

SECTION 11

HM-133

• ELECTRICAL PARTS

[MAIN-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1140011491	S.IC uPD789071MC-041-5A4-E1-A	B	51.1/24.5
IC3	1110006310	S.IC BD5245G-TR	B	67.3/34.8
IC6	1130012030	S.IC BR24L02FV-WE2	B	39.4/30.1
Q1	1530001941	S.TR 2SC2712-BL (TE85L,F)	B	26.1/11
Q2	1590000680	S.TR DTC114EUA T106	B	21.6/34.8
Q3	1590001330	S.TR DTA114EUA T106	B	24.7/34.8
Q4	1510000771	S.TR 2SA1586-GR (TE85R,F)	B	54.7/34.9
Q5	1510000771	S.TR 2SA1586-GR (TE85R,F)	B	54.5/37.5
Q6	1510000771	S.TR 2SA1586-GR (TE85R,F)	B	48.5/5.8
Q7	1510000771	S.TR 2SA1586-GR (TE85R,F)	B	48.5/3.3
Q8	1530001941	S.TR 2SC2712-BL (TE85L,F)	B	19.5/9.9
Q9	1590001010	S.TR DTB113ZK T146	B	22.8/11
D1	1790000950	S.ZEN MA8056-M (TX)	B	23.1/17
D3	1750000940	S.DIO ISS400 TE61	B	64.7/23.2
D4	1750000940	S.DIO ISS400 TE61	B	64.7/29.2
D5	1750000940	S.DIO ISS400 TE61	B	59.6/25.5
D6	1750000940	S.DIO ISS400 TE61	B	58.7/20.8
D7	1750000940	S.DIO ISS400 TE61	B	42.8/16.7
D9	1750000940	S.DIO ISS400 TE61	B	34.1/16.3
D10	1750000940	S.DIO ISS400 TE61	B	34.9/17.8
D11	1750000940	S.DIO ISS400 TE61	B	38.8/14.5
D12	1750000940	S.DIO ISS400 TE61	B	57.2/29
D16	1730002280	S.ZEN MA8091-M (TX)	B	55.2/14.5
D17	1730002280	S.ZEN MA8091-M (TX)	B	48.8/14.5
D18	1730002280	S.ZEN MA8091-M (TX)	B	12.5/13.9
X1	6060000610	S.CER EFOS4914E3	B	42.6/22.3
L1	6200001520	S.COL MLF2012D R82K-T	B	12/28.9
L2	6200001520	S.COL MLF2012D R82K-T	B	10.7/13.9
R2	7030000400	S.RES MCR10EZJH 1.5 k	B	24.2/8.3
R3	7030000400	S.RES MCR10EZJH 1.5 k	B	41.9/8.3
R4	7030000400	S.RES MCR10EZJH 1.5 k	B	57.3/8.2
R5	7030003400	S.RES ERJ3GEYJ 471 V (470)	B	28.6/11.2
R6	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	B	26.8/34.7
R7	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	B	23.3/36.8
R8	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	B	19.1/33.7
R9	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	57.6/35.6
R10	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	57.6/34.3
R11	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	B	57.6/36.9
R12	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	60.4/37.2
R13	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	45.7/5.5
R14	7030003420	S.RES ERJ3GEYJ 681 V (680)	B	51.5/5.9
R14	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	51.5/5.9
R15	7030003400	S.RES ERJ3GEYJ 471 V (470)	B	51.5/3.3
R15	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	B	51.5/3.3
R16	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	45.7/4.2
R18	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	41.6/33.6
R19	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	38.4/34.5
R22	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	B	37.9/18.7
R23	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	B	56.1/18.1
R24	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	B	58/18.6
R25	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	B	59.8/18.9
R27	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	68.1/32.5
R35	7030000400	S.RES MCR10EZJH 1.5 k	B	69.1/11.9
R36	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	20.5/30.6
R37	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	B	19.1/30.6
R38	7030003720	S.RES ERJ3GEYJ 224 V (220 k)	B	17.5/7.7
R39	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	B	24.4/5.7
R40	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	B	24.4/3
R41	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	17/32.7
R42	7030003860	S.RES ERJ3GE JPW V	B	68.4/21.6
R43	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	57.4/27.5
R44	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	57.3/22.1
R45	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	53.9/18
R46	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	37.8/15.8
R47	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	37.6/17.1
R48	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	45.3/17.6
R49	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	57.3/26.2
R50	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	58.1/23.4
R51	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	57.4/24.7
C1	4030006850	S.CER C1608 JB 1H 471K-T	B	52/16.9
C2	4510008500	S.ELE EEE1CA101WP	B	35.5/5.8
C5	4030007050	S.CER C1608 CH 1H 220J-T	B	14.9/30.4
C9	4030007050	S.CER C1608 CH 1H 220J-T	B	16.3/16.9
C10	4030007050	S.CER C1608 CH 1H 220J-T	B	15.6/15.5
C11	4030007050	S.CER C1608 CH 1H 220J-T	B	15.6/7.2
C12	4030006860	S.CER C1608 JB 1H 102K-T	B	64.9/34.4
C13	4030006860	S.CER C1608 JB 1H 102K-T	B	44.3/27.6
C14	4030006900	S.CER C1608 JB 1H 103K-T	B	67.5/37.2
C15	4030006860	S.CER C1608 JB 1H 102K-T	B	41.9/29.7
C16	4030006860	S.CER C1608 JB 1H 102K-T	B	14.1/13.6
C17	4030006860	S.CER C1608 JB 1H 102K-T	B	11.7/17.4
C18	4030006860	S.CER C1608 JB 1H 102K-T	B	10.4/17.4
C19	4030006860	S.CER C1608 JB 1H 102K-T	B	13/25.8
C21	4030006860	S.CER C1608 JB 1H 102K-T	B	11.7/25.8

