July 2025

SERVICE MANUAL ADDENDUM

IC-718 (For #82 and #83)

NOTE: Use these amended pages as one addendum set.
Do not mix them up with the previous master pages.

	Definitions
Replacement page	The page to replace the original one.
Addendum page	The page to be added to the original set.
Amended page	The page to be added as change history, including corrections.

Page number information

The number of revisions can be easily understood by the addendum service manual's page number.
The number of revisions (a, b, c, ...) is added after the page number.

Spare units information

We will supply spare units for the IC-718 described in this service manual.
Accordingly, this service manual (addendum) focuses on the spare units that can be supplied, instead of those on the individual electronic parts list.

CONTENTS

Version List

MODEL	Version Number†	Version	MAIN	PA	FILTER	FRONT				Remarks
						LOGIC	VR	MIC	PHONE	
IC-718	[#82]*	USA-07	✓	✓	✓	✓	✓	✓	✓	–
IC-718	[#83]	EUR-04	✓	✓	✓	✓	✓	✓	✓	–

This addendum service manual provides service information for the versions listed above, excluding out of production versions.
†The first two digits of the serial number show its Version Number.
*Newly added versions.
✓: Applicable

SECTION 1 SPECIFICATION

The underlined parts have been updated from the addendum of the previous version, or from the original page.

■ GENERAL

• Frequency coverage:

Receive	0.030000 ~ 29.999999 MHz *1
Transmit	1.800000 ~ 1.999999 MHz *2
	3.500000 ~ 3.999999 MHz *2
	7.000000 ~ 7.300000 MHz *2
	10.100000 ~ 10.150000 MHz
	14.000000 ~ 14.350000 MHz
	18.068000 ~ 18.168000 MHz
	21.000000 ~ 21.450000 MHz
	24.890000 ~ 24.990000 MHz
	28.000000 ~ 29.700000 MHz

*1 Guaranteed range: 0.500000 ~ 29.999999 MHz

*2 The frequency coverage and guaranteed ranges differ, depending on the transceiver version.

• Operating Modes:
USB/LSB (J3E), CW (A1A), RTTY (F1B), AM (A3E)

• Number of memory channels:
101 (including 2 scan edges)

• Antenna impedance:
50 Ω unbalanced

• Power supply requirement:
13.8 V DC ±15%

• Polarity: Negative ground

• Operating temperature range:
–10°C ~ +60°C, +14°F ~ +140°F

• Frequency resolution:
1 Hz

• Frequency stability:
±20 ppm or less
(–10°C ~ +60°C, 14°F ~ 140°F)

• Current drain:

Receive	Standby	0.7 A (Typical)
	Maximum audio	2.0 A
Transmit	Maximum power	20.0 A

• Dimensions (Approximate, projections not included):
240 (W) × 95 (H) × 239 (D) mm;
9.4 (W) × 3.7 (H) × 9.4 (D) inches

• Weight (Approximate):
4.0 kg; 8.8 lb

■ TRANSMITTER

• Transmit output power:

SSB, CW, RTTY	2 ~ 100 W
AM	1 ~ 35 W

• Modulation system:

SSB	Digital PSN modulation
AM	Digital Low power modulation

• Spurious emissions:
–50 dB or less

• Carrier suppression:
40 dB or more

• Unwanted sideband suppression:
50 dB or more

• Microphone impedance:
600 Ω

• Operating mode: Simplex

■ RECEIVER

• Receive system:
RF Direct Sampling

• Sensitivity (Preamplifier ON):
For all versions (10 dB S/N)
SSB/CW/RTTY
–16 dBμV (PD) or less (1.8 ~ 29.999999 MHz)
AM
22 dBμV (PD) or less (0.5 ~ 1.799999 MHz)
6 dBμV (PD) or less (1.8 ~ 29.999999 MHz)
For only [EUR] (12 dB SINAD)
SSB/CW/RTTY
10 dBμV (PD) or less (1.8 ~ 2.999999 MHz)
0 dBμV (PD) or less (3.0 ~ 29.999999 MHz)
AM
16 dBμV (PD) or less (1.8 ~ 2.999999 MHz)
6 dBμV (PD) or less (3.0 ~ 29.999999 MHz)

• Squelch sensitivity (Preamplifier ON, threshold):
SSB, CW, RTTY
15 dBμV (PD) or less

• Selectivity (Expanded Filter OFF):
SSB (BW=2.4 kHz)
2.4 kHz or more/–6 dB,
3.4 kHz or less/–40 dB
CW (BW=500 Hz)
500 Hz or more/–6 dB,
700 Hz or less/–40 dB
RTTY (BW=500 Hz)
500 Hz or more/–6 dB
800 Hz or less/–40 dB
AM (BW=6 kHz)
6 kHz or more/–6 dB
10 kHz or less/–40 dB

• Spurious and image rejection:
SSB, CW, AM
70 dB or more (1.8 ~ 29.999999 MHz)

• Audio output power:
2.0 W or more
(8 Ω load, 1 kHz, 10% distortion)

• Audio output impedance:
8 Ω

• RIT variable range:
±1.2 kHz

• DSP function:

ANF	30dB or more (1kHz singletone)
NR	6dB or more
	(SSB mode set noise reduction ratio)

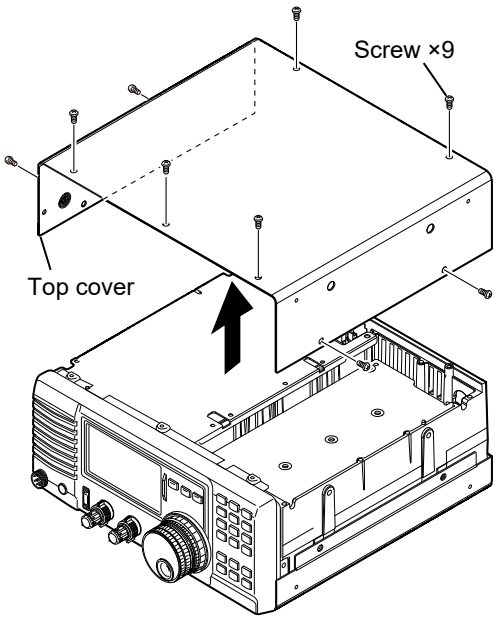
All stated specifications are subject to change without notice or obligation.

SECTION 3 DISASSEMBLY INSTRUCTION

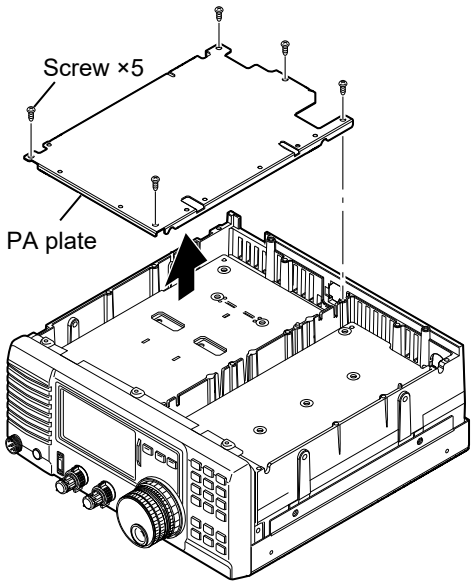
The underlined parts have been updated from the addendum of the previous version, or from the original page.

1. REMOVING THE PA UNIT

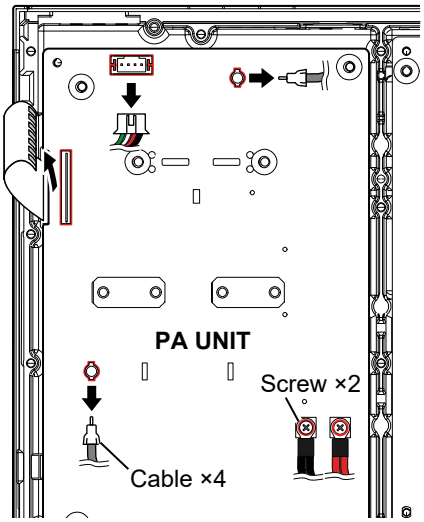
1) Remove the 9 screws from the top cover, then remove it.



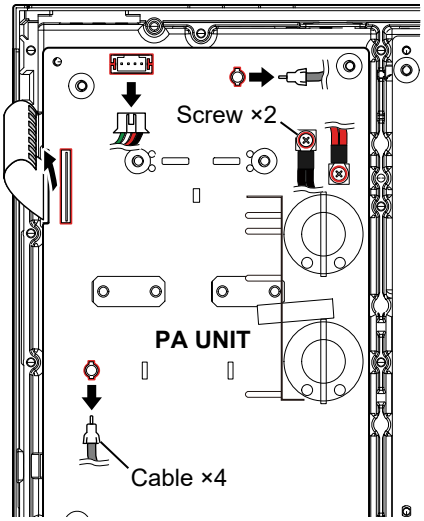
2) Remove the 5 screws from the PA plate, then remove it.



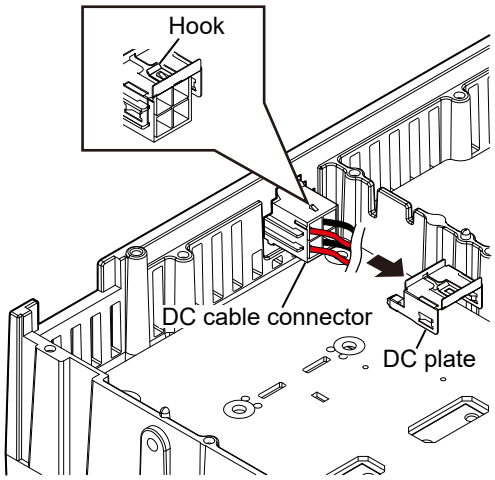
3) Remove the 2 screws and 4 cables from the PA UNIT.
• **For only [USA]**



• **For only [EUR]**



4) Unhook the hook on the DC plate to the DC cable connector and remove the DC plate from the DC cable connector.

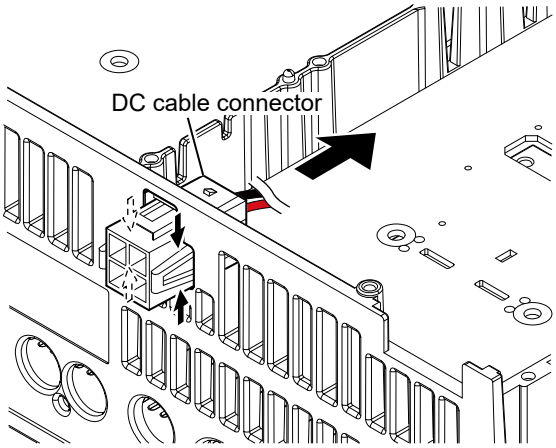


(Continued on the next page.)

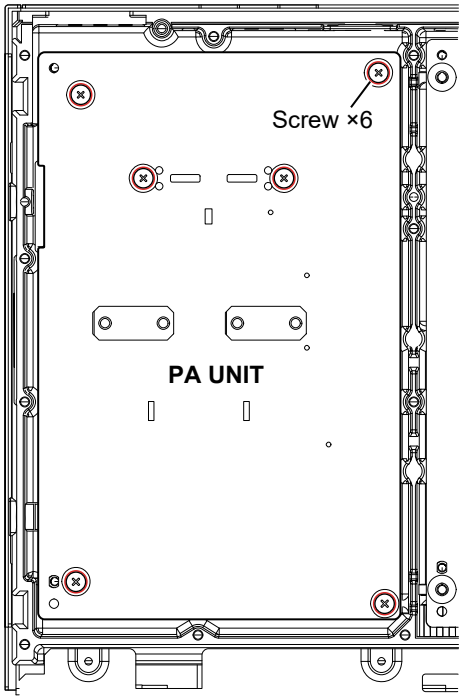
The underlined parts have been updated from the addendum of the previous version, or from the original page.

1. REMOVING THE PA UNIT (CONTINUED)

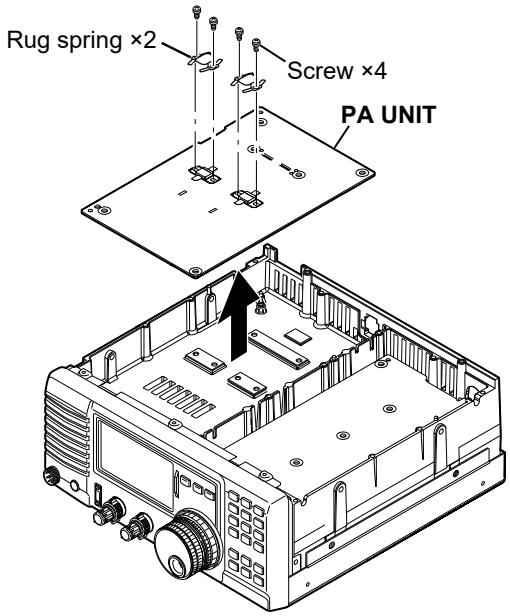
5) Push both sides of the DC cable connector from above and below and pull it out in the direction of the arrow.



6) Remove the 6 screws from the PA UNIT.

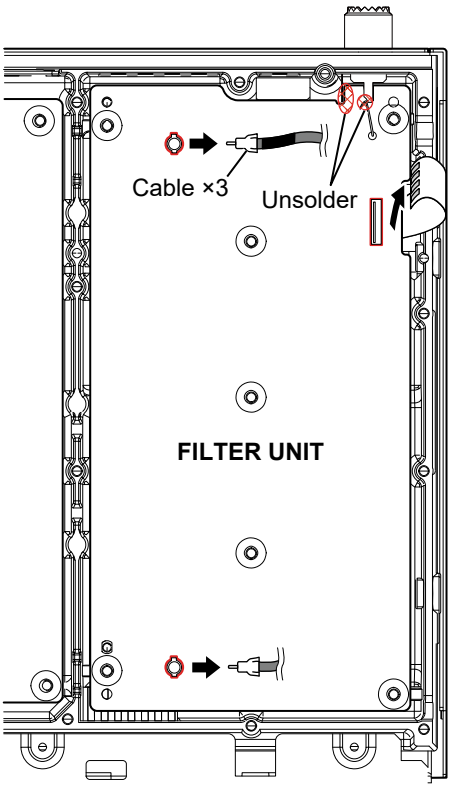


7) Remove the 2 rug springs and the 4 screws from the PA UNIT, then remove it.

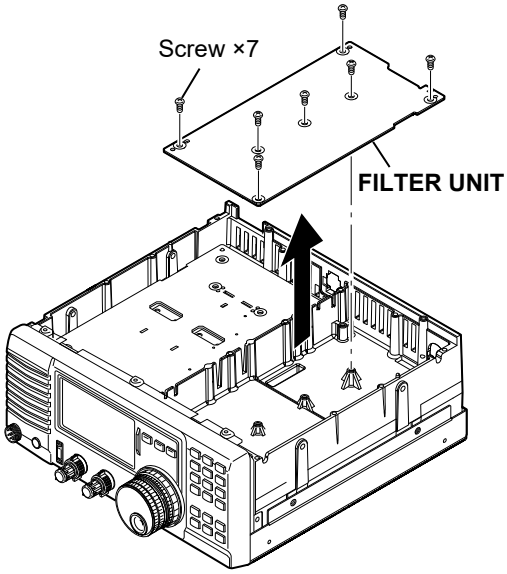


2. REMOVING THE FILTER UNIT

1) Remove the 3 cables from the FILTER UNIT.
2) Unsolder the 2 points at the antenna connector.



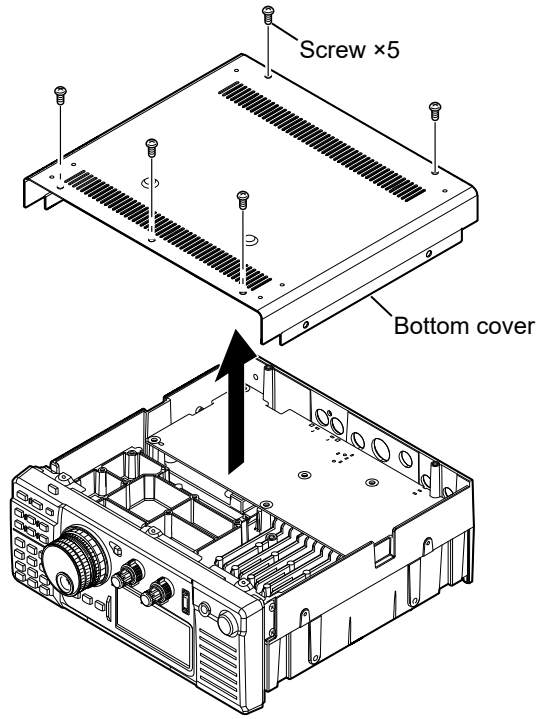
3) Remove the 7 screws from the FILTER UNIT, then remove it.



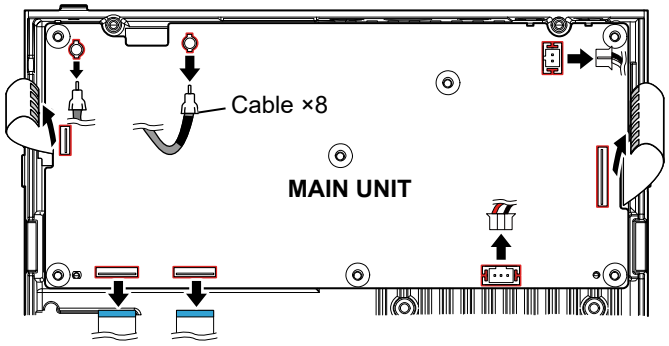
The underlined parts have been updated from the addendum of the previous version, or from the original page.

3. REMOVING THE MAIN UNIT

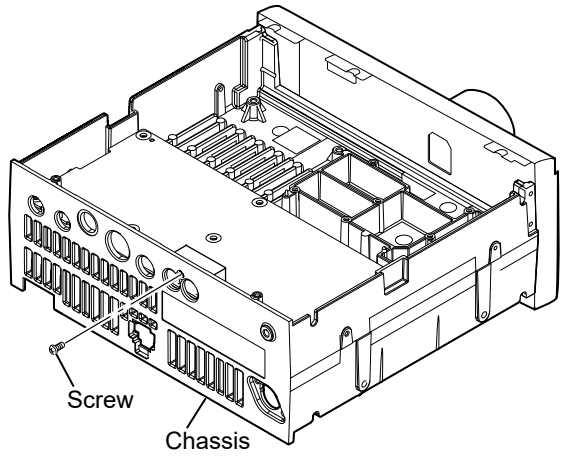
1) Remove the 5 screws from the bottom cover, then remove it



2) Remove the 8 cables from the MAIN UNIT.



3) Remove the screw from the chassis.



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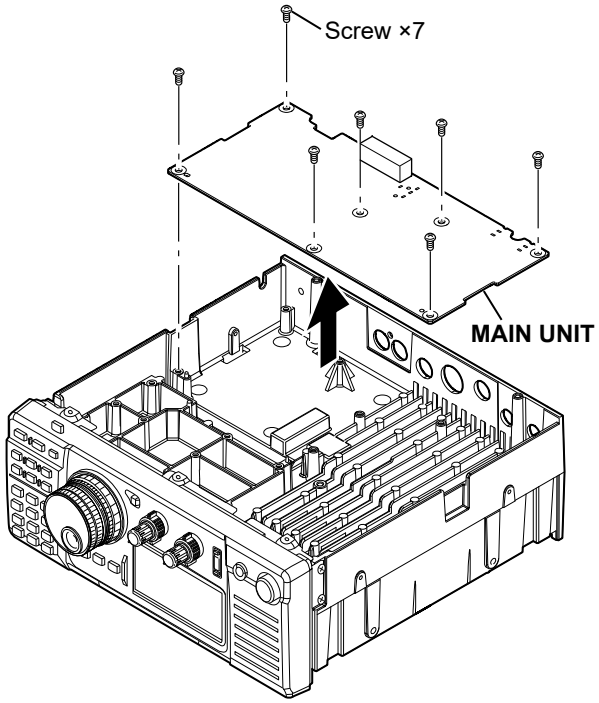
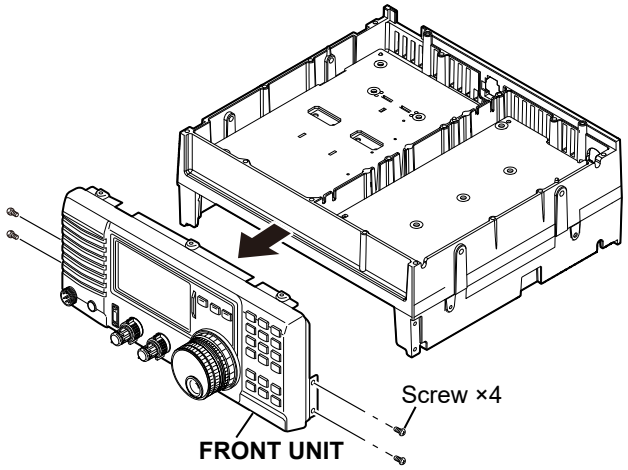
4) Remove the 7 screws from the MAIN UNIT, then remove it.



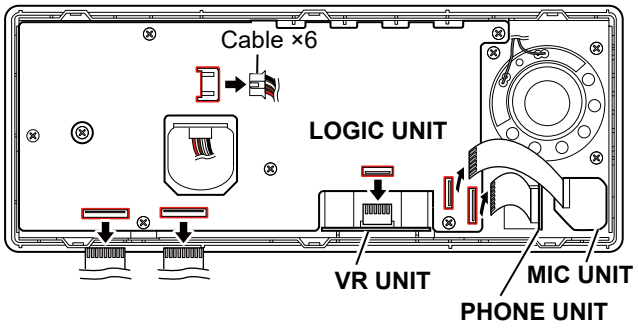
The underlined parts have been updated from the addendum of the previous version, or from the original page.

4. REMOVING THE LOGIC UNIT

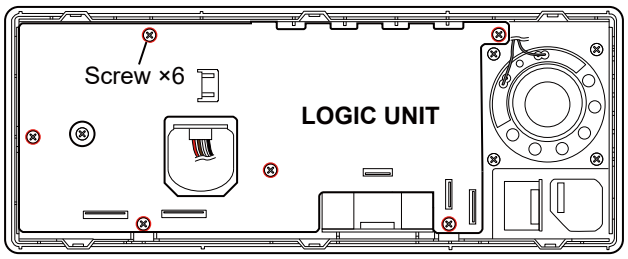
1) Remove the 4 screws from the FRONT UNIT, then remove it.



2) Remove the 6 cables from the LOGIC UNIT.



3) Remove the 6 screws from the LOGIC UNIT, then remove it.

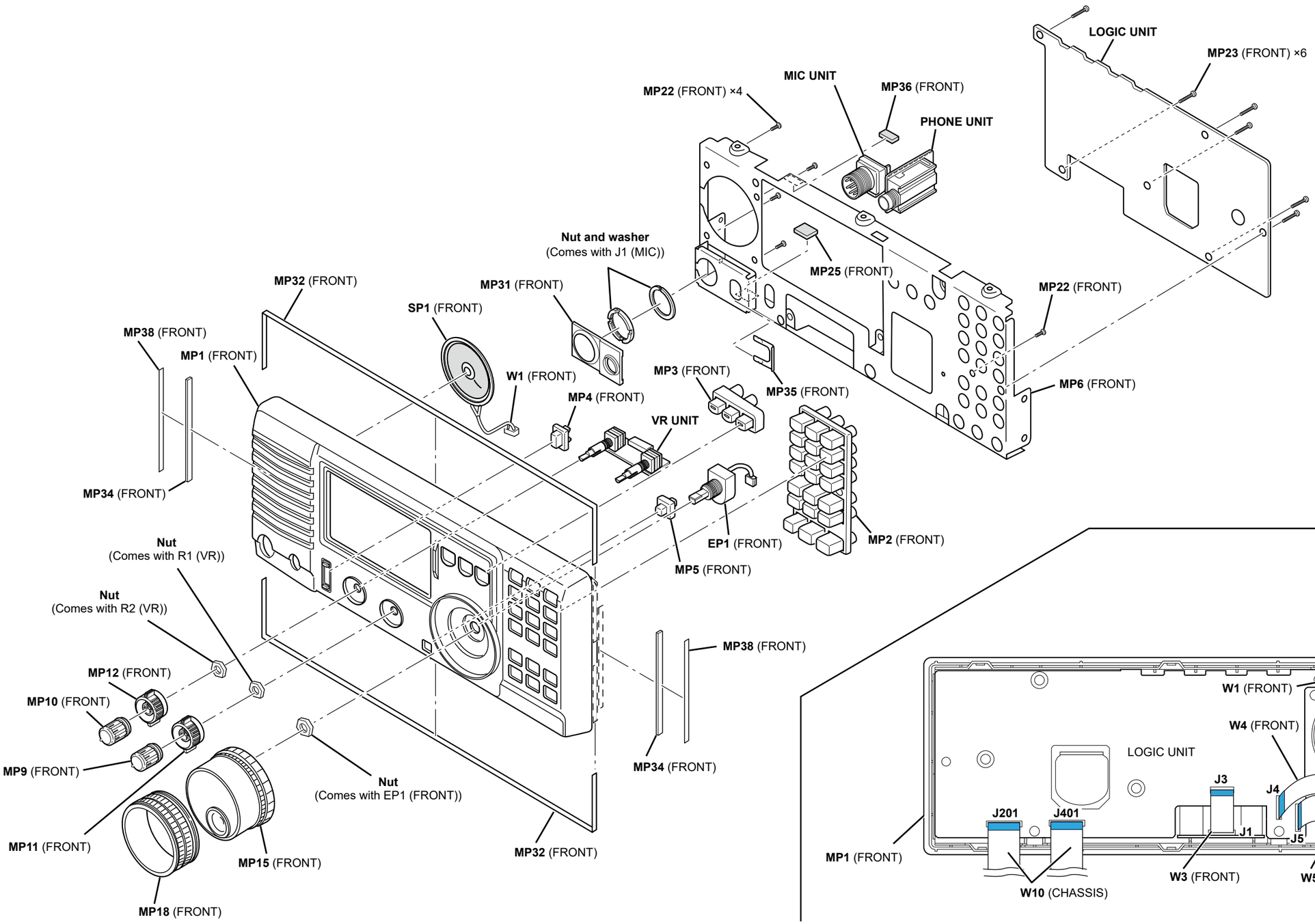


SECTION 6 SPARE PARTS AND UNITS

The underlined parts have been updated from the addendum of the previous version, or from the original page.

■ASSEMBLED FRONT UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 FRONT	0344878201	[#82]	–
C 718 #83 FRONT	0344878301	[#83]	–



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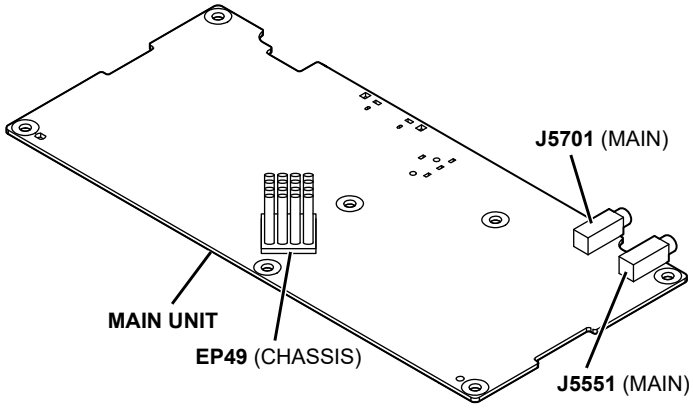
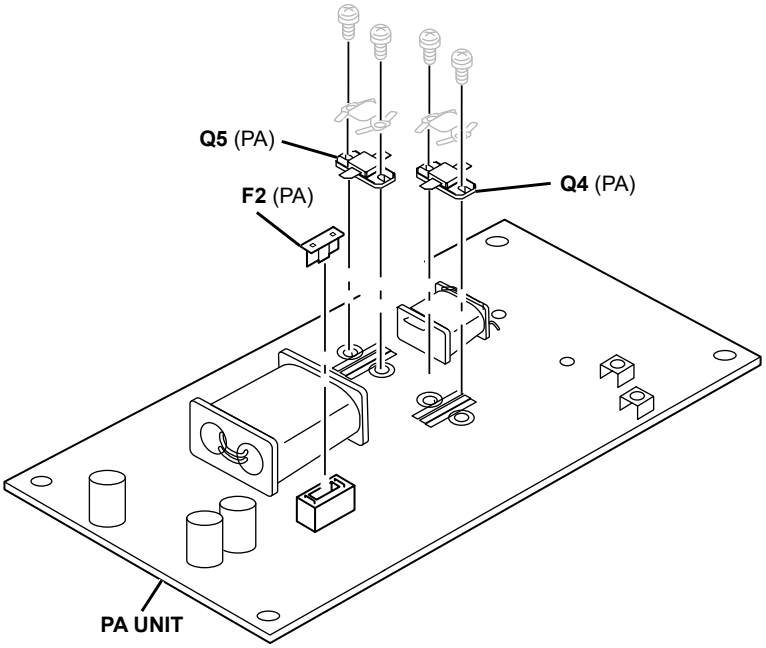
■ ASSEMBLED MAIN UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 MAIN	0344878202	[#82]	–
C 718 #83 MAIN	0344878302	[#83]	–



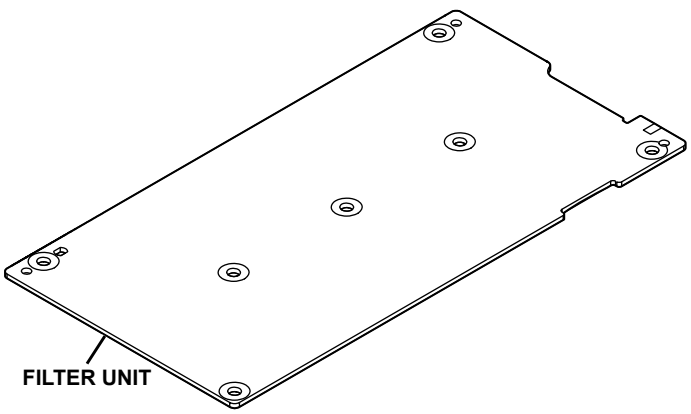
■ ASSEMBLED PA UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 PA	0344878203	[#82]	–
C 718 #83 PA	0344878303	[#83]	–



■ ASSEMBLED FILTER UNIT

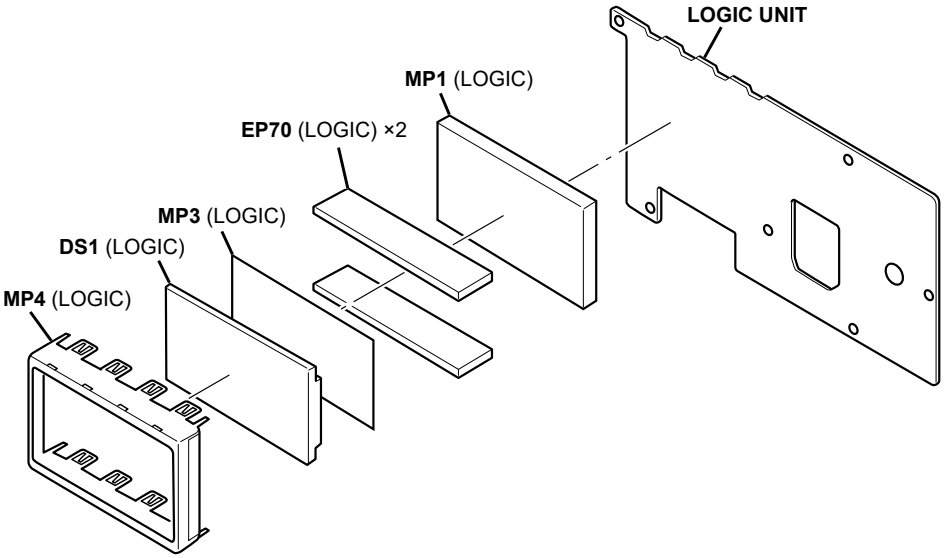
Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 FILTER	0344878204	[#82]	–
C 718 #83 FILTER	0344878304	[#83]	–



The underlined parts have been updated from the addendum of the previous version, or from the original page.

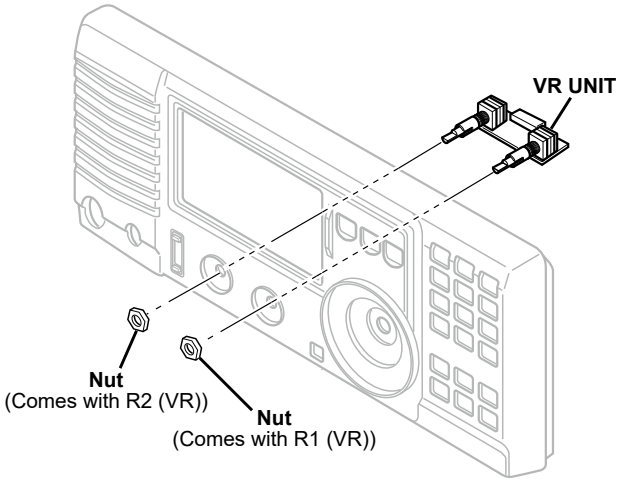
■ ASSEMBLED LOGIC UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 LOGIC	0344878205	[#82]	–
C 718 #83 LOGIC	0344878305	[#83]	–



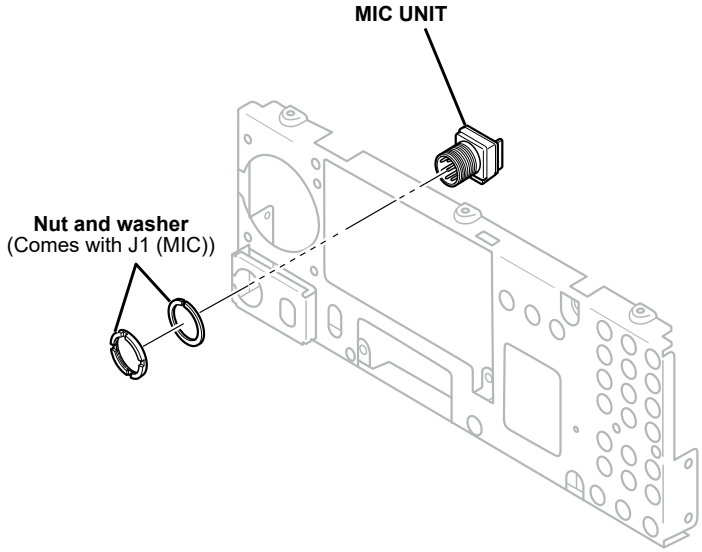
■ ASSEMBLED VR UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 VR	0344878206	All	–



■ ASSEMBLED MIC UNIT

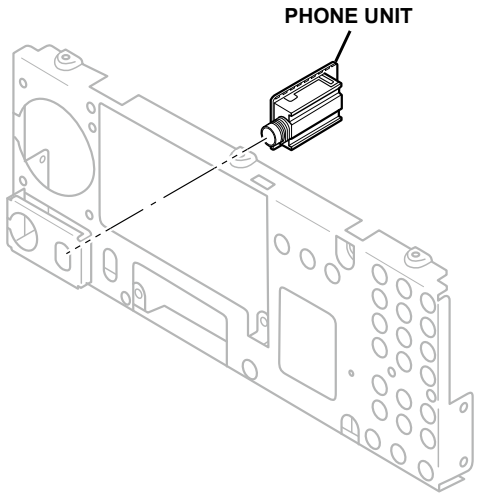
Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 MIC	0344878207	All	–



The underlined parts have been updated from the addendum of the previous version, or from the original page.

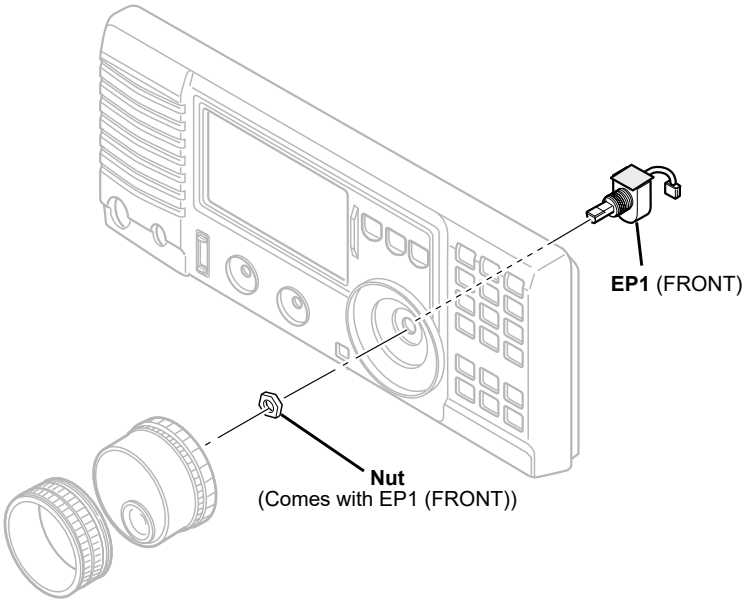
■ ASSEMBLED PHONE UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 PHONE	0344878208	All	–



■ ASSEMBLED SENSOR

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 SENSOR	0344878209	All	–



■SPARE PARTS INFORMATION

The underlined parts have been updated from the addendum of the previous version, or from the original page.

