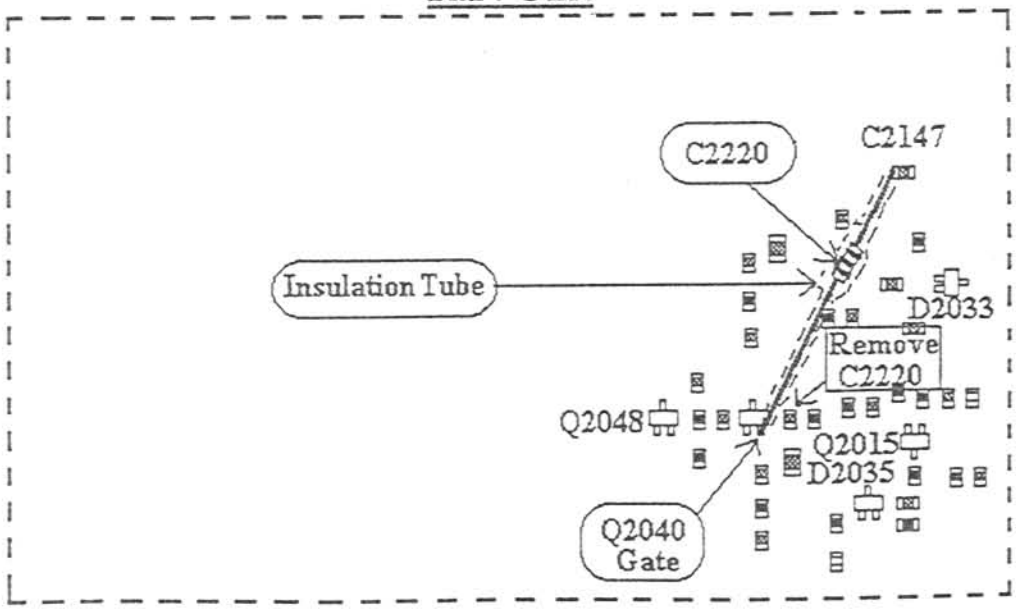
File No.:	TB-9446	Date:	6 October, 1994
Model:	FT-900	Serial No. Range:	After Lot 7 & Up

Problem:	Distorted FM. reception.
Expected Results of Modification:	Improve Problem.

Component Value Changes: R.F. Unit.			
Part Location No.	From	To	New Part No.
C2220	Chip. Cap. 0.047 µ C2012F1H473ZFA	CeramicCap.0.047µ UP050F473ZHB	K28179002

Procedure
• Turn the transceiver off, and disconnect all cables.
• Place the set upside-down on the work surface with rear facing you, and remove the eight screws affixing the bottom cover. Then lift the bottom cover off.
• Disconnect the light-blue-banded coaxial cable from J2026 near the rear of the exposed R.F. Unit.
• Unplug the yellow-banded coaxial cable from *2024* near the rear the corner of R.F. Unit .
• Using a small sharp tool, gently pry up on either side of *2011*, the white plastic ribbon cable socket near the rear left corner of the R.F. Unit, about 1/8 inch, until the ribbon cable can be removed.
• Remove the six screws from the R.F. Unit.
• Flip R.F. Unit over to the solder side, remove C2220(chip capacitor). Locate C2147, Q2040 and add C2220(cerimic capacitor) from C2147(between *T2015 component-side* &C2147) to Q2040(*Gate*).

R.F. Unit



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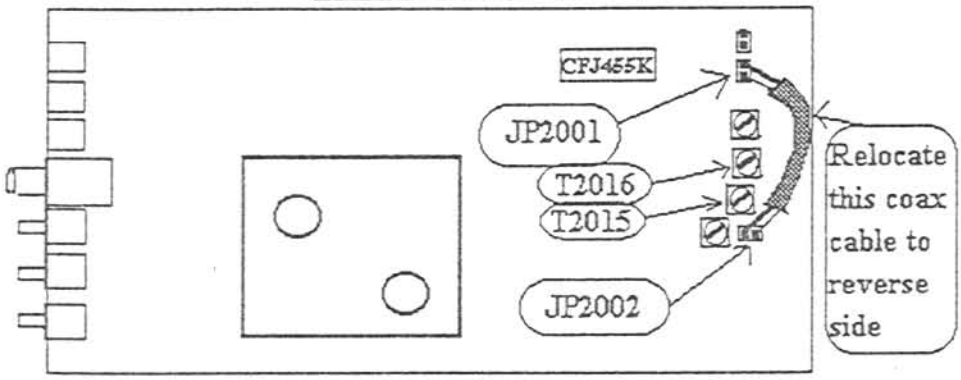
File No.:	TB-9445	**Date:**	24 September, 1994
Model:	FT-900	**Serial No. Range:**	Lot 008

Problem:	Internal receiver spurious (around 29.61 MHz).