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.	H/V LOCATION
C22	4030006860	S.CER C1608 JB 1H 102K-T	B	10.4/28.5
C23	4030006860	S.CER C1608 JB 1H 102K-T	B	23.1/14
C24	4030006860	S.CER C1608 JB 1H 102K-T	B	67.2/12.1
C25	4030006860	S.CER C1608 JB 1H 102K-T	B	25.6/32.2
C26	4030006860	S.CER C1608 JB 1H 102K-T	B	53/4.6
C27	4030006860	S.CER C1608 JB 1H 102K-T	B	60.9/35.9
C29	4510008540	S.ELE EEE1CA100SR	B	26.4/16
C30	4030011600	S.CER C1608 JB 1E 104K-T	B	23/3
C31	4510008540	S.ELE EEE1CA100SR	B	28.3/4.9
J1	6510023110	CNR 3008L-8P8C <KIN>		
DS1	5010000120	S.LED LN1371G-(TR)	T	21.9/11
DS2	5010000120	S.LED LN1371G-(TR)	T	21.9/32
DS3	5010000120	S.LED LN1371G-(TR)	T	39.3/11
DS4	5010000120	S.LED LN1371G-(TR)	T	39.3/32
DS5	5010000120	S.LED LN1371G-(TR)	T	55.9/2.5
DS6	5010000120	S.LED LN1371G-(TR)	T	56.2/26.8
DS7	5010000120	S.LED LN1371G-(TR)	T	71.7/14.8
DS8	5010000120	S.LED LN1371G-(TR)	T	72.2/33.8
DS10	5010000150	S.LED LT1EP53A	T	51.6/5
DS10	5040003160	S.LED BRPY1211C-TR	T	51.6/5
DS11	5010000150	S.LED LT1EP53A	T	51.6/38
DS11	5040003160	S.LED BRPY1211C-TR	T	51.6/38
MC1	7700002310	MIC EM-140		
S1	2260000980	SW SKHHLPO14A		
EP1	6910012350	S.BEA MMZ1608Y 102BT	B	10.4/25.8
EP2	6910012350	S.BEA MMZ1608Y 102BT	B	14.3/17.4
EP3	6910012350	S.BEA MMZ1608Y 102BT	B	13/17.4
EP4	6910012350	S.BEA MMZ1608Y 102BT	B	14.5/11

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

• MECHANICAL PARTS

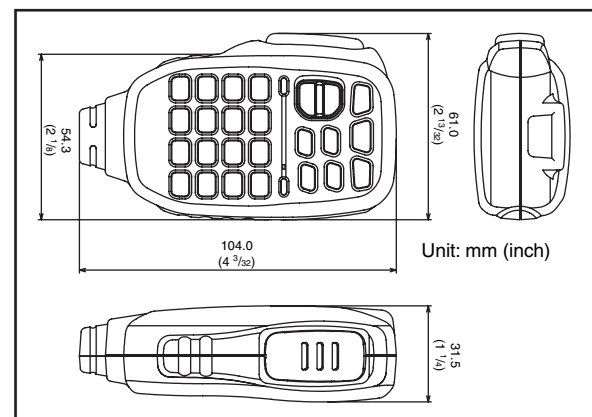
[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900011271	OPC-1153A	1
MP1	8210018830	2539 FRONT PANEL	1
MP2	8210018840	2539 REAR PANEL	1
MP3	8930057380	2539 PTT BUTTON	1
MP4	8930057390	2539 LED LENS	2
MP5	8930057570	2539 SW RUBBER	1
MP6	8930057520	2539 KEYBOARD	1
MP8	8810009371	Screw BT B0 3X12NI-ZK3 (BT)	2
MP9	8810009561	Screw BT B0 2X6 NI-ZK3 (BT)	3