• For the front assembly

	Reference Number	Parts name	Order number	Applicable versions	Remarks
CABLE	W10	OPC-940B-1 (P0.5,N30,L170)	8900015101	[#82]	Quantity: 2*
		FFC-1025 (P0.5N30L120)	8910000230	[#83]	Quantity: 2*
COVER	MP1	2241 L-COVER-5	8110007055	All	–
COVER	MP2	2241 U-COVER-7	8110007067		–
RUBBER	MP6	RUBBER LEG (A)	8930002900		Quantity: 2*
STAND	MP7	STAND (C)	8010001520		–
LEG	MP8	LEG (A)	8930005790		–
LEG	MP9	LEG (B)	8930005800		–
SCREW	MP12	FLAT BT M3 × 8 NI-ZC3	8810009651		Quantity: 4*
SCREW	MP18	PHBT M3 × 8 NI-ZC3	8810008661		Quantity: 4*
SCREW	MP22	BIND M3 × 8 ZK3 BLACK	8810005771		Quantity: 14*
SHEET	MP26	2241 SHEET	8930052550		Quantity: 2*
SCREW	MP28	PHBT M3 × 12 NI-ZC3	8810009131		Quantity: 2*
SHEET	MP31	NONWOVEN SHEET B	8930007120		Quantity: 2*
SPONGE	MP44	SPONGE (SA)	8930108230		–
SPONGE	MP45	SPONGE (NK)	8930093100		–

*When you order a quantity of 1, you will receive one item.

• For the LOGIC UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
J3	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	B	51.3/20.0
J4	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	B	23.6/16.0
J5	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	B	14.7/10.0
DS1	5030002490	LCD A0087A LCD83.5*45.5.1T LCD	T	54.0/55.9
EP70	8930051450	LCD SRCN-2241-SP-N-W (SHJ)		
MP1	8210016610	PAN 2241 REFLECTOR		
MP3	8930051090	SCR 2241 LCD FILTER		
MP4	8930072671	RUB 2241 LCD RUBBER-1 (TOP)		

• For the VR UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
R1	7210003040	VAR TP96D26-22F-10KBX2-2240	T	4.8/10.5
R2	7210003030	VAR TP96D00-22F-10KBX2-2240	T	35.8/10.5
J1	6510022051	S.CON 10FM-1.0SP-1.9-TF (LF) (SN)	T	20.3/2.9

• For the MIC UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510000191	CON FM214-8SS(P)-1	B	8.5/12.5
J2	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	T	18.2/7.5

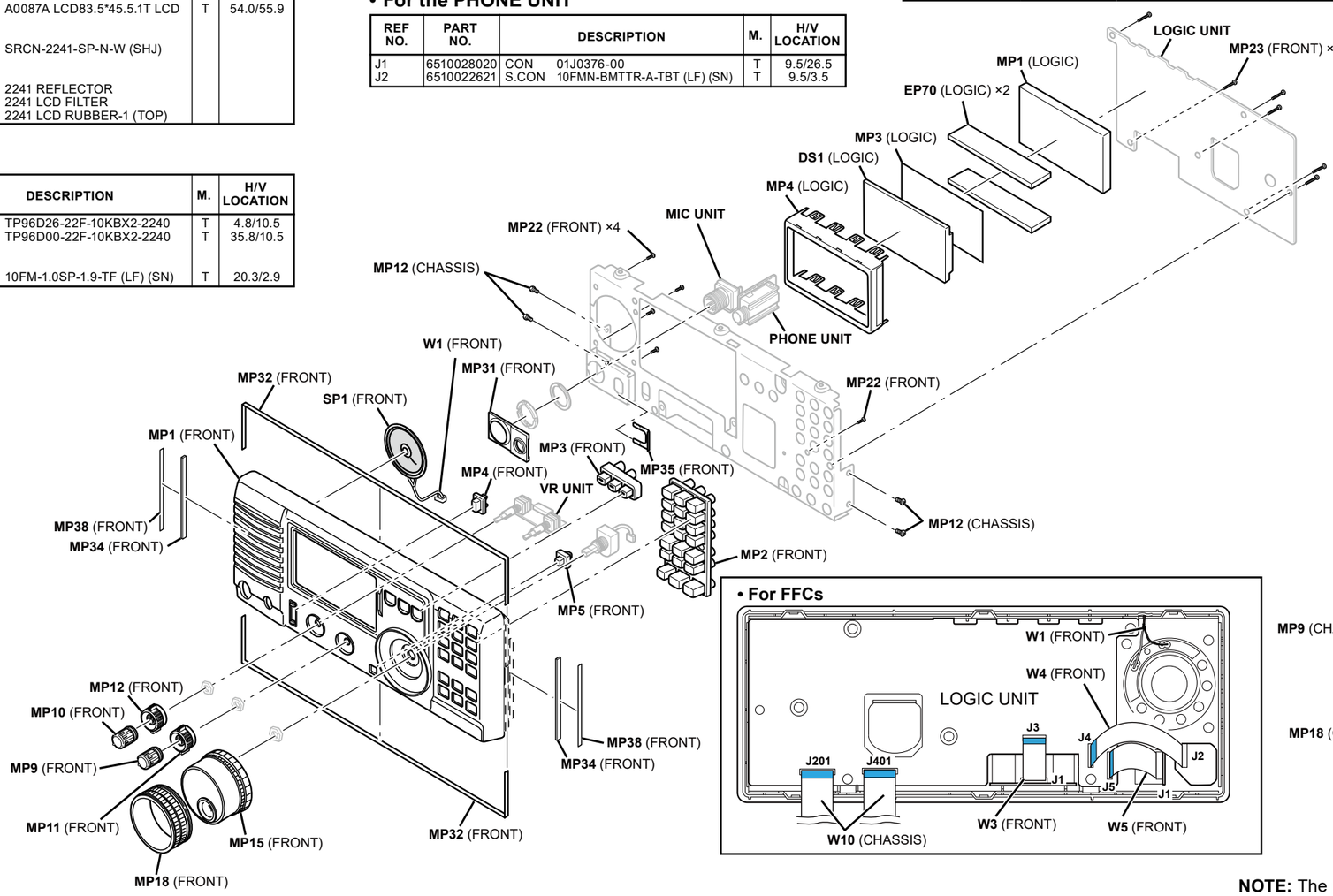
• For the PHONE UNIT

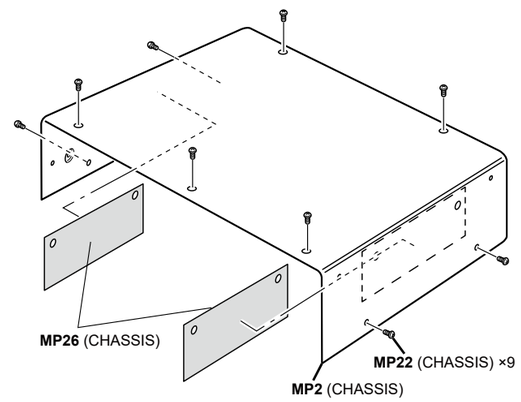
REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510028020	CON 01J0376-00	T	9.5/26.5
J2	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	T	9.5/3.5

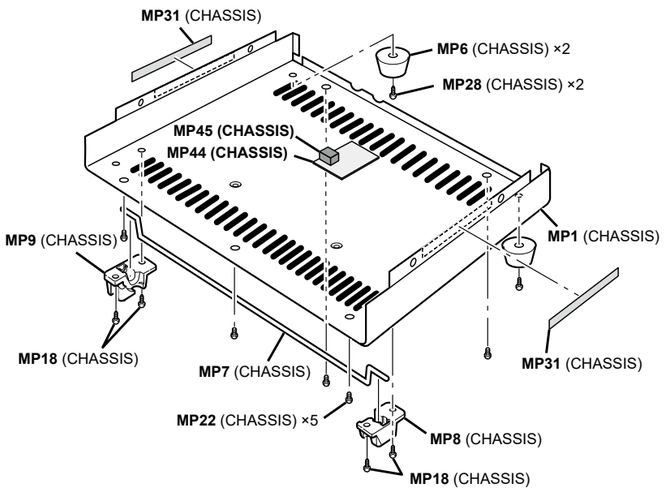
• For the FRONT UNIT

	Reference Number	Parts name	Order number	Applicable versions	Remarks
SPEAKER	SP1	VS-C50-0827	2510000671	All	–
CABLE	W1	SX2242 SHIELD-1 (1)/FR	8970023641		–
CABLE	W3	OPC-885A (P1N10L39)	8900014740		–
CABLE	W4	OPC-885A (P1N10L39)	8900014740		–
CABLE	W5	OPC-683A (P1N10L110)	8900014730		–
PANEL	MP1	2241 FRONT PANEL (A) ASSEMBLY-3	8210024121		–
KEY	MP2	2241 21-KEY (A) (SC)	8930051400		–
KEY	MP3	2241 3-KEY (SC)	8930050930		–
KEY	MP4	2241 POWER KEY (SC)	8930050960		–
KEY	MP5	2241 LOCK KEY (SC)	8930050950		–
KNOB	MP9	KNOB N261-1	8610010421		–
KNOB	MP10	KNOB N261-1	8610010421		–
KNOB	MP11	KNOB N272-1	8610010711		–
KNOB	MP12	KNOB N272-1	8610010711		–
KNOB	MP15	KNOB N-283A ASSEMBLY-1	8610014311		–
KNOB	MP18	KNOB N-213 COVER-1 (TOP)	8610009171		–
SCREW	MP22	PHBT M3 × 8 NI-ZC3	8810008661		Quantity: 5*
SHEET	MP23	PHBT M3 × 12 NI-ZC3	8810009131		Quantity: 6*
RUBBER	MP31	2242 JACK RUBBER (TOP)	8930071480		–
SPONGE	MP32	2242 F-SPONGE	8930071490		Quantity: 2*
SHEET	MP34	INSULATION SHEET (LW)	8930072980		Quantity: 2*
PLATE	MP35	1768 SNAP PLATE	8930091070		–
SHEET	MP38	HIMELON SHEET (CT)	8930071840		Quantity: 2*

*When you order a quantity of 1, you will receive one item.







NOTE: The parts that are not listed, see SECTION 7 MECHANICAL PARTS for details.

■SPARE PARTS INFORMATION (CONTINUED)

• For the chassis assembly

	Reference Number	Parts name	Order number	Remarks
CONNECTOR	J1	MR-DS-01-2	6510028411	–
FAN	MF1	SB0812H-ICOM-00	2710000520	–
CABLE	W11	OPC-927A (P1N24L100)	8900017140	–
CABLE	W12	OPC-909A (P1N10L110)	8900014720	–
CABLE	W15	SX2241 1.5D COAXIAL A-1 (1) CH	8970023671	–
CABLE	W17	SX2241 1.5D COAXIAL A-1 (1) CH	8970023671	–
CABLE	W19	SX2241 1.5D COAXIAL C-1 (1) CH	8970023691	–
PLUG	EP1	DOMED PLUG DP-500	8930021010	–
HEAT SINK	EP49	CMBA0210101404-00	6910026021	–
PLATE	MP4	1691 EARTH PLATE-1	8930037001	–
SCREW	MP13	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 2*
SCREW	MP14	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 4*
SCREW	MP15	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 7*
SCREW	MP16	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 7*
SCREW	MP19	PHBT M3 × 8 NI-ZC3	8810008661	–
SCREW	MP20	SET SCREW H M3 × 8 ZC3	8810007231	Quantity: 4*
BOLT	MP21	CAPBOLT M4 × 8 ZK3	8820000551	Quantity: 4*
BOLT	MP23	FLANGE BOLT M4 × 8 NI	8820000530	–
WASHER	MP24	FLAT WASHER M4 NI BS	8850000140	Quantity: 2*
WASHER	MP25	S-WASHER M4 NI	8850000430	–
SCREW	MP27	SET SCREW C M3 × 10 ZC3	8810003381	Quantity: 2*
SCREW	MP38	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 5*
PLATE	MP41	3073 DC PLATE	8930079060	–

*When you order a quantity of 1, you will receive one item.

• For the PA UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
Q1	1560002420	S.FET RD01MUS2B-T513	T	162.1/60.0
Q3	1560003000	S.FET RD06HHS2-T612	T	140.0/69.2
Q4	1560002550	FET RD100HHF1C-503	T	94.0/42.8
Q5	1560002550	FET RD100HHF1C-503	T	94.0/84.9
Q8	1560003000	S.FET RD06HHS2-T612	T	140.0/49.5
F2	5210001430	FUS 11930011 (BFLP 5A 58V)		
W21	8920003070	C_C CAB-1353 [#82]		
	8900019321	CAB OPC-2034-1 [#83]		
W22	8920003240	C_C CAB-1390		
MP4	8930113940	SPR 4486 RUG SPRING		
MP101	8810007231	SCR SET SCREW H M3 × 8 ZC3		

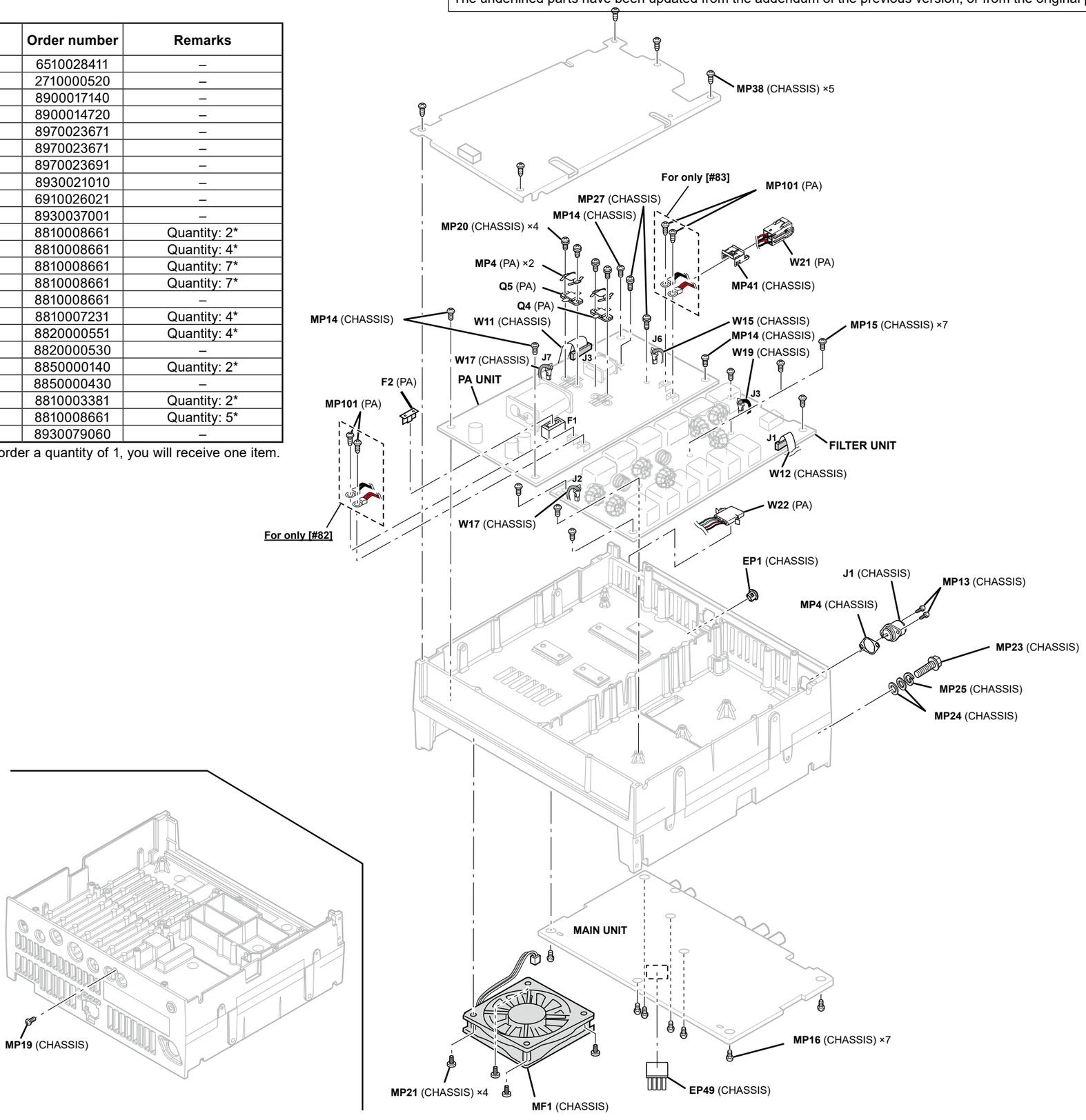
• For the FILTER UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
D4	1750002230	S.DIO LRB751S-40T1G	T	155.6/22.9
D5	1750002230	S.DIO LRB751S-40T1G	T	158.4/23.0
J1	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	T	146.0/10.1

• For the MAIN UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
IC3451	1110009200	S.IC TA7368PG-R10-R	T	161.8/66.1
IC3601	1110006570	S.IC TS462CPT	T	141.6/4.4
Q900	1530004560	S.TRA 2SC3356G-B-AE2-R	T	32.5/40.5
J5001	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	T	9.5/56.5
J5551	6450002470	CON JY-3510A1-130	T	205.0/94.5
J5601	6450002520	CON RL-1515-2(B.B)-L	T	84.5/97.3
J5701	6450002470	CON JY-3510A1-130	T	183.0/94.5

The underlined parts have been updated from the addendum of the previous version, or from the original page.



NOTE: The parts that are not listed, see SECTION 7 MECHANICAL PARTS for details.

SECTION 7 MECHANICAL PARTS

The underlined parts have been updated from the addendum of the previous version, or from the original page.

[CHASSIS UNIT]

REF NO.	PART NO.	DESCRIPTION		QTY.
J1	6510028411	MR-DS-01-2		1
MF1	2710000520	SB0812H-ICOM-00		1
W10**	8900015101	OPC-940B-1 (P0.5N30L170)	[#82]	2
	8910000230	FFC-1025 (P0.5N30L120)	[#83]	2
W11**	8900017140	OPC-927A (P1N24L100)		1
W12**	8900014720	OPC-909A (P1N10L110)		1
W15**	8970023671	SX2241 1.5D COAXIAL A-1 (1) CH		1
W17**	8970023671	SX2241 1.5D COAXIAL A-1 (1) CH		1
W19**	8970023691	SX2241 1.5D COAXIAL C-1 (1) CH		1
EP1	8930021010	DOMED PLUG DP-500		1
EP49*	6910026021	CMBA0210101404-00		1
MP1	8110007055	2241 L-COVER-5		1
MP2	8110007067	2241 U-COVER-7		1
MP3	8010026790	4486 CHASSIS		1
MP4	8930037001	1691 EARTH PLATE-1		1
MP6	8930002900	RUBBER LEG (A)		2
MP7	8010001520	STAND (C)		1
MP8	8930005790	LEG (A)		1
MP9	8930005800	LEG (B)		1
MP12	8810009651	FLAT BT M3 × 8 NI-ZC3		4
MP13	8810008661	PHBT M3 × 8 NI-ZC3		2
MP14	8810008661	PHBT M3 × 8 NI-ZC3		4
MP15	8810008661	PHBT M3 × 8 NI-ZC3		7
MP16	8810008661	PHBT M3 × 8 NI-ZC3		7
MP18	8810008661	PHBT M3 × 8 NI-ZC3		4
MP19	8810008661	PHBT M3 × 8 NI-ZC3		1
MP20	8810007231	SET SCREW H M3 × 8 ZC3		4
MP21	8820000551	CAPBOLT M4 × 8 ZK3		4
MP22	8810005771	BIND M3 × 8 ZK3 BLACK		14
MP23	8820000530	FLANGE BOLT M4 × 8 NI		1
MP24	8850000140	FLAT WASHER M 4 NI BS		2
MP25	8850000430	S-WASHER M 4 NI		1
MP26	8930052550	2241 SHEET		2
MP27	8810003381	SET SCREW C M3 × 10 ZC3		2
MP28	8810009131	PHBT M3 × 12 NI-ZC3		2
MP31	8930007120	NONWOVEN SHEET B		2
MP37	8930113600	SPONGE (TC)		2
MP38	8810008661	PHBT M3 × 8 NI-ZC3		5
MP40	8510013472	2241 PA COVER-2		1
MP41	8930079060	3073 DC PLATE		1
MP44	8930108230	SPONGE (SA)		1
MP45	8930093100	SPONGE (NK)		1
MP46	8930058171	SHIELD SPONGE (O)-1		1
MP47	8930092980	THERMAL SHEET (CX) TC500CAT		1
MP48	8930091000	THERMAL SHEET (CP) TC150CAT		1
MP49	8930076951	THERMAL SHEET (BP)-1 TC800CAS		4
MP50	8930099110	SPONGE (PO)	Only [#83]	1

[MAIN UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510028210	SJ050010 (TMP-J01X-V6)	1
J701*	6510028210	SJ050010 (TMP-J01X-V6)	1
J5001*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J5101*	6510022581	24FMN-BMTTR-A-TBT (LF) (SN)	1
J5201*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J5401*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J5501*	6510031660	LGR4609-7100F	1
J5551*	6450002470	JY-3510A*01-130	1
J5601*	6450002520	RL-1515-2 (B.B)-L	1
J5651*	6510024661	TCS5072-1041577	1
J5701*	6450002470	JY-3510A*01-130	1
J5702*	6510018961	B2B-PH-SM4-TB (LF) (SN)	1
J5751*	6510034970	B03B-EH-A (LF) (SN)	1
F5654*	5210001370	FCC20162ABTP	1
MP501*	8510016472	2775 VCO CASE-2	1
MP2001*	8510016472	2775 VCO CASE-2	1

[PA UNIT]

REF NO.	PART NO.	DESCRIPTION		QTY.
J3*	6510022581	24FMN-BMTTR-A-TBT (LF) (SN)		1
J6*	6510028210	SJ050010 (TMP-J01X-V6)		1
J7*	6510028210	SJ050010 (TMP-J01X-V6)		1
J13*	6510018971	B4B-PH-SM4-TB (LF) (SN)		1
F1*	5220000440	FHA040-01		1
F2*	5210001430	11930011 (BFLP 5A 58V)		1
W21**	8920003070	CAB-1353	[#82]	1
	8900019321	OPC-2034-1	[#83]	1
W22**	8920003240	CAB-1390		1
EP101*	6910020710	OT-047 M3	Only [#82]	1
EP102*	6910020710	OT-047 M3	Only [#82]	1
EP114*	6910020710	OT-047 M3	Only [#83]	1
EP115*	6910020710	OT-047 M3	Only [#83]	1
MP1*	8510013440	2242 EARTH PLATE	Only [#83]	1
MP2*	8510024850	4487 SHIELD PLATE	Only [#83]	1
MP3*	8410003560	4486 PA HEATSINK		1
MP4	8930113940	4486 RUG SPRING		2
MP8*	8410003560	4486 PA HEATSINK		1
MP101	8810007231	SET SCREW H M3 × 8 ZC3		2

[FILTER UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J2	6510028210	SJ050010 (TMP-J01X-V6)	1
J3	6510028210	SJ050010 (TMP-J01X-V6)	1

[FRONT UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
SP1	2510000671	VS-C50-0827	1
W1	8970023641	SX2242 SHIELD-1 (1)/FR	1
W3	8900014740	OPC-885A (P1N10L39)	1
W4	8900014740	OPC-885A (P1N10L39)	1
W5	8900014730	OPC-683A (P1N10L110)	1
EP1	0880001360	EX-2500 #02 SENSOR	1
MP1	8210024121	2241 FRONT PANEL (A) ASSEMBLY-3	1
MP2	8930051400	2241 21-KEY (A) (SC)	1
MP3	8930050930	2241 3-KEY (SC)	1
MP4	8930050960	2241 POWER KEY (SC)	1
MP5	8930050950	2241 LOCK KEY (SC)	1
MP6	8010018052	2241 SUB CHASSIS ASSEMBLY-2	1
MP9	8610010421	KNOB N261-1	1
MP10	8610010421	KNOB N261-1	1
MP11	8610010711	KNOB N272-1	1
MP12	8610010711	KNOB N272-1	1
MP15	8610014311	KNOB N-283A ASSEMBLY-1	1
MP18	8610009171	KNOB N-213 COVER-1 (TOP)	1
MP22	8810008661	PHBT M3 × 8 NI-ZC3	5
MP23	8810009131	PHBT M3 × 12 NI-ZC3	6
MP25	8930036870	SPONGE (DZ)	1
MP31	8930071480	2242 JACK RUBBER (TOP)	1
MP32	8930071490	2242 F-SPONGE	2
MP34	8930072980	INSULATION SHEET (LW)	2
MP35	8930091070	1768 SNAP PLATE	1
MP36	8930088872	SHIELD SPONGE (DD)-2	1
MP38	8930071840	HIMELON SHEET (CT)	2

*: Refer to “BOARD LAYOUTS” for the location.
**: Refer to “GENERAL WIRING” for the connection
Screw abbreviations A, B0, BT: Self-tapping PH: Pan head BS: Brass NI: Nickel ZU: Zinc SUS: Stainless

The underlined parts have been updated from the addendum of the previous version, or from the original page.

[LOGIC UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510020421	S4B-PH-SM4-TB (LF) (SN)	1
J3*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J4*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J5*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J201*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J401*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
DS1	5030002490	A0087A LCD83.5 × 45.5 × 1.1T LCD	1
EP70	8930051450	SRCN-2241-SP-N-W (SHJ)	2
MP1	8210016610	2241 REFLECTOR	1
MP3	8930051090	2241 LCD FILTER	1
MP4	8930072671	2241 LCD RUBBER-1 (TOP)	1

[VR UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510022051	10FM-1.0SP-1.9-TF (LF) (SN)	1

[MIC UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1	6510000191	FM214-8SS (P)-1	1
J2*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1

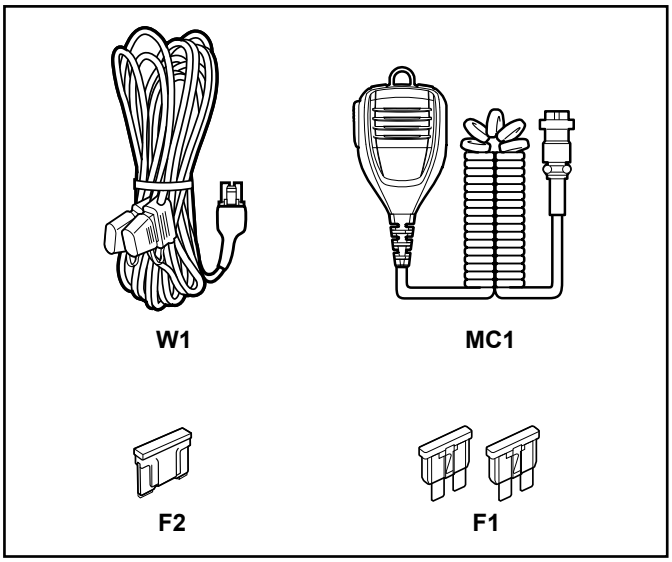
[PHONE UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1	6510028020	01J0376-00	1
J2*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1

[SUPPLIED ACCESSORIES]

REF NO.	PART NO.	DESCRIPTION	QTY.
F1	5210001360	ATQ 25A	2
F2	5210001430	11930011 (BFLP 5A 58V)	1
MC1	–	HM-219†	1
W1	8900022020	OPC-2361	1

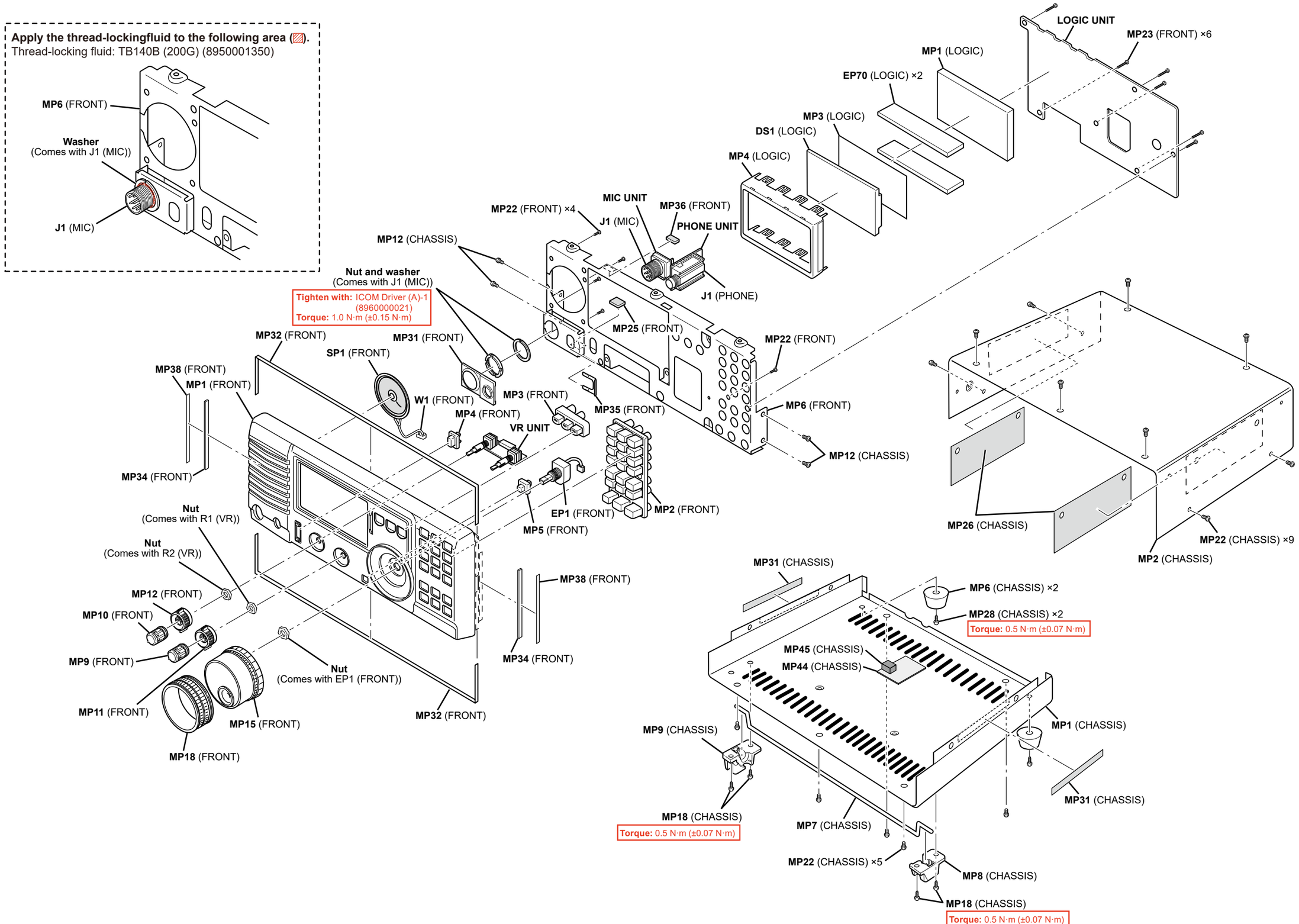
†Sold as an option.



*: Refer to “BOARD LAYOUTS” for the location.
Screw abbreviations A, B0, BT: Self-tapping PH: Pan head BS: Brass NI: Nickel ZU: Zinc SUS: Stainless

The underlined parts have been updated from the addendum of the previous version, or from the original page.

• Exploded view for front assembly

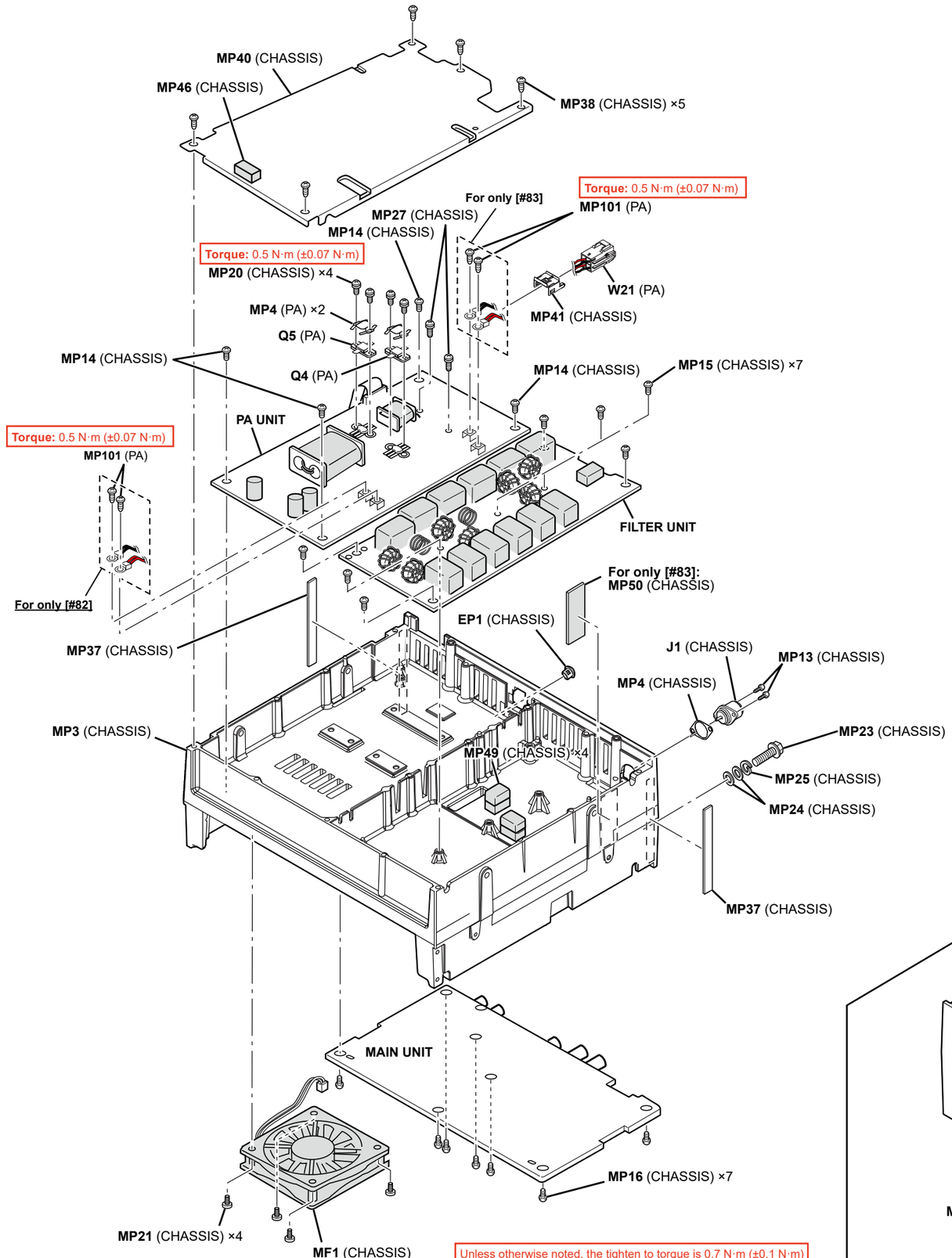


Unless otherwise noted, the tighten to torque is 0.7 N·m (±0.1 N·m)

(Amended page)

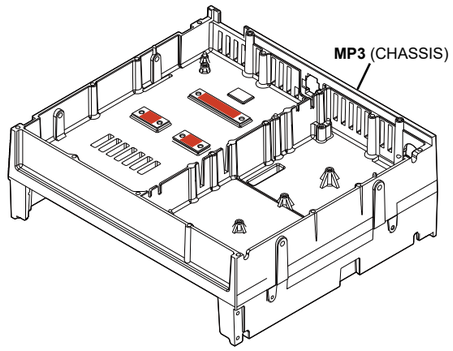
The underlined parts have been updated from the addendum of the previous version, or from the original page.

