SERVICE MANUAL SECTION

CIRCUIT OPERATION

RECEIVER SECTION

- The receiver uses the double conversion superheterodyne system with a 1st IF frequency of 10.695 MHz and a 2nd IF frequency of 455 kHz.
- The signal input from the antenna terminal (J801) is applied to RF coil LR01 through the antenna low pass filter and antenna switching circuit (QT51 and QT52).
- The signal pass through LR01 is amplified with RF amplifier (cascade amplifier) consisting of QR01 (2SC2026) and QR02 (2SC2668) and applied to the gate of 1st mixer QR03 (2SK192) through the band pass filter consisting of LR02, LR03 and LR04.
- The signal is then mixed with the local signal generated with PLL and the 10.695 MHz signal is obtained.
- The 10.695 MHz signal is applied to 1st IF crystal filters FR01-1 and FR01-2 (±7.5 kHz, −3 dB) which remove adjacent signals. The filtered signal is amplified by 1st IF amplifiers QR04 (2SC2668), then applied to pin 16 of QR07 (MC3357).
- QR07 incorporates the 2nd mixer which mixes the 10.695 MHz with the 10.240 MHz 2nd local signal to obtain the 455 kHz signal. The 455 kHz signal is output from pin 3 of QR07. The 455 kHz signal is applied to 2nd IF band pass filter FR02 (KBF-455P) which removes adjacent signals. The filtered signal is then applied to pin 5 of QR07 where the signal is amplified with the 2nd IF amplifier, limited with the limiter and detected with the quadrature detector. The detected signal is output from pin 9 of QR07. The detected signal passes through the de-emphasis circuit consisting of RR24 and CR28 and then is applied to AF volume control R801.
- The signal is then amplified by AF amplifier QR16 (BA546) to drive the speaker (E802).

1. SQUELCH CIRCUIT

- The signal from pin 9 of QR07 is also applied to pin 10 of QR07 where the noise components (30 — 50 kHz) of the signal is amplified. The amplified noise signal is output from pin 11 of QR07.
- The noise signal is then rectified with QR08 (1S1555) into a DC signal and applied to squelch control R802 which controls the level of the signal.
- The resultant DC voltage is applied to pin 12 of QR07. When this voltage is 0.7V or more, the squelch is on; otherwise, it is off.
- When a signal is received while the squelch is on, the voltage applied to pin 12 of QR07 drops below 0.7V and a voltage appears at pin 14 of QR07. This voltage turns on switching transistor QR09 (2SC2458), and QR10 (2SB605) is then turned on so that the power is supplied to AF power amplifier QR16.

2. METER CIRCUIT

- The signal output from pin 5 of QR07 is applied to the S meter amplifier consisting of QR11 and QR12 (2SC2668) after the level is adjusted with RR25. The amplified signal is rectified with QR13 and QR14 (1SS99) to drive the S meter (M801).

TRANSMITTER SECTION

1. YOUNGER STAGE

- The signal from PLL is amplified with QT57 (2SC2668) so that a power of about 1 mW is applied to QT56. QT56 amplifies the signal by about 10 dB so that the signal of about 10 mW is applied to the predriver. The power is supplied to these amplifier from the TX5V line. Predriver QT56 has a gain of 10 dB and driver QT55 has a gain of 10 dB. The coupling loss between these amplifier is 7 dB, so a power of about 300 mW is applied to the base of final amplifier QT53. The bases of QT56, QT55 and QT53 are biased with the regulated 5V.

2. POWER AMPLIFIER

- The signal amplified with QT57, QT56 and QT55 is applied to QT53 which amplifies the power to 2.5W or more. The signal is then applied to the 2-stage low pass filter through the diode switching circuit. The signal is fed to the antenna after the harmonics are sufficiently attenuated by the filter.

3. MICROPHONE AMPLIFIER

- The voice signal from microphone E801 is amplified with the differential amplifier consisting of QT04 and QT05 by about 45 dB. The signal then passes through the pre-emphasis circuit and applied to the limiter circuit consisting of QT06 (2SA1048) and QT07 (2SC2458).
- RT18, CT14, RT19, CT15, RT20, CT16 and QT08 form a low pass filter.
- RT21 (10 kΩ) is adjusted so that the maximum deviation is ±5 kHz. A deviation of 3 kHz is obtained with an input of 3 to 5 mV.

4. TONE BURST OSCILLATOR

- When CALL switch S803 is turned on, QT02 (2SA1048) is turned on so that QT03 (TA755) is powered to oscillates.
- The oscillating frequency is adjusted to 1750 Hz with potentiometer RT05 and deviation is adjusted to ± 3.5 kHz with potentiometer RT06.

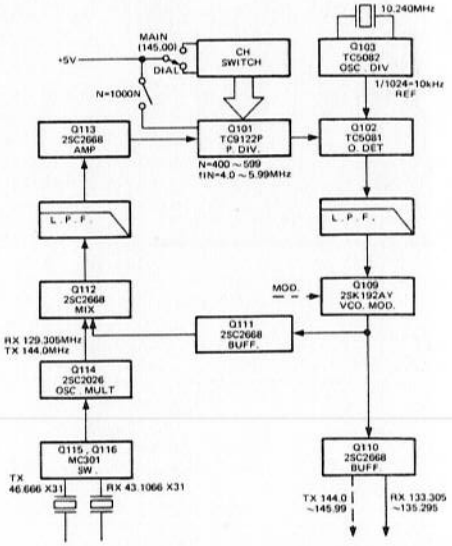
5. METER CIRCUIT

- When the PTT switch is pressed, QT58 (2SB562) is turned ON and +5V is applied to the younger stage. QR15 (2SC2603F) is then turned on to drive the meter.
- If the PLL circuit unlocks, transmission signal is turned off and the meter reading drops to zero. Thus, transmission condition can be monitored with the meter.

PLL SECTION

The PLL block is directly controlled with the thumb wheel switch. (That is, the frequency is determined by the BCD code generated with the swtich.) PLL directly oscillates at transmission frequencies during transmission and at transmission frequencies minus 10.695 MHz.

PLL Basic Block



1. PROGRAMMABLE COUNTER Q101

- A 12 bit BCD code generated with the thumb wheel switch (S801) is applied to Q101. This code represents a frequency division number (400 to 799 for the E version, 400 to 599 for the W version). BCD code signals applied to pins 3 to 6 of Q101 determine the tens kHz digit of the oscillation frequency, those applied to pins 7 to 10 the hundreds kHz digit and those applied to pins 11 to 13 the units MHz digit.
- The signal (4.00 to 7.99 MHz for the E version, 4.00 to 5.99 MHz for the W version) from Q104 (2SC2668) is applied to pin 2 of Q101. This signal is divided by the frequency division number and the divided signal is output from pin 17 of Q101 to pin 7 of the phase detector Q103 (TC5081).

PROGRAM CODE TABLE

Q101 PIN NO.	(14)	(13)	(12)	(11)	(10)	(9)	(8)	(7)	(6)	((5)	(4)	(3)
DIAL	MHz (8	4	2	1)	100 kHz (8	4	2	1)	10 kHz (8	4	2	1)
1	0	0	0	1	0	0	0	1	0	0	0	1
2	0	0	1	0	0	0	1	0	0	0	1	0
3	0	0	1	1	0	0	1	1	0	0	1	1
4	0	1	0	0	0	1	0	0	0	1	0	0
5	0	1	0	1	0	1	0	1	0	1	0	1
6	0	1	1	0	0	1	1	0	0	1	1	0
7	0	1	1	1	0	1	1	1	0	1	1	1
8	1	0	0	0	1	0	0	0	1	0	0	0
9	1	0	0	1	1	0	0	1	1	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0

The following example shows how to calculate the frequency division number from the frequency indicated.

Example: Frequency indicated: 144.000 MHz

TX Local frequency = 46.666 MHz
Step = 10 kHz
(144.000 – 46.666 x 3)/10 = 400

RX Local frequency = 43.1016 MHz
1st IF = 10.695 MHz
[144.000 – (43.1016 x 3 + 10.695)]/10 = 400

Relationship between PLL programmable divider and frequency

Frequency indication (MHz)	Frequency dicision number (N)	Q101 (TC9122P) Pin Number 14	13	12	11	10	9	8	7	6	5	4	3
144.00	400	0	1	0	0	0	0	0	0	0	0	0	0
144.01	401	0	1	0	0	0	0	0	0	0	0	0	1
144.02	402	0	1	0	0	0	0	0	0	0	0	1	0
≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
145.00	500	0	1	0	1	0	0	0	0	0	0	0	0
145.50	550	0	1	0	1	0	1	0	1	0	0	0	0
≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
145.99	599	0	1	0	1	1	0	0	1	1	0	0	1

2. REFERENCE FREQUENCY GENERATOR Q102

- Q102 is a PLL frequency synthesizer IC.
- A 10.240MHz signal is output from pin 1 of Q102.
- A 10 kHz signal which is obtained by dividing the 10.240MHz reference signal by 1024.