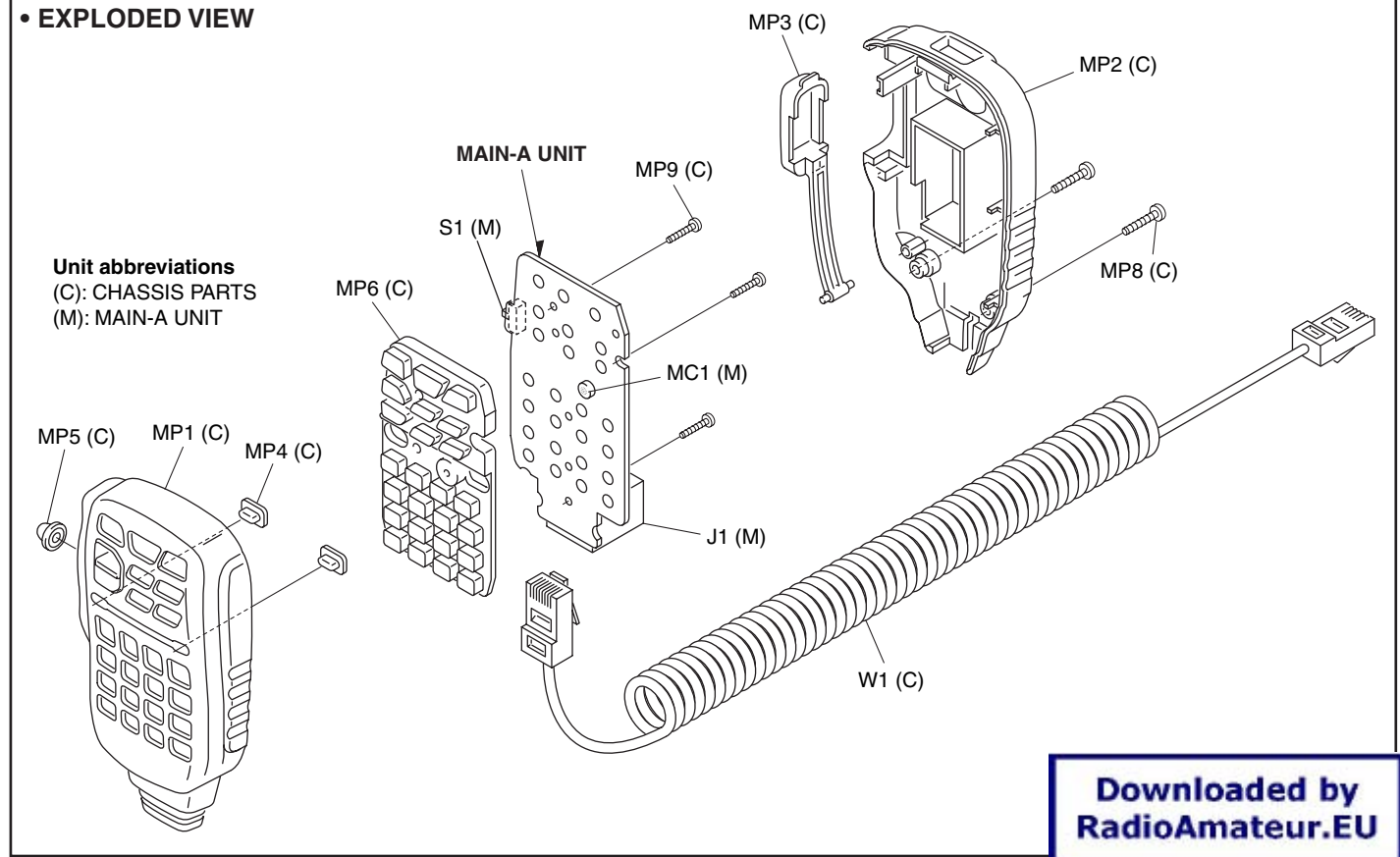
[MAIN-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510023110	3008L-8P8C	1
MC1	7700002310	EM-140	1
S1	2260000980	SKHHLPO14A	1