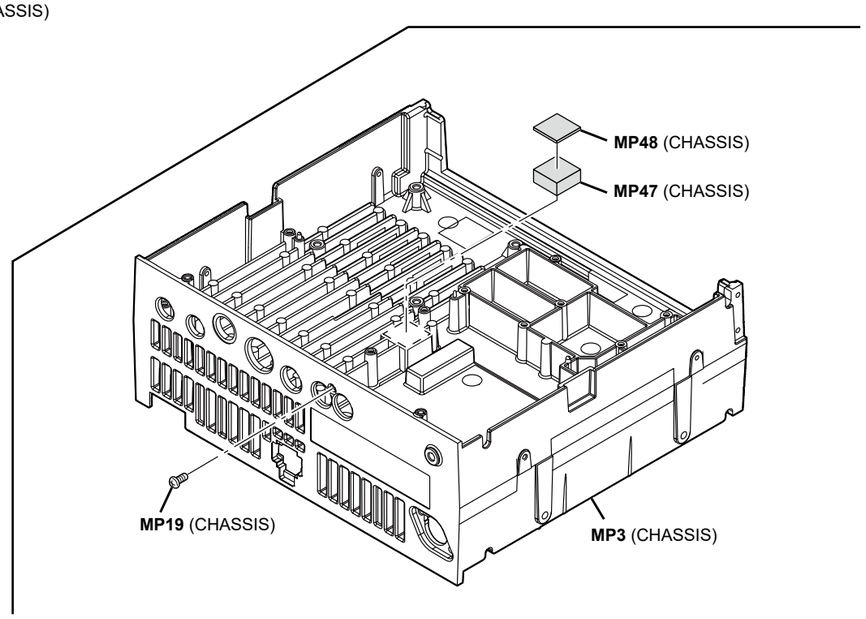
- **Exploded view for chassis assembly**



Unless otherwise noted, the tighten to torque is 0.7 N·m (±0.1 N·m)

Apply the compound to the following area (■).
Compound: Thermal Compound G747 (8950005610)

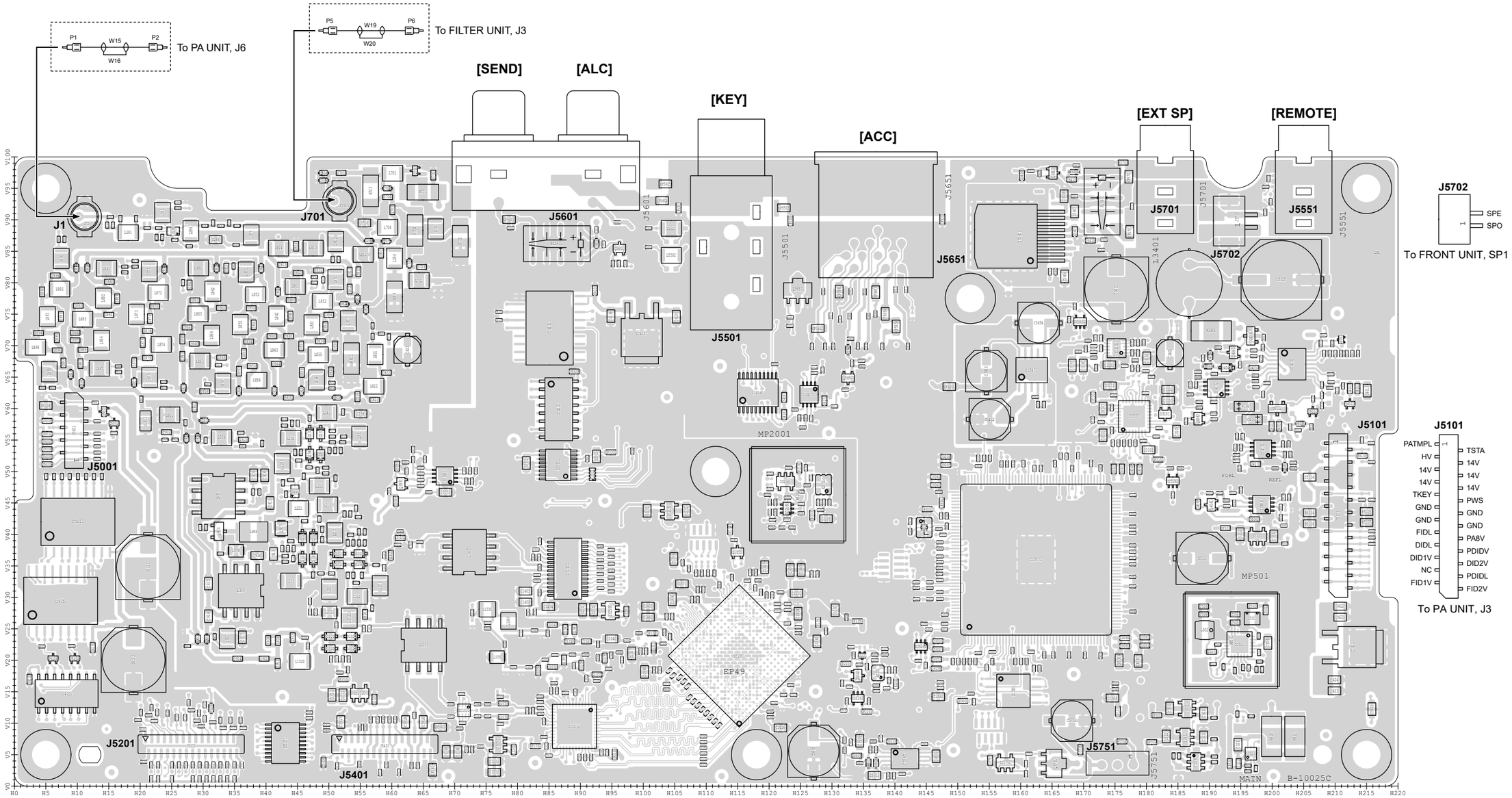




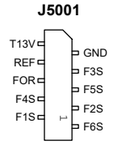
SECTION 8 BOARD LAYOUTS

The underlined parts have been updated from the addendum of the previous version, or from the original page.

- **MAIN UNIT (B-10025C)**
  (Top view)

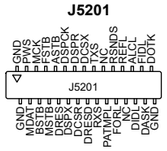


J5001



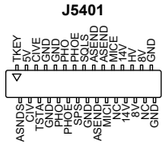
To FILTER UNIT, J1

J5201



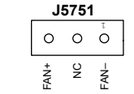
To LOGIC UNIT, J201

J5401



To LOGIC UNIT, J401

J5751

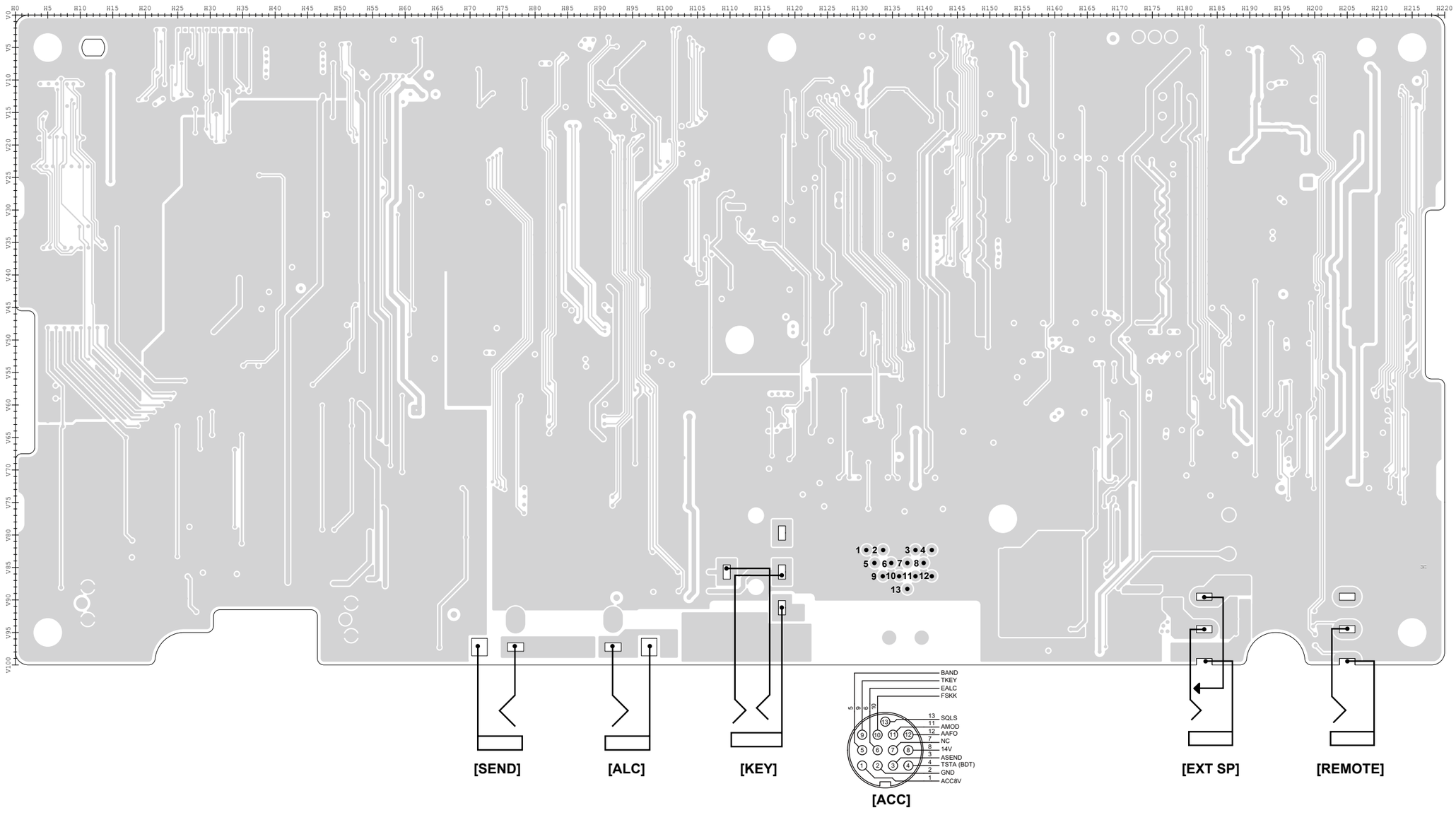


To CHASSIS UNIT, MF1

NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

The underlined parts have been updated from the addendum of the previous version, or from the original page.

- **MAIN UNIT (B-10025C)**
  (Bottom view)

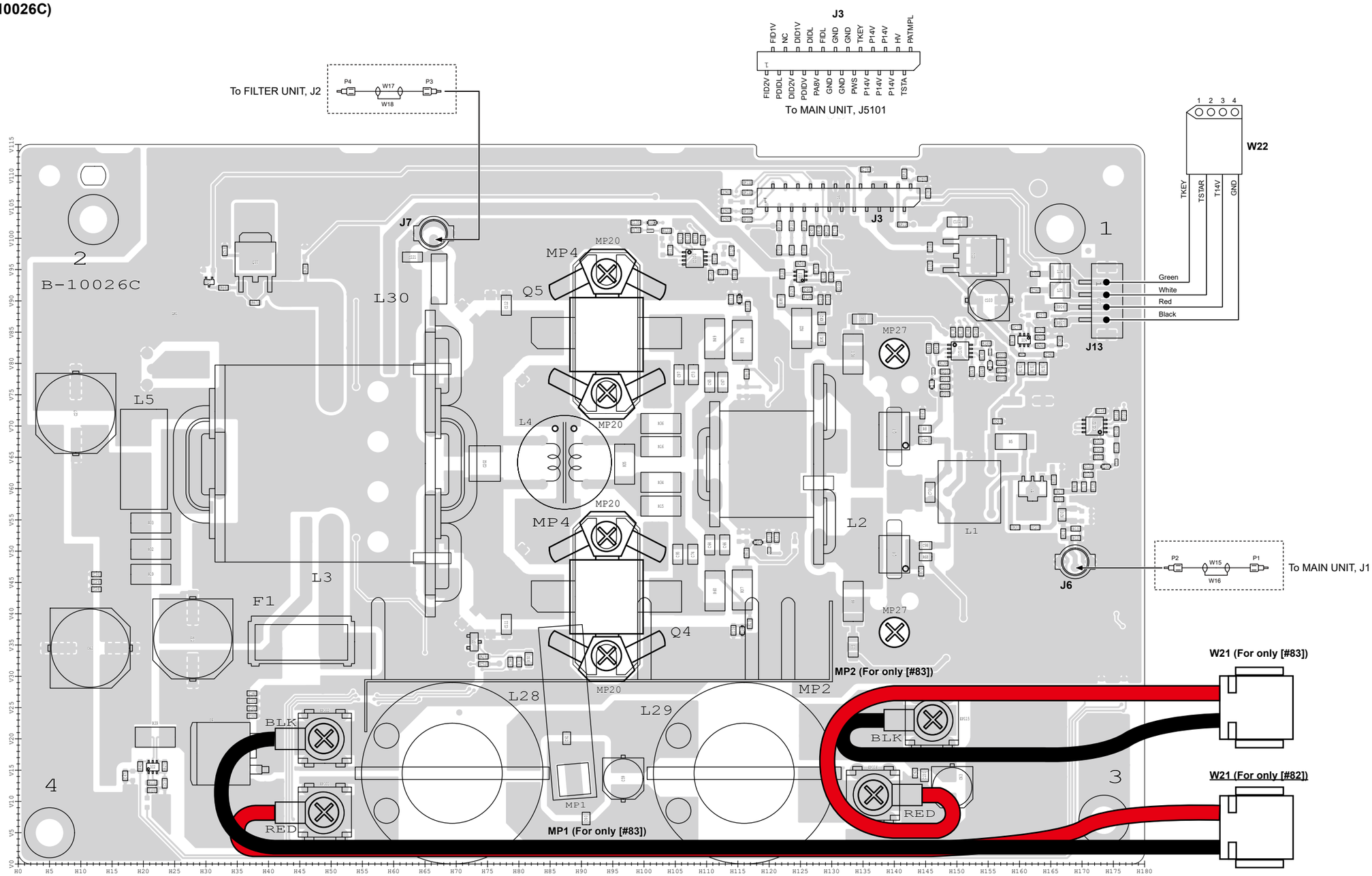


NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

(Amended page)

The underlined parts have been updated from the addendum of the previous version, or from the original page.

- **PA UNIT (B-10026C)**
  (Top view)

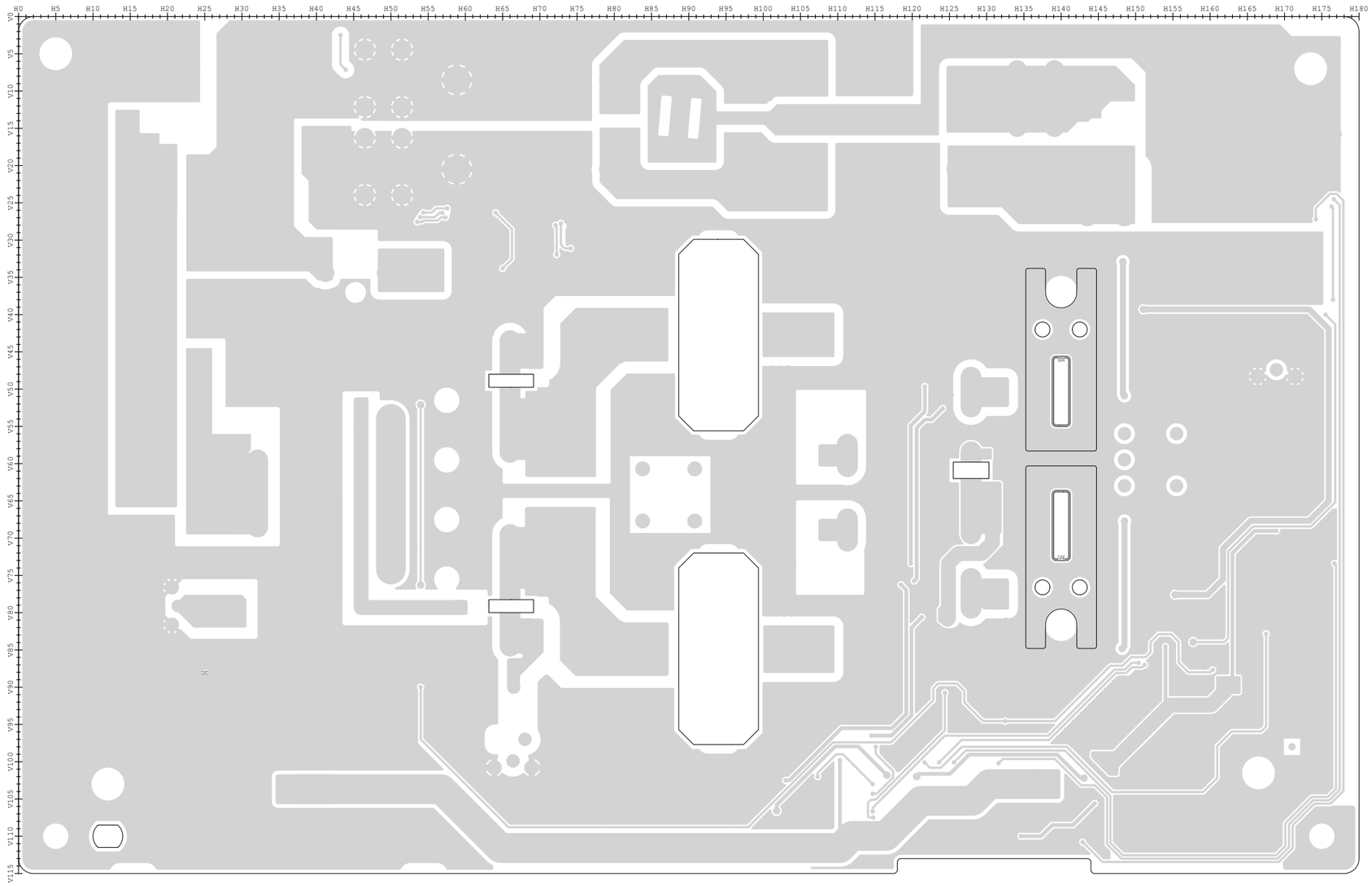


NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

(Amended page)

The underlined parts have been updated from the addendum of the previous version, or from the original page.

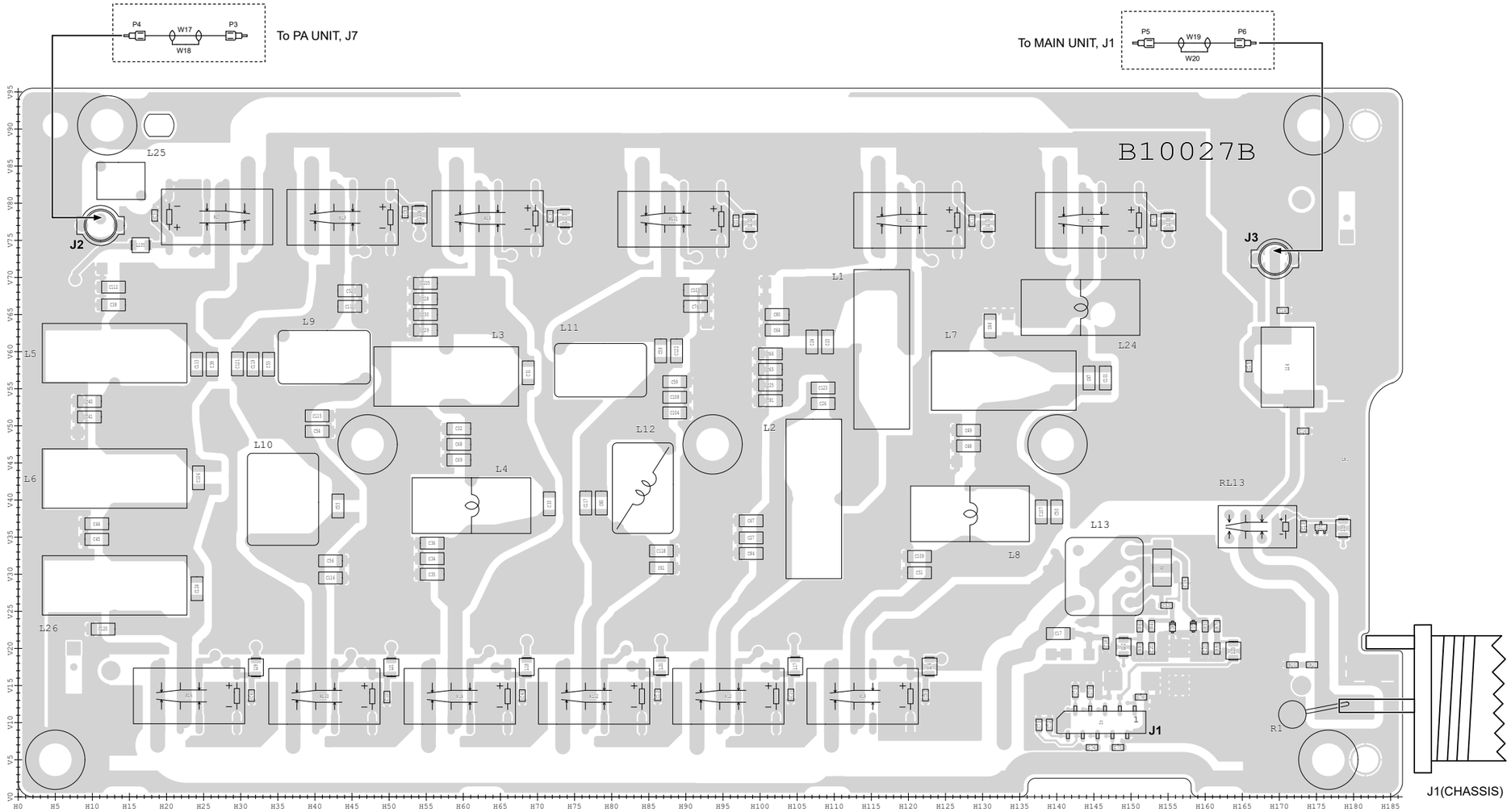
- **PA UNIT (B-10026C)**
  (Bottom view)



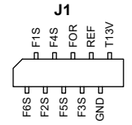
NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

The underlined parts have been updated from the addendum of the previous version, or from the original page.

- **FILTER UNIT (B-10027B)**
  (Top view)



J1

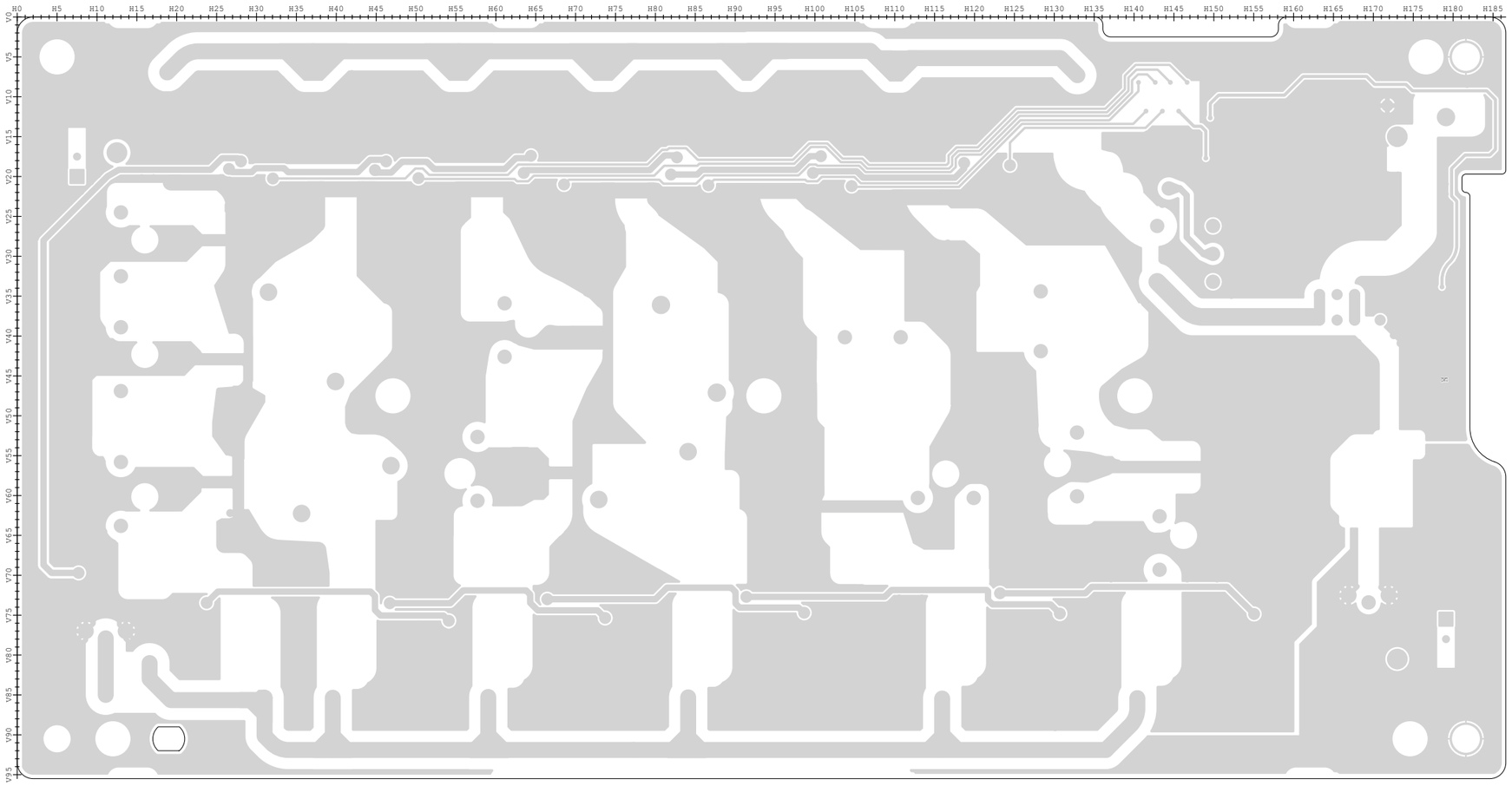


To MAIN UNIT, J5001

NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

The underlined parts have been updated from the addendum of the previous version, or from the original page.

- **FILTER UNIT (B-10027B)**
  (Bottom view)

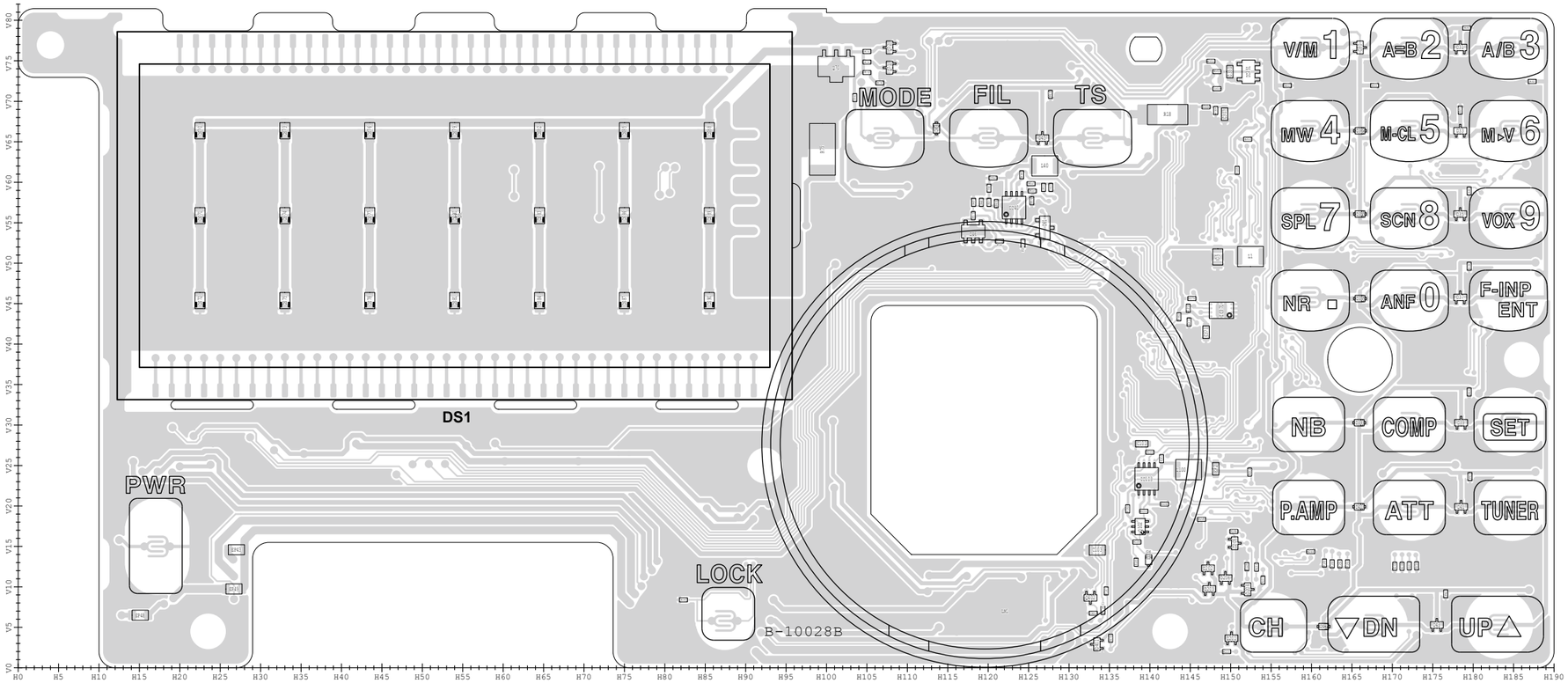


NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

(Amended page)

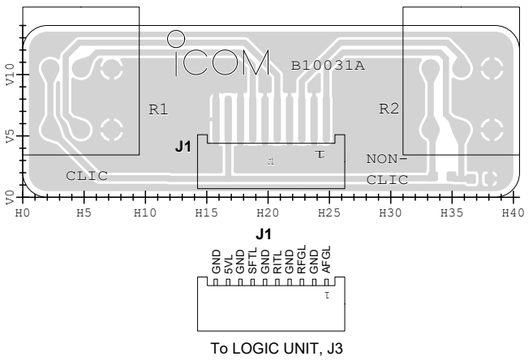
The underlined parts have been updated from the addendum of the previous version, or from the original page.

- **LOGIC UNIT (B-10028B)**
  (Top view)

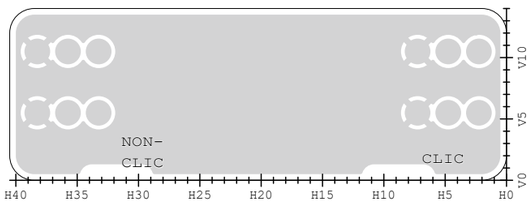


- **VR UNIT (B-10031A)**

(Top view)

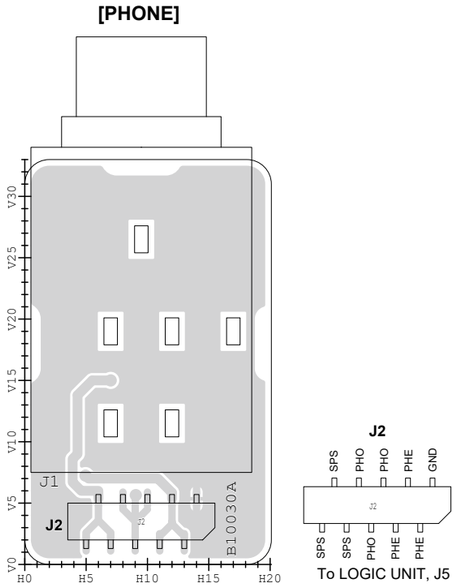


(Bottom view)

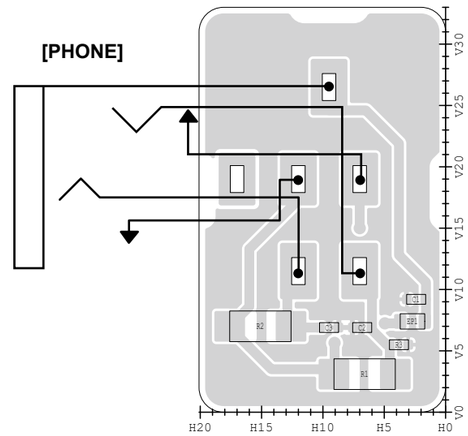


- **PHONE UNIT (B-10030A)**

(Top view)



(Bottom view)

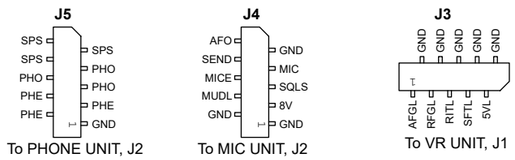


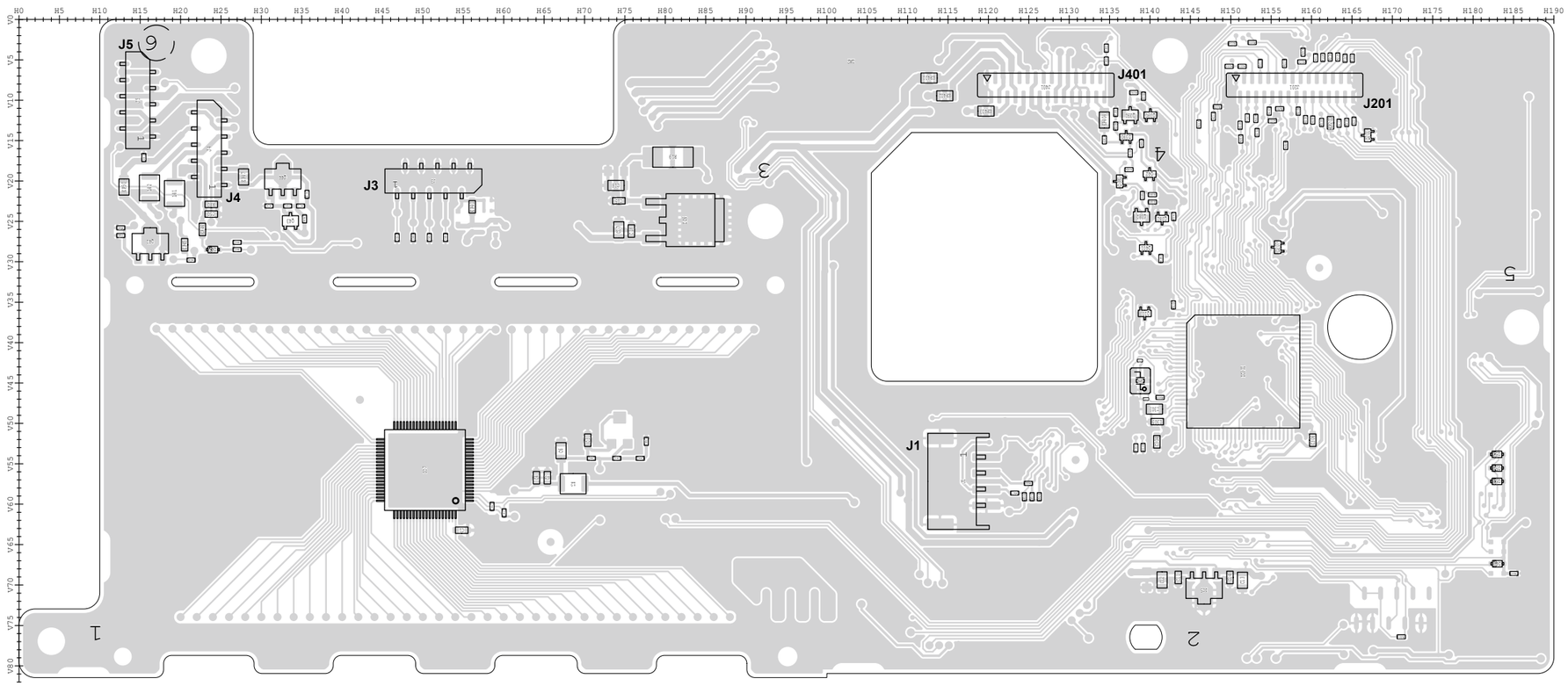
NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

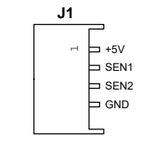
(Amended page)

The underlined parts have been updated from the addendum of the previous version, or from the original page.