3. PHASE DETECTOR (P/D) Q103

- The phase of 10 kHz signal output from the reference signal generator is compared with that of the signal from the programmable counter.
- The 10 kHz signal is applied to pin 8 of Q103 from pin 7 of Q102. The signal from pin 17 of the programmable counter is applied to pin 7 of Q103.

4. VCO

- Capacitance of varicap diode Q116 varies when the DC voltage across it varies; therefore the oscillation frequency varies.
  The modulation signal (voice signal) is applied to the gate of Q119 (2SK192) to vary the voltage between the source and gate.

5. LOCAL OSCILLATOR

- The local oscillator circuit consists of X102, X103, X104, X105 and Q106. X102 and X103 are for RX and the latter is used to shift the frequency by −60C kHz. X104 and X105 are for TX and the latter is used to shift the frequency by −600 kHz.
- The signal oscillated is tripled at L102 connected to the collector of Q106 (2SC2026). Thus, a 130.305 MHz (129.705 MHz for −600 kHz shift operation) is obtained during reception and a 141.00 MHz signal (140.400 MHz for −600 kHz shift operation) is obtained during transmission. When the +5 kHz switch is pressed, the above frequencies are raised by 5 kHz. The signal is then applied to mixer Q105 (2SC2668).
- When the +5 kHz switch is pressed, Q111, Q112, Q113, Q114, Q125 and Q126 conduct to short circuit L108, L109, L110 and L111 so that inductance is lowered and the frequency is raised.

6. WIDE BAND MIXER

- The signal from the VCO is buffered by Q120 and Q121 (2SC2668) and applied to the base of wide band mixer Q105. The signal from the local oscillator is also applied to the base of Q105 via C124.
  The wide band mixer mixes these two signals to generate the 4.00 to 7.995 MHz signal.
  The signal from Q105 passes through LPF (consisting of C122, L101 and C121) and is amplified with Q104 (2SC2668). The signal is then applied to pin 2 of Q101. L102 is adjusted so that the level of this signal is 1.8 Vp-p during reception at 145.35 MHz.

7. OUTPUT AMPLIFIER

- The signal from the VCO is amplifier with Q123 (2SC2668) and applied to the source of QR23 via filter L118 and coupling capacitor CR11 during reception while it is applied to the TX younger amplifier (QT57) through CT82 during transmission.

8. UNLOCK SWITCH

- Q115 (2SA1048) is used as an unlock switch. If the unlock switch circuit operates during transmission, the level of the TX +B (5V) line drops to 0V and the TX prior amplifier stops operation.
- If the PLL circuit unlocks, the voltage at pin 4 of phase detector Q103 drops to turn on Q115. This cuts off QT58 and stops operation of the TX prior amplifier, preventing unnecessary radio waves from being transmitted.

POWER SUPPLY SECTION

- The voltage regulator uses the series regulating circuit consisting of QS09, QS10, QS11 and QS12. This regulator supplies 5V stably when the source voltage is 5.5 to 11.0V.
- 9.6V is applied to QS10 and QS12. QS12 forms a switching circuit which utilizes the pinch-off characteristic of FET and generates a control voltage for QS11. The current flowing through Zener diode QS08 is applied to the base of QS09. QS09 controls the base current of QS11 and the base current of QS10 is controlled through RS19.
- If the source voltage drops below 9.6V, the regulator operates as follows. The voltage applied to the base of QS11 from QS12 drops.
  The current through QS08 decreases so that the base current of QS09 decreases. This increases the base voltage of QS11 so that the output voltage is kept to 5V.
- If the source voltage rises above 9.6V, the regulator operates as follows.
  The voltage applied to QS11 through QS12 increases. The base current of QS09 increases so that the base current of QS11 decreases. This makes QS10 to operate to lower the output voltage.
- During reception, the PTT switch is off, so the base voltage of QS07 is 5V. Therefore, the base voltage of QS03 is relatively low and it is on. At this time, the base voltage of QS06 is low so that QS05 is off. Thus, the level of the TX5V line is 0V.
- 6V for RX is generated from the voltage of the RX5V line by the voltage boost circuit consisting of QS03 and QS02.
- During transmission, the PTT switch is on and the base voltage of QS08 is 3V. Therefore, QS07 is on and QS03 is off. Thus, the voltage of the RX5V line is 0V. At this time, the base voltage of QS06 is high so that the base voltage of QS05 is low. Thus, the TX5V line is active.

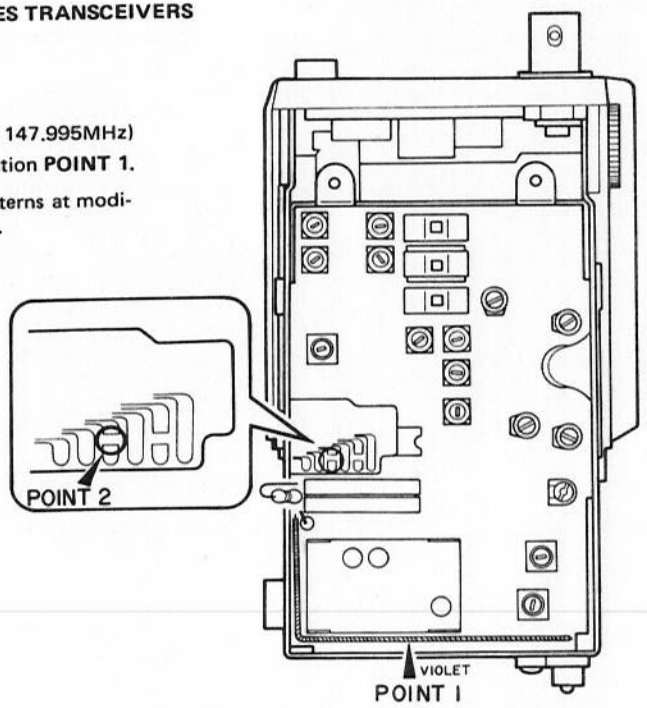
SERVICE GUIDE

• MODIFYING THE C110 SERIES TRANSCEIVERS

C110W → C110E

(144.000 to 145.995MHz → 144.000 to 147.995MHz)

- Cut the violet wire at modification **POINT 1.**
- Connect the flexible PWB patterns at modification **POINT 2** by soldering.

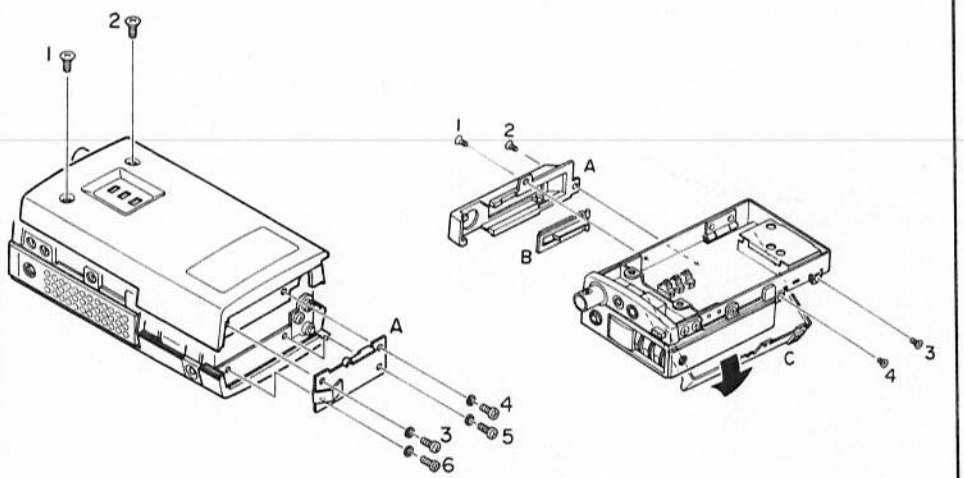


• CASE REMOVAL

Remove screws 1, 2, and 3 to 6, then remove A to remove the case.