• DIMENTIONS

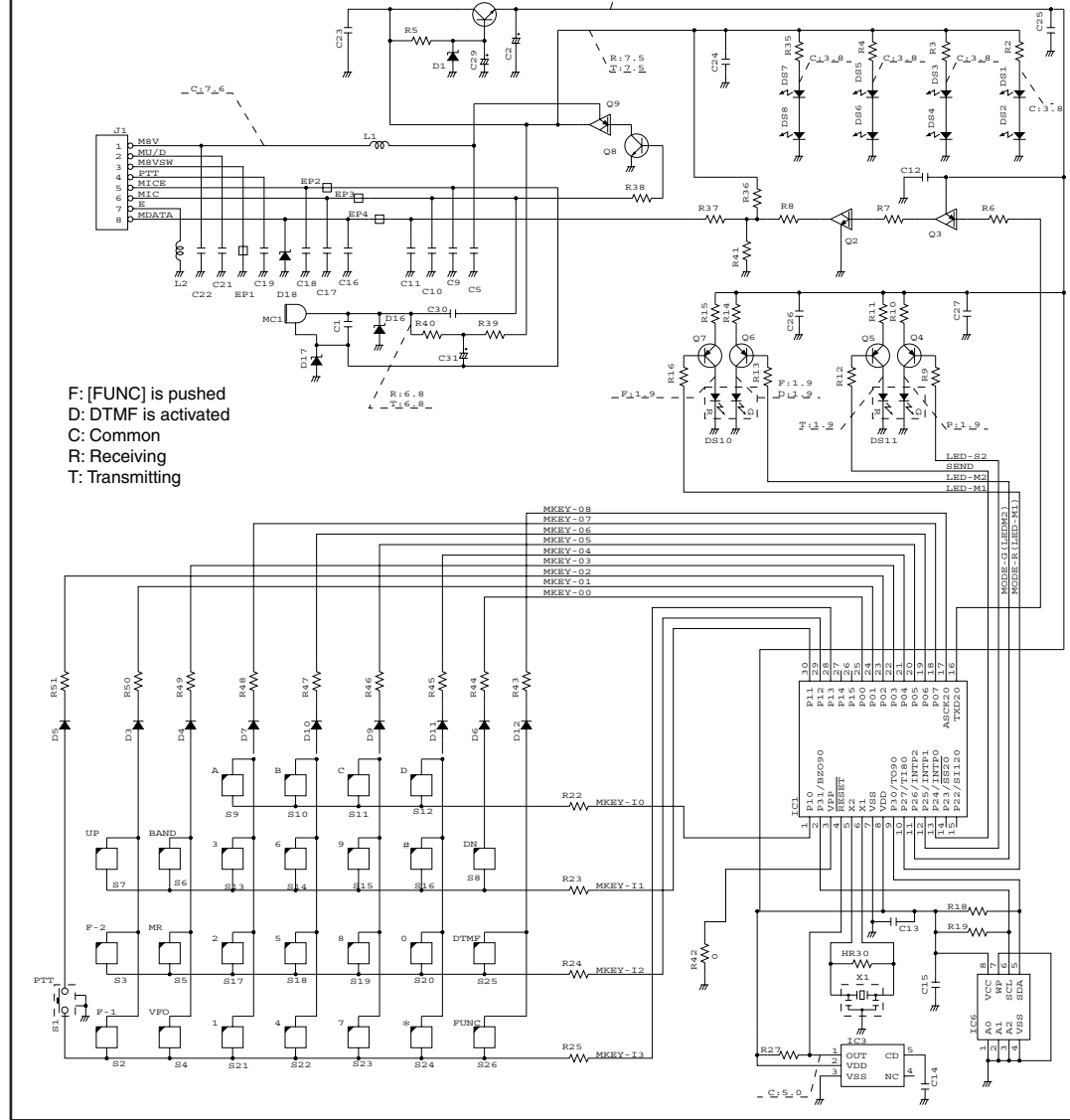


• EXPLODED VIEW



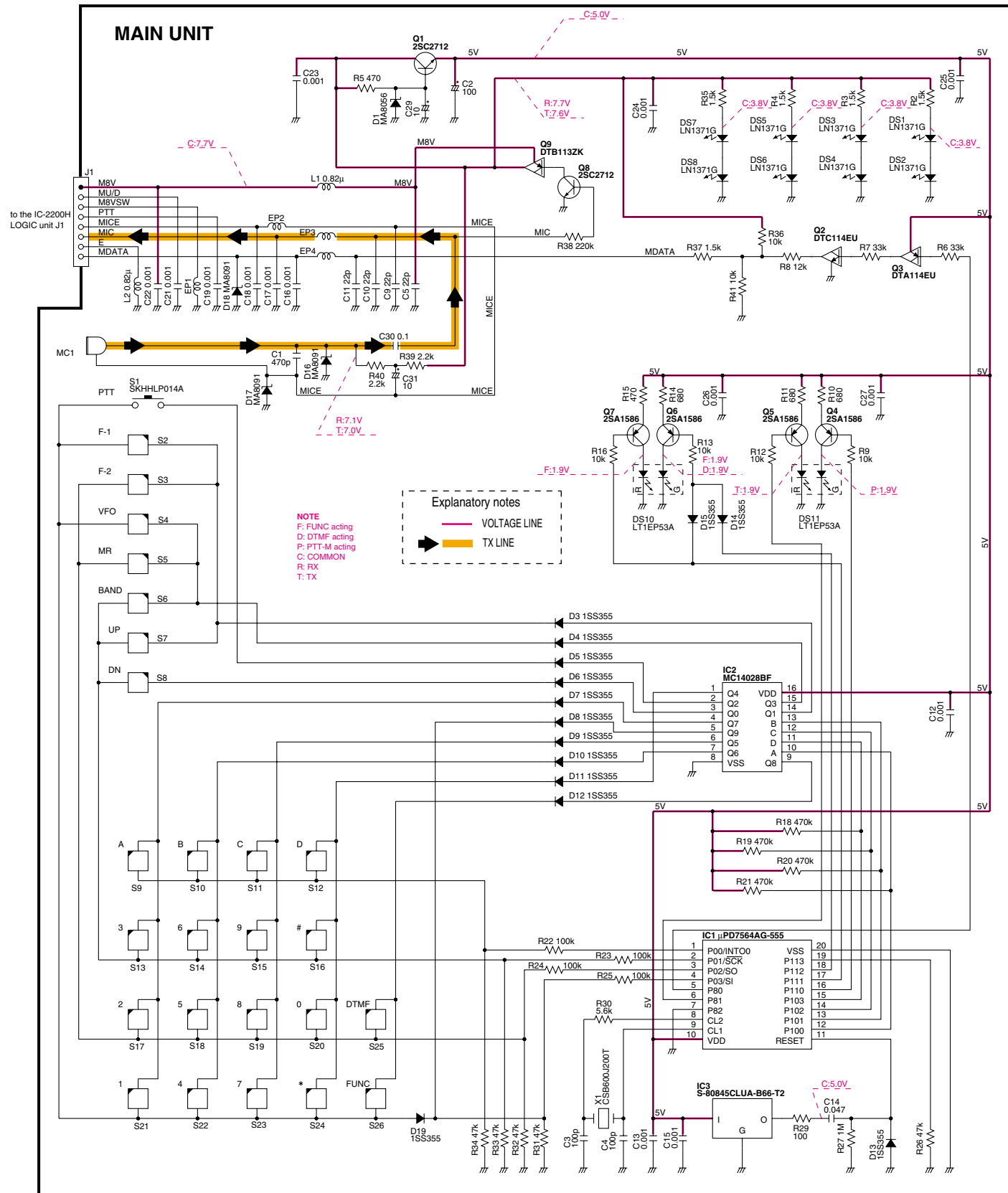
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RadioAmateur.EU