• LOGIC UNIT (B-10028B)
(Bottom view)

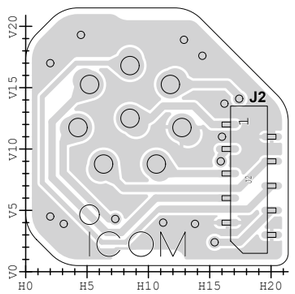


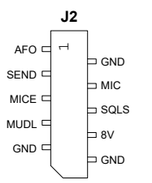




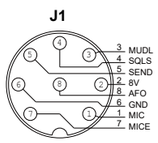
• MIC UNIT (B-10029A)

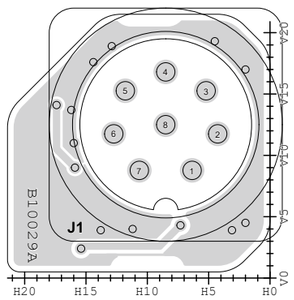
(Top view)





(Bottom view)



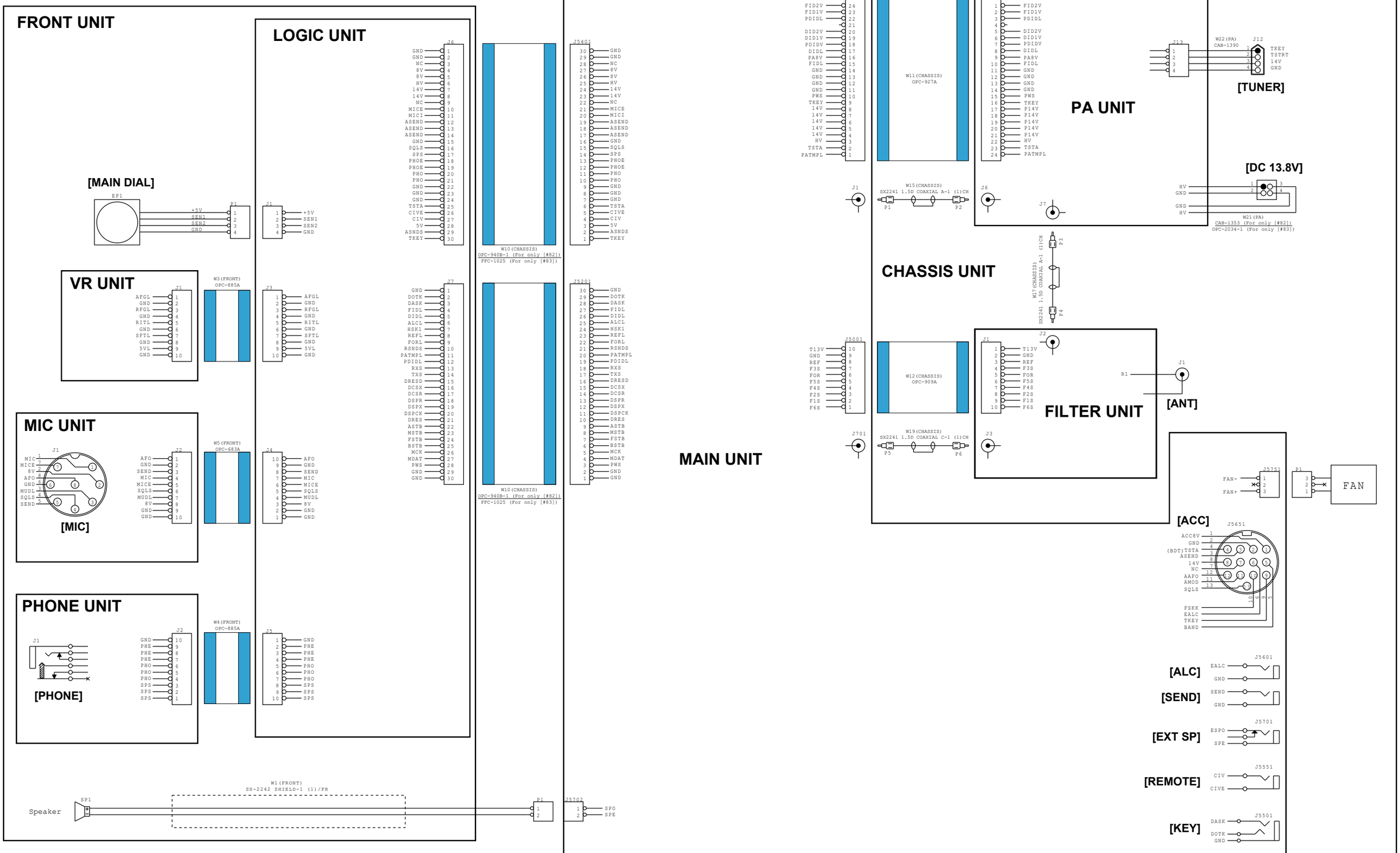


NOTE: Some parts may not be mounted on the PCB, depending on the transceiver version.

(Amended page)

SECTION 9 GENERAL WIRING

The underlined parts have been updated from the addendum of the previous version, or from the original page.

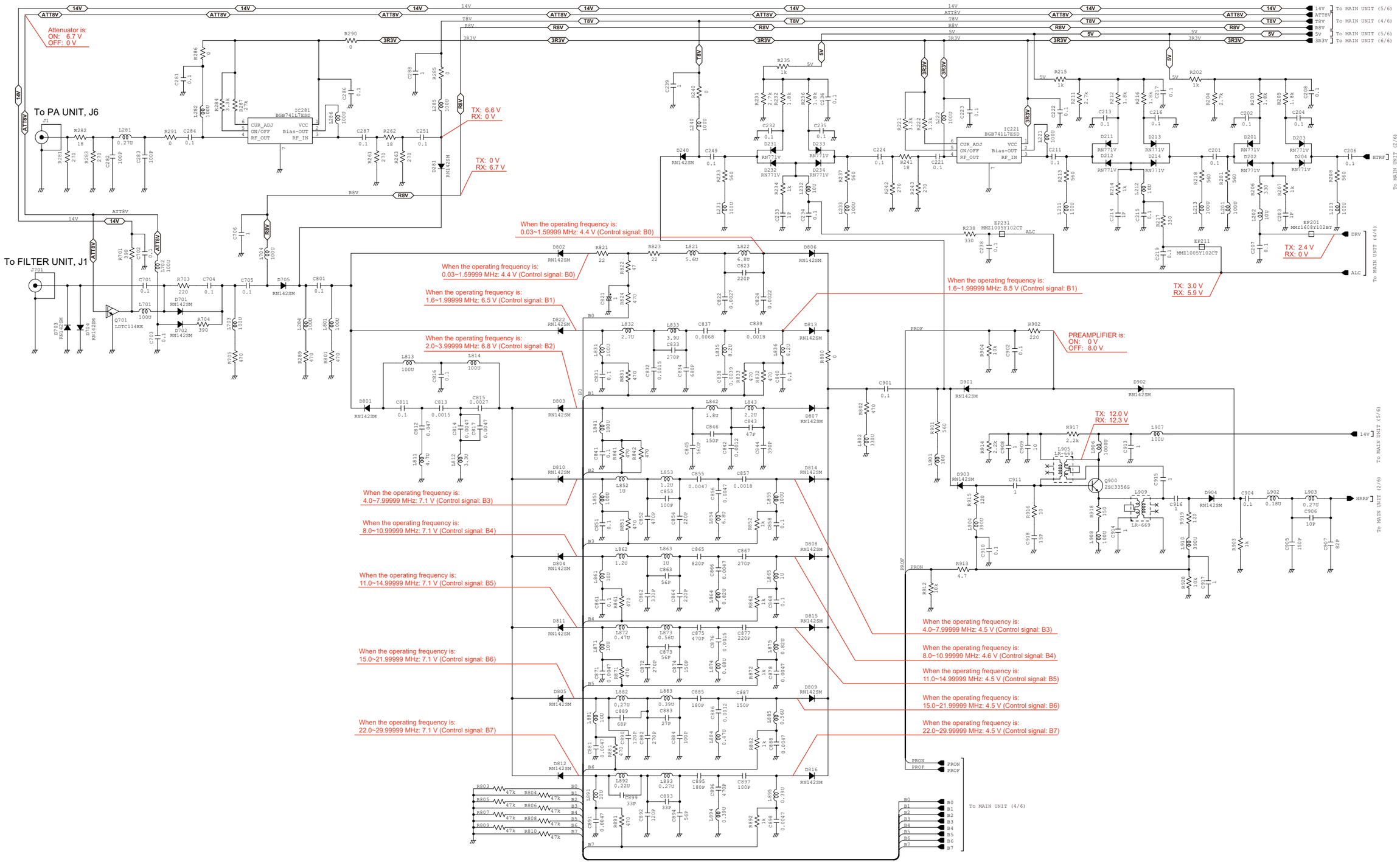


(Amended page)

SECTION 11 VOLTAGE DIAGRAM

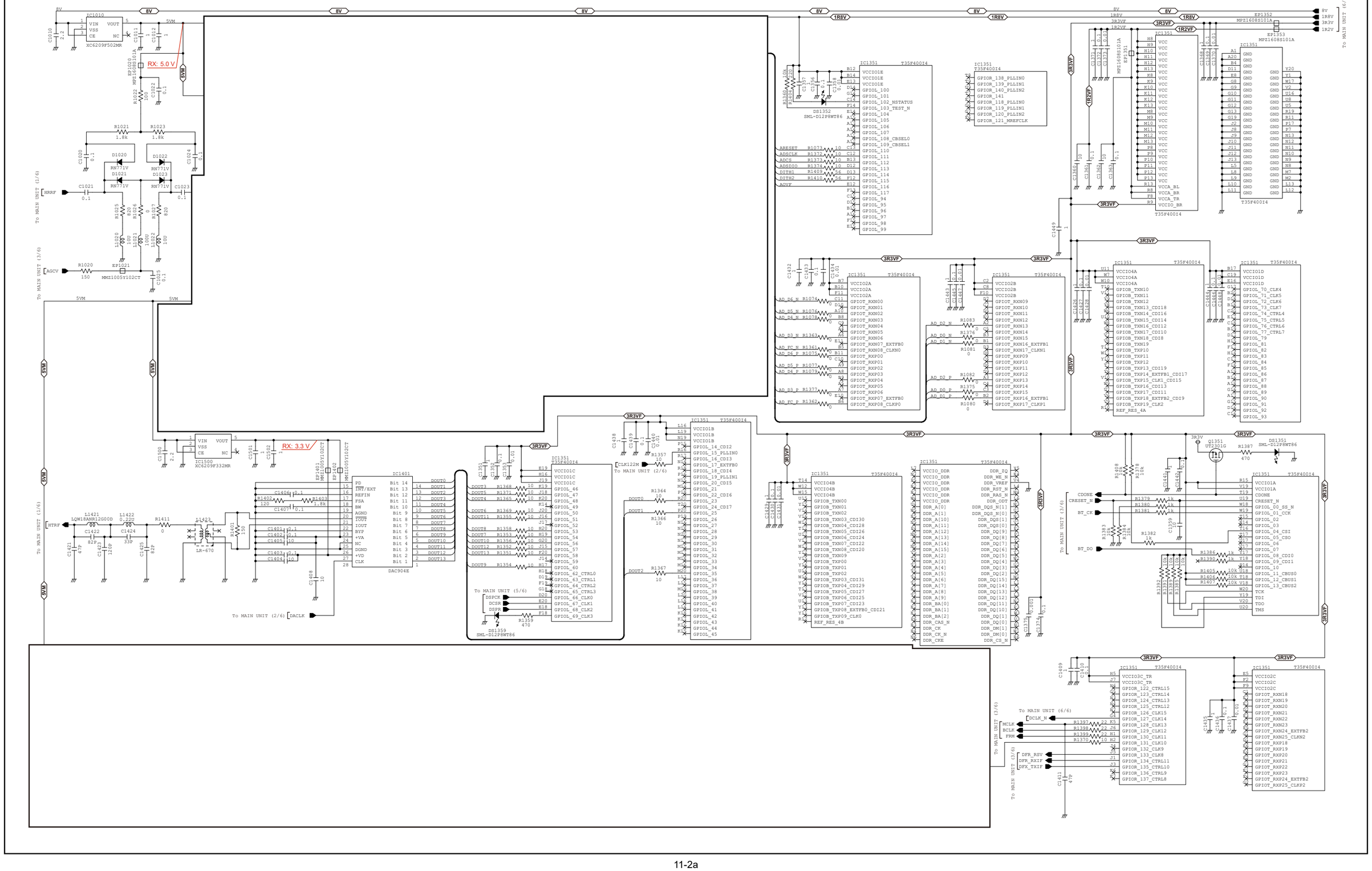
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• MAIN UNIT (1/6)



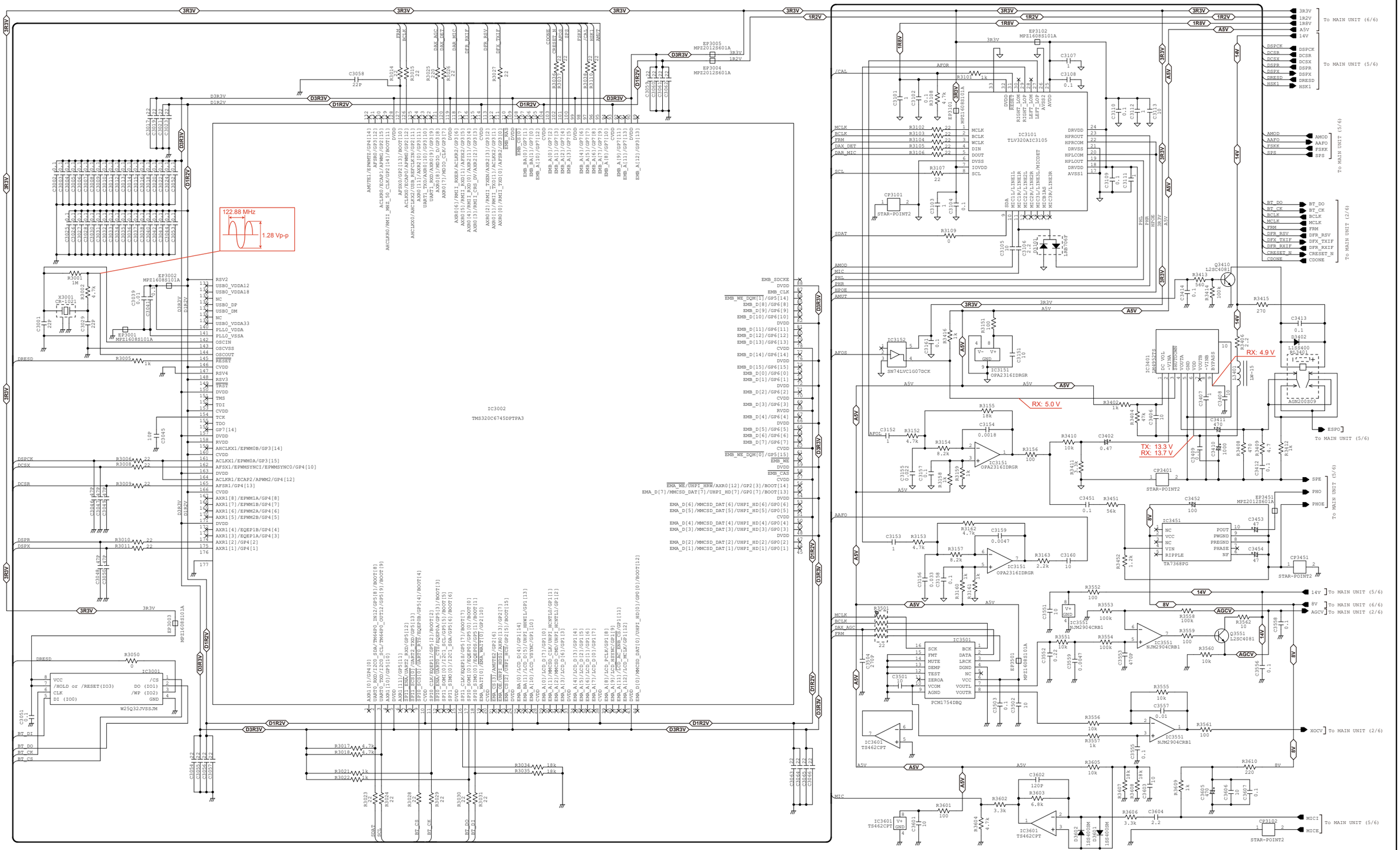
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• MAIN UNIT (2/6)



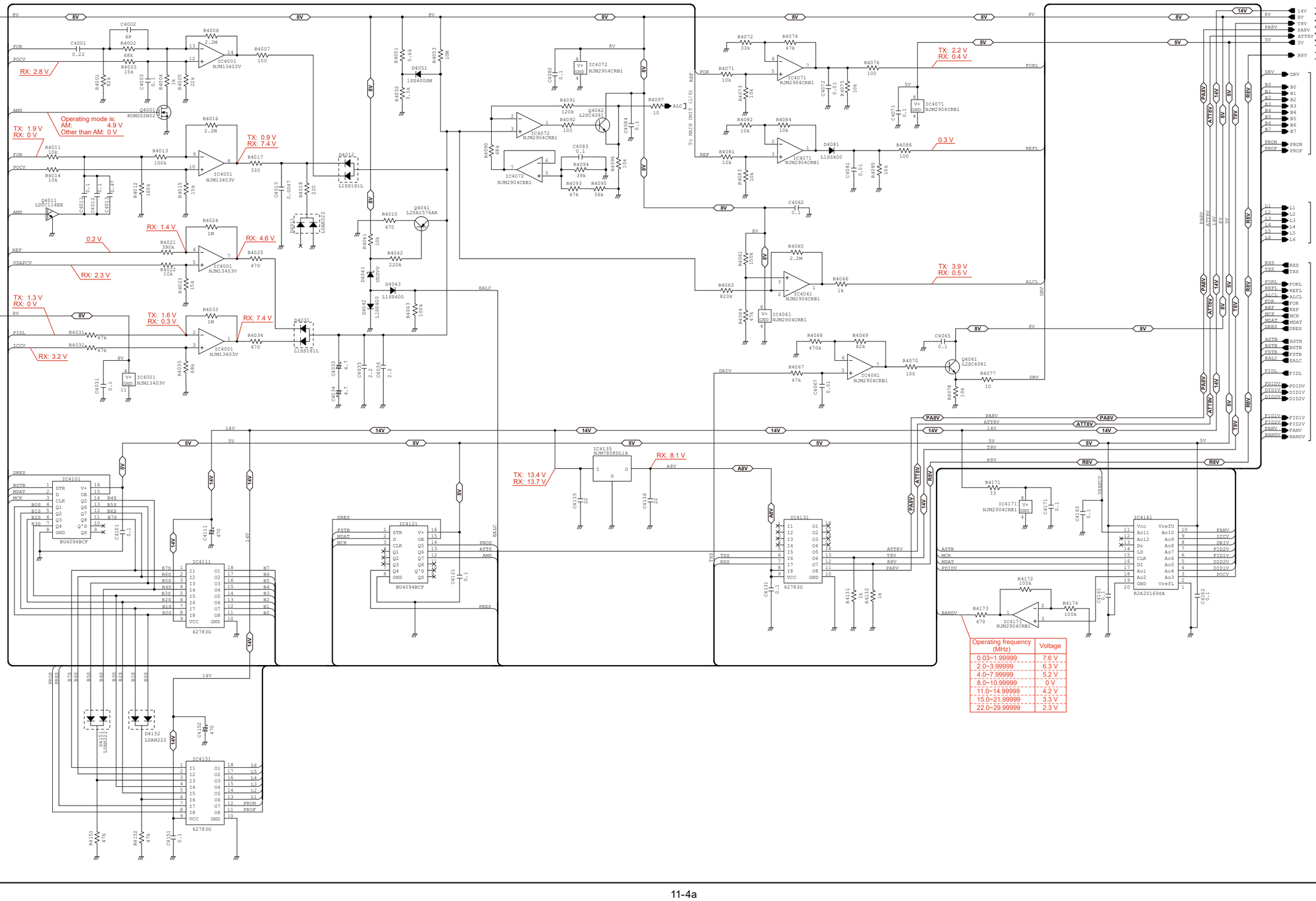
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• MAIN UNIT (3/6)



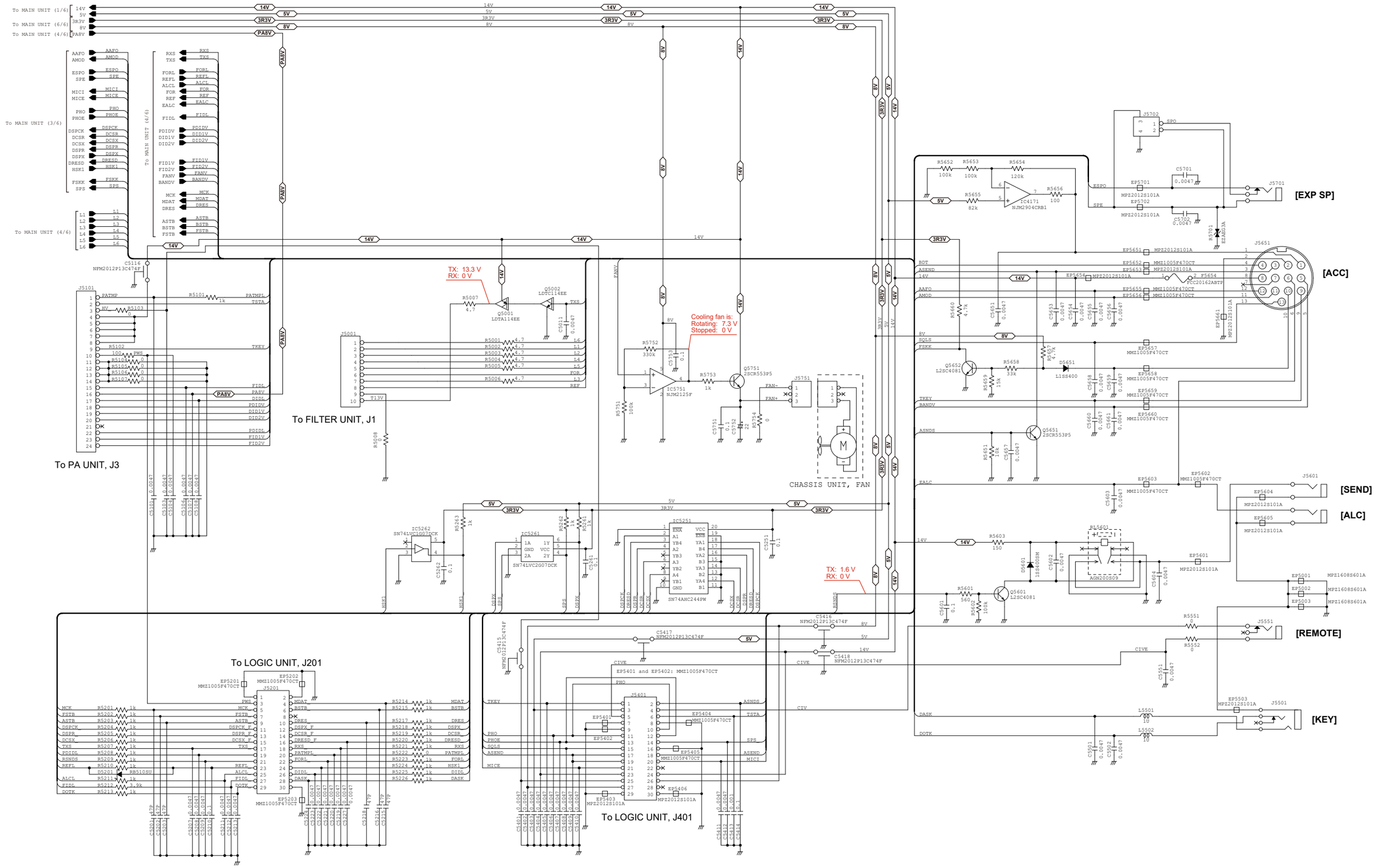
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• MAIN UNIT (4/6)



The underlined parts have been updated from the addendum of the previous version, or from the original page.

• MAIN UNIT (5/6)



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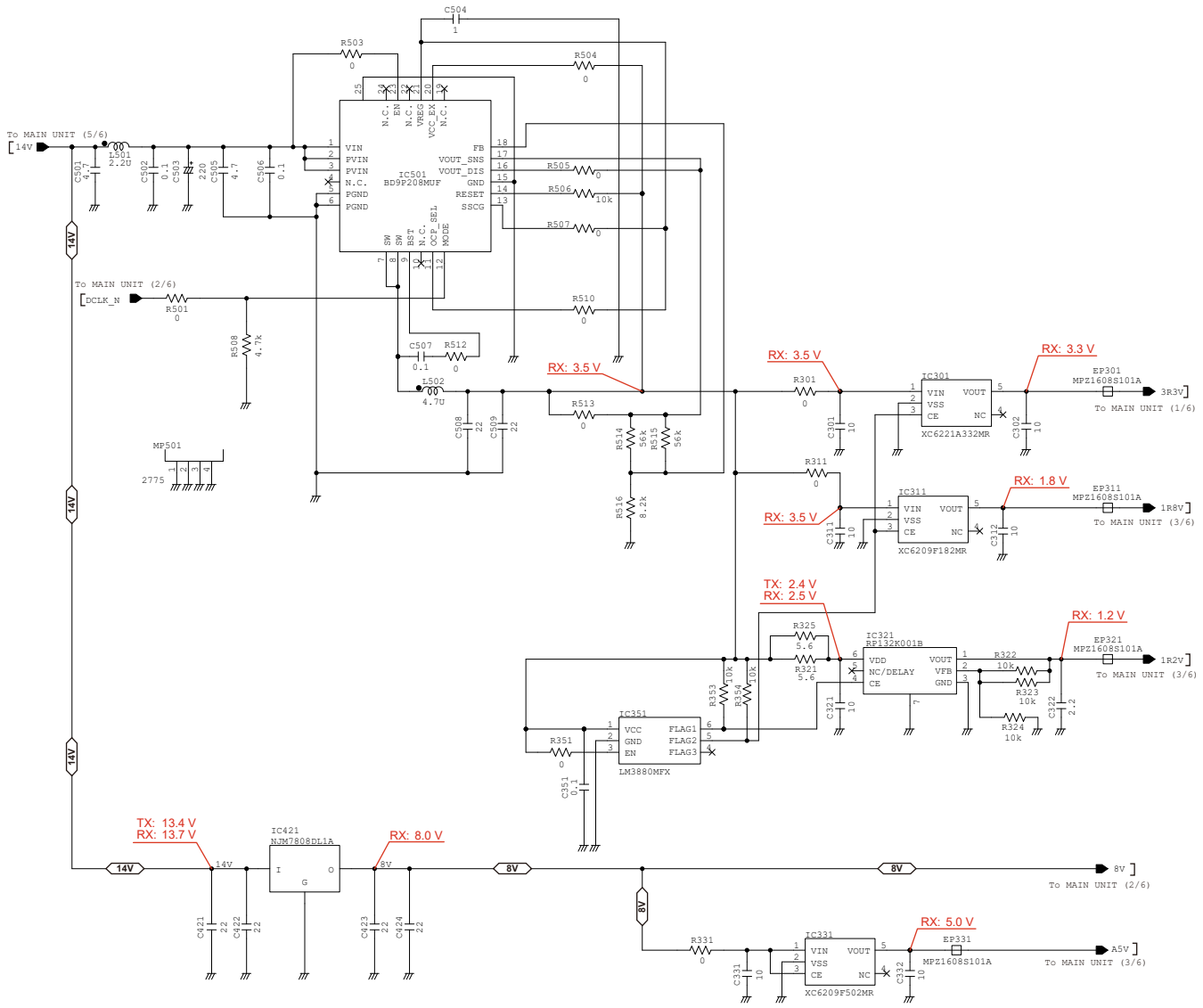
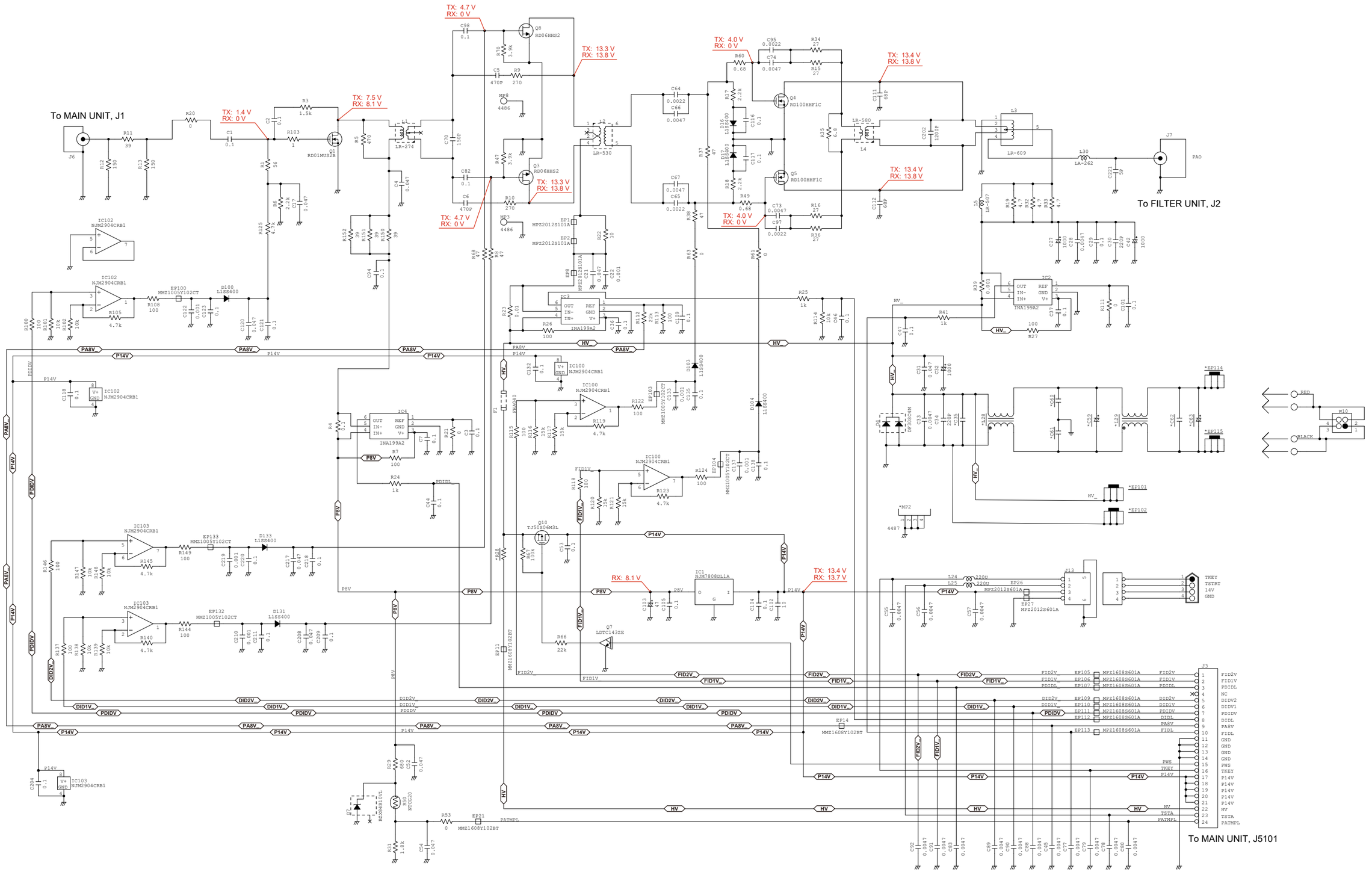
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• MAIN UNIT (6/6)



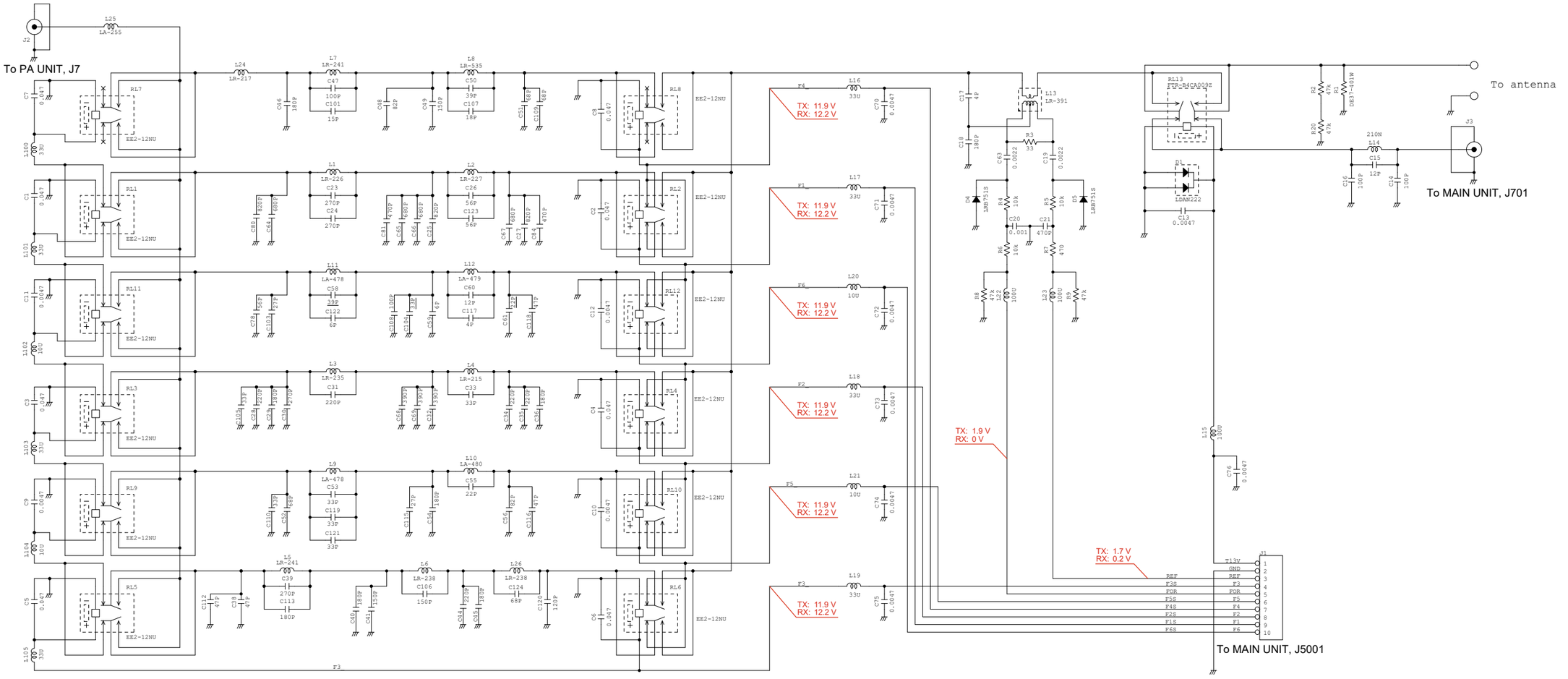
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• PA UNIT



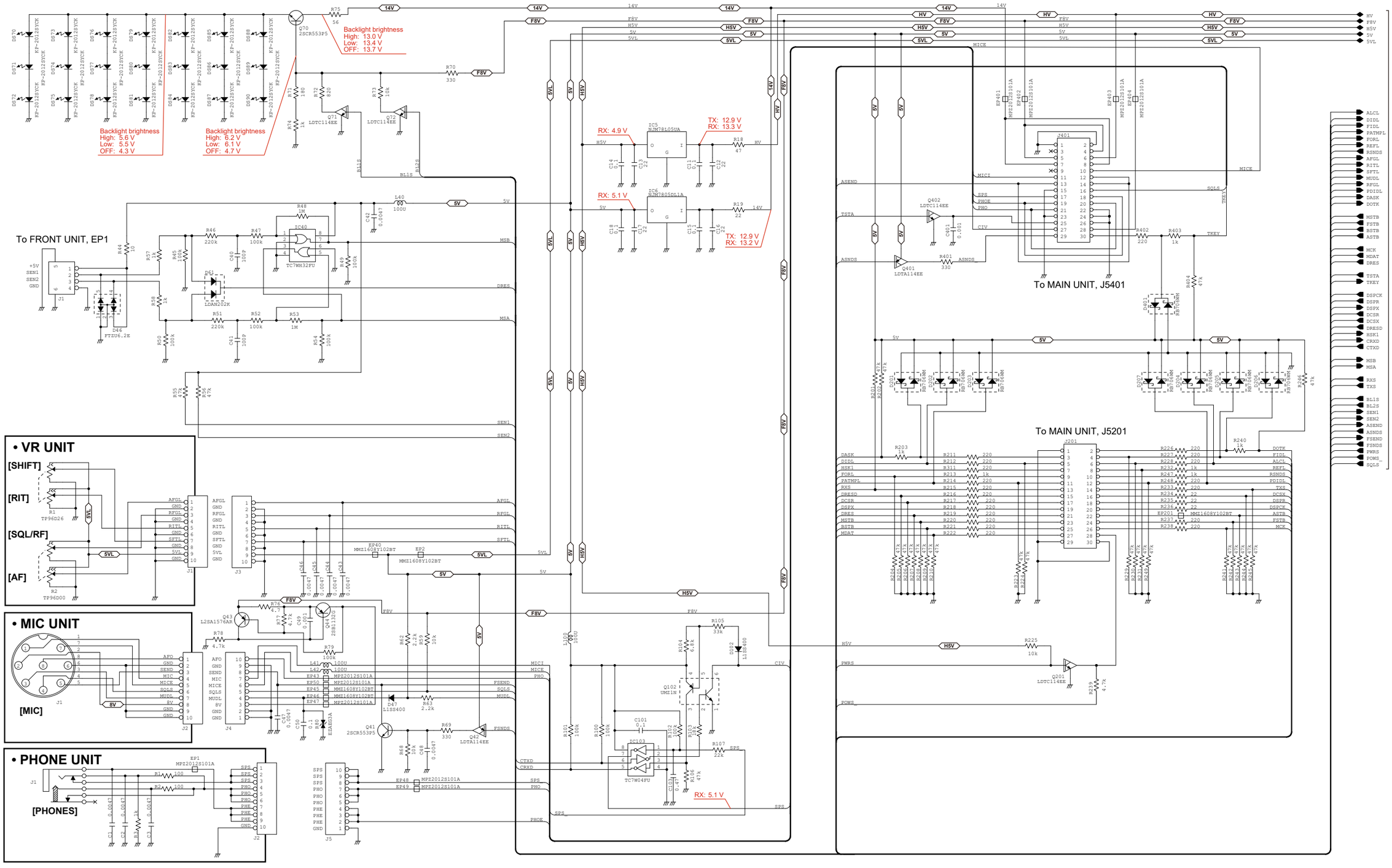
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• FILTER UNIT



The underlined parts have been updated from the addendum of the previous version, or from the original page.