• BOARD REMOVAL

Remove screws 1 and 2, then remove A and B. Next, remove screws 3 and 4 and open chassis C.



PLL SECTION

• Checking the reference frequency

1. Connect a frequency counter to TP2 (C115).
2. Confirm that it reads 10.240 MHz ± 100 Hz.

• Adjusting local frequency

1. Set the thumb wheel switches to 145.35 MHz.
2. Connect an RF VTVM to TP1 (RR05). (0.5V range)
3(*). Position the cores of L104, L105, L106, L107, L108, L109, L110 and L111 slightly below their center. Adjust L102 so that the voltage at TP4 (R101) becomes 1.8 Vp-p.
4. Transmit and confirm that the voltage is 1.8 Vp-p or more.
5. Confirm that the RX local frequency is around 129.305 MHz and TX local frequency is around 140.00 MHz.

• Adjusting VCO frequency

1. Connect an accurate DC voltmeter to TP3 (R124).
2. Set the frequency to 144.00 MHz for the C110E and C110W.
3. Adjust L116 so that the voltmeter reads 1.7V for the C110E and C110W.
4. Transmit and adjust C143 so that the voltmeter reads 2.0V for the C110E and C110W.

TRANSMITTER SECTION

1(*). Center CT59, CT60, CT66, CT67 and CT70.
2. Adjust L118, LT61, LT62, CT59, CT60, CT66, CT67 and CT70 so that the power consumption is maximized. At this time, the RF output will be 2.5W and the load current will be about 750 mA.
3. The difference between the RF power at 144.00 MHz and that at 147.995 MHz should be 0.4W or less. (Typ. 0.3W)
4. If the power consumption at high frequencies differs from that at low frequencies, adjust LT61, CT70 and CT66 so that they are balanced.

• Adjusting transmission and receiving frequencies

1. Connect the frequency counter to TP5 (CT82).
2. Set the thumb wheel switch to 145.02 MHz.
3. Transmit and press the +5 kHz switch, then adjust L106 so that the frequency counter reads 145.025 MHz ±100 Hz.
   Set S102 to the −600 kHz position and adjust L107 so that the frequency counter reads 144.425 MHz ±100 Hz. Reset the +5 kHz switch and S102 and adjust L110 so that the frequency counter reads 145.02 MHz ±100 Hz. Set S102 to the −600 kHz position and adjust L111 so that the frequency counter reads 144.42 MHz ±100 Hz. Reset S102.
4. Receive and press the +5 kHz switch. Adjust L104 so that the frequency counter reads 134.330 MHz ±100 Hz.
   Set S101 to the −600 kHz position and adjust L105 so that the frequency counter reads 133.730 MHz ±100 Hz.
   Resets these switches and adjust L108 so that the frequency counter reads 134.325 MHz ±100 Hz.
   Set S101 to the −600 kHz position and adjust L109 so that the frequency counter reads 133.725 MHz ±100 Hz.
5. Repeat steps 3 and 4 several times.

• Adjusting deviation

1. Set the thumb wheel switch to 145.02 MHz.
2. Turn RT21 all the way to the right.
3. Apply a 1000 Hz, 100 mV (open voltage) signal to the MIC terminal.
4. Transmit and adjust RT21 so that the deviation is ±5 kHz.
5. Decrease the level of the input signal until the deviation is ±3 kHz, then confirm that the level of the input signal is 3 to 5 mV.

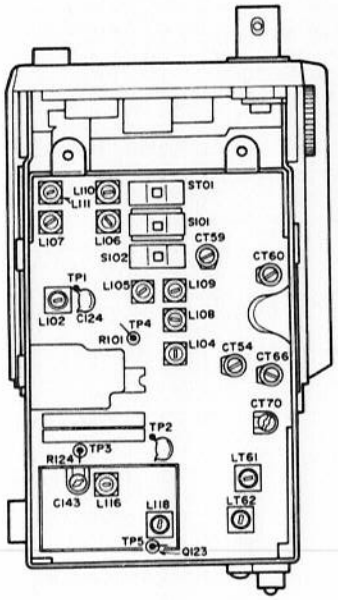
• Adjusting tone burst

1. Set the thumb wheel switch to 145.02 MHz.
2. Press the CALL switch to transmit.
3. Adjust RT05 so that the AF frequency counter reads 1750 Hz.
4. Adjust RT06 so that the deviation is ±3.5 kHz.

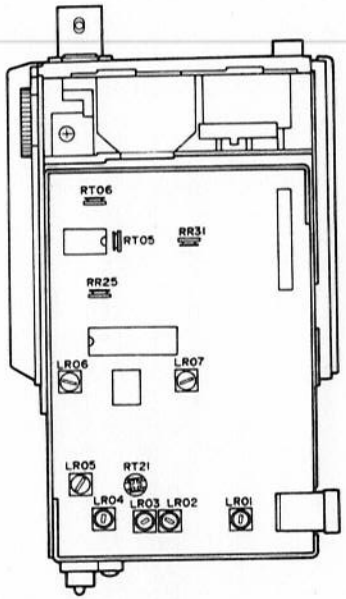
• Meter adjustment

1. Set the power supply voltage to 5.5V.
2. Adjust RR31 so that the meter needle points a position between the red and green markings.

ADJUST AND TEST POINT LOCATIONS



PLL, Tx



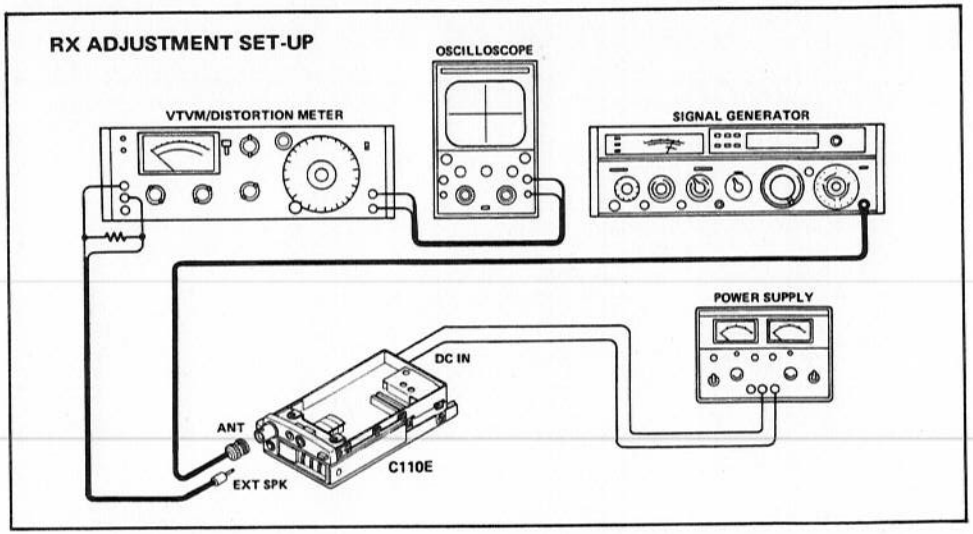
Rx

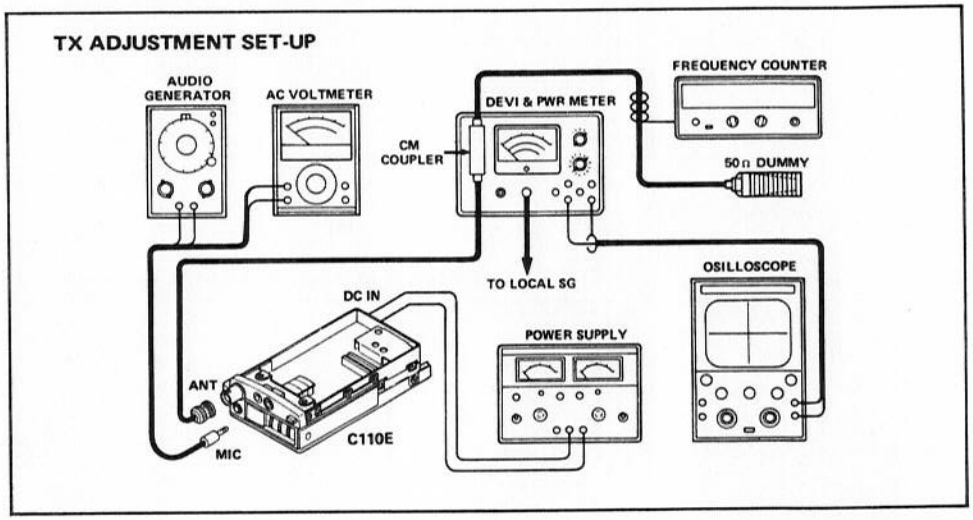
ADJUSTMENT PROCEDURES

STANDARD ADJUSTMENT CONDITIONS

Rated power supply voltage	9.6V DC
Receiver output	150 mW
Receiver load	8.0 ohms
Deviation	±3 kHz at 1000 Hz
Transmitter load	50 ohms
Receiving frequency	145.04 MHz
Transmitting frequency	145.02 MHz
SQL control setting	Leftmost position
VOL control setting	Appropriate position

(1) Perform adjustment under the above conditions unless otherwise specified.
(2) Items indicated with "*" should be adjusted only after components have been replaced.