• VOLTAGE DIAGRAM

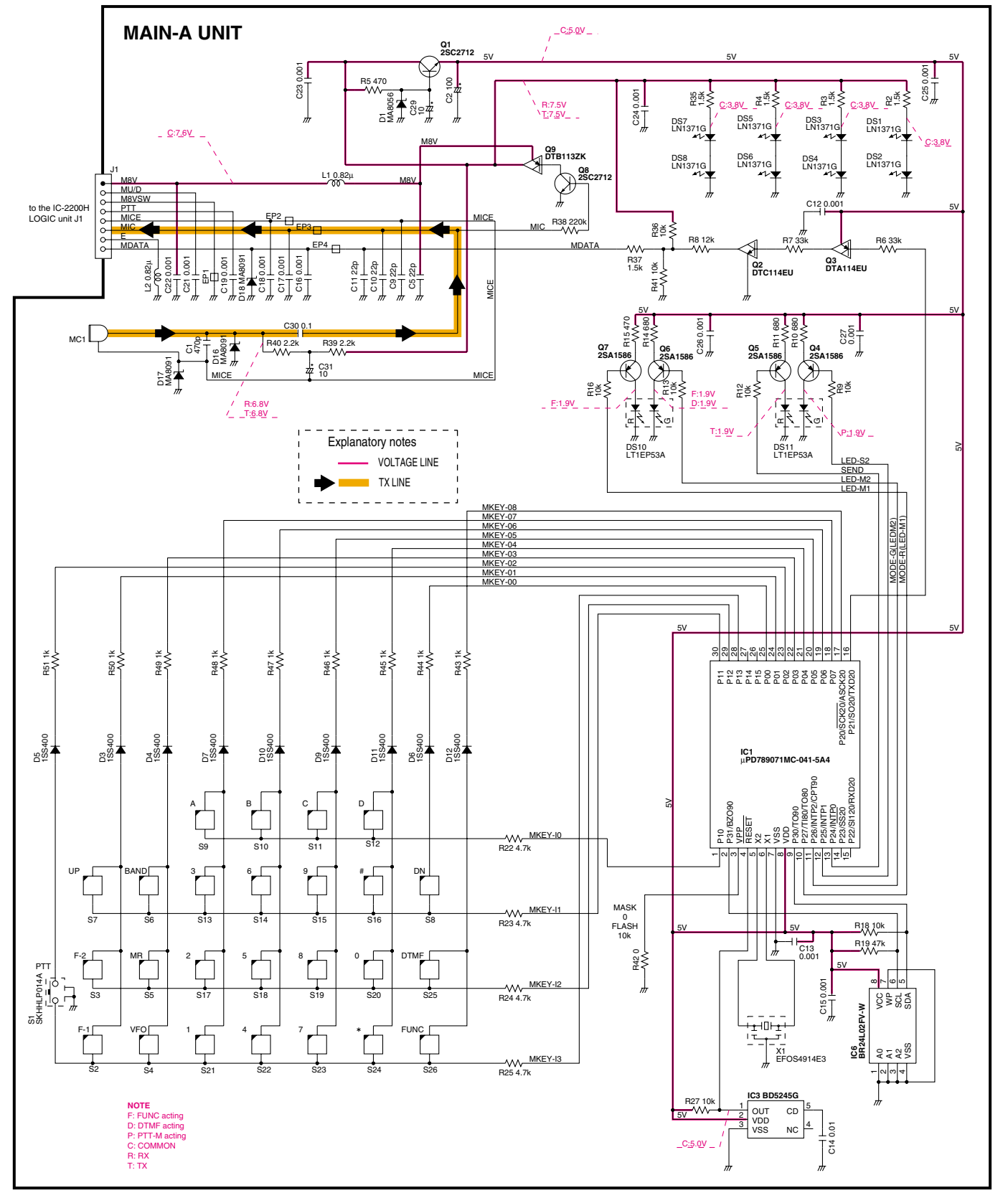


11-3 HM-133V

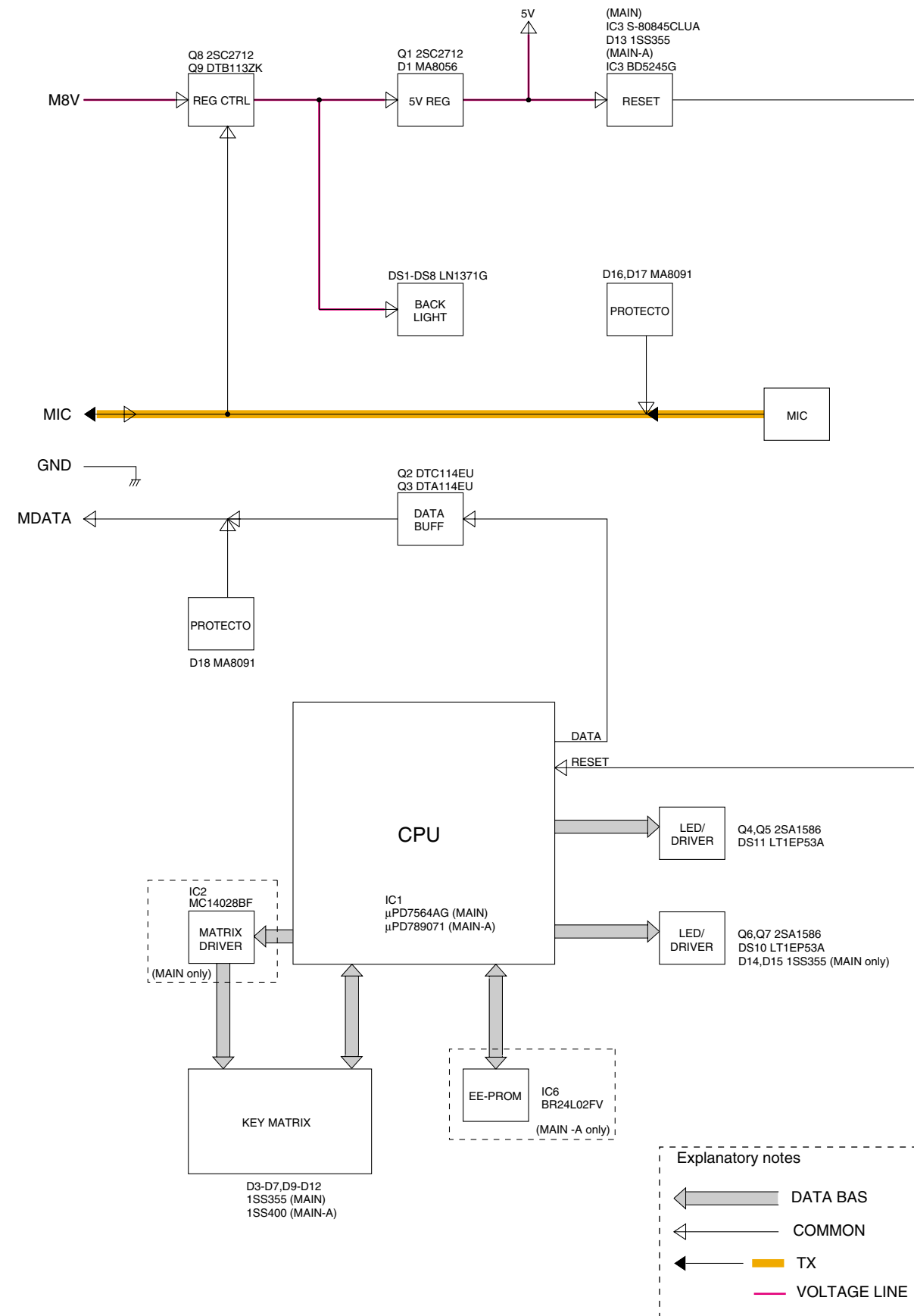
• MAIN UNIT



• MAIN-A UNIT

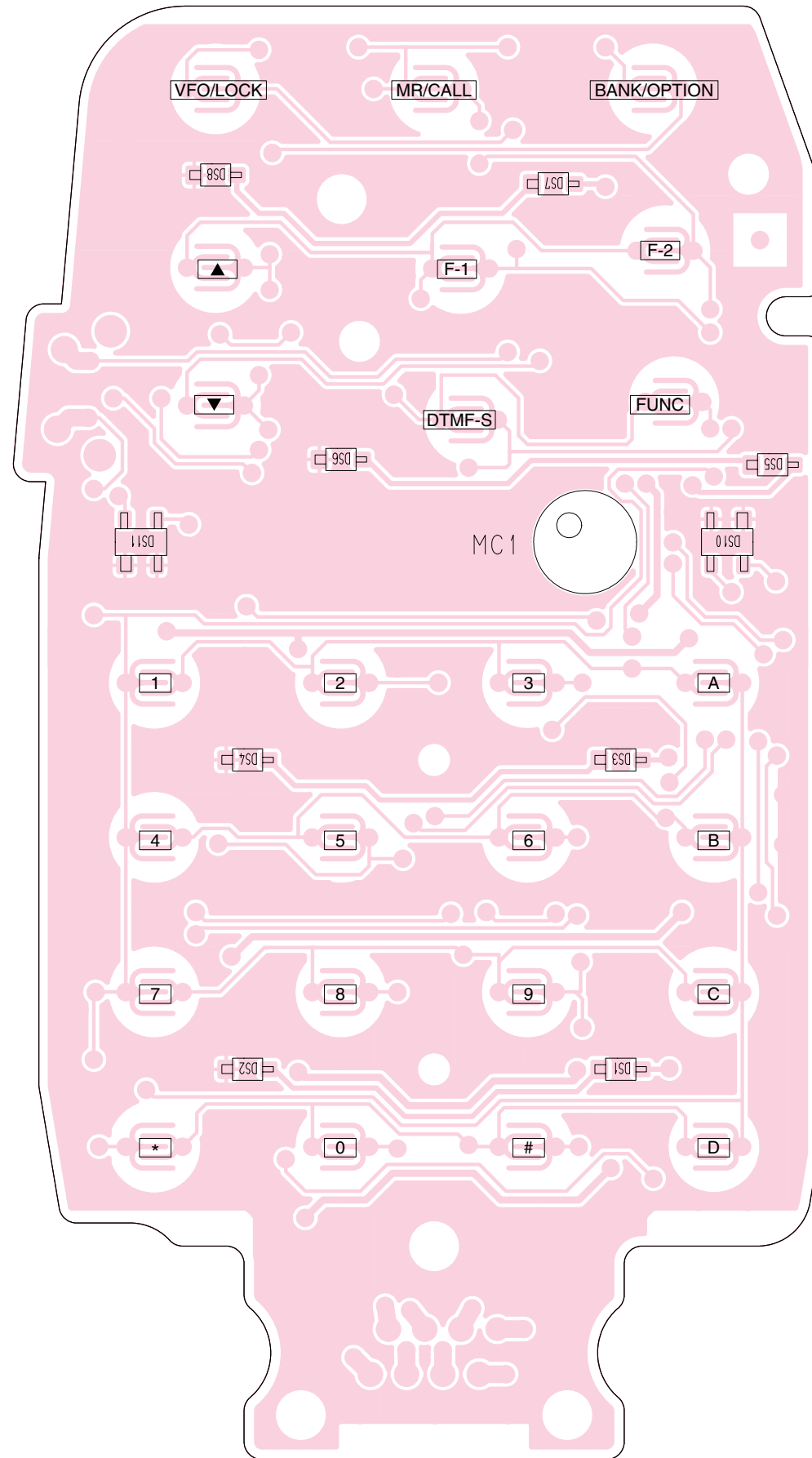