• LOGIC UNIT (1/2)



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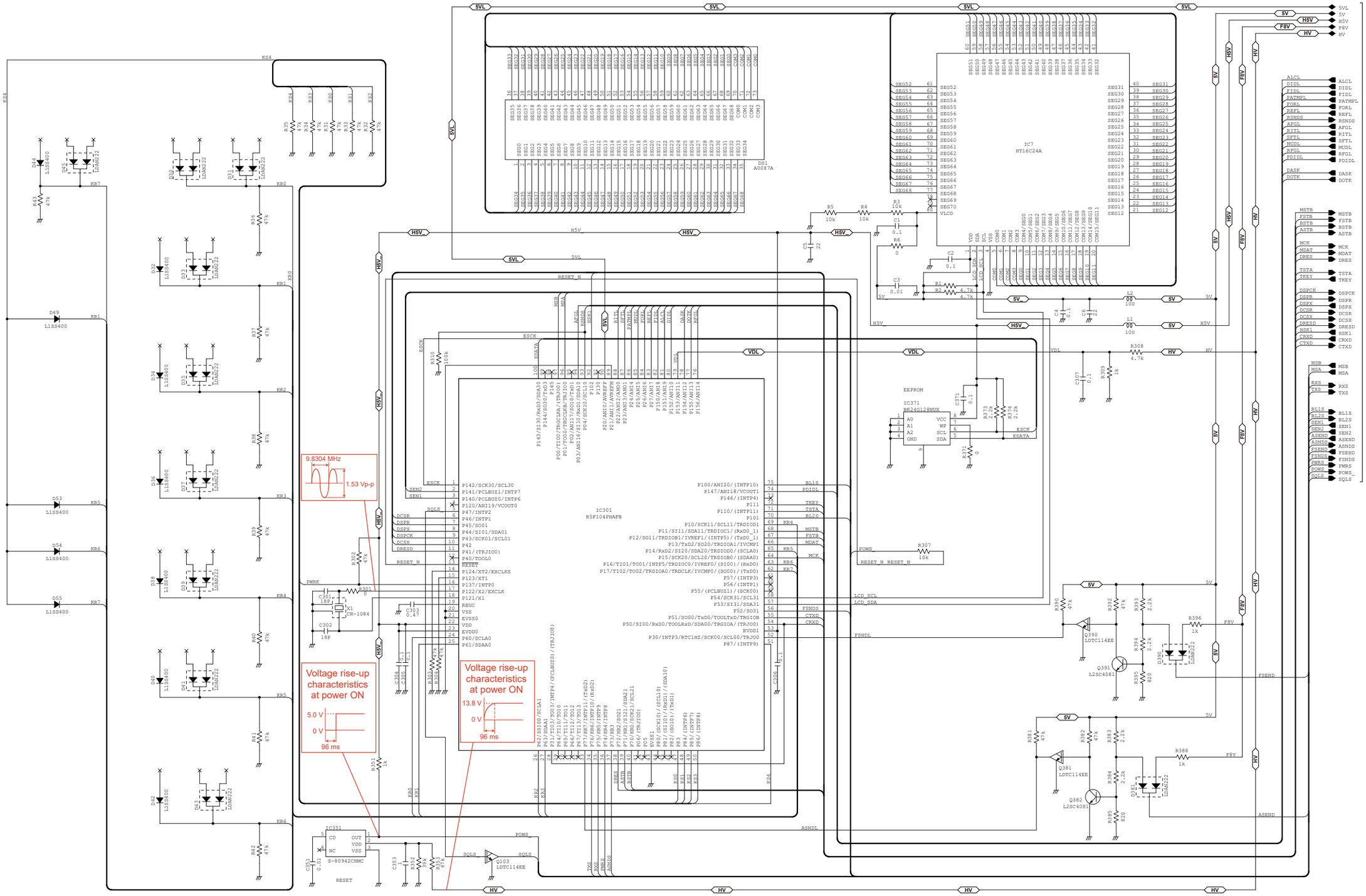
The underlined parts have been updated from the addendum of the previous version, or from the original page.

• LOGIC UNIT (2/2)



SERVICE MANUAL

HF ALL BAND TRANSCEIVER

IC-718

(For #83)

S-16110XZ-C1
April 2025

Icom Inc.

INTRODUCTION

We will supply spare units for the IC-718 described in this service manual.
Accordingly, this service manual focuses on the spare units that can be supplied, consumable parts and parts that are considered necessary in case of physical damage, instead of those on the individual electronic parts list.

This service manual describes the latest technical information for the IC-718 HF ALL BAND TRANSCEIVER the time of publication.

Model	Version	Version Number
IC-718	EUR-04	[#83]

To upgrade quality, any electrical or mechanical parts and internal circuits are subject to change without notice or obligation.

SERVICE CAUTION

NEVER connect the DUT to an AC outlet or to a DC power supply that uses more than the specified voltage. This will ruin the DUT.

DO NOT expose the DUT to rain, snow or liquids.

DO NOT reverse the polarity of the DC power cable when directly applying power to the DUT.

DO NOT apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the DUT's front-end.

ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

1. 10-digit Icom part number
2. Component name
3. Equipment model name and unit name
4. Quantity required

<ORDER EXAMPLE>

8930108230	SPONGE (SA)	IC-718	CHASSIS	1 piece
1750003940	RN142SMT2R	IC-718	MAIN UNIT	1 piece

REPAIR NOTES

1. Make sure that the problem is internal before disassembling the DUT.
2. **DO NOT** open the DUT until the DUT is disconnected from its power source.
3. **DO NOT** force any circuits or electronic parts.
4. **DO NOT** keep power ON for a long time when the DUT is defective.
5. **NEVER** transmit power into a Standard Signal Generator. Otherwise the RF power may damage them.
6. **ALWAYS** connect a 50 dB to 60 dB attenuator between the DUT and such test equipment.
7. **READ** the instructions of the test equipment thoroughly before connecting it to the DUT.

TABLE OF CONTENTS

SECTION 1 SPECIFICATION

■ GENERAL

• Frequency coverage:

Receive	0.030000 ~ 29.999999 MHz *1
Transmit	1.800000 ~ 1.999999 MHz *2
	3.500000 ~ 3.999999 MHz *2
	7.000000 ~ 7.300000 MHz *2
	10.100000 ~ 10.150000 MHz
	14.000000 ~ 14.350000 MHz
	18.068000 ~ 18.168000 MHz
	21.000000 ~ 21.450000 MHz
	24.890000 ~ 24.990000 MHz
	28.000000 ~ 29.700000 MHz

*1 Guaranteed range: 0.500000 ~ 29.999999 MHz

*2 The frequency coverage and guaranteed ranges differ, depending on the transceiver version.

• Operating Modes:
USB/LSB (J3E), CW (A1A), RTTY (F1B), AM (A3E)

• Number of memory channels:
101 (including 2 scan edges)

• Antenna impedance:
50 Ω unbalanced

• Power supply requirement:
13.8 V DC ±15%

• Polarity: Negative ground

• Operating temperature range:
–10°C ~ +60°C, +14°F ~ +140°F

• Frequency resolution:
1 Hz

• Frequency stability:
±20 ppm or less
(–10°C ~ +60°C, 14°F ~ 140°F)

• Current drain:

Receive	Standby	0.7 A (Typical)
	Maximum audio	2.0 A
Transmit	Maximum power	20.0 A

• Dimensions (Approximate, projections not included):
240 (W) × 95 (H) × 239 (D) mm;
9.4 (W) × 3.7 (H) × 9.4 (D) inches

• Weight (Approximate):
4.0 kg; 8.8 lb

■ TRANSMITTER

• Transmit output power:

SSB, CW, RTTY	2 ~ 100 W
AM	1 ~ 35 W

• Modulation system:

SSB	Digital PSN modulation
AM	Digital Low power modulation

• Spurious emissions:
–50 dB or less

• Carrier suppression:
40 dB or more

• Unwanted sideband suppression:
50 dB or more

• Microphone impedance:
600 Ω

• Operating mode: Simplex

■ RECEIVER

• Receive system:
RF Direct Sampling

• Sensitivity (Preamplifier ON):
SSB/CW/RTTY (10 dB S/N)
–16 dBμV (PD) or less (1.8 ~ 29.999999 MHz)
AM (10 dB S/N)
22 dBμV (PD) or less (0.5 ~ 1.799999 MHz)
6 dBμV (PD) or less (1.8 ~ 29.999999 MHz)
SSB/CW/RTTY (12 dB SINAD)
10 dBμV (PD) or less (1.8 ~ 2.999999 MHz)
0 dBμV (PD) or less (3.0 ~ 29.999999 MHz)
AM (12 dB SINAD)
16 dBμV (PD) or less (1.8 ~ 2.999999 MHz)
6 dBμV (PD) or less (3.0 ~ 29.999999 MHz)

• Squelch sensitivity (Preamplifier ON, threshold):
SSB, CW, RTTY
15 dBμV (PD) or less

• Selectivity (Expanded Filter OFF):
SSB (BW=2.4 kHz)
2.4 kHz or more/–6 dB,
3.4 kHz or less/–40 dB
CW (BW=500 Hz)
500 Hz or more/–6 dB,
700 Hz or less/–40 dB
RTTY (BW=500 Hz)
500 Hz or more/–6 dB
800 Hz or less/–40 dB
AM (BW=6 kHz)
6 kHz or more/–6 dB
10 kHz or less/–40 dB

• Spurious and image rejection:
SSB, CW, AM
70 dB or more (1.8 ~ 29.999999 MHz)

• Audio output power:
2.0 W or more
(8 Ω load, 1 kHz, 10% distortion)

• Audio output impedance:
8 Ω

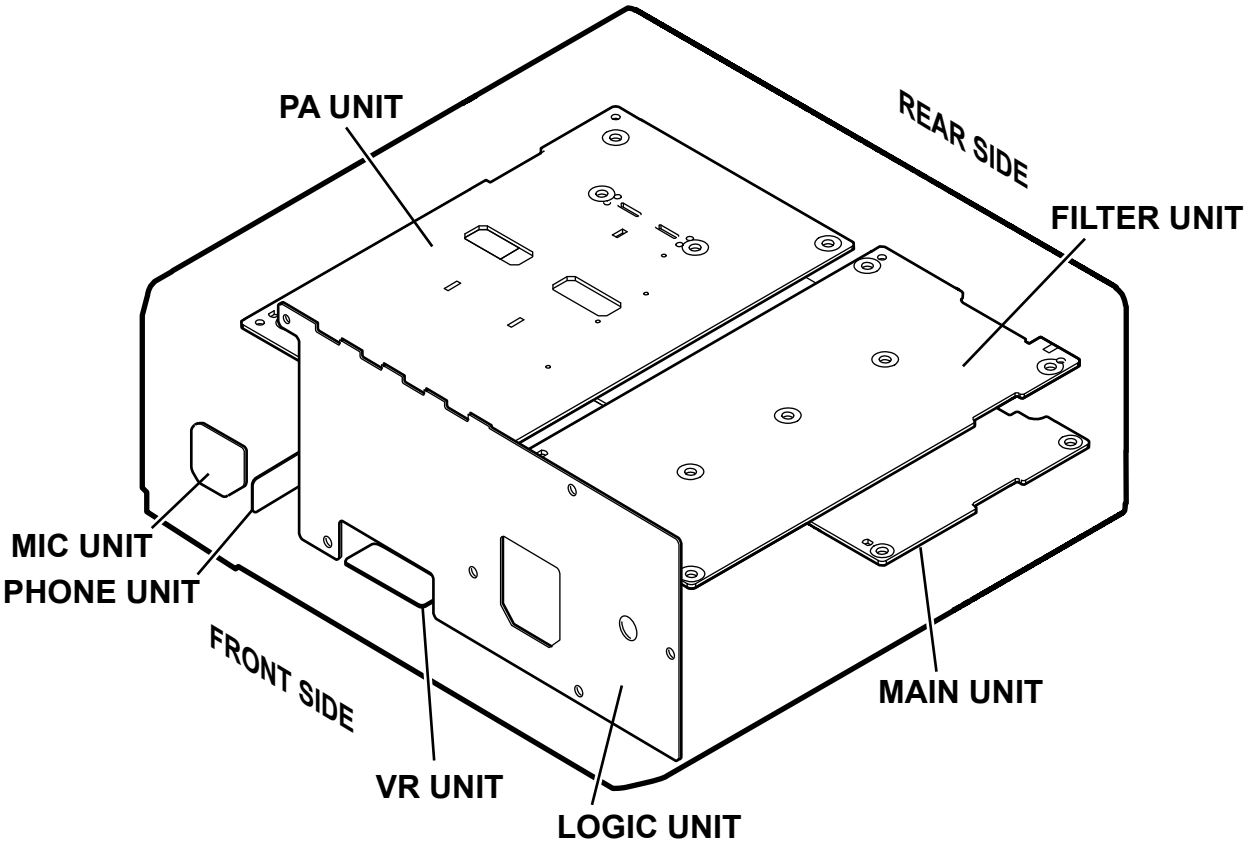
• RIT variable range:
±1.2 kHz

• DSP function:

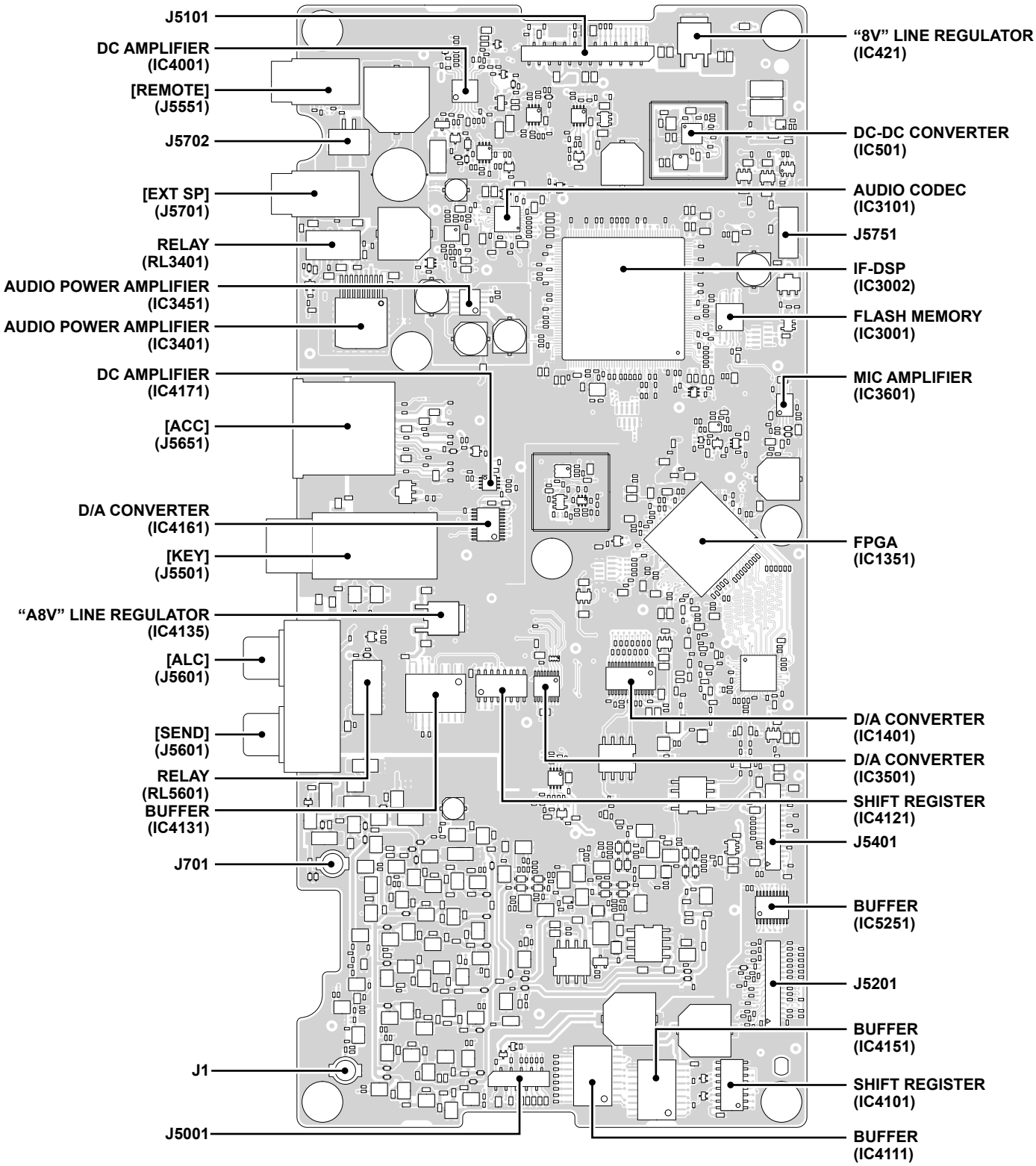
ANF	30dB or more (1kHz singletone)
NR	6dB or more
	(SSB mode set noise reduction ratio)

SECTION 2 INSIDE VIEWS

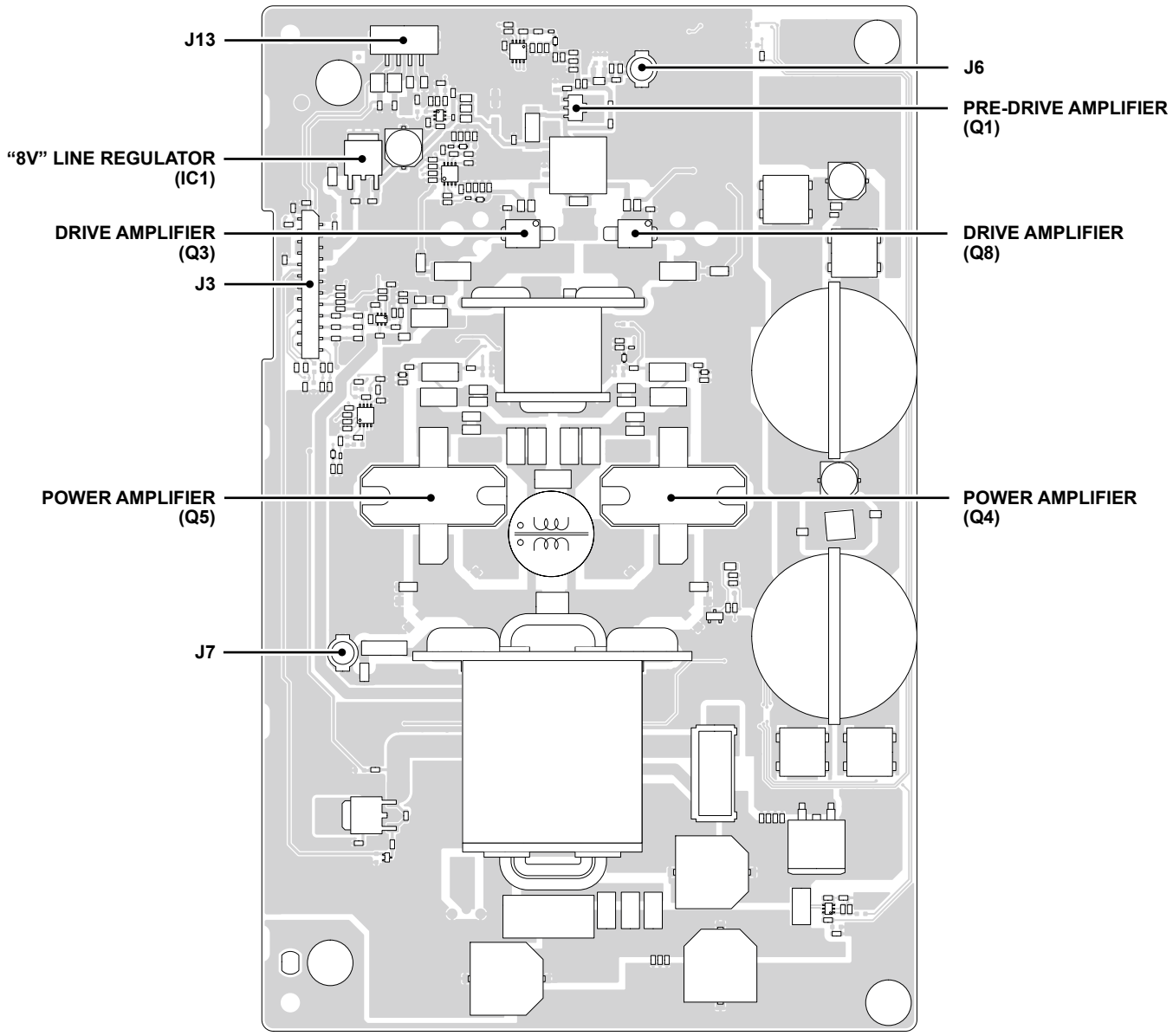
• **Transparent view**



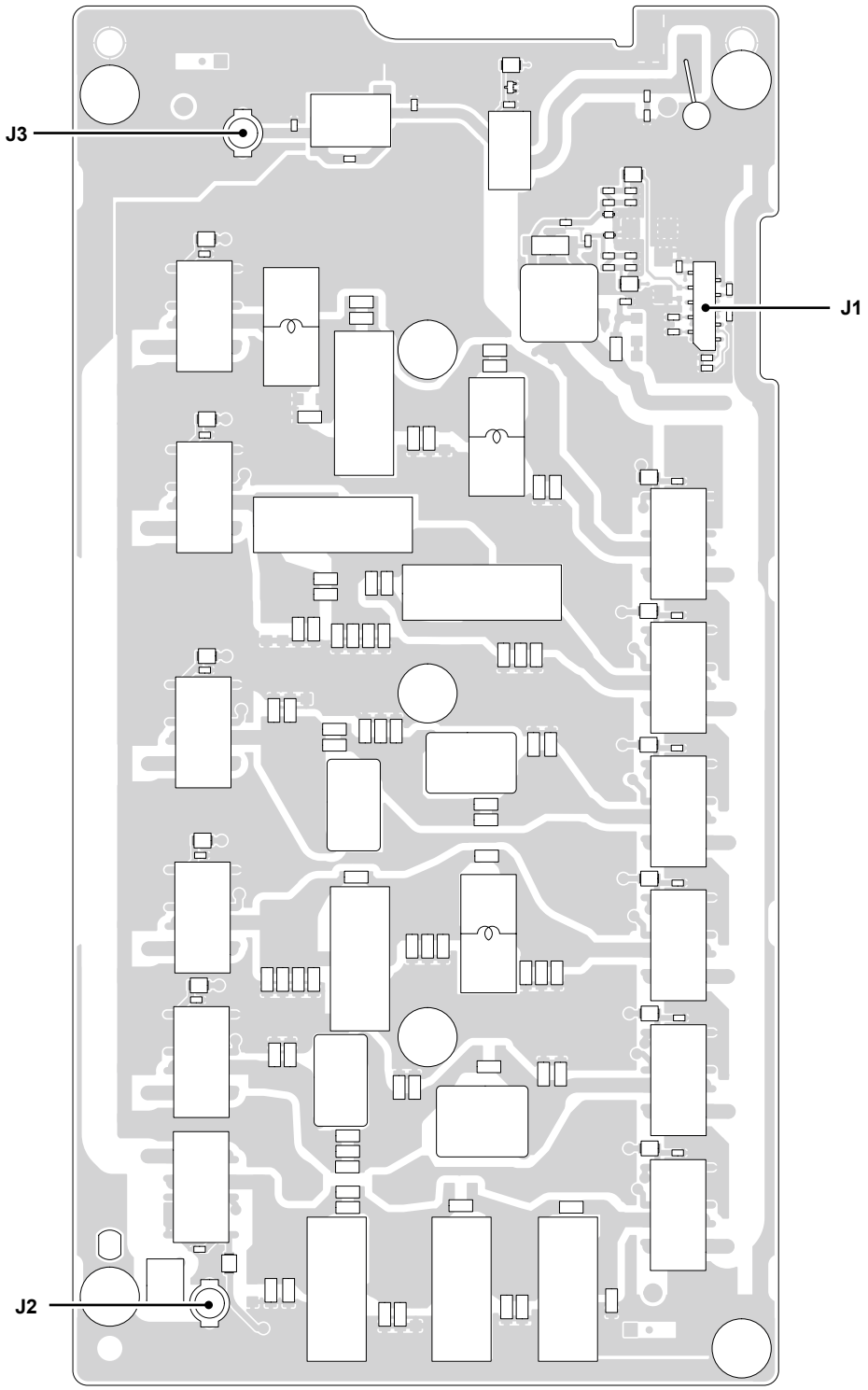
• **MAIN UNIT**


J5101
DC AMPLIFIER (IC4001)
[REMOTE] (J5551)
J5702
[EXT SP] (J5701)
RELAY (RL3401)
AUDIO POWER AMPLIFIER (IC3451)
AUDIO POWER AMPLIFIER (IC3401)
DC AMPLIFIER (IC4171)
[ACC] (J5651)
D/A CONVERTER (IC4161)
[KEY] (J5501)
"A8V" LINE REGULATOR (IC4135)
[ALC] (J5601)
[SEND] (J5601)
RELAY (RL5601)
BUFFER (IC4131)
J701
J1
J5001
"8V" LINE REGULATOR (IC421)
DC-DC CONVERTER (IC501)
AUDIO CODEC (IC3101)
J5751
IF-DSP (IC3002)
FLASH MEMORY (IC3001)
MIC AMPLIFIER (IC3601)
FPGA (IC1351)
D/A CONVERTER (IC1401)
D/A CONVERTER (IC3501)
SHIFT REGISTER (IC4121)
J5401
BUFFER (IC5251)
J5201
BUFFER (IC4151)
SHIFT REGISTER (IC4101)
BUFFER (IC4111)

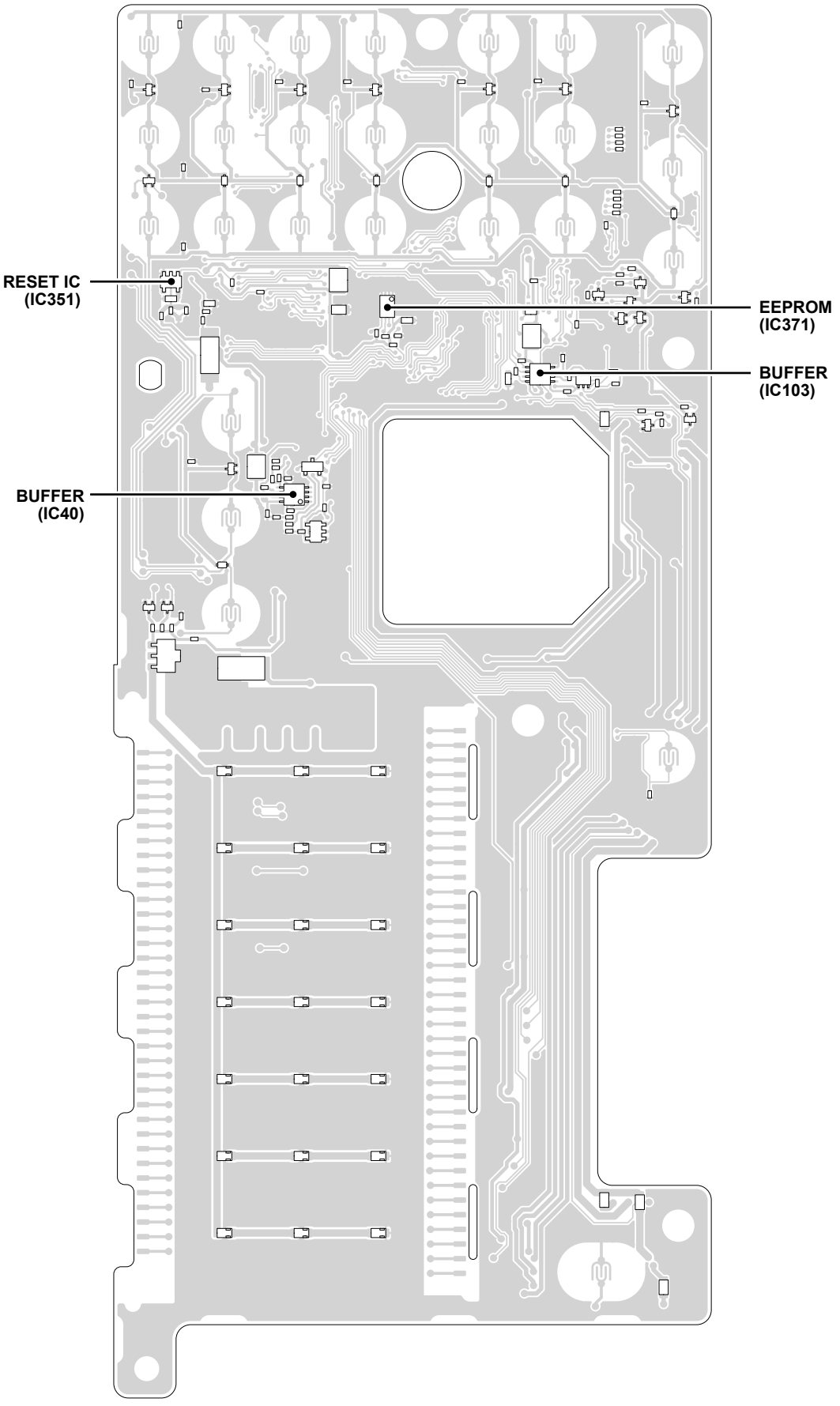
• **PA UNIT**


J13
"8V" LINE REGULATOR (IC1)
DRIVE AMPLIFIER (Q3)
J3
POWER AMPLIFIER (Q5)
J7
J6
PRE-DRIVE AMPLIFIER (Q1)
DRIVE AMPLIFIER (Q8)
POWER AMPLIFIER (Q4)

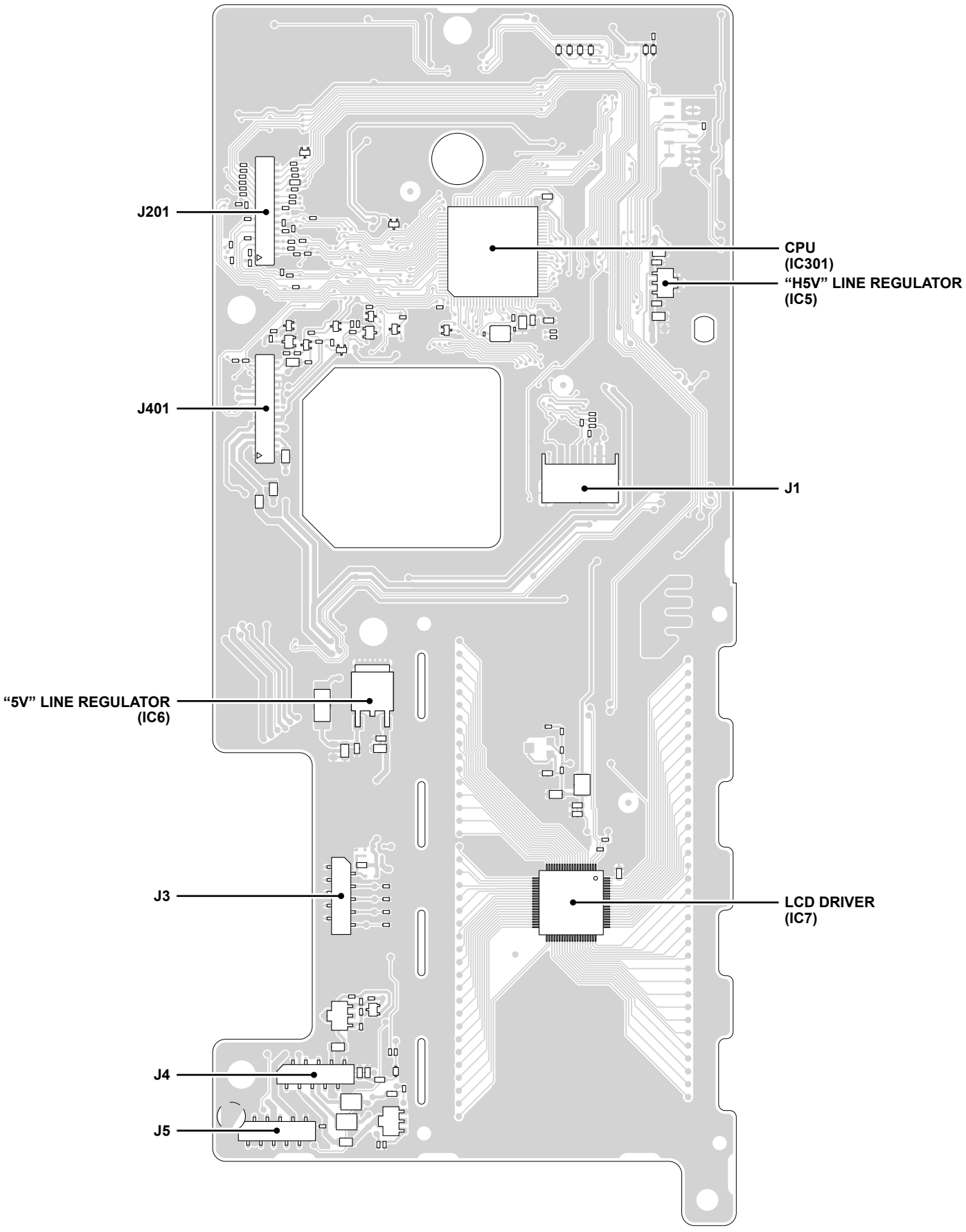
• **FILTER UNIT**



• **LOGIC UNIT (Top view)**



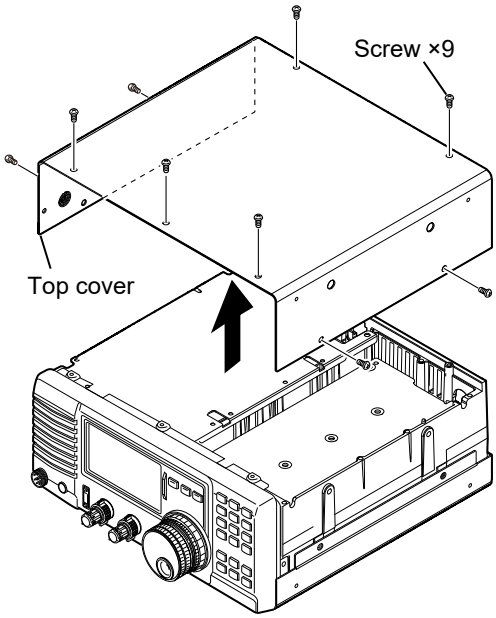
• **LOGIC UNIT (Bottom view)**



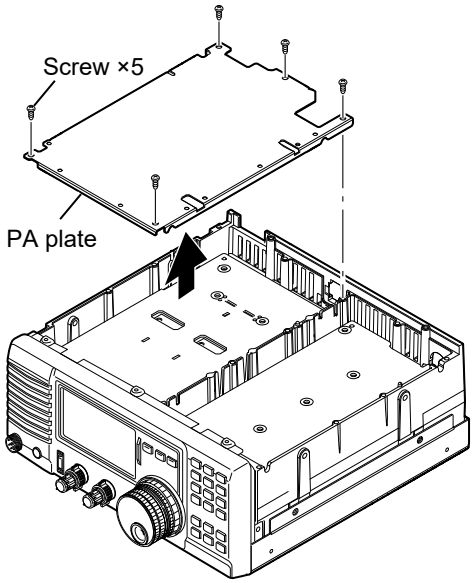
SECTION 3 DISASSEMBLY INSTRUCTION

1. REMOVING THE PA UNIT

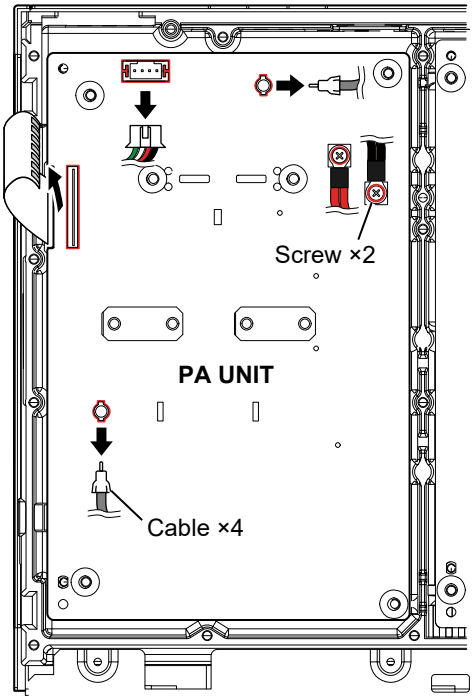
1) Remove the 9 screws from the top cover, then remove it.



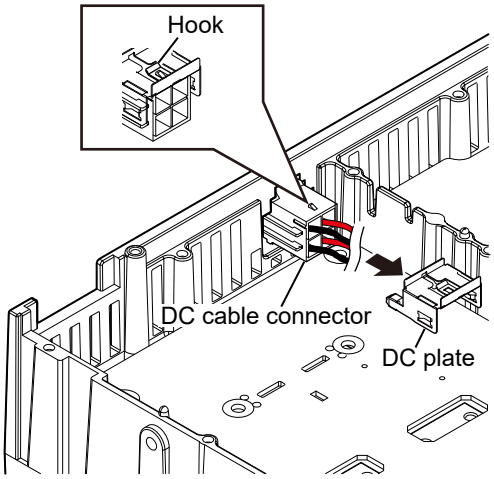
2) Remove the 5 screws from the PA plate, then remove it.