Expected Results of Modification:	Reduce and Improve spurious signal.

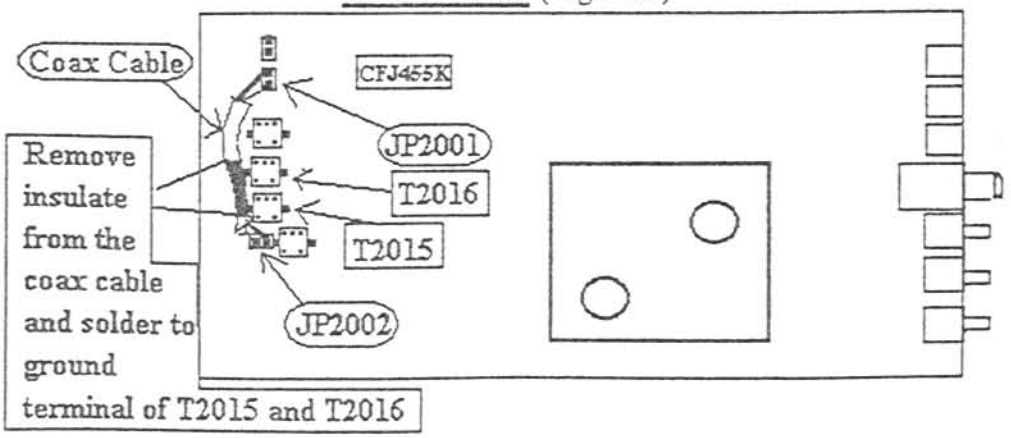
Procedure
1. Remove top cover and remove 6 screws from **R.F. Unit**.
2. Remove Coax Cable(**JP2001** to **JP2002**) from *component-side*. See figure 1.
3. Remove *Coax Cable Insulation* to expose about 3/4" of shield wire.
4. Cut off both ends of *Coax Cable* connector and solder back to the same location but on the *Chip-Side* and solder *Shield Wire* section to *Ground Terminal between* T2015 and T2016. See figure 2.

R.F. Unit (Figure 1)



(Obverse view of "component" side)

R.F. Unit (Figure 2)



(Obverse view of "Chip" Side)

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File No.:	TB-9442	Date:	1 September, 1994
Model:	FT-900/AT	Serial No. Range:	Lot 05 and up.

Problem:	DC-DC converter Q2063 destroyed by over current.

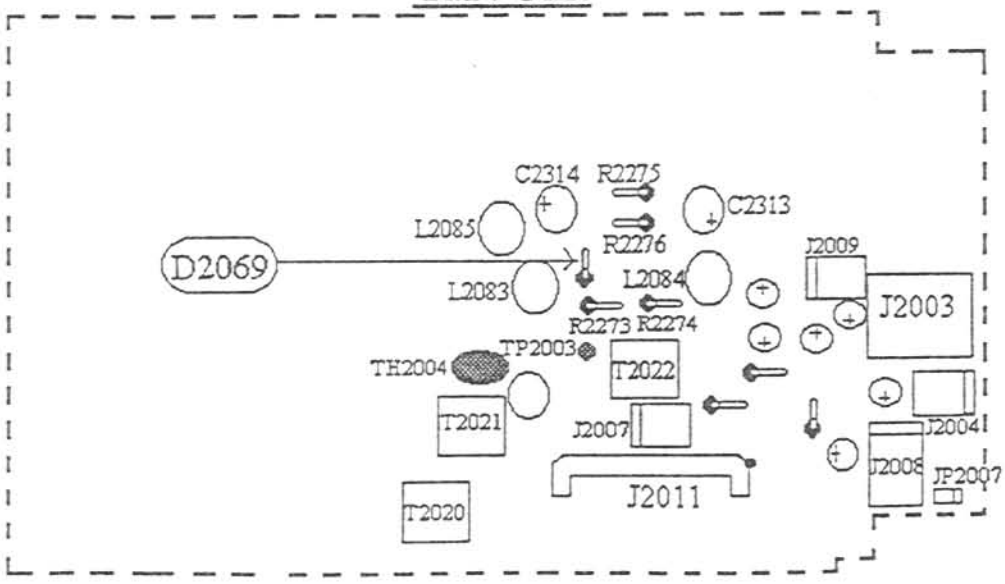
Expected Results of Modification:	Improve circuit.

Component Value Changes: R.F. Unit.			
Part Location No.	From	To	New Part No.
D2069	1SS83RE	RB-100A	G2090600

Bottom Cover & R.F. Unit Removal Procedure

- Turn the transceiver off, and disconnect all cables.
- Place the set upside-down on the work surface with the rear facing you, and remove the eight screws affixing the bottom cover. Then lift the bottom cover off.
- Disconnect the light-blue-baned coaxial cable from J2026 near the rear of the exposed R.F. Unit.
- Unplug the yellow-baned coaxial cable from J2024 near the rear corner of the R.F. Unit.
- Using the small sharp tool, gently pry up on either side of J2011, the white plastic ribbon cable socket near the left corner of the R.F. Unit , about 1/8 inch, until the ribbon cable can be removed.
- Remove the six screws on the R.F. Unit (one is inside the large shield housing, accessible through the hole near the corner).