10-2 HM-133V

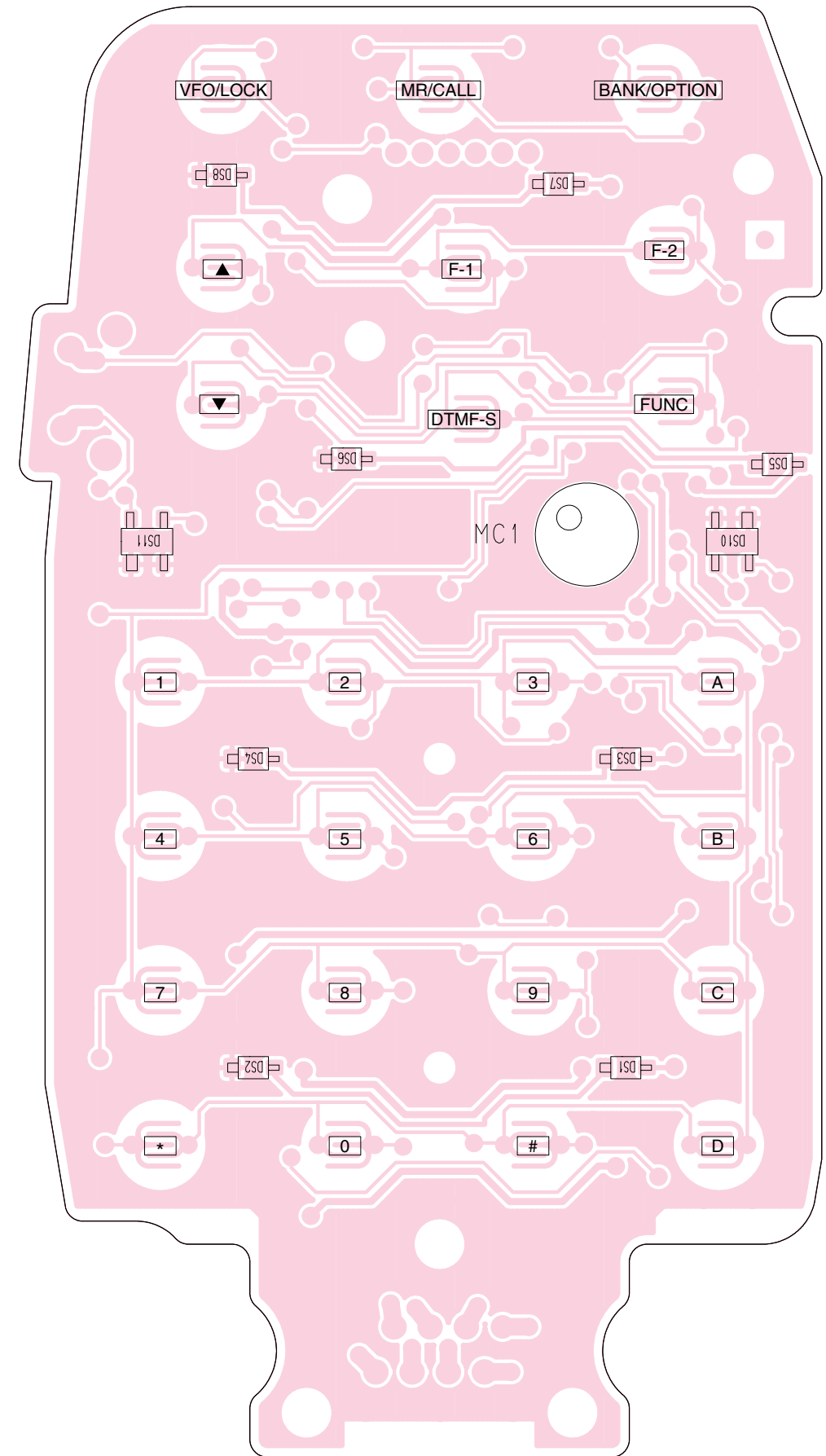


9-3 HM-133V
• TOP VIEW (MAIN UNIT)

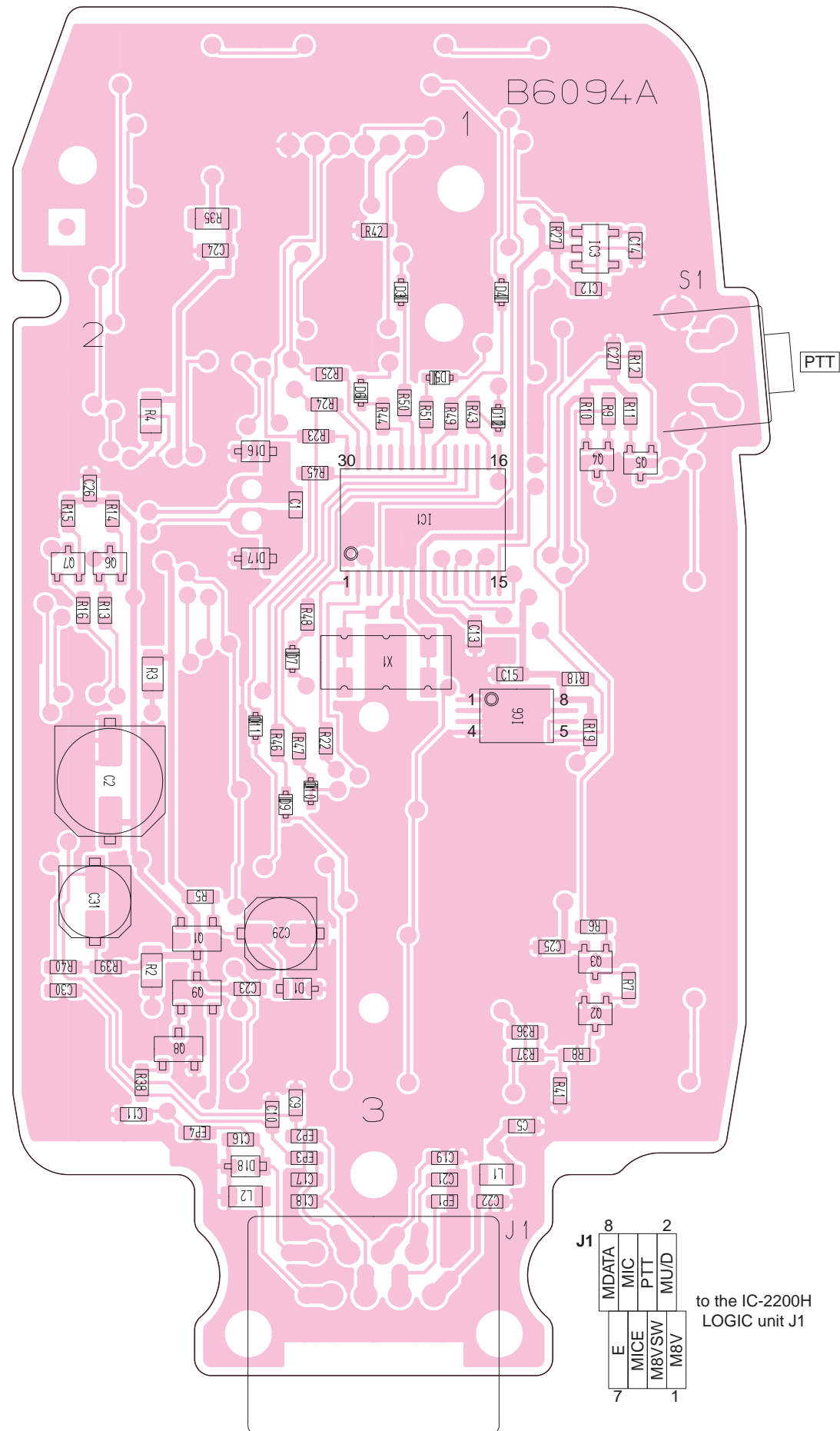
NOTE:
 HM-133V's main unit has 2 versions (MAIN or MAIN-A).
 MAIN unit employs old type CPU, MAIN-A unit employs new type one.
 Make sure to be used whether MAIN unit or MAIN-A unit before servicing.