3) Remove the 2 screws and 4 cables from the PA UNIT.



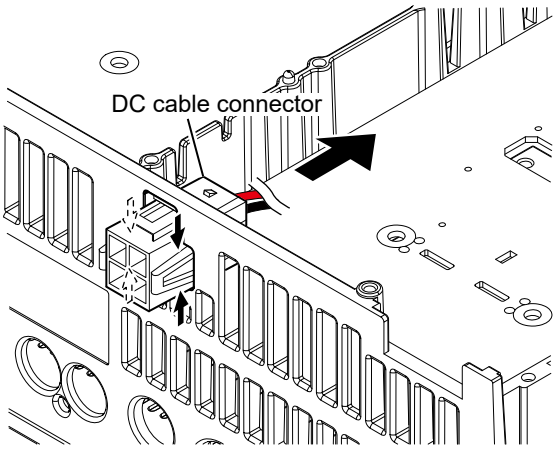
4) Unhook the hook on the DC plate to the DC cable connector and remove the DC plate from the DC cable connector.



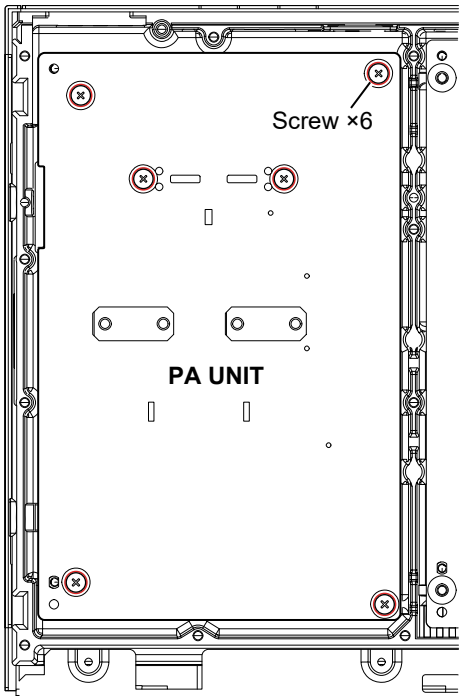
(Continued on the next page.)

1. REMOVING THE PA UNIT (CONTINUED)

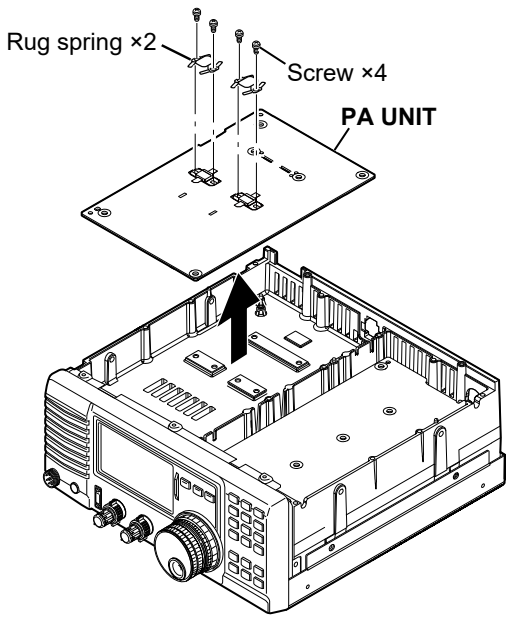
5) Push both sides of the DC cable connector from above and below and pull it out in the direction of the arrow.



6) Remove the 6 screws from the PA UNIT.

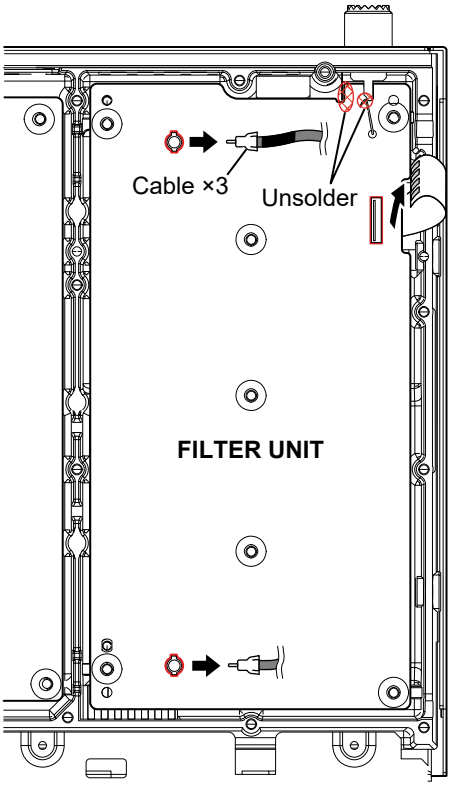


7) Remove the 2 rug springs and the 4 screws from the PA UNIT, then remove it.

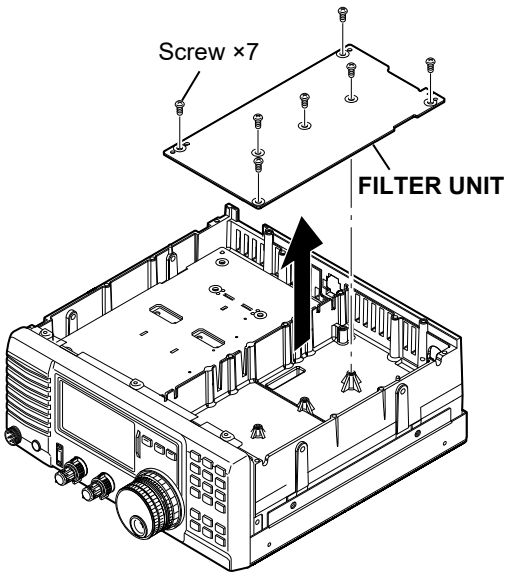


2. REMOVING THE FILTER UNIT

1) Remove the 3 cables from the FILTER UNIT.
2) Unsolder the 2 points at the antenna connector.

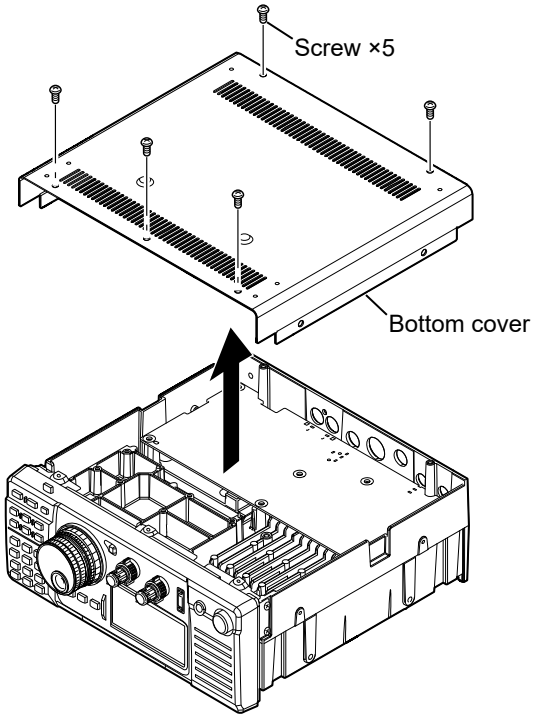


3) Remove the 7 screws from the FILTER UNIT, then remove it.

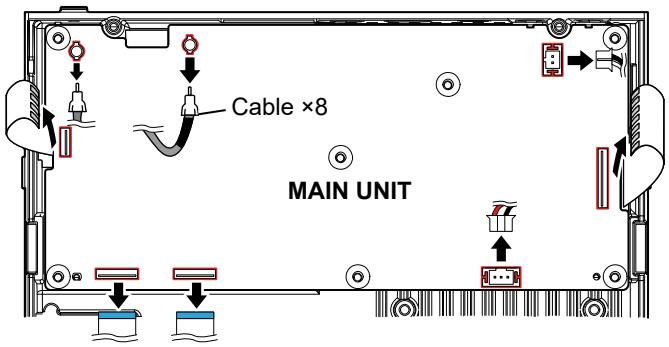


3. REMOVING THE MAIN UNIT

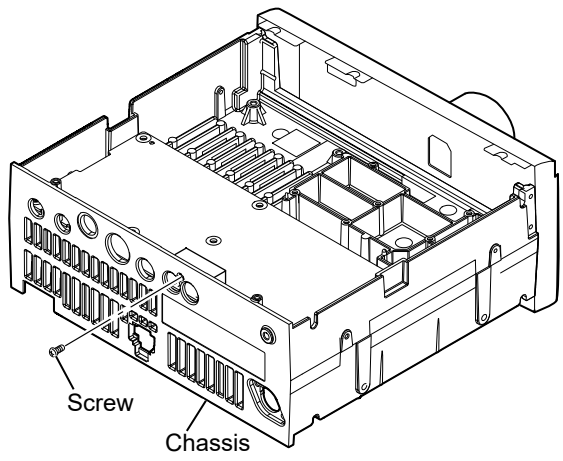
1) Remove the 5 screws from the bottom cover, then remove it



2) Remove the 8 cables from the MAIN UNIT.

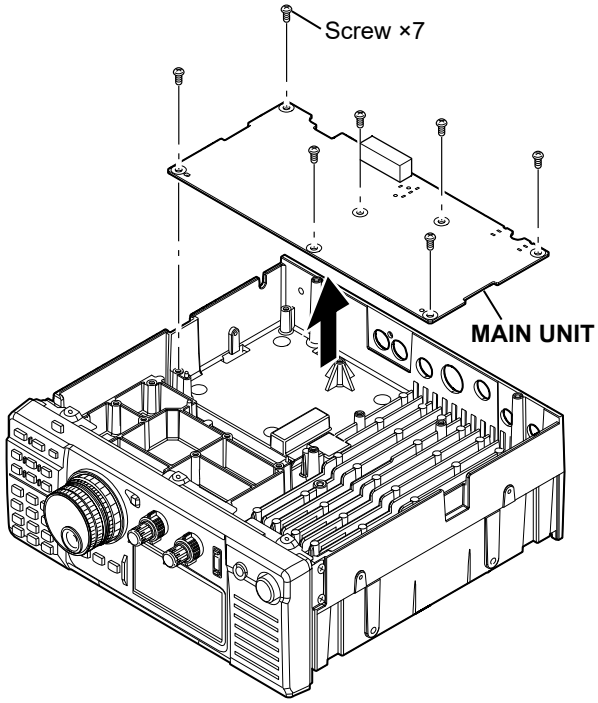


3) Remove the screw from the chassis.



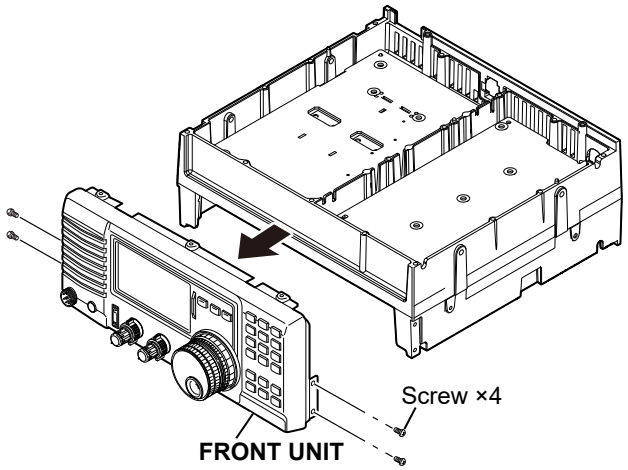
(Continued on the right above.)

4) Remove the 7 screws from the MAIN UNIT, then remove it.

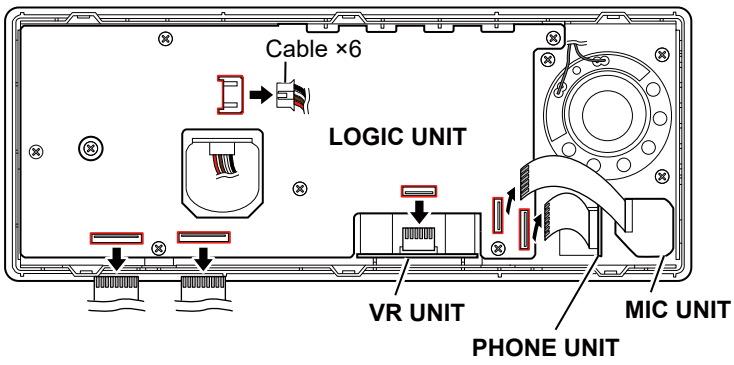


4. REMOVING THE LOGIC UNIT

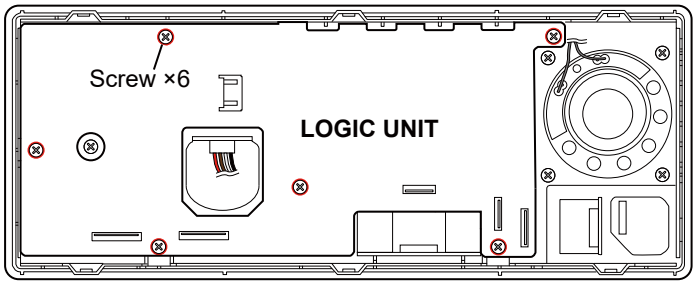
1) Remove the 4 screws from the FRONT UNIT, then remove it.



2) Remove the 6 cables from the LOGIC UNIT.

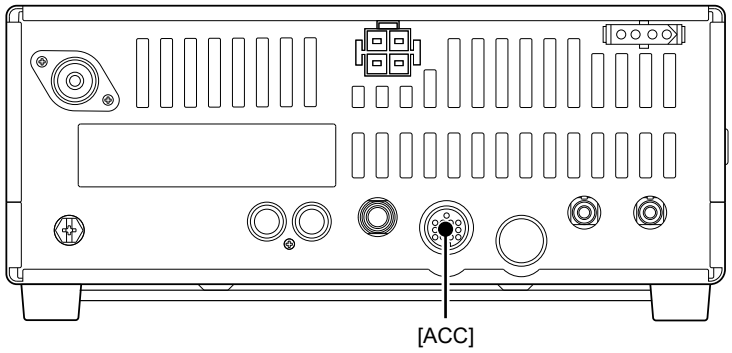


3) Remove the 6 screws from the LOGIC UNIT, then remove it.

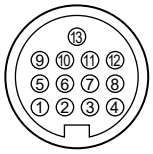


SECTION 4 INTERFACE INFORMATION

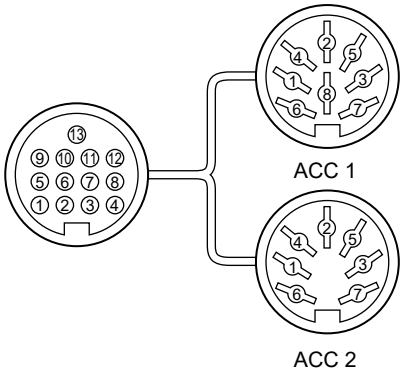
• REAR PANEL



[ACC]

ACC	Pin number	Pin name	Description	Specification
	1	8 V	Regulated 8 V output.	Output voltage: 8 V ±0.3 V Output current: 10 mA or less
	2	GND	Connects to ground.	–
	3	SEND	Input/output pin. Goes to ground when transmitting. When grounded, transmits.	Ground level: –0.5 ~ 0.8 V Input current: 20 mA or less
	4	BDT	Data line for the optional AT-180.	–
	5	BAND	Band voltage output. (Varies with amateur band)	Output voltage: 0 ~ 8.0 V
	6	ALC	ALC voltage input.	Control voltage: –4 ~ 0 V Input impedance: 10 kΩ or more
	7	NC	–	–
	8	13.8 V	13.8 V output when power is ON.	Output current: Maximum 1 A
	9	TKEY	Key line for the AT-180.	–
	10	FSKK	RTTY key input.	Ground level: –0.5 ~ 0.8 V Input current: 10 mA or less
	11	MOD	Modulation input.	Input impedance: 10 kΩ Input level: Approximately 100 mV rms
	12	AF	AF detector output. Fixed, regardless of [AF] position.	Output impedance: 4.7 kΩ Output level: 100 to 300 mV rms
	13	SQL S	Squelch output. Goes to ground when squelch opens	SQL open: 0.3 V or less/5 mA SQL closed: 6.0 V or more/100 µA

When connecting the ACC conversion cable (OPC-599)

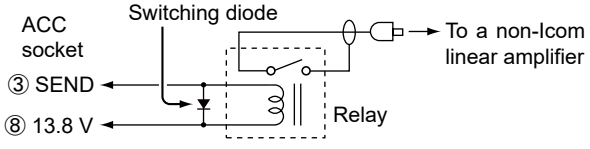


① FSKK
② GND
③ SEND
④ MOD
⑤ AF
⑥ SQL S
⑦ 13.8 V
⑧ ALC

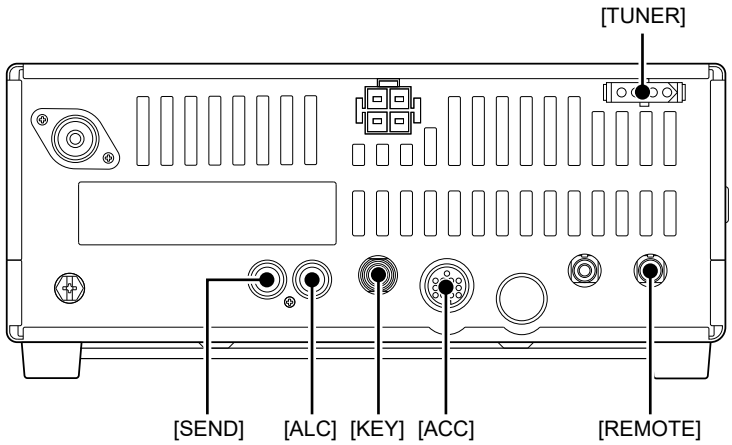
① 8 V
② GND
③ SEND
④ BAND
⑤ ALC
⑥ NC
⑦ 13.8 V

When the SEND terminal controls an inductive load (such as a relay), a counter-electromotive force can cause the transceiver to malfunction or other damage. To prevent this, we recommend adding a switching diode, such as an "1SS133," on the load side of the circuit to the counter-electromotive force absorption. When the diode is added, a switching delay of the relay may occur. Be sure to check its switching action before operation.

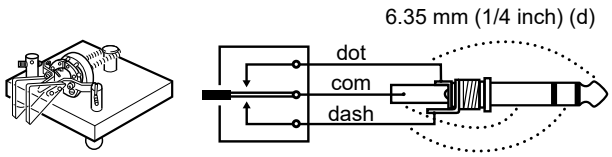
[Example]



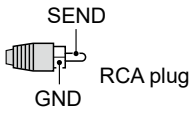
• REAR PANEL (CONTINUED)



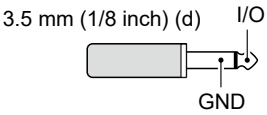
[KEY]



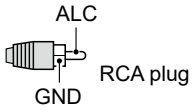
[SEND]



[REMOTE]

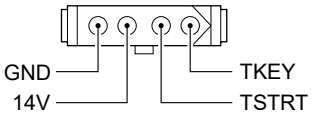


[ALC]



• ALC voltage: –4 ~ 0 V

[TUNER]



Connect the control cable to an optional AH-730 or AH-740 automatic antenna tuner.

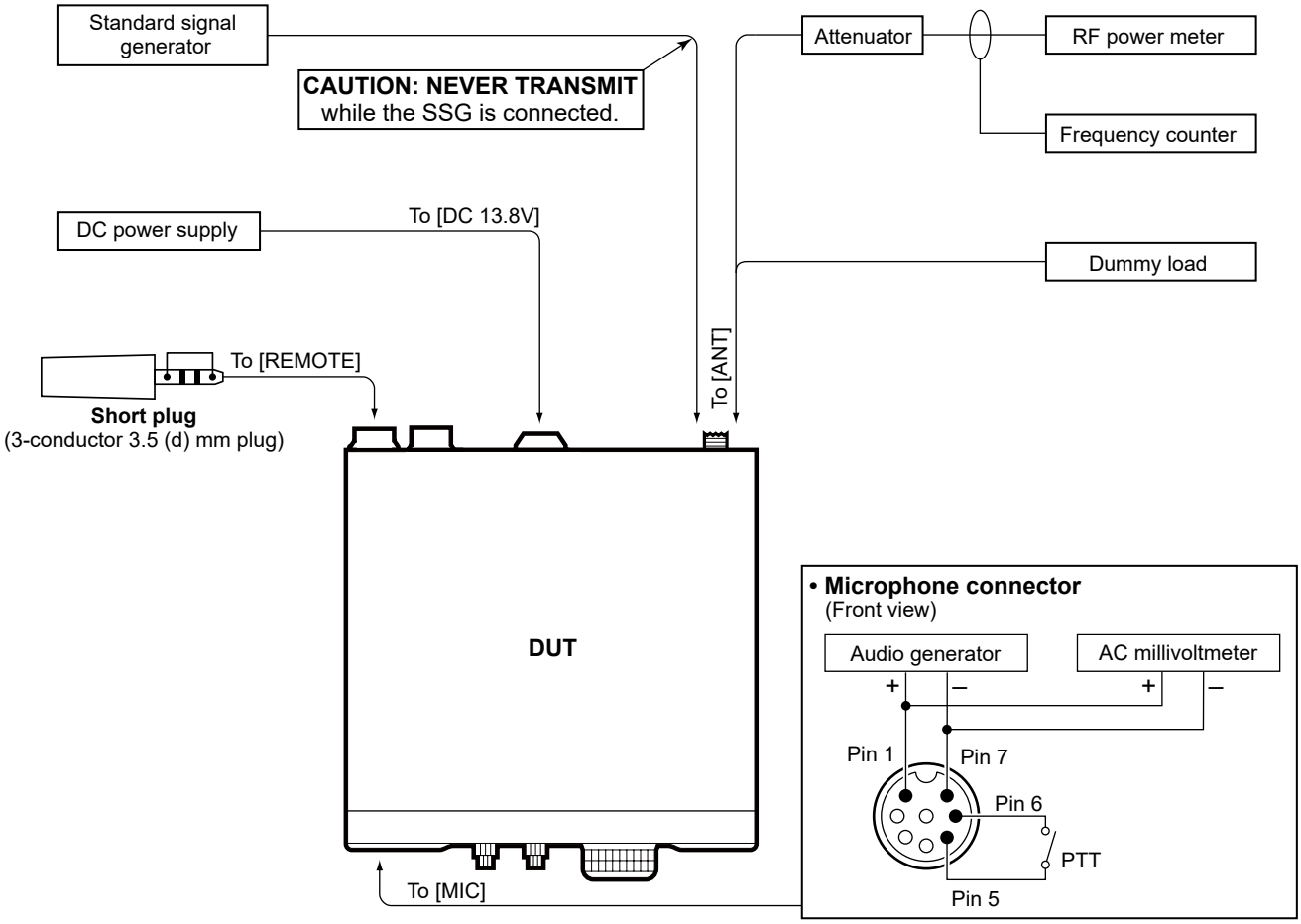
SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

■ REQUIRED EQUIPMENT

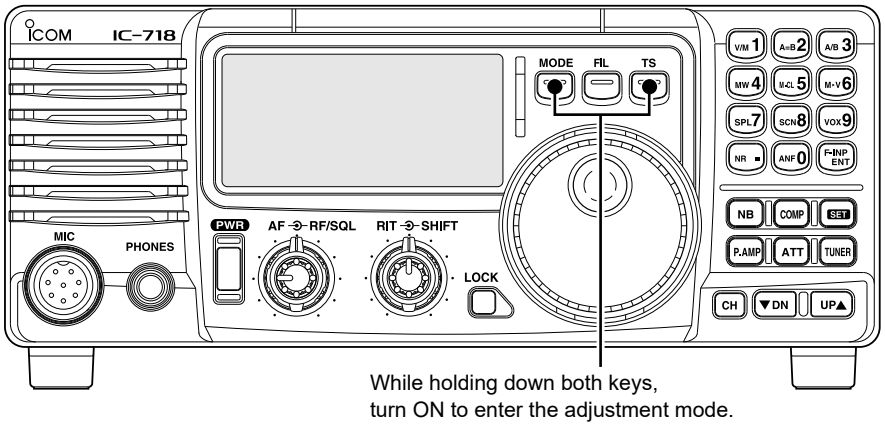
EQUIPMENT	GRADE AND RANGE		EQUIPMENT	GRADE AND RANGE	
DC power supply	Output voltage: Rated output current:	Up to 13.8 V 20 A or more	Frequency counter	Range: Measuring accuracy:	Up to 100 MHz ±0.5 ppm or better
RF power meter (50 Ω terminated)	Measuring range: Frequency range:	1 ~ 125 W 1.8 ~ 30 MHz	Audio generator	Frequency range: Output level:	Up to 3000 Hz 1 ~ 500 mV
Dummy load	Impedance: Rated input power: SWR:	100 Ω 150 W or more 2.0 : 1	Standard signal generator (SSG)	Frequency range: Output level:	Up to 100 MHz –20 dBμV ~ 90 dBμV (–127 ~ –17 dBm)
AC millivoltmeter	Measuring range:	10 mV to 10 V	Attenuator	Power attenuation: Rated input power:	50 dB 150 W or more
Short plug	See the illustration below.				

■ CONNECTIONS



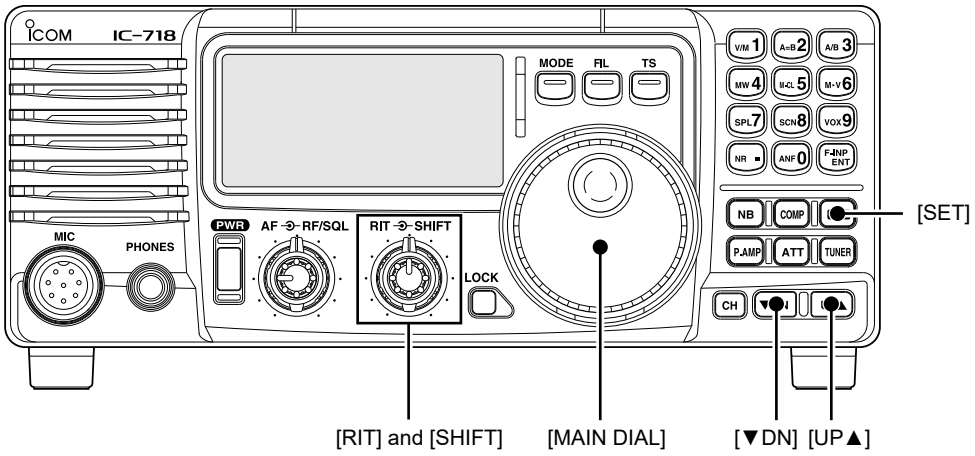
■ ENTERING THE ADJUSTMENT MODE

1. Connect the DC power supply to [DC 13.8V].
2. Connect the short plug to the [REMOTE].
3. While holding down both [MODE] and [TS], turn ON to enter the adjustment mode.

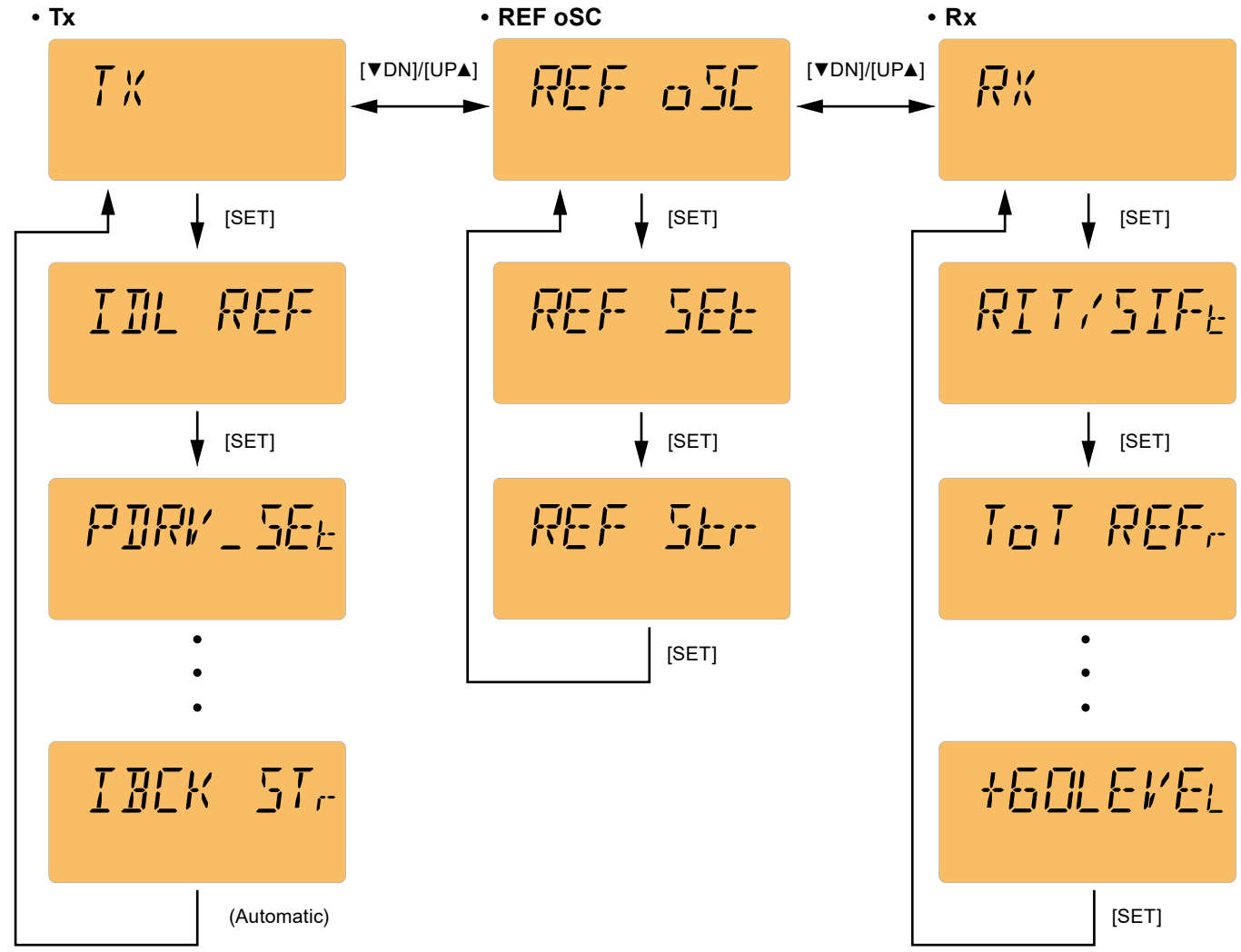


■ KEY ASSIGNMENTS FOR THE ADJUSTMENT MODE

1. Push [▼DN] to select the previous adjustment item, push [UP▲] to select the next adjustment item.
   • A short beep sounds when [▼DN] or [UP▲] is pushed.
2. Rotate [MAIN DIAL] to set or modify the adjustment value.
3. Push [SET] to start automatic adjustment, or store the adjusted value, and select the next adjustment item.
   • A short beep sounds when [SET] is pushed.



■ ADJUSTMENT MODE SCREEN



■ QUITTING THE ADJUSTMENT MODE

1. Turn OFF the IC-718 power, and then remove the Short plug from [REMOTE].
2. Turn ON the IC-718 power.

5-2 TRANSMIT ADJUSTMENTS

Select [Tx] and push [SET] to enter the transmit adjustment menu.

ADJUSTMENT		ADJUSTMENT ITEM DISPLAY	SETTING CONDITION	OPERATION
IDLING	1	IDL REF	• Connect the RF power meter to [ANT].	• Push [SET] to start automatic adjustment. • When the automatic adjustment is finished, the next adjustment item is selected.
PRE-DRIVER IDLING CURRENT	2	PDRV_SEt		• Push [SET] to select the next adjustment item.
	3	PDRV IId		• Push [SET] to start automatic adjustment. • "PId1_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
DRIVER IDLING CURRENT	4	DRV SEt		• Push [SET] to select the next adjustment item.
	5	DRV 1 Id		• Push [SET] to start automatic adjustment. • "DId1_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
	6	DRV2 Id		• Push [SET] to start automatic adjustment. • "DId2_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
FINAL AMP IDLING CURRENT	7	FDRV SEt		• Push [SET] to select the next adjustment item.
	8	FDRV 1 Id		• Push [SET] to start automatic adjustment. • "FId1_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
	9	FDRV2 Id		• Push [SET]. • "FId2_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
ID-APC	10	ID APC	• Connect the RF power meter to [ANT]. • Connect the audio generator with the AC millivoltmeter to [MIC], and set it to: Frequency: 1.0 kHz Waveform: Sine wave Level: 30 mV rms	• Push [SET] to select the next adjustment item.
	11	ID SEt		
VD-APC	12	VD STr	• Connect the RF power meter to [ANT]. • Set the DC power supply voltage to 11.3 V.	• Push [SET] to select the next adjustment item.
	13	VD 7SP	• Set the DC power supply voltage to 10.5 V.	

Continued on the next page...

5-2 TRANSMIT ADJUSTMENTS (CONTINUED)

ADJUSTMENT		ADJUSTMENT ITEM DISPLAY	SETTING CONDITION	OPERATION
SWR-APC	14	SWR APC	• Connect the RF power meter to [ANT].	• Push [SET] to select the next adjustment item.
TX OUTPUT POWER (50 W)	15	Po SEt	• Connect the RF power meter to [ANT]. • Connect the audio generator with the AC millivoltmeter to [MIC], and set it to: Frequency: 1.0 kHz Waveform: Sine wave Level: 30 mV rms	• Push [SET] to select the next adjustment item.
	16	ToT SEt		• Rotate [MAIN DIAL] to set to 50 W (within ±2 W), and then push [SET] to select the next adjustment item.
(2 W)	17	Po 2W		• Rotate [MAIN DIAL] to set to 2 W (within ±0.2 W), and then push [SET] to select the next adjustment item.
(10 W)	18	Po 10W		• Rotate [MAIN DIAL] to set to 10 W (within ±1 W), and then push [SET] to select the next adjustment item.
(50 W)	19	Po 50W		• Rotate [MAIN DIAL] to set to 50 W (within ±1 W), and then push [SET] to select the next adjustment item.
(105 W)	20	Po 105W		• Rotate [MAIN DIAL] to set to 105 W (within ±1 W), and then push [SET] to select the next adjustment item.
AM POCV Ratio	21	AMRATIo	• Connect the RF power meter to [ANT]. • Connect the audio generator with the AC millivoltmeter to [MIC], and set it to: Frequency: 1.0 kHz Waveform: Sine wave Level: 30 mV rms	• Push [SET] to select the next adjustment item.
	22	AMR SET		• Rotate [MAIN DIAL] to set to 35 W (within ±1 W), and then push [SET] to select the next adjustment item.
POWER BALANCE (1.8 MHz)	23	PoB SEt	• Connect the RF power meter to [ANT].	• Push [SET] to select the next adjustment item.
	24	Po 1R8M		• Rotate [MAIN DIAL] to set to 105 W (within ±1 W), and then push [SET] to select the next adjustment item.
(3.5 MHz)	25	Po 3R5M		
(28.6 MHz)	26	Po 28M		
ALC	27	AL--M SEt	• Connect the RF power meter to [ANT]. • Connect the audio generator with the AC millivoltmeter to [MIC], and set it to: Frequency: 1.0 kHz Waveform: Sine wave Level: 30 mV rms	• Push [SET] to start automatic adjustment. • "AL-M_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
DRIVE GAIN	28	DRIVE HF	• Connect the RF power meter to [ANT]. • Connect the audio generator with the AC millivoltmeter to [MIC], and set it to: Frequency: 1.0 kHz Waveform: Sine wave Level: 30 mV rms	• Push [SET] to start automatic adjustment. • When the automatic adjustment is finished, the next adjustment item is selected.

Continued on the next page...

5-2 TRANSMIT ADJUSTMENTS (CONTINUED)

ADJUSTMENT		ADJUSTMENT ITEM DISPLAY	SETTING CONDITION	OPERATION
SWR2	29	SWR2 SEt	• Connect the dummy load to [ANT].	• Push [SET] to start automatic adjustment. • When the automatic adjustment is finished, the next adjustment item is selected.
ID-APC	30	IDCK SEt	• Connect the RF power meter to [ANT].	• Push [SET] to start automatic check. • "IDCK_STr" is displayed while checking. • When the automatic check is finished, return to the adjustment main menu.

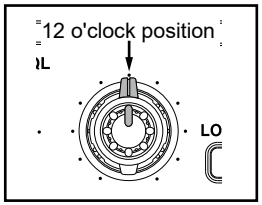
5-3 REFERENCE FREQUENCY ADJUSTMENTS

Select [REF oSC] and push [SET] to enter the reference frequency adjustment menu.

ADJUSTMENT		ADJUSTMENT ITEM DISPLAY	SETTING CONDITION	OPERATION
REFERENCE FREQUENCY	1	REF SEt	• Connect the RF power meter to [ANT]. • Loosely couple the frequency counter to [ANT].	• Push [SET] to select the next adjustment item.
	2	REF Str		• Rotate [MAIN DIAL] to 29.700000 MHz (Within ±5 Hz), and then push [SET]. • Returns to the adjustment main menu.