RECEIVER SECTION

- **Adjusting sensitivity**

1. Connect an 8-ohm load, VTVM and oscilloscope to the speaker terminal.
2. Generate a 145.04 MHz signal modulated at 1000 Hz with an deviation of ±3.0 kHz with the RF SG. Set the output level to the minimum level required for adjustment.
3. Adjust LR07 so that the speaker output level is maximized. (About 2.0V at 8 ohms)
4. Adjust LR05 and LR06 so that the VTVM reading is maximized.

Note: Since the VTVM reading becomes too large as adjustment proceeds, lower the SG output level at an appropriate timing. If LR05 is not adjusted properly, the distortion ratio will increase.

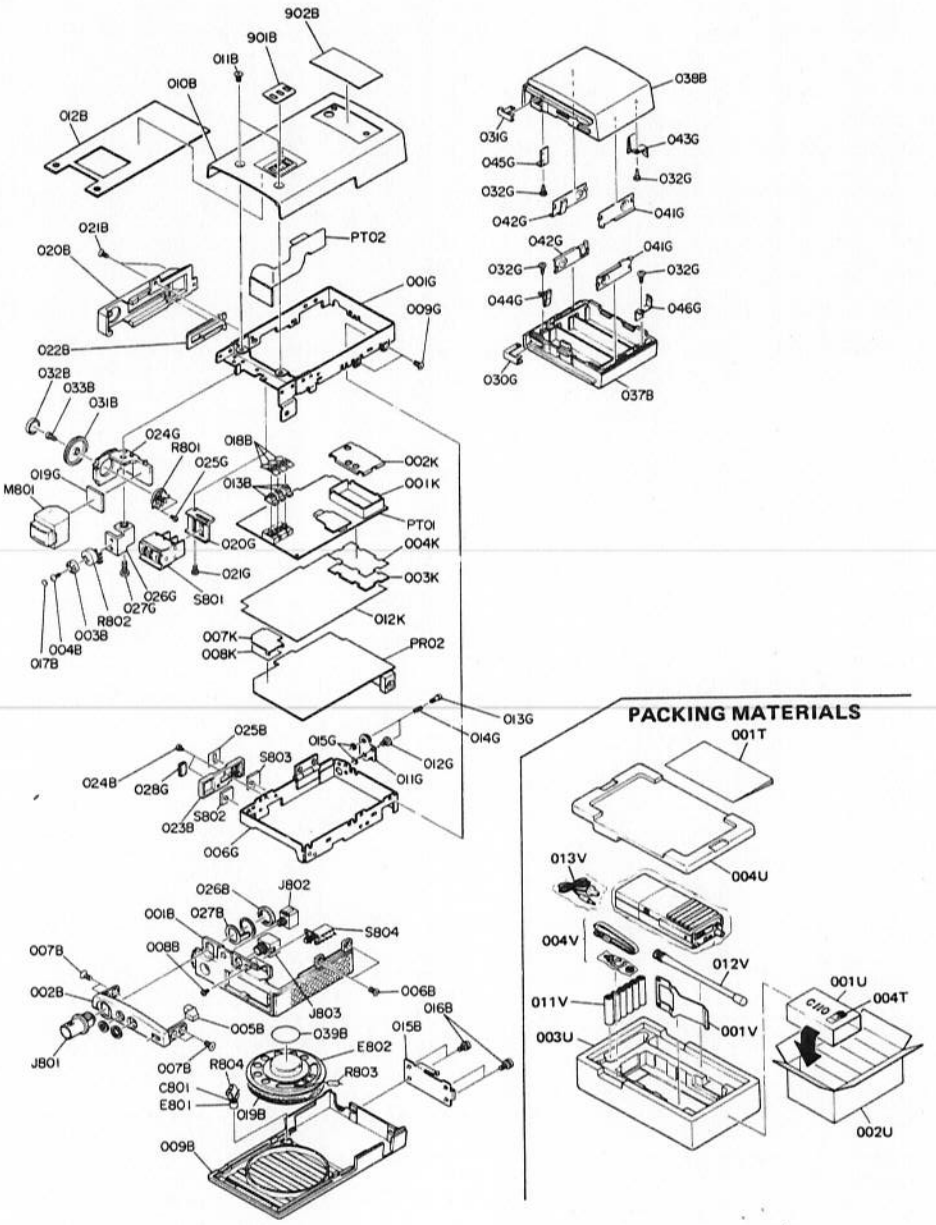
- **Adjusting RF circuit**

1. Connect the SG to the antenna terminal. Generate an unmodulated 145.04 MHz signal of 40 dB with the SG.
2. Adjust LR01, LR02, LR03 and LR04 so that the S meter reading is maximized. Since the S meter reading becomes too large as adjustment proceeds, lower the SG output level at an appropriate timing.

- **Adjusting the S meter**

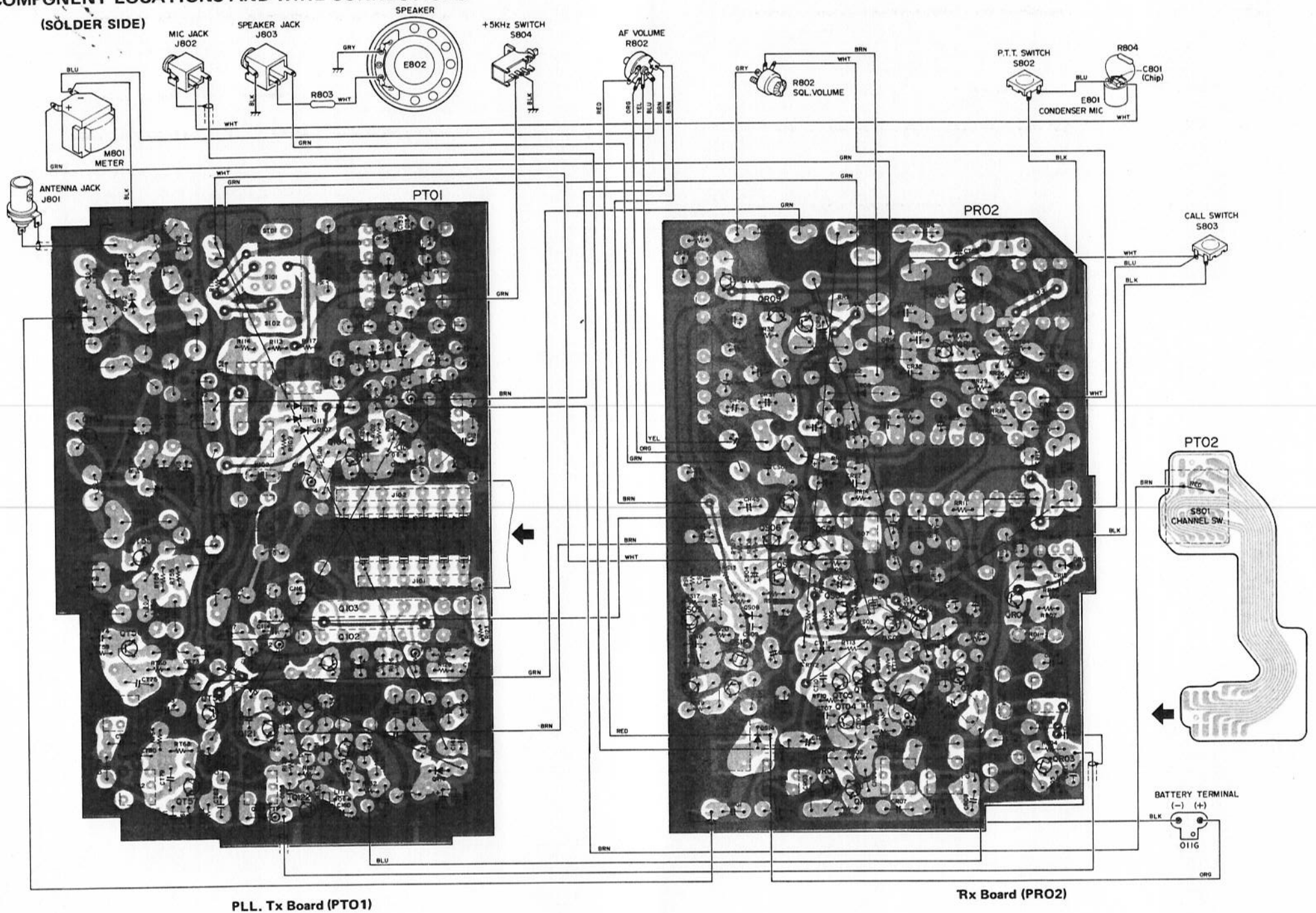
Apply a 15 dB signal modulated with 1000 Hz (±3.0 kHz deviation) to the antenna terminal from the SG. Adjust RR 25 so that the S meter reads S-6.