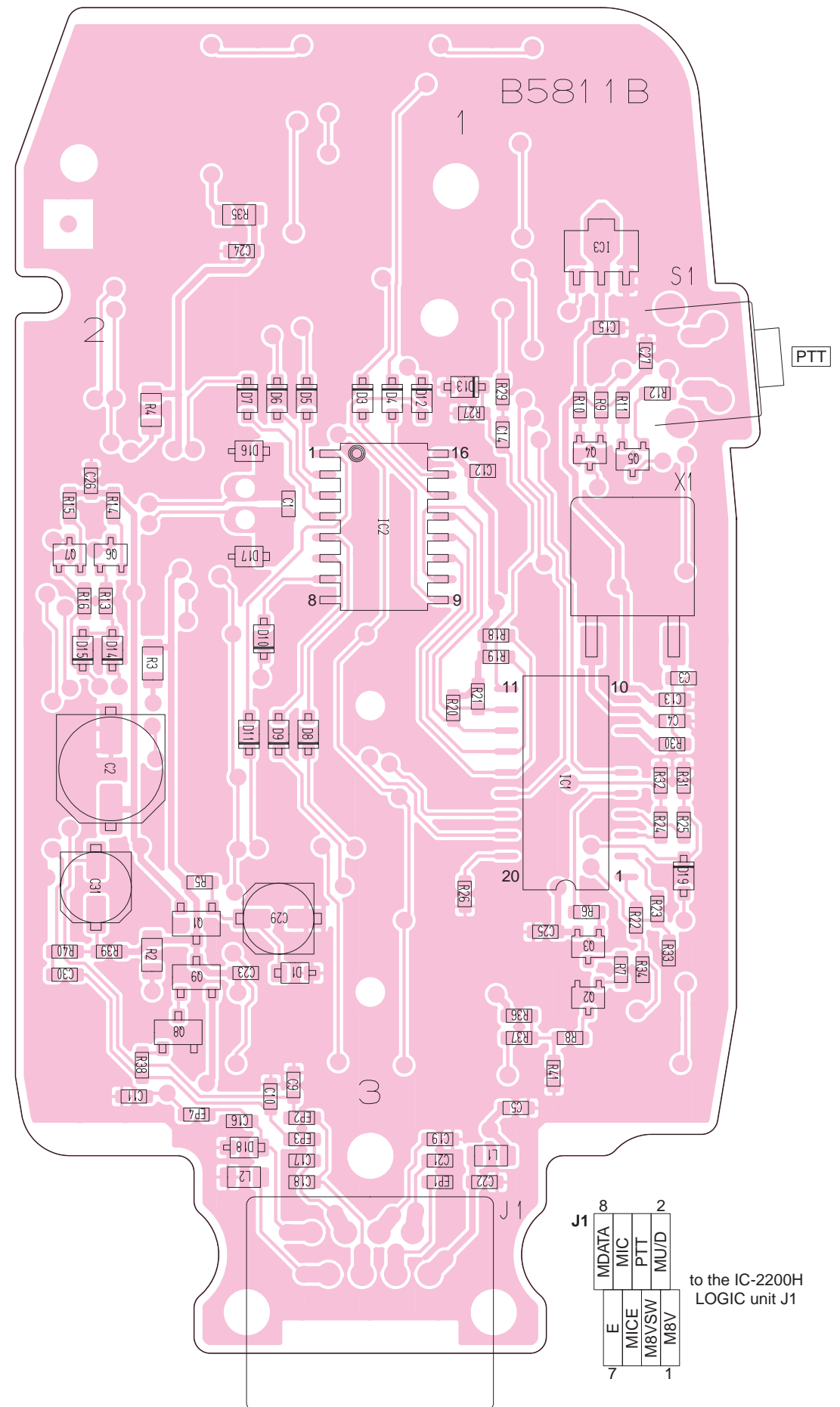
• TOP VIEW (MAIN-A UNIT)



• BOTTOM VIEW (MAIN-A UNIT)



• BOTTOM VIEW (MAIN UNIT)



2-2 HM-133V