5-4 RECEIVE ADJUSTMENTS

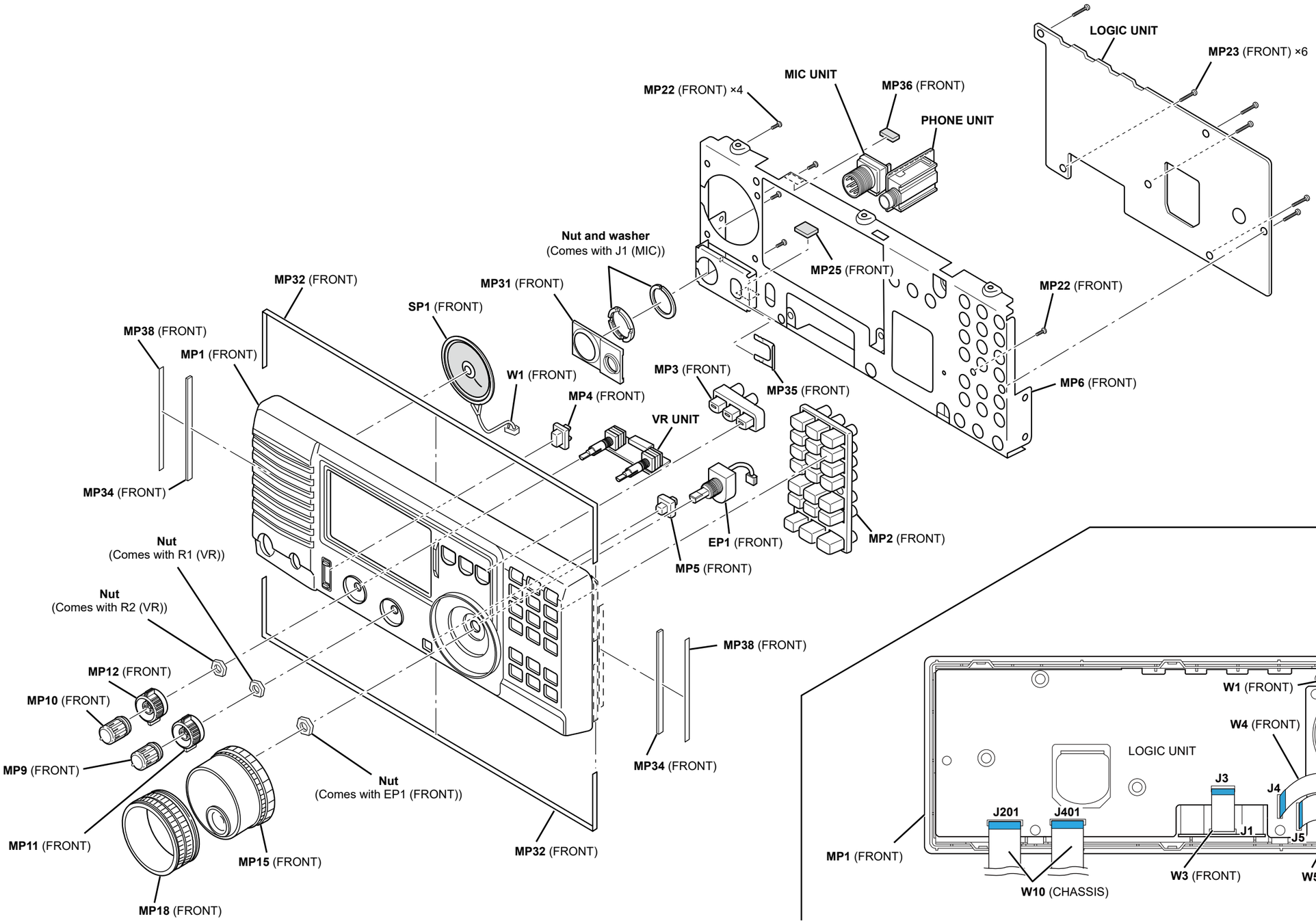
Select [Rx] and push [SET] to enter the receive adjustment menu.

ADJUSTMENT		ADJUSTMENT ITEM DISPLAY	SETTING CONDITION	OPERATION
VOLUME CENTER POSITION ADJUSTMENT	1	RIT/SIFt	–	• Rotate [RIT] and [SHIFT] to the center (12 o'clock) position.  • Push [SET] to select the next adjustment item.
RECEIVE SENSITIVITY (PRE OFF REF)	2	ToT REFr	• Connect the SSG to [ANT], and set it to: Frequency: 14.1515 MHz Level: 60 dBµ (PD) (–47 dBm)	• Push [SET] to start automatic adjustment. • When the automatic adjustment is finished, the next adjustment item is selected.
(PRE OFF SET)	3	ToT SETr	• Set the SSG to: Level: OFF	• Push [SET] to start automatic adjustment. • "TOTr_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
(PRE ON REF)	4	ToT REFP	• Set the SSG to: Level: 60 dBµ (PD) (–47 dBm)	• Push [SET] to start automatic adjustment. • When the automatic adjustment is finished, the next adjustment item is selected.
(PRE ON SET)	5	ToT SETp	• Set the SSG to: Level: OFF	• Push [SET] to start automatic adjustment. • "TOTp_STr" is displayed while adjusting. • When the automatic adjustment is finished, the next adjustment item is selected.
S-METER (S0 LEVEL)	6	S0 LEVEL	• Connect the SSG to [ANT], and set it to: Frequency: 14.1515 MHz Level: 4 dBµ (PD) (–103 dBm)	• Push [SET] to start automatic adjustment. • When the automatic adjustment is finished, return to the adjustment main menu.
(S9 LEVEL)	7	S9 LEVEL	• Set the SSG to: Level: 34 dBµ (PD) (–73 dBm)	
(S9+60 LEVEL)	8	+60LEVEL	• Set the SSG to: Level: 94 dBµ (PD) (–13 dBm)	

SECTION 6 SPARE PARTS AND UNITS

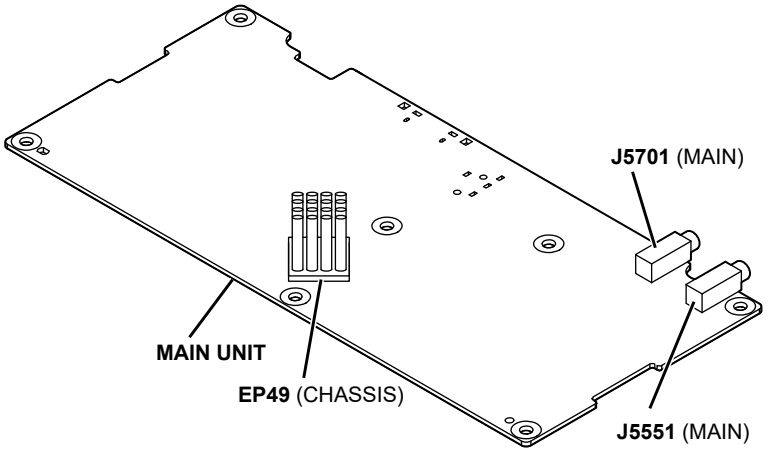
■ASSEMBLED FRONT UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #83 FRONT	0344878301	All	–



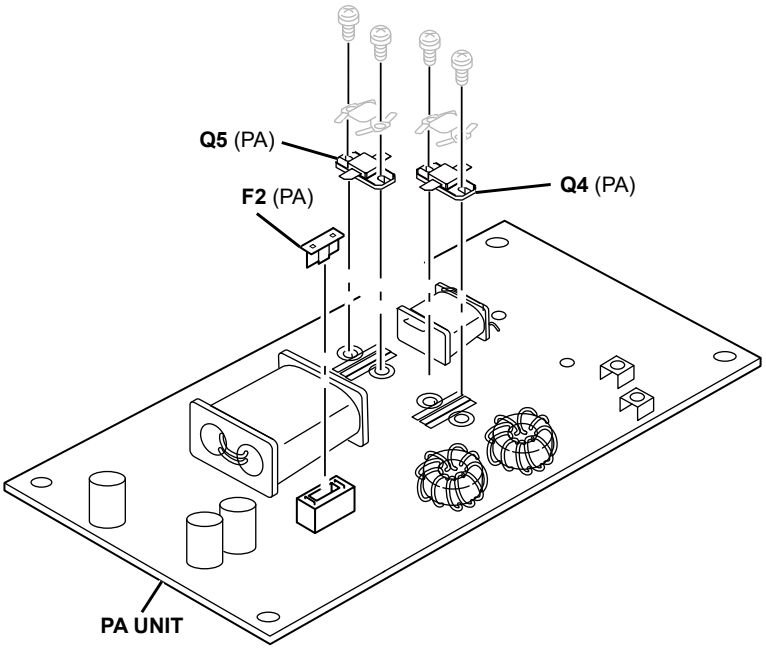
■ ASSEMBLED MAIN UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #83 MAIN	0344878302	All	–



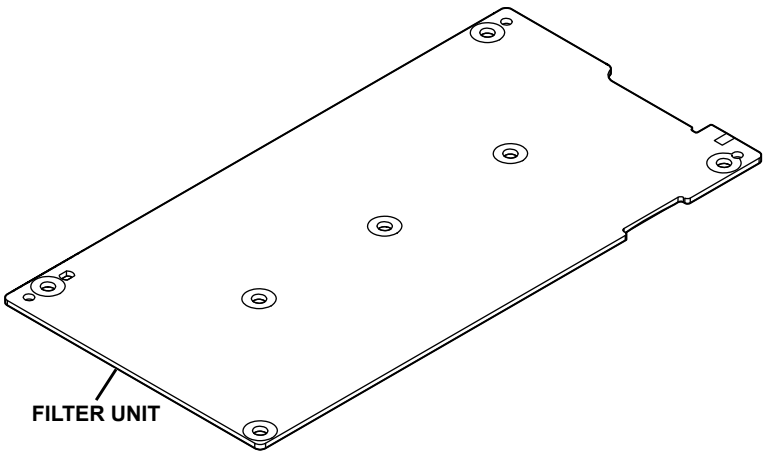
■ ASSEMBLED PA UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #83 PA	0344878303	All	–



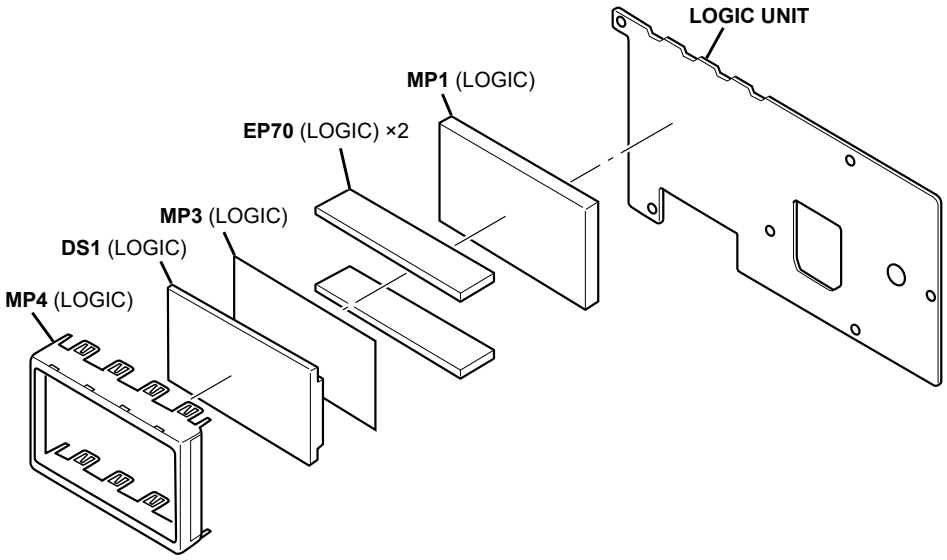
■ ASSEMBLED FILTER UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #83 FILTER	0344878304	All	–



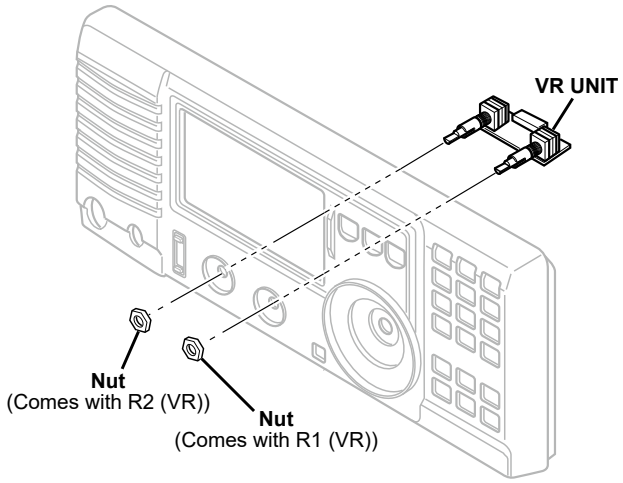
■ ASSEMBLED LOGIC UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #83 LOGIC	0344878305	All	–



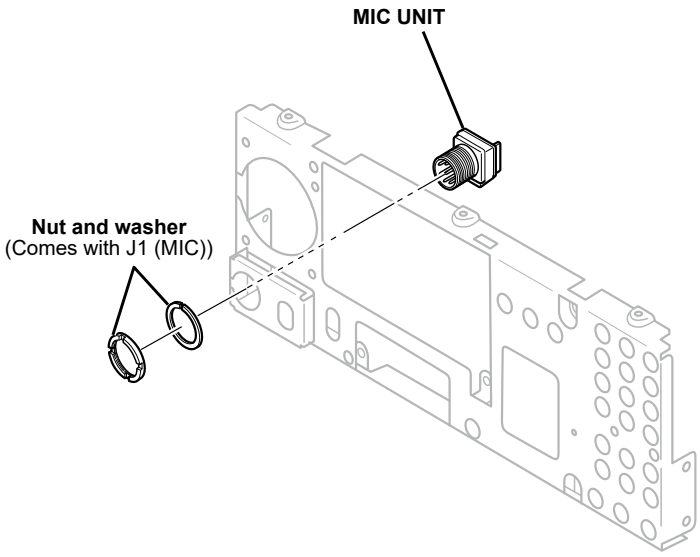
■ ASSEMBLED VR UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 VR	0344878206	All	–



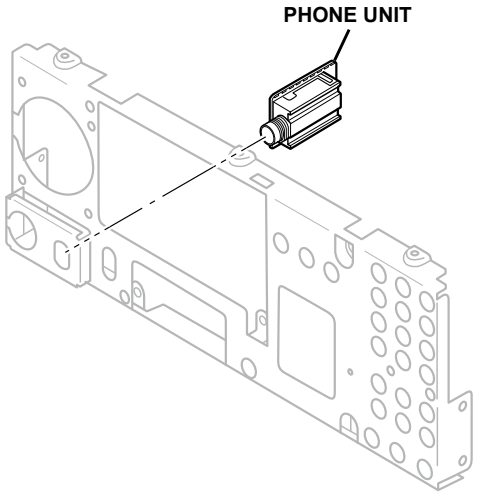
■ ASSEMBLED MIC UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 MIC	0344878207	All	–



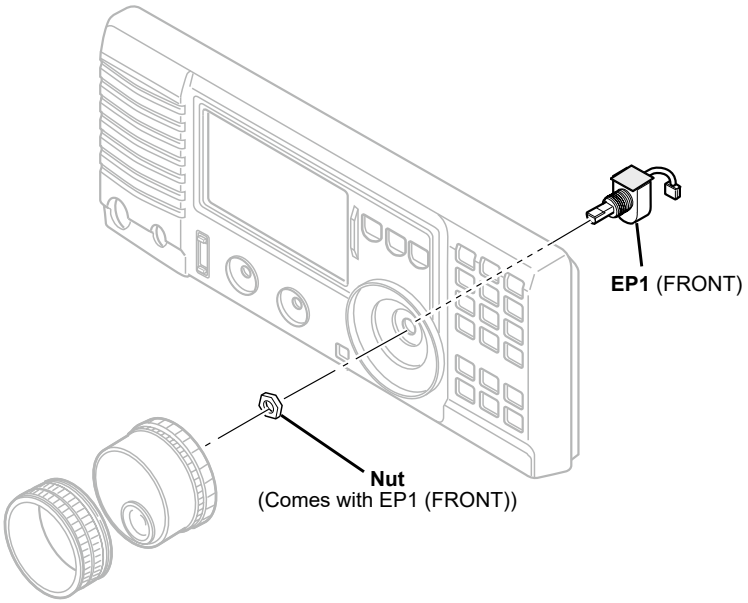
■ ASSEMBLED PHONE UNIT

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 PHONE	0344878208	All	–



■ ASSEMBLED SENSOR

Spare unit name	Order number	Applicable versions	Remarks
C 718 #82 SENSOR	0344878209	All	–



■SPARE PARTS INFORMATION

• For the front assembly

	Reference Number	Parts name	Order number	Applicable versions	Remarks
CABLE	W10	FFC-1025 (P0.5N30L120)	8910000230	All	Quantity: 2*
COVER	MP1	2241 L-COVER-5	8110007055		–
COVER	MP2	2241 U-COVER-7	8110007067		–
RUBBER	MP6	RUBBER LEG (A)	8930002900		Quantity: 2*
STAND	MP7	STAND (C)	8010001520		–
LEG	MP8	LEG (A)	8930005790		–
LEG	MP9	LEG (B)	8930005800		–
SCREW	MP12	FLAT BT M3 × 8 NI-ZC3	8810009651		Quantity: 4*
SCREW	MP18	PHBT M3 × 8 NI-ZC3	8810008661		Quantity: 4*
SCREW	MP22	BIND M3 × 8 ZK3 BLACK	8810005771		Quantity: 14*
SHEET	MP26	2241 SHEET	8930052550		Quantity: 2*
SCREW	MP28	PHBT M3 × 12 NI-ZC3	8810009131		Quantity: 2*
SHEET	MP31	NONWOVEN SHEET B	8930007120		Quantity: 2*
SPONGE	MP44	SPONGE (SA)	8930108230		–
SPONGE	MP45	SPONGE (NK)	8930093100		–

*When you order a quantity of 1, you will receive one item.

• For the LOGIC UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
J3	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	B	51.3/20.0
J4	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	B	23.6/16.0
J5	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	B	14.7/10.0
DS1	5030002490	LCD A0087A LCD83.5*45.5.1T LCD	T	54.0/55.9
EP70	8930051450	LCD SRCN-2241-SP-N-W (SHJ)		
MP1	8210016610	PAN 2241 REFLECTOR		
MP3	8930051090	SCR 2241 LCD FILTER		
MP4	8930072671	RUB 2241 LCD RUBBER-1 (TOP)		

• For the VR UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
R1	7210003040	VAR TP96D26-22F-10KBX2-2240	T	4.8/10.5
R2	7210003030	VAR TP96D00-22F-10KBX2-2240	T	35.8/10.5
J1	6510022051	S.CON 10FM-1.0SP-1.9-TF (LF) (SN)	T	20.3/2.9

• For the MIC UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510000191	CON FM214-8SS(P)-1	B	8.5/12.5
J2	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	T	18.2/7.5

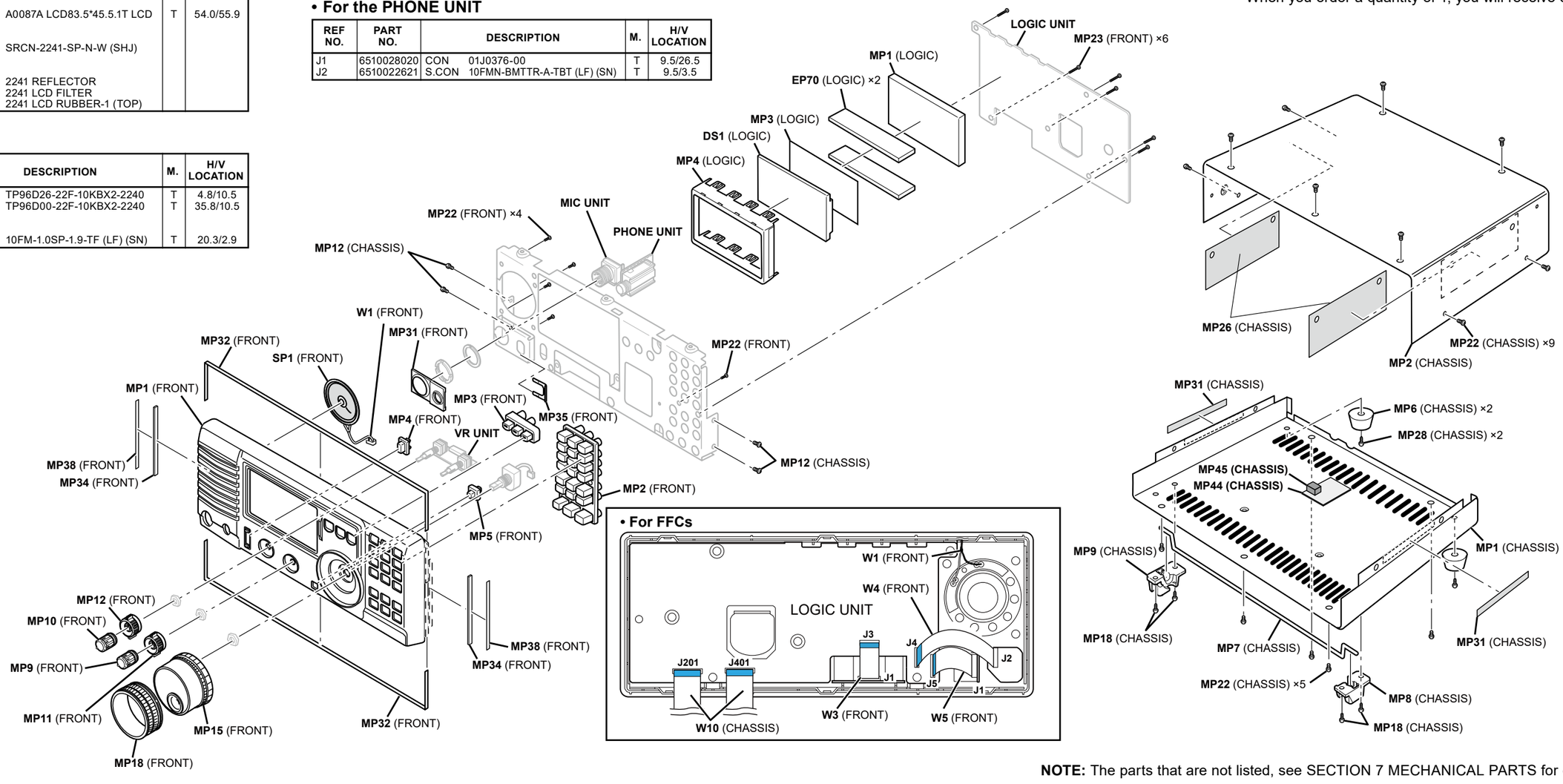
• For the PHONE UNIT

REF NO.	PART NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510028020	CON 01J0376-00	T	9.5/26.5
J2	6510022621	S.CON 10FMN-BMTTR-A-TBT (LF) (SN)	T	9.5/3.5

• For the FRONT UNIT

	Reference Number	Parts name	Order number	Applicable versions	Remarks
SPEAKER	SP1	VS-C50-0827	2510000671	All	–
CABLE	W1	SX2242 SHIELD-1 (1)/FR	8970023641		–
CABLE	W3	OPC-885A (P1N10L39)	8900014740		–
CABLE	W4	OPC-885A (P1N10L39)	8900014740		–
CABLE	W5	OPC-683A (P1N10L110)	8900014730		–
PANEL	MP1	2241 FRONT PANEL (A) ASSEMBLY-3	8210024121		–
KEY	MP2	2241 21-KEY (A) (SC)	8930051400		–
KEY	MP3	2241 3-KEY (SC)	8930050930		–
KEY	MP4	2241 POWER KEY (SC)	8930050960		–
KEY	MP5	2241 LOCK KEY (SC)	8930050950		–
KNOB	MP9	KNOB N261	8610010420		–
KNOB	MP10	KNOB N261	8610010420		–
KNOB	MP11	KNOB N272	8610010710		–
KNOB	MP12	KNOB N272	8610010710		–
KNOB	MP15	KNOB N-283A ASSEMBLY-1	8610014311		–
KNOB	MP18	KNOB N-213 COVER-1 (TOP)	8610009171		–
SCREW	MP22	PHBT M3 × 8 NI-ZC3	8810008661		Quantity: 5*
SHEET	MP23	PHBT M3 × 12 NI-ZC3	8810009131		Quantity: 6*
RUBBER	MP31	2242 JACK RUBBER (TOP)	8930071480		–
SPONGE	MP32	2242 F-SPONGE	8930071490		Quantity: 2*
SHEET	MP34	INSULATION SHEET (LW)	8930072980		Quantity: 2*
PLATE	MP35	1768 SNAP PLATE	8930091070		–
SHEET	MP38	HIMELON SHEET (CT)	8930071840		Quantity: 2*

*When you order a quantity of 1, you will receive one item.



NOTE: The parts that are not listed, see SECTION 7 MECHANICAL PARTS for details.

■SPARE PARTS INFORMATION (CONTINUED)

• For the chassis assembly

	Reference Number	Parts name	Order number	Remarks
CONNECTOR	J1	MR-DS-01-2	6510028411	–
FAN	MF1	SB0812H-ICOM-00	2710000520	–
CABLE	W11	OPC-927A (P1N24L100)	8900017140	–
CABLE	W12	OPC-909A (P1N10L110)	8900014720	–
CABLE	W15	SX2241 1.5D COAXIAL A-1 (1) CH	8970023671	–
CABLE	W17	SX2241 1.5D COAXIAL A-1 (1) CH	8970023671	–
CABLE	W19	SX2241 1.5D COAXIAL C-1 (1) CH	8970023691	–
PLUG	EP1	DOMED PLUG DP-500	8930021010	–
HEAT SINK	EP49	CMBA0210101404-00	6910026021	–
PLATE	MP4	1691 EARTH PLATE-1	8930037001	–
SCREW	MP13	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 2*
SCREW	MP14	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 4*
SCREW	MP15	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 7*
SCREW	MP16	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 7*
SCREW	MP19	PHBT M3 × 8 NI-ZC3	8810008661	–
SCREW	MP20	SET SCREW H M3 × 8 ZC3	8810007231	Quantity: 4*
BOLT	MP21	CAPBOLT M4 × 8 ZK3	8820000551	Quantity: 4*
BOLT	MP23	FLANGE BOLT M4 × 8 NI	8820000530	–
WASHER	MP24	FLAT WASHER M4 NI BS	8850000140	Quantity: 2*
WASHER	MP25	S-WASHER M4 NI	8850000430	–
SCREW	MP27	SET SCREW C M3 × 10 ZC3	8810003381	Quantity: 2*
SCREW	MP38	PHBT M3 × 8 NI-ZC3	8810008661	Quantity: 5*
PLATE	MP41	3073 DC PLATE	8930079060	–

*When you order a quantity of 1, you will receive one item.

• For the PA UNIT

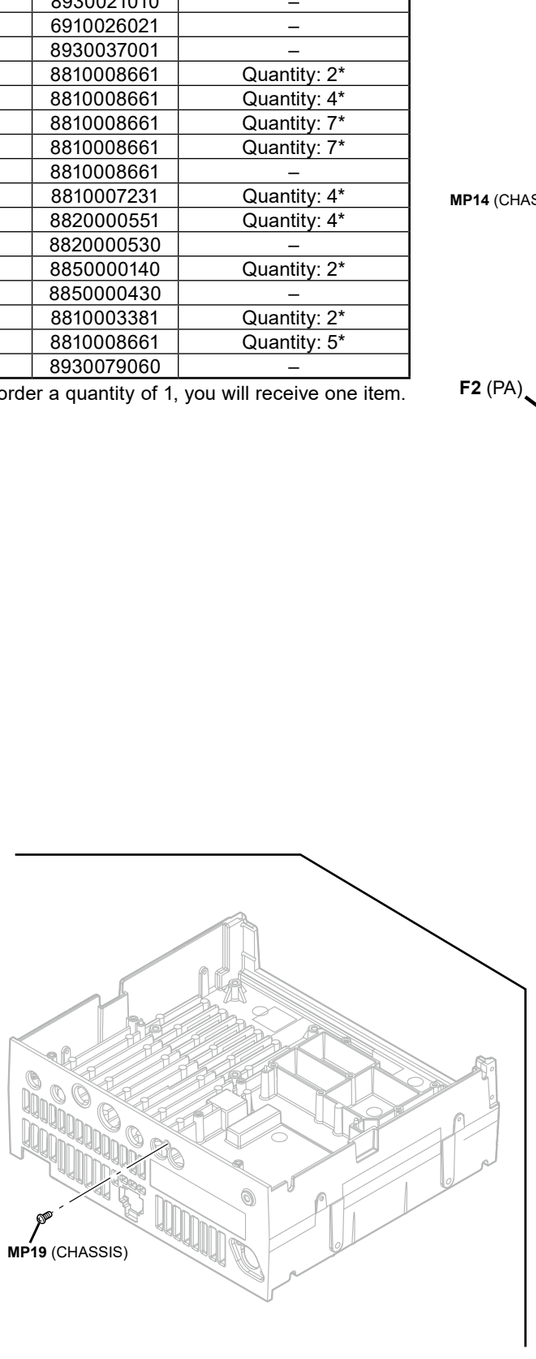
REF NO.	PART NO.	DESCRIPTION		M.	H/V LOCATION
Q1	1560002420	S.FET	RD01MUS2B-T513	T	162.1/60.0
Q3	1560003000	S.FET	RD06HHS2-T612	T	140.0/69.2
Q4	1560002550	FET	RD100HHF1C-503	T	94.0/42.8
Q5	1560002550	FET	RD100HHF1C-503	T	94.0/84.9
Q8	1560003000	S.FET	RD06HHS2-T612	T	140.0/49.5
F2	5210001430	FUS	11930011 (BFLP 5A 58V)		
W21	8900019321	CAB	OPC-2034-1		
W22	8920003240	C_C	CAB-1390		
MP4	8930075440	SPR	3015 RUG SPRING		
MP101	8810007231	SCR	SET SCREW H M3 × 8 ZC3		

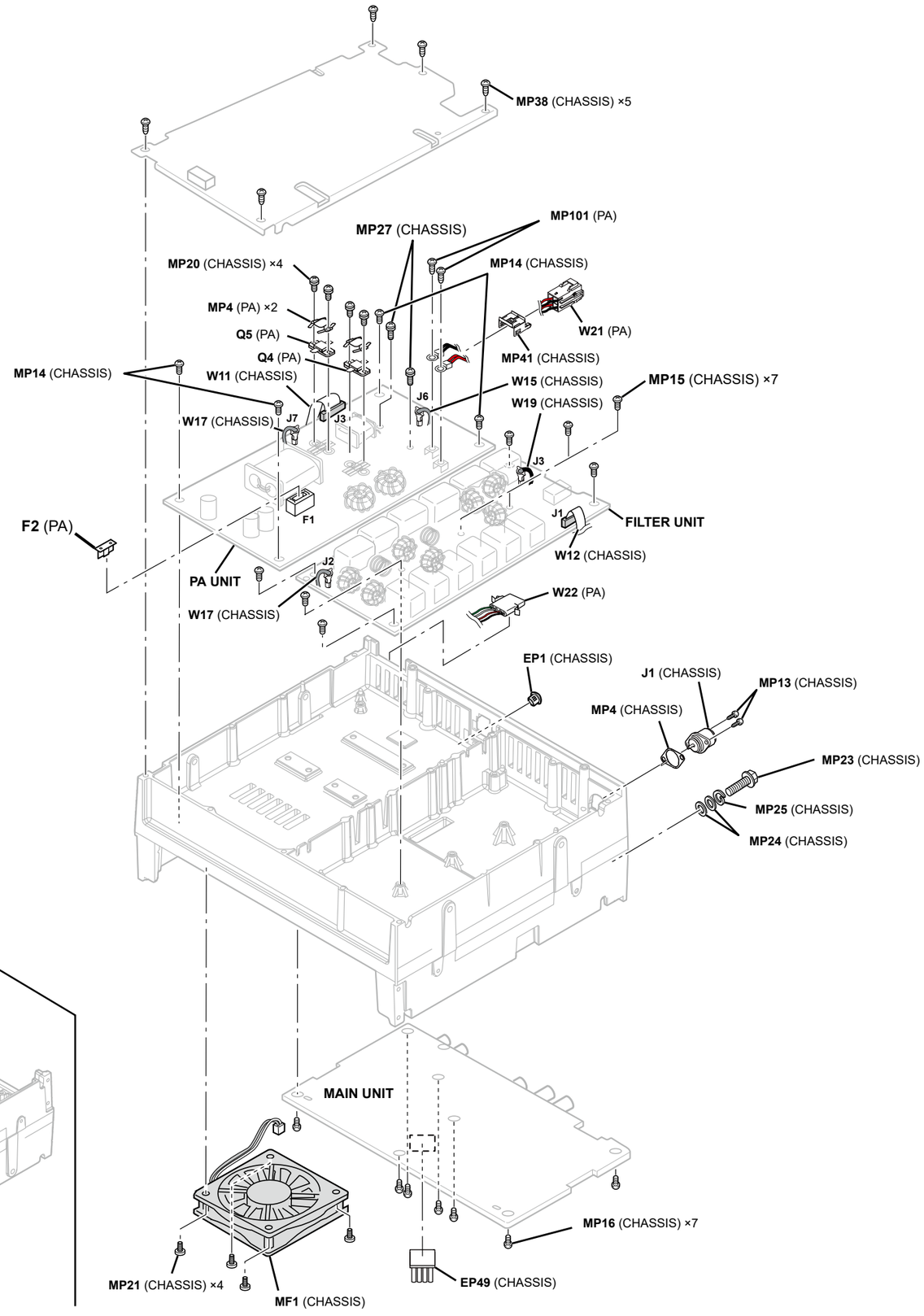
• For the FILTER UNIT

REF NO.	PART NO.	DESCRIPTION		M.	H/V LOCATION
D4	1750002230	S.DIO	LRB751S-40T1G	T	155.6/22.9
D5	1750002230	S.DIO	LRB751S-40T1G	T	158.4/23.0
J1	6510022621	S.CON	10FMN-BMTTR-A-TBT (LF) (SN)	T	146.0/10.1

• For the MAIN UNIT

REF NO.	PART NO.	DESCRIPTION		M.	H/V LOCATION
IC3451	1110009200	S.IC	TA7368PG-R10-R	T	161.8/66.1
IC3601	1110006570	S.IC	TS462CPT	T	141.6/4.4
Q900	1530004560	S.TRA	2SC3356G-B-AE2-R	T	32.5/40.5
J5001	6510022621	S.CON	10FMN-BMTTR-A-TBT (LF) (SN)	T	9.5/56.5
J5551	6450002470	CON	JY-3510A1-130	T	205.0/94.5
J5601	6450002520	CON	RL-1515-2(B.B)-L	T	84.5/97.3
J5701	6450002470	CON	JY-3510A1-130	T	183.0/94.5





NOTE: The parts that are not listed, see SECTION 7 MECHANICAL PARTS for details.