EXPLODED PARTS VIEW AND PARTS LIST



COMPONENT LOCATIONS AND WIRE CONNECTIONS

(SOLDER SIDE)



PLL. Tx Board (PTO1)

Rx Board (PRO2)

• MECHANISM

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
001B	1	221Z063010	Escutcheon, Meter/Channel
002B	1	221Z063120	Escutcheon, Ant/EXT
003B	1	221Z154030	Knob, SQL
004B	1	51061404S0	P.H.M. Screw P1.4 x 4
005B	1	221Z270010	Button, Call
006B	2	51040204E0	F.H.M. Screw F2 x 4
007B	4	51042604E0	F.H.M. Screw F2.6 x 4
008B	1	51060204E0	P.H.M. Screw P2 x 4
009B	1	221Z064010	Case, Front
010B	1	221Z064020	Case, Rear
011B	2	51140305E9	O.C.H.M. Screw O3 x 5
012B	1	221Z109060	Shield, Case
013B	3	221Z154040	Knob, Slide Switch
015B	1	221Z115010	Spring
016B	4	51102604E0	B.H.M. Screw B2.6 x 4
017B	1	221Z265030	Indicator, SQL Knob
018B	3	221Z303020	Mask, Slide Switch
019B	1	221Z202010	Net, Speaker
020B	1	221Z063130	Escutcheon, PTT
021B	2	51040204E0	F.H.M. Screw F2 x 4
022B	1	221Z154010	Knob, PTT
023B	1	221Z271010	Holder, PTT/Lamp SW.
024B	2	51060204E0	P.H.M. Screw P2 x 4
025B	1	221Z303010	Mask, Lamp
026B	1	53228119E0	S.C. Nut, Antenna Jack
031B	1	221Z154020	Knob, VOL
032B	1	221Z067010	Cap, VOL Knob
033B	1	51061704S0	P.H.M. Screw P1.7 x 4
037B	1	221Z064030	Case, Battery; Front
038B	1	221Z064040	Case, Battery; Rear
039B	1	221Z120060	Insulator, SPK
901B	1	221Z265110	Indicator, Slide SW.
902B	1	221Z265120	Indicator, Name Plate(C110E)
902B	1	221Z265140	Indicator, Name Plate(C110EB)
001G	1	221Z105500	Chassis Assembly, Main
006G	1	221Z105510	Chassis Assembly, Sub
009G	4	51040204E0	F.H.M. Screw F2 x 4
011G	1	221Z271020	Holder, (+) (−) Terminal
012G	1	51102604E0	B.H.M. Screw B2.6 x 4
013G	2	221Z123090	Contactor, (+) (−)
014G	2	221Z115020	Spring
015G	2	64001200R0	RG Ring, E Type
019G	1	221Z056030	Buffer, Meter
020G	1	221Z271030	Holder, CH Switch
021G	1	51060204E0	P.H.M. Screw P2 x 4
024G	1	221Z271040	Holder, VOL
025G	2	51281603U0	P.H. Tapped Screw P1.6 x 3
026G	1	221Z271050	Holder, SQL
027G	1	51102608E0	B.H.M. Screw B2.6 x 8
028G	1	221Z056020	Buffer, PTT Knob
030G	1	221Z123070	Contactor, Battery(−)
031G	1	221Z123080	Contactor, Battery(+)
032G	4	51380205P0	P.H. Tapped Screw P2 x 5
040G	3	221Z056040	Buffer, Chassis
041G	2	221Z123010	Contactor, Battery Terminal (A)
042G	2	221Z123020	Contactor, Battery Terminal (B)
043G	1	221Z123030	Contactor, Battery Terminal (C)
044G	1	221Z123040	Contactor, Battery Terminal (D)
045G	1	221Z123050	Contactor, Battery Terminal (E)
046G	1	221Z123060	Contactor, Battery Terminal (F)
047G	2	221Z274010	Reflector, Lamp

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
001K	1	221Z109110	Shield, Case
002K	1	221Z109120	Shield, Lid
003K	1	221Z109130	Shield, Lid
004K	1	221Z120110	Shield
007K	1	221Z109140	Lid, Shield
008K	1	221Z120140	Insulator, Shield
012K	1	221Z120080	Insulator, TX, RX PWB
C801	1	DK56102300	Ceramic Cap. 1000pF ±10%, Chip
E801	1	MS50000100	Condensor Mic
E802	1	QK00503090	Speaker, 8Ω
J801	1	YJ10001620	Jack, Antenna
J802	1	YJ01000590	Jack, Mic
J803	1	YJ01000570	Jack, Speaker
M801	1	IM11020030	Meter, 500μA
R801	1	BR11030010	Variable Resistor 10KΩ(B)
R802	1	BR05020010	Variable Resistor 5KΩ(B)
R803	1	GU05039120	Resistor 3.9Ω ±5% 1/2W
R804	1	GU05333180	Resistor 33KΩ ±5% 1/8W
S801	1	SC04040010	Switch, Channel
S802	1	SP01010680	Switch, PTT
S803	1	SP01010680	Switch, Call
S804	1	SP01010690	Switch, +5KHz
			PACKING
001T	1	221Z851010	Instructions
004T	2	9523019010	Serial No. Card
001U	1	221Z804110	Sleeve
002U	1	221Z805110	Master Carton(1/5)
003U	1	221Z809010	Cushion
004U	1	221Z809020	Cushion
001V	1	221Z258010	Hook, Belt Clip
004V	1	221Z156010	Strap, Hand
011V	6	ZB01030010	Battery, UM-3 1.5V
012V	1	YR99020120	Antenna
013V	1	ZE10080240	Earphone