R.F. Unit



Obverse View of Component side

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File No.:	TB-9450	**Date:**	25 October, 1994
Model:	FT-900	**Serial No. Range:**	Before lot 008
Problem:	Reduce average out put power because ALC voltage too high (Pulse type ALC voltage).		
Expected Results of Modification:	Improve ALC voltage.		

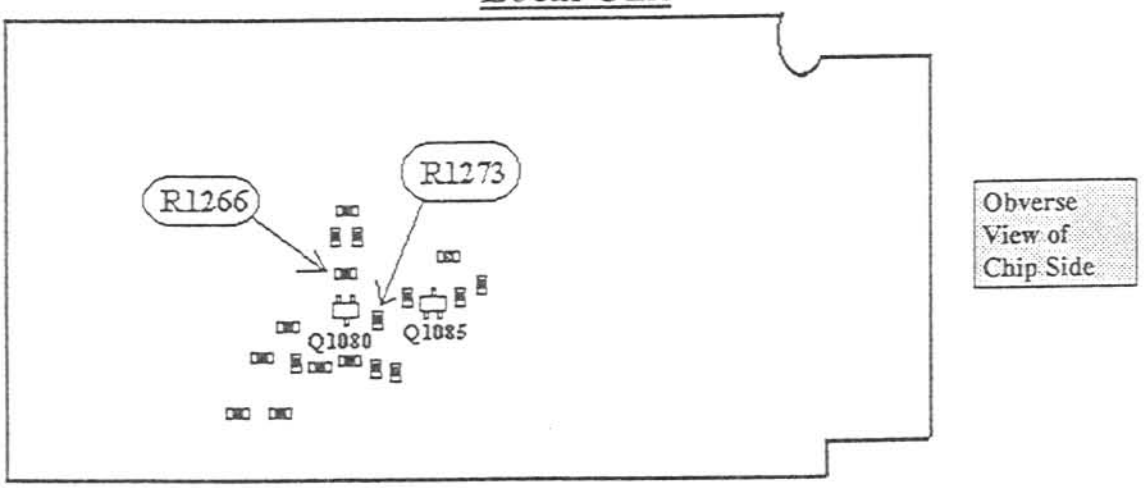
Component Value Changes

Part Location No.	From	To	New Part No.
Local Unit R1266	RMC1/10T100J 10Ω	RMC1/10T000J 0Ω	J24205000
Local Unit R1273	RMC1/10T334J 330KΩ	RMC1/10T473J 47KΩ	J24205473
LPF Unit C5049, C5050, C5051, C5052.	DD306/979F473/ Z50 0.047μF	DD106/979F103/ Z50 0.01μF	K26170657

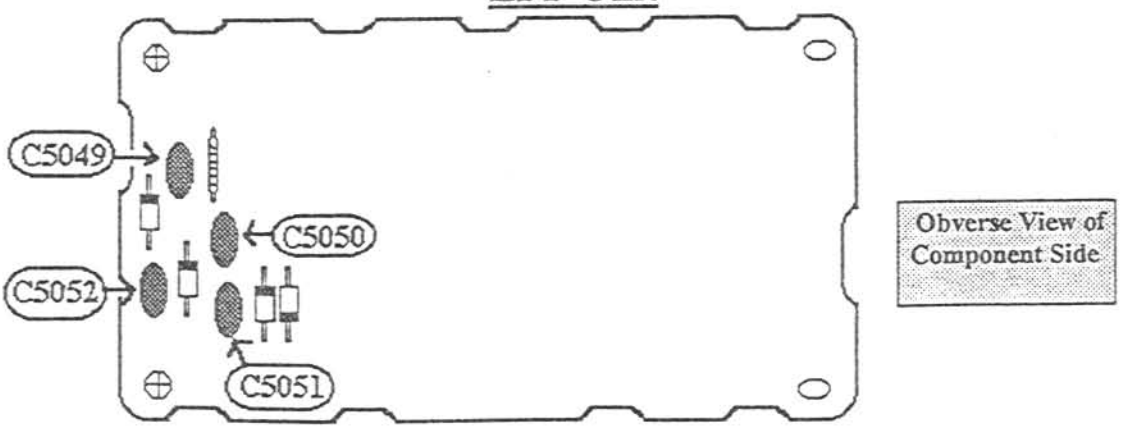
Procedure

Replace R1266/R1273 on the Local Unit and C5049/C5050/C5051/C5052 on the LPF.

Local Unit



LPF Unit



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