• ELECTRICAL

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
			PR02-RX-REG CIRCUIT BOARD
PR02	1	YF221Z0050	P.W. Board, RX-REG
			PR02-CAPACITORS
CR01	1	DK17102300	Ceramic 1000pF ±20%
CR02	1	DD11080330	Ceramic 8pF ±0.5pF
CR03	1	DD15470370	Ceramic 47pF ±5%
CR04	1	DK17102300	Ceramic 1000pF ±20%
CR05	1	DK17102300	Ceramic 1000pF ±20%
CR06	1	DD11080330	Ceramic 8pF ±0.5pF
CR07	1	DD10005370	Ceramic 0.5pF ±0.25pF
CR08	1	DD11080330	Ceramic 8pF ±0.5pF
CR09	1	DD10005370	Ceramic 0.5pF ±0.25pF
CR10	1	DD11060330	Ceramic 6pF ±0.5pF
CR11	1	DD15101370	Ceramic 100pF ±5%
CR12	1	DK17102300	Ceramic 1000pF ±20%
CR13	1	DK17102300	Ceramic 1000pF ±20%
CR14	1	DD10040370	Ceramic 4pF ±0.25pF
CR15	1	DK17102300	Ceramic 1000pF ±20%
CR16	1	DK17102300	Ceramic 1000pF ±20%
CR17	1	DK17102300	Ceramic 1000pF ±20%
CR18	1	DK17102300	Ceramic 1000pF ±20%
CR19	1	DD15121370	Ceramic 120pF ±5%
CR20	1	DF15223310	Film 0.022μF ±5%
CR21	1	DF15223310	Film 0.022μF ±5%
CR22	1	DD11100370	Ceramic 10pF ±0.5pF
CR23	1	EV22501660	Elect 2.2μF 16V
CR24	1	EJ10405010	Elect 0.1μF 50V
CR25	1	DK17102300	Ceramic 1000pF ±20%
CR26	1	DK17102300	Ceramic 1000pF ±20%
CR27	1	DS17103010	Ceramic 0.01μF ±20%
CR28	1	EV22501660	Elect 2.2μF 16V
CR29	1	EJ22405010	Elect 0.22μF 50V
CR30	1	DD15221370	Ceramic 220pF ±5%
CR31	1	DK17102300	Ceramic 1000pF ±20%
CR32	1	DK17102300	Ceramic 1000pF ±20%
CR33	1	DK17102300	Ceramic 1000pF ±20%
CR34	1	DK17102300	Ceramic 1000pF ±20%
CR36	1	EJ10701010	Elect 100μF 10V
CR37	1	EJ10601610	Elect 10μF 16V
CR38	1	DK17102300	Ceramic 1000pF ±20%
CR39	1	EJ22405010	Elect 0.22μF 50V
CR40	1	EJ10601610	Elect 10μF 16V
CR41	1	EJ47600610	Elect 47μF 6.3V
CR42	1	EJ22600610	Elect 22μF 6.3V
CR43	1	DK17102300	Ceramic 1000pF ±20%
CR44	1	EV10403560	Elect 0.1μF 35V
CR45	1	EJ10700610	Elect 100μF 6.3V
CR46	1	EJ33600610	Elect 33μF 6.3V
CS01	1	DK17102300	Ceramic 1000pF ±20%
CS02	1	EJ47502510	Elect 4.7μF 25V
CS04	1	EJ10405010	Elect 0.1μF 50V
CS05	1	EJ47601610	Elect 47μF 16V
CS06	1	DK17102300	Ceramic 1000pF ±20%
CS07	1	EJ10700610	Elect 100μF 6.3V
CS08	1	EJ47600610	Elect 47μF 6.3V
CS09	1	DK17102300	Ceramic 1000pF ±20%
CS10	1	EJ10405010	Elect 0.1μF 50V
CS11	1	DK17102300	Ceramic 1000pF ±20%
CS12	1	EJ10700610	Elect 100μF 6.3V
CS14	1	DK56102300	Ceramic 1000pF ±10%, Chip

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
CT01	1	DK17102300	Ceramic 1000pF ±20%
CT02	1	EJ47600610	Elect 47μF 6.3V
CT03	1	DF15103310	Film 0.01μF ±5%
CT04	1	EV10403560	Elect 0.1μF 35V
CT05	1	DF15103310	Film 0.01μF ±5%
CT06	1	EJ10405010	Elect 0.1μF 50V
CT07	1	DK16471300	Ceramic 470pF ±10%
CT08	1	EJ10601610	Elect 10μF 16V
CT09	1	DK16471300	Ceramic 470pF ±10%
CT10	1	DK16471300	Ceramic 470pF ±10%
CT11	1	EJ10505010	Elect 1μF 50V
CT12	1	DK17102300	Ceramic 1000pF ±20%
CT13	1	EJ22600610	Elect 22μF 6.3V
CT14	1	DF15102310	Film 1000pF ±5%
CT15	1	DF15472310	Film 4700pF ±5%
CT16	1	DD15101370	Ceramic 100pF ±5%
CT17	1	DK17102300	Ceramic 1000pF ±20%
			PR02-RESISTORS (All Resistors are ±5% & 1/8W)
RR01	1	GD05103180	10KΩ
RR02	1	GD05104180	100KΩ
RR03	1	GD05102180	1KΩ
RR04	1	GD05682180	6.8KΩ
RR05	1	GD05222180	2.2KΩ
RR06	1	GD05221180	220Ω
RR07	1	GD05222180	2.2KΩ
RR08	1	GD05682180	6.8KΩ
RR09	1	GD05154180	150KΩ
RR10	1	GD05102180	1KΩ
RR11	1	GD05152180	1.5KΩ
RR12	1	GD05102180	1.5KΩ
RR13	1	GD05473180	47KΩ
RR14	1	GD05223180	22KΩ
RR15	1	GD05223180	22KΩ
RR16	1	GD05823180	82KΩ
RR17	1	GD05103180	10KΩ
RR18	1	GD05102180	1KΩ
RR19	1	GD05274180	270KΩ
RR20	1	GD05153180	15KΩ
RR21	1	GD05152180	1.5KΩ
RR22	1	GD05472180	4.7KΩ
RR23	1	GD05332180	3.3KΩ
RR24	1	GD05472180	4.7KΩ
RR25	1	RA01030620	10KΩ(B), Variable
RR26	1	GD05104180	100KΩ
RR27	1	GD05332180	3.3KΩ
RR28	1	GD05224180	220KΩ
RR29	1	GD05332180	3.3KΩ
RR30	1	GD05104180	100KΩ
RR31	1	RA01040370	100KΩ(B), Variable
RR32	1	GD05103180	10KΩ
RR33	1	GD05472180	4.7KΩ
RR35	1	GD05271180	270Ω

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
RS01	1	GD05473180	47KΩ
RS02	1	GD05332180	3.3KΩ
RS03	1	GD05103180	10KΩ
RS04	1	GD05103180	10KΩ
RS05	1	GD05103180	10KΩ
RS06	1	GD05332180	3.3KΩ
RS07	1	GD05332180	3.3KΩ
RS08	1	GD05102180	1KΩ
RS09	1	GD05102180	1KΩ
RS10	1	GD05102180	1KΩ
RS11	1	GD05103180	10KΩ
RS12	1	GD05471180	470Ω
RS13	1	HH00016120	Thermistor 1KD-5
RS14	1	GD05332180	3.3KΩ
RS15	1	GD05472180	4.7KΩ
RS16	1	GD05223180	22KΩ
RS17	1	GD05223180	22KΩ
RS18	1	GD05222140	2.2KΩ ¼W
RS19	1	GD05471180	470Ω
RS20	1	GD05332180	3.3KΩ
RS21	1	GD05681180	680Ω
RS22	1	GD05472180	4.7KΩ
RT01	1	GD05223180	22KΩ
RT02	1	GD05223180	22KΩ
RT03	1	GD05821180	820Ω
RT04	1	GD05393180	39KΩ
RT05	1	RA01030620	10KΩ(B), Variable
RT06	1	RA01020420	1KΩ(B), Variable
RT07	1	GD05124180	120KΩ
RT08	1	GD05683180	68KΩ
RT09	1	GD05471180	470Ω
RT10	1	GD05472180	4.7KΩ
RT11	1	GD05222180	2.2KΩ
RT12	1	GD05330180	33Ω
RT13	1	GD05333180	33KΩ
RT14	1	GD05332180	3.3KΩ
RT15	1	GD05102180	1KΩ
RT16	1	GD05102180	1KΩ
RT17	1	GD05222180	2.2KΩ
RT18	1	GD05223180	22KΩ
RT19	1	GD05823180	82KΩ
RT20	1	GD05473180	47KΩ
RT21	1	RA01030490	10KΩ(B), Variable
RT24	1	GD05103180	10KΩ
			PR02-SEMICONDUCTORS
QR01	1	HT320261O0	Transistor 2SC2026(L)
QR02	1	HT326681O0	Transistor 2SC2668(O)
QR03	1	HF201921B0	F.E.T. 2SK192A(Y)
QR04	1	HT326681O0	Transistor 2SC2668(O)
QR05	1	HD20011050	Diode 1S1555
QR07	1	HC10015170	IC MC3357P
QR08	1	HD20011050	Diode 1S1555
QR09	1	HT324581Y0	Transistor 2SC2458(Y)
QR10	1	HT206051L0	Transistor 2SB605(L)
QR11	1	HT326681O0	Transistor 2SC2668(O)
QR12	1	HT326681O0	Trnsistor 2SC2668(O)
QR13	1	HD20016060	Diode 1SS99
QR14	1	HD20016060	Diode 1SS99
QR15	1	HT326031F0	Transistor 2SC2603(F)
QR16	1	HC10028210	IC BA546

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
QS01	1	HT110481Y0	Transistor 2SA1048(Y)
QS02	1	HT324581Y0	Transistor 2SC2458(Y)
QS03	1	HT110481Y0	Transistor 2SA1048(Y)
QS04	1	HT326031F0	Transistor 2SC2603(F)
QS05	1	HT110481Y0	Transistor 2SA1048(Y)
QS06	1	HT326031F0	Transistor 2SC2603(F)
QS07	1	HT110481Y0	Transistor 2SA1048(Y)
QS08	1	HD30103090	Zener YZ047A
QS09	1	HT326031F0	Transistor 2SA2603(F)
QS10	1	HT205621C0	Transistor 2SB562(C)
QS11	1	HT326031F0	Transistor 2SC2603(F)
QS12	1	HF201921B0	F.E.T. 2SK192A(Y)
QS13	1	HD20028100	Diode IN4001
QT01	1	HD20011050	Diode 1S1555
QT02	1	HT110481Y0	Transistor 2SA1048(Y)
QT03	1	HC10093050	IC TA7555
QT04	1	HT324581G0	Transistor 2SC2458(GR)
QT05	1	HT324581G0	Transistor 2SC2458(GR)
QT06	1	HT110481Y0	Transistor 2SA1048(Y)
QT07	1	HT324581G0	Transistor 2SC2458(GR)
QT08	1	HT324581G0	Transistor 2SC2458(GR)
			PR02-MISCELLANEOUS
FR01	1	XU210695NR	Cristal 10.6M15BS
FR02	1	FG455304E0	Ceramic Filter KBF-455P-15A
JS01	1	YJ04001090	Jack
LR01	1	LA55012000	Ant. Coil, LC057
LR02	1	LA55012000	Ant. Coil, LC057
LR03	1	LA55012000	Ant. Coil, LC057
LR04	1	LA55012000	Ant. Coil, LC057
LR05	1	LA55011900	Ant. Coil, LC055
LR06	1	LA55011700	Ant. Coil, LC058
LR07	1	LA55011800	Ant. Coil, LC071
			PT01-TX/PLL CIRCUIT BOARD
PT01	1	YF221Z006R	P.W. Board, TX/PLL
			PT01-CAPACITORS
C101	1	DK56102300	Ceramic 1000pF ±10%, Chip
C102	1	DK56102300	Ceramic 1000pF ±10%, Chip
C103	1	DK56102300	Ceramic 1000pF ±10%, Chip
C104	1	DK56102300	Ceramic 1000pF ±10%, Chip
C105	1	DK56102300	Ceramic 1000pF ±10%, Chip
C106	1	DK56102300	Ceramic 1000pF ±10%, Chip
C107	1	DK56102300	Ceramic 1000pF ±10%, Chip
C108	1	DK56102300	Ceramic 1000pF ±10%, Chip
C109	1	DK56102300	Ceramic 1000pF ±10%, Chip
C110	1	DK56102300	Ceramic 1000pF ±10%, Chip
C111	1	DK56102300	Ceramic 1000pF ±10%, Chip
C112	1	DK56102300	Ceramic 1000pF ±10%, Chip
C113	1	DK56102300	Ceramic 1000pF ±10%, Chip
C114	1	DD10020370	Ceramic 2pF ±0.25pF
C115	1	DD15150370	Ceramic 15pF ±5%
C116	1	DD15330300	Ceramic 33pF ±5%
C117	1	DD15330300	Ceramic 33pF ±5%
C118	1	DK17102300	Ceramic 1000pF ±20%
C119	1	DK17103010	Ceramic 0.01μF ±20%
C120	1	DK17102300	Ceramic 1000pF ±20%

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
C121	1	DD15470370	Ceramic 47pF ±5%
C122	1	DD15220370	Ceramic 22pF ±5%
C123	1	DK17102300	Ceramic 1000pF ±10%
C124	1	DD11100370	Ceramic 10pF ±0.5pF
C125	1	DK17102300	Ceramic 1000pF ±20%
C126	1	DD11100330	Ceramic 10pF ±0.5pF
C127	1	DD15680360	Ceramic 68pF ±5%
C128	1	DD15330360	Ceramic 33pF ±5%
C129	1	DK17102300	Ceramic 1000pF ±20%
C131	1	DD15820370	Ceramic 82pF ±5%
C132	1	DD15820370	Ceramic 82pF ±5%
C133	1	DD15820370	Ceramic 82pF ±5%
C134	1	DD15820370	Ceramic 82pF ±5%
C135	1	EV10601660	Elect 10μF 16V
C136	1	EV47403560	Elect 0.47μF 35V
C137	1	DS17103010	Ceramic 0.01μF ±20%
C138	1	EJ47601610	Elect 47μF 16V
C139	1	DK17102300	Ceramic 1000pF ±20%
C140	1	DS17103010	Ceramic 0.01μF ±20%
C141	1	DK17102300	Ceramic 1000pF ±20%
C142	1	DK17102300	Ceramic 1000pF ±20%
C143	1	CT13000020	Trimming 30pF
C144	1	DK56102300	Ceramic 1000pF ±10%, Chip
C145	1	EJ10700610	Elect 100μF 6.3V
C146	1	DD11070300	Ceramic 7pF ±0.5pF
C147	1	DK16471300	Ceramic 470pF ±10%
C148	1	DK16471300	Ceramic 470pF ±10%
C149	1	DD15120370	Ceramic 12pF ±5%
C150	1	DD11100370	Ceramic 10pF ±0.5pF
C151	1	DD10010370	Ceramic 1pF ±0.25pF
C152	1	DD10010370	Ceramic 1pF ±0.25pF
C153	1	DK17102300	Ceramic 1000pF ±20%
C154	1	DK17102300	Ceramic 1000pF ±20%
C155	1	DD11100370	Ceramic 10pF ±0.5pF
C156	1	DK17102300	Ceramic 1000pF ±20%
C157	1	DK17102300	Ceramic 1000pF ±20%
C158	1	DK17102300	Ceramic 1000pF ±20%
C160	1	DK56102300	Ceramic 1000pF ±10%, Chip
C161	1	DD15120360	Ceramic 12pF ±5%
CT51	1	DD15150370	Ceramic 15pF ±5%
CT52	1	DD11070370	Ceramic 7pF ±0.5pF
CT53	1	DD15330370	Ceramic 33pF ±5%
CT54	1	DD10020370	Ceramic 2pF ±0.25pF
CT55	1	DD15330300	Ceramic 33pF ±5%
CT56	1	DD15101370	Ceramic 100pF ±5%
CT57	1	DD15220370	Ceramic 22pF ±5%
CT58	1	DK17102300	Ceramic 1000pF ±20%
CT59	1	CT14000020	Trimming 40pF
CT60	1	CT12000020	Trimming 20pF
CT61	1	DK17102300	Ceramic 1000pF ±20%
CT62	1	DK17102300	Ceramic 1000pF ±20%
CT63	1	EJ10601601	Elect 10μF 16V
CT64	1	DK17102300	Ceramic 1000pF ±20%
CT65	1	EJ10601610	Elect 10μF 16V
CT66	1	CT14000020	Trimming 40pF
CT67	1	CT14000020	Trimming 40pF
CT68	1	DK17102300	Ceramic 1000pF ±20%
CT69	1	DK17102300	Ceramic 1000pF ±20%
CT70	1	CT13000020	Trimming 30pF

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
CT71	1	DD15330370	Ceramic 33pF 5%
CT72	1	DK17102300	Ceramic 1000pF 20%
CT73	1	DK17102300	Ceramic 1000pF 20%
CT74	1	DK17102300	Ceramic 1000pF 20%
CT75	1	DD15560370	Ceramic 56pF 5%
CT76	1	DK17102300	Ceramic 1000pF 20%
CT77	1	DD11090330	Ceramic 9pF 0.5pF
CT78	1	DD11020370	Ceramic 2pF 0.25pF
CT79	1	DD11080330	Ceramic 8pF 0.5pF
CT80	1	DK17102300	Ceramic 1000pF 20%
CT81	1	DK17102300	Ceramic 1000pF 20%
CT82	1	DD11180370	Ceramic 18pF 0.5pF
CT83	1	EJ10601610	Elect 10μF 16V
CT84	1	DK16471300	Ceramic 470pF 10%
CT85	1	DK17102300	Ceramic 1000pF 20%
			PT01-RESISTORS (All Resistors are ±5% & 1/8W)
R101	1	GD05222180	2.2KΩ
R102	1	GD05224180	220KΩ
R103	1	GD05471180	470Ω
R104	1	GD05103180	10KΩ
R105	1	GD05560180	56Ω
R106	1	GD05102180	1KΩ
R107	1	GD05224180	220KΩ
R108	1	GD05223180	22KΩ
R109	1	GD05472180	4.7KΩ
R110	1	GD05472180	4.7KΩ
R111	1	GD05472180	4.7KΩ
R112	1	GD05472180	4.7KΩ
R113	1	GD05222180	2.2KΩ
R114	1	GD05222180	2.2KΩ
R115	1	GD05222180	2.2KΩ
R116	1	GD05222180	2.2KΩ
R117	1	GD05473180	47KΩ
R118	1	GD05473180	47KΩ
R119	1	GD05473180	47KΩ
R120	1	GD05473180	47KΩ
R121	1	GD05472180	4.7KΩ
R122	1	GD05104180	100KΩ
R123	1	GD05104180	100KΩ
R124	1	GD05103180	10KΩ
R125	1	GD05471180	470Ω
R126	1	GD05473180	47KΩ
R127	1	GD05473180	47KΩ
R128	1	GD05472180	4.7KΩ
R129	1	GD05683180	68KΩ
R130	1	GD05103180	10KΩ
R131	1	GD05102180	1KΩ
R132	1	GD05104180	100KΩ
R133	1	GD05271180	270Ω
R134	1	GD05333180	33KΩ
R135	1	GD05124180	120KΩ
R136	1	GD05102180	1KΩ
R137	1	GD05224180	220KΩ
R138	1	GD05471180	470Ω

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION	
RT51	1	GD05103180	10KΩ	
RT52	1	GD05221180	220Ω	
RT53	1	GD05181180	180Ω	
RT54	1	GD05220180	22Ω	
RT55	1	GD05220180	22Ω	
RT56	1	GD05820140	82Ω	¼W
RT57	1	GD05022140	2.2Ω	¼W
RT58	1	GD05470180	47Ω	
RT59	1	GD05027180	2.7Ω	
RT60	1	GD05470180	47Ω	
RT61	1	GD05101180	100Ω	
RT62	1	GD05392180	3.9KΩ	
RT63	1	GD05682180	6.8KΩ	
RT64	1	GD05101180	100Ω	
RT65	1	GD05221180	220Ω	
			PT01-SEMICONDUCTORS	
Q101	1	HC10047050	IC	TC9122P
Q102	1	HC10023050	IC	TC5082PL
Q103	1	HC10063050	IC	TC5081AP
Q104	1	HT326681O0	Transistor	2SC2668(O)
Q105	1	HT326681O0	Transsitor	2SC2668(O)
Q106	1	HT320261O0	Transistor	2SC2026(L)
Q107	1	HD20010060	Diode	1SS53
Q108	1	HD20010060	Diode	1SS53
Q109	1	HD20010060	Diode	1SS53
Q110	1	HD20010060	Diode	1SS53
Q111	1	HD20010060	Diode	1SS53
Q112	1	HD20010060	Diode	1SS53
Q113	1	HD20010060	Diode	1SS53
Q114	1	HD20010060	Diode	1SS53
Q115	1	HT110481Y0	Transistor	2SA1048(Y)
Q116	1	HD40001180	Varicap	FC53M
Q117	1	HD20010060	Diode	1SS53
Q118	1	HD20007200	Diode	MC301
Q119	1	HF20192180	F.E.T.	2SK192A(Y)
Q120	1	HT326681O0	Transistor	2SC2668(O)
Q121	1	HT326681O0	Transistor	2SC2668(O)
Q122	1	HT326681O0	Transistor	2SC2668(O)
Q123	1	HD20001200	Diode	MI301
Q124	1	HD20011050	Diode	1S1555
Q125	1	HD20010060	Diode	1SS53
Q126	1	HD20010060	Diode	1SS53
QT51	1	HD20001200	Diode	MI301
QT52	1	HD20001200	Diode	MI301
QT53	1	HT319471O0	Transistor	2SC1947
QT54	1	HD20011050	Diode	1S1555
QT55	1	HT325301A0	Transistor	2SC2053
QT56	1	HT317302A0	Transistor	2SC1730(K)
QT57	1	HT326681O0	Transistor	2SC2668(O)
QT58	1	HT305621C0	Transistor	2SB562(C)
			PT01-MISCELLANEOUS	
FB01	1	FC90040010	Ferrite Beads	
J101	1	YJ10001970	Jack, (6P)	
J102	1	YJ10001940	Jack, (7P)	

REF. DESIG.	Q'TY	PART NO.	DESCRIPTION
L101	1	LC18220010	Choke Coil, 8.2μH
L102	1	LA55012000	Ant. Coil, LC057
L103	1	LC16810010	Choke Coil, 0.68μH
L104	1	LA55012100	Ant. Coil, LC100
L105	1	LA55012100	Ant. Coil, LC100
L106	1	LA55012100	Ant. Coil, LC100
L107	1	LA55012100	Ant. Coil, LC100
L108	1	LA55016180	Ant. Coil, LC102
L109	1	LA55016180	Ant. Coil, LC102
L110	1	LA55016190	Ant. Coil, LC099
L111	1	LA55016190	Ant. Coil, LC099
L112	1	LC11230010	Choke Coil, 12μH
L113	1	LF90070010	Ant. Coil, LD024
L114	1	LF90070010	Ant. Coil, LD024
L115	1	LF90070010	Ant. Coil, LD024
L116	1	LA55012200	Ant. Coil, LC101
L117	1	LC16810010	Choke Coil, 0.68μH
L118	1	LA55012000	Ant. Coil, LC057
LT51	1	LC14500020	Choke Coil, LE027
LT52	1	LC14500020	Choke Coil, LE027
LT53	1	LC11310060	Choke Coil, LE026
LT54	1	LF90080010	Ant. Coil, LD025
LT55	1	LC14500020	Choke Coil, LE027
LT56	1	LC11210240	Choke Coil, LE080
LT57	1	LC13110010	Choke Coil, LE029
LT58	1	LC14310010	Choke Coil, LD023
LT59	1	LC11110030	Choke Coil, LE028
LT60	1	LC13320050	Choke Coil, 3.3μH
LT61	1	LA55012000	Ant. Coil, LC057
LT62	1	LA55012000	Ant. Coil, LC057
S101	1	SS02020820	Slide Switch, RX
S102	1	SS01020470	Slide Switch, TX
ST01	1	SS01020470	Slide Switch, RF
X101	1	XJ119001L0	Crystal, 10.240MHz
X102	1	XC30800110	Crystal, 43.10166MHz
X103	1	XC30800210	Crystal, 43.30166MHz
X104	1	XC30800310	Crystal, 46.66666MHz
X105	1	XC30800410	Crystal, 46.86666MHz
PT02	1	WE221Z0010	P.W. Board, Flexible
S801	1	SC04040010	Switch, Channel

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

7. SPECIFICATIONS

1. General

Frequency . . . . . 144 – 148 MHz (E)
144 – 146 MHz (W)

Type of emission F3
Microphone input impedance . . . . . 600 ohms
Speaker impedance . . . . . 8 ohms
Operating voltage . . . . . 5.5 – 11V
Power supply . . . . . 6 size-AA dry cells or nicad batteries
Antenna impedance . . . . . 50 ohms
Dimensions . . . . . 167(H) x 65(W) x 34(D) mm
Weight . . . . . 470g (including batteries and antenna)

2. Receiver

Receiving system . . . . . Double superheterodyne
IF . . . . . 1st IF 10.695 MHz
2nd IF 455 kHz
Sensitivity . . . . . –3 dB (20 dB QS)
–7 dB (12 dB SINAD)
Pass band . . . . . ±7 kHz (–6 dB)
Selectivity . . . . . ± kHz (–60 dB)
Squelch sensitivity . . . . . –12 dB
Audio output . . . . . 0.3W (10% distortion, 8 ohm load)
Current consumption . . . . . Approx. 20 mA (no signal received)

3. Transmitter

Transmission output . . . . . Hi 2.5W (with CNB110)
Low 0.15W
Spurious ratio . . . . . 60 dB
Maximum deviation . . . . . 5 kHz
Modulating method . . . . . Reactance modulation
Audio frequency response . . . . . 300 to 3000 Hz
Current consumption . . . . . Approx. 750 mA (at 9V)

* The above specifications and appearance are subject to modification without prior notice.