SECTION 7 MECHANICAL PARTS

[CHASSIS UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1	6510028411	MR-DS-01-2	1
MF1	2710000520	SB0812H-ICOM-00	1
W10**	8910000230	FFC-1025 (P0.5N30L120)	2
W11**	8900017140	OPC-927A (P1N24L100)	1
W12**	8900014720	OPC-909A (P1N10L110)	1
W15**	8970023671	SX2241 1.5D COAXIAL A-1 (1) CH	1
W17**	8970023671	SX2241 1.5D COAXIAL A-1 (1) CH	1
W19**	8970023691	SX2241 1.5D COAXIAL C-1 (1) CH	1
EP1	8930021010	DOMED PLUG DP-500	1
EP49**	6910026021	CMBA0210101404-00	1
MP1	8110007055	2241 L-COVER-5	1
MP2	8110007067	2241 U-COVER-7	1
MP3	8010026790	4486 CHASSIS	1
MP4	8930037001	1691 EARTH PLATE-1	1
MP6	8930002900	RUBBER LEG (A)	2
MP7	8010001520	STAND (C)	1
MP8	8930005790	LEG (A)	1
MP9	8930005800	LEG (B)	1
MP12	8810009651	FLAT BT M3 × 8 NI-ZC3	4
MP13	8810008661	PHBT M3 × 8 NI-ZC3	2
MP14	8810008661	PHBT M3 × 8 NI-ZC3	4
MP15	8810008661	PHBT M3 × 8 NI-ZC3	7
MP16	8810008661	PHBT M3 × 8 NI-ZC3	7
MP18	8810008661	PHBT M3 × 8 NI-ZC3	4
MP19	8810008661	PHBT M3 × 8 NI-ZC3	1
MP20	8810007231	SET SCREW H M3 × 8 ZC3	4
MP21	8820000551	CAPBOLT M4 × 8 ZK3	4
MP22	8810005771	BIND M3 × 8 ZK3 BLACK	14
MP23	8820000530	FLANGE BOLT M4 × 8 NI	1
MP24	8850000140	FLAT WASHER M4 NI BS	2
MP25	8850000430	S-WASHER M4 NI	1
MP26	8930052550	2241 SHEET	2
MP27	8810003381	SET SCREW C M3 × 10 ZC3	2
MP28	8810009131	PHBT M3 × 12 NI-ZC3	2
MP31	8930007120	NONWOVEN SHEET B	2
MP37	8930113600	SPONGE (TC)	2
MP38	8810008661	PHBT M3 × 8 NI-ZC3	5
MP40	8510013472	2241 PA COVER-2	1
MP41	8930079060	3073 DC PLATE	1
MP44	8930108230	SPONGE (SA)	1
MP45	8930093100	SPONGE (NK)	1
MP46	8930058171	SHIELD SPONGE (O)-1	1
MP47	8930092980	THERMAL SHEET (CX) TC500CAT	1
MP48	8930091000	THERMAL SHEET (CP) TC150CAT	1
MP49	8930076951	THERMAL SHEET (BP)-1 TC800CAS	4
MP50	8930099110	SPONGE (PO)	1

[MAIN UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510028210	SJ050010 (TMP-J01X-V6)	1
J701*	6510028210	SJ050010 (TMP-J01X-V6)	1
J5001*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J5101*	6510022581	24FMN-BMTTR-A-TBT (LF) (SN)	1
J5201*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J5401*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J5501*	6510031660	LGR4609-7100F	1
J5551*	6450002470	JY-3510A*01-130	1
J5601*	6450002520	RL-1515-2 (B.B)-L	1
J5651*	6510024661	TCS5072-1041577	1
J5701*	6450002470	JY-3510A*01-130	1
J5702*	6510018961	B2B-PH-SM4-TB (LF) (SN)	1
J5751*	6510034970	B03B-EH-A (LF) (SN)	1
F5654*	5210001370	FCC20162ABTP	1
MP501*	8510016472	2775 VCO CASE-2	1
MP2001*	8510016472	2775 VCO CASE-2	1

[PA UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J3*	6510022581	24FMN-BMTTR-A-TBT (LF) (SN)	1
J6*	6510028210	SJ050010 (TMP-J01X-V6)	1
J7*	6510028210	SJ050010 (TMP-J01X-V6)	1
J13*	6510018971	B4B-PH-SM4-TB (LF) (SN)	1
F1*	5220000440	FHA040-01	1
F2*	5210001430	11930011 (BFLP 5A 58V)	1
W21**	8900019321	OPC-2034-1	1
W22**	8920003240	CAB-1390	1
EP114*	6910020710	OT-047 M3	1
EP115*	6910020710	OT-047 M3	1
MP1*	8510013440	2242 EARTH PLATE	1
MP2*	8510024850	4487 SHIELD PLATE	1
MP3*	8410003560	4486 PA HEATSINK	1
MP4	8930075440	3015 RUG SPRING	2
MP8*	8410003560	4486 PA HEATSINK	1
MP101	8810007231	SET SCREW H M3 × 8 ZC3	2

[FILTER UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J2*	6510028210	SJ050010 (TMP-J01X-V6)	1
J3*	6510028210	SJ050010 (TMP-J01X-V6)	1

[FRONT UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
SP1	2510000671	VS-C50-0827	1
W1**	8970023641	SX2242 SHIELD-1 (1)/FR	1
W3**	8900014740	OPC-885A (P1N10L39)	1
W4**	8900014740	OPC-885A (P1N10L39)	1
W5**	8900014730	OPC-683A (P1N10L110)	1
EP1	0880001360	EX-2500 #02 SENSOR	1
MP1	8210024121	2241 FRONT PANEL (A) ASSEMBLY-3	1
MP2	8930051400	2241 21-KEY (A) (SC)	1
MP3	8930050930	2241 3-KEY (SC)	1
MP4	8930050960	2241 POWER KEY (SC)	1
MP5	8930050950	2241 LOCK KEY (SC)	1
MP6	8010018052	2241 SUB CHASSIS ASSEMBLY-2	1
MP9	8610010420	KNOB N261	1
MP10	8610010420	KNOB N261	1
MP11	8610010710	KNOB N272	1
MP12	8610010710	KNOB N272	1
MP15	8610014311	KNOB N-283A ASSEMBLY-1	1
MP18	8610009171	KNOB N-213 COVER-1 (TOP)	1
MP22	8810008661	PHBT M3 × 8 NI-ZC3	5
MP23	8810009131	PHBT M3 × 12 NI-ZC3	6
MP25	8930036870	SPONGE (DZ)	1
MP31	8930071480	2242 JACK RUBBER (TOP)	1
MP32	8930071490	2242 F-SPONGE	2
MP34	8930072980	INSULATION SHEET (LW)	2
MP35	8930091070	1768 SNAP PLATE	1
MP36	8930088872	SHIELD SPONGE (DD)-2	1
MP38	8930071840	HIMELON SHEET (CT)	2

*: Refer to “BOARD LAYOUTS” for the location.
**: Refer to “GENERAL WIRING” for the connection
Screw abbreviations A, B0, BT: Self-tapping PH: Pan head BS: Brass NI: Nickel ZU: Zinc SUS: Stainless

[LOGIC UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510020421	S4B-PH-SM4-TB (LF) (SN)	1
J3*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J4*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J5*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J201*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J401*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
DS1	5030002490	A0087A LCD83.5*45.5*1.1T LCD	1
EP70	8930051450	SRCN-2241-SP-N-W (SHJ)	2
MP1	8210016610	2241 REFLECTOR	1
MP3	8930051090	2241 LCD FILTER	1
MP4	8930072671	2241 LCD RUBBER-1 (TOP)	1

[VR UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1*	6510022051	10FM-1.0SP-1.9-TF (LF) (SN)	1

[MIC UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1	6510000191	FM214-8SS (P)-1	1
J2*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1

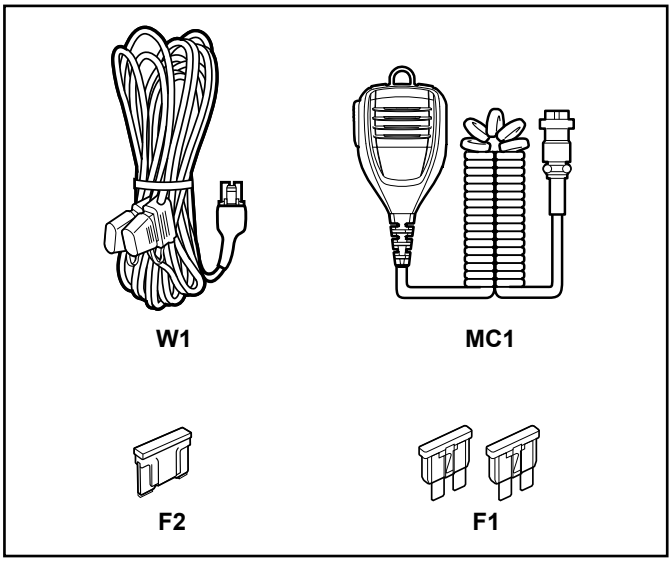
[PHONE UNIT]

REF NO.	PART NO.	DESCRIPTION	QTY.
J1	6510028020	01J0376-00	1
J2*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1

[SUPPLIED ACCESSORIES]

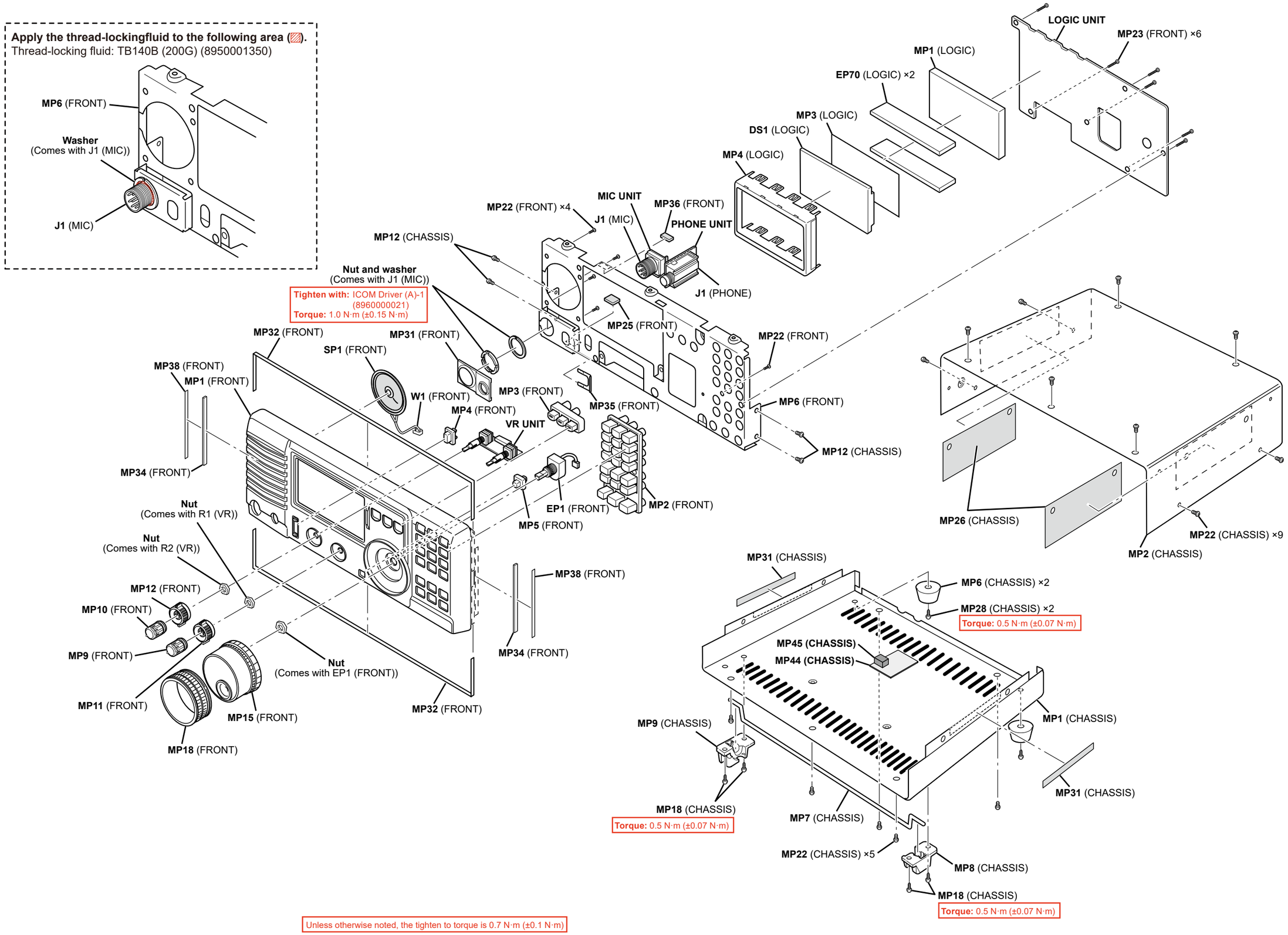
REF NO.	PART NO.	DESCRIPTION	QTY.
F1	5210001360	ATQ 25A	2
F2	5210001430	11930011 (BFLP 5A 58V)	1
MC1	–	HM-219†	1
W1	8900022020	OPC-2361	1

†Sold as an option.



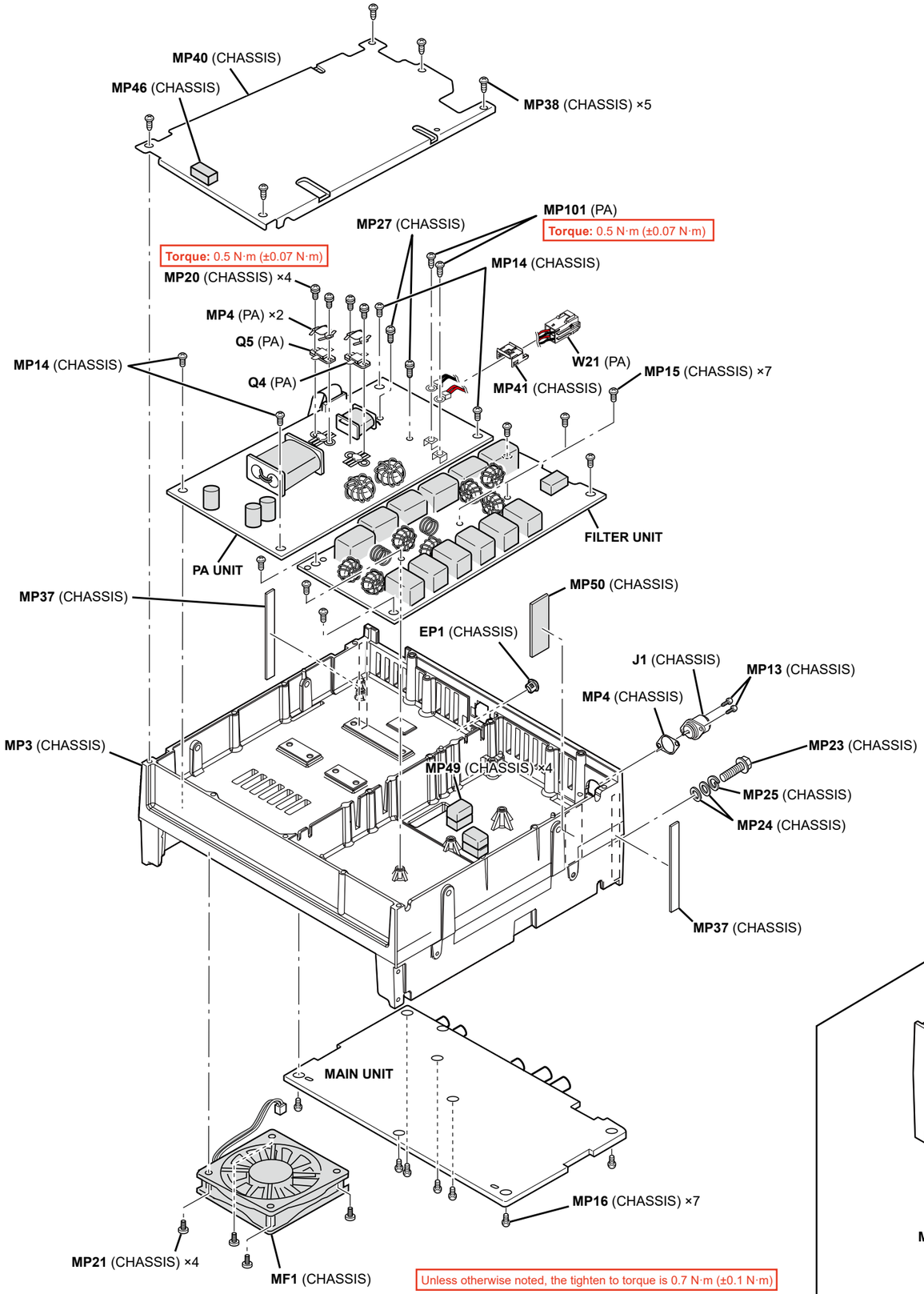
*: Refer to “BOARD LAYOUTS” for the location.
Screw abbreviations A, B0, BT: Self-tapping PH: Pan head BS: Brass NI: Nickel ZU: Zinc SUS: Stainless

• **Exploded view for front assembly**



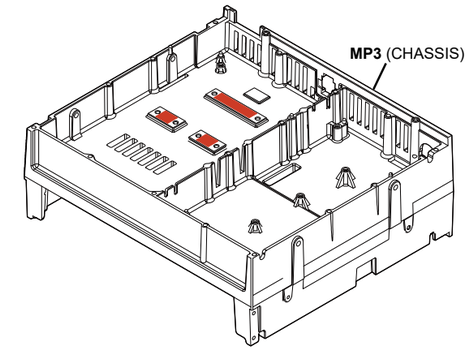
Unless otherwise noted, the tighten to torque is 0.7 N·m (±0.1 N·m)

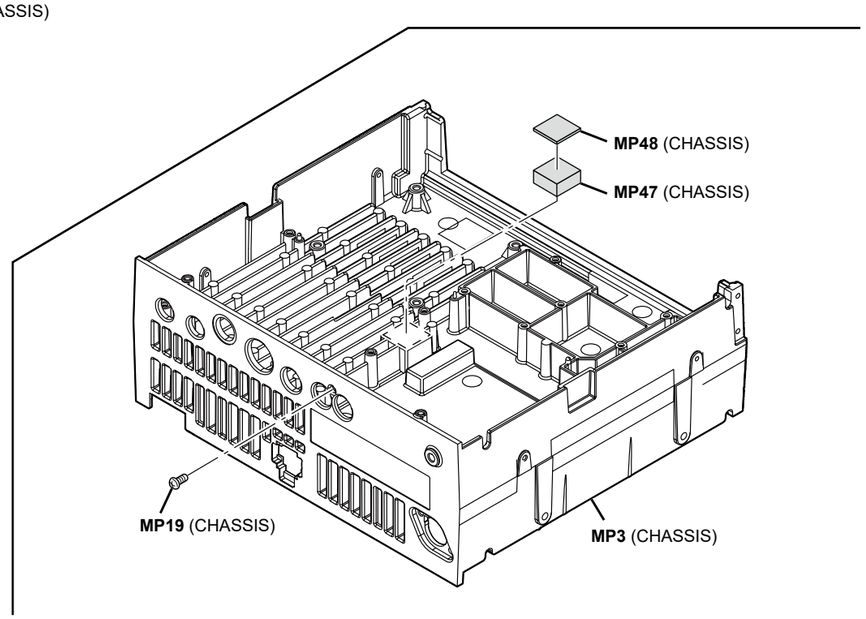
• **Exploded view for chassis assembly**



Unless otherwise noted, the tighten to torque is 0.7 N·m (±0.1 N·m)

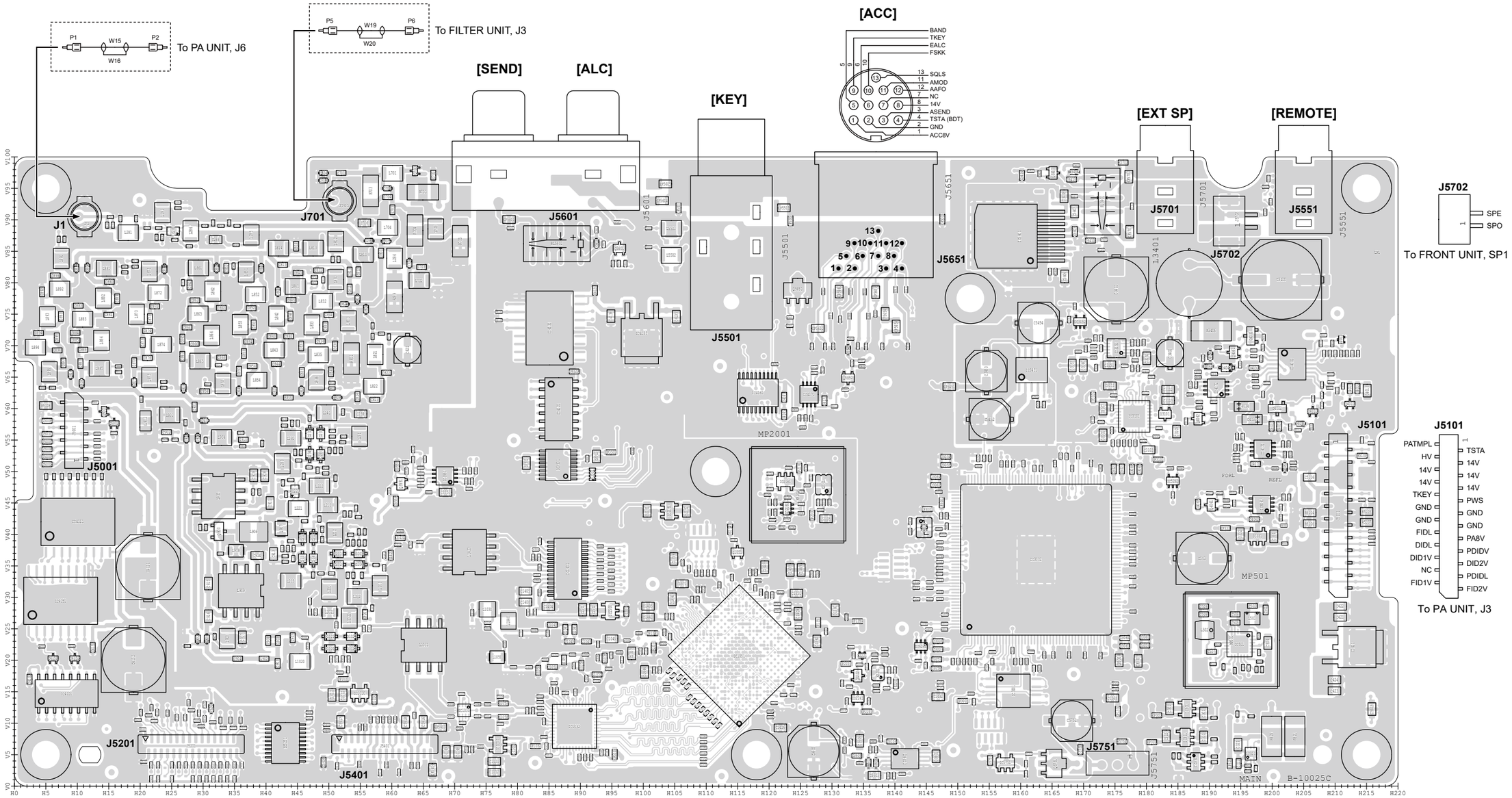
Apply the compound to the following area (■).
Compound: Thermal Compound G747 (8950005610)



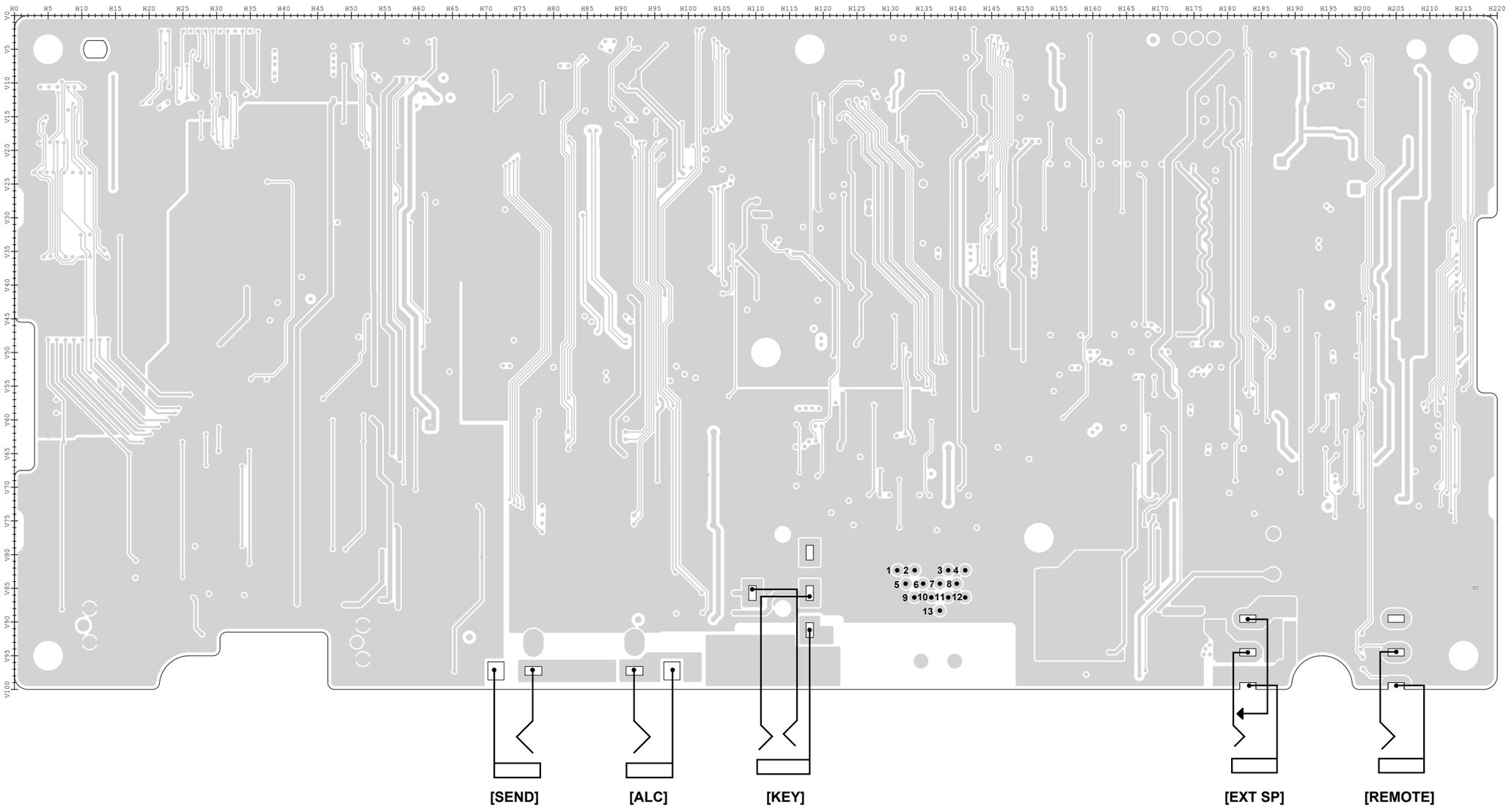


SECTION 8 BOARD LAYOUTS

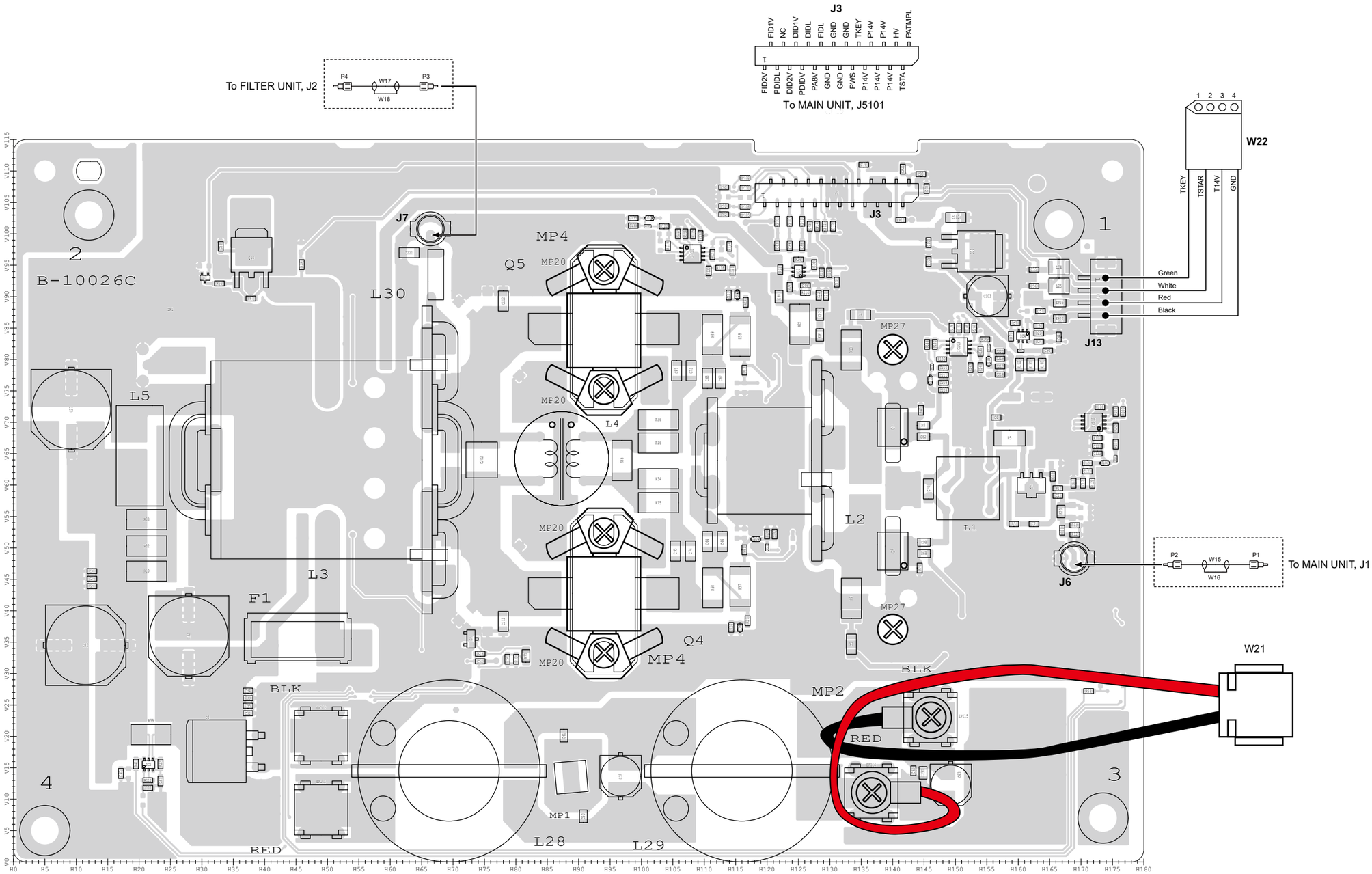
- **MAIN UNIT (B-10025C)**
  (Top view)



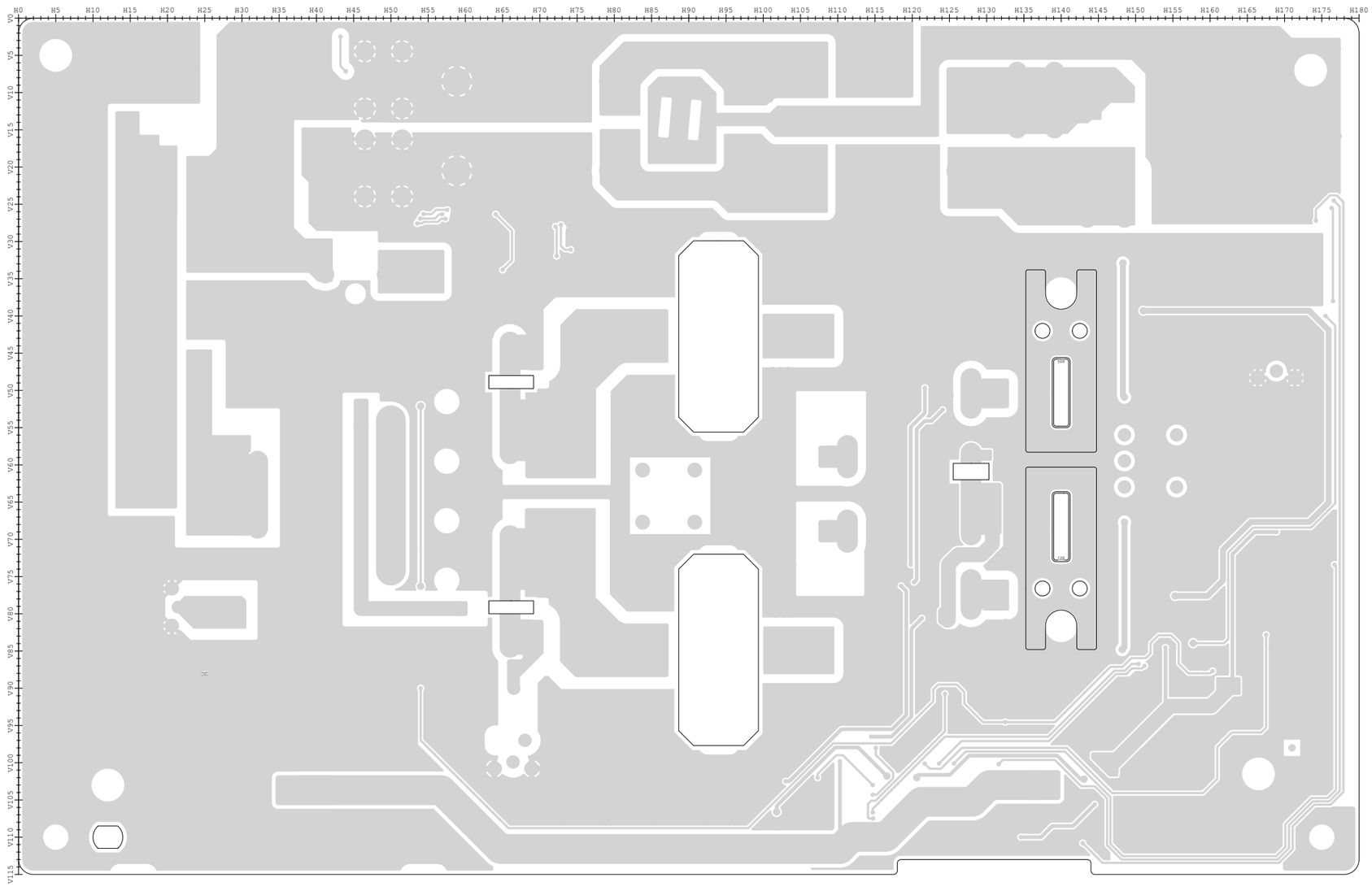
• **MAIN UNIT (B-10025C)**
(Bottom view)



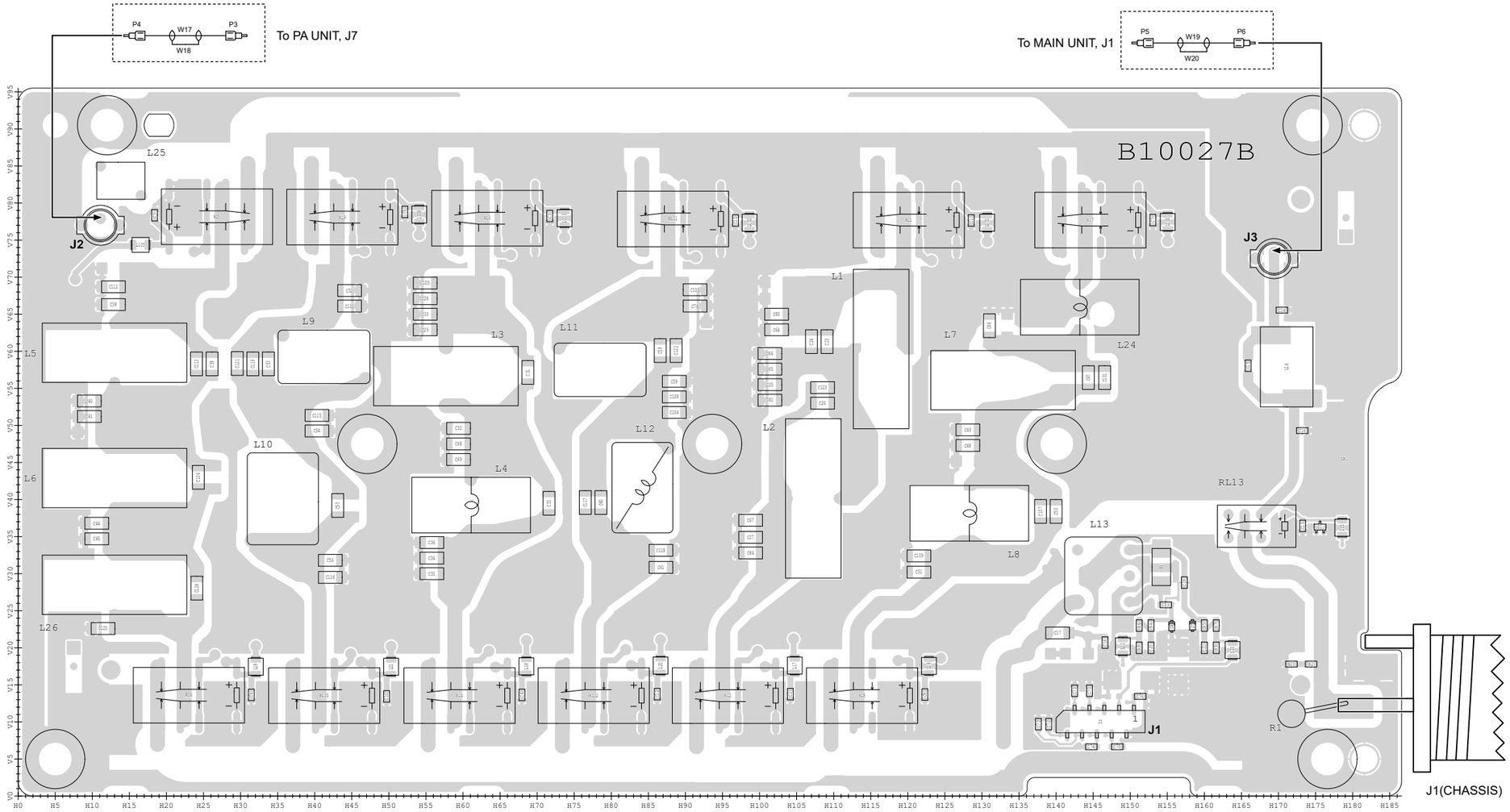
• **PA UNIT (B-10026C)**
(Top view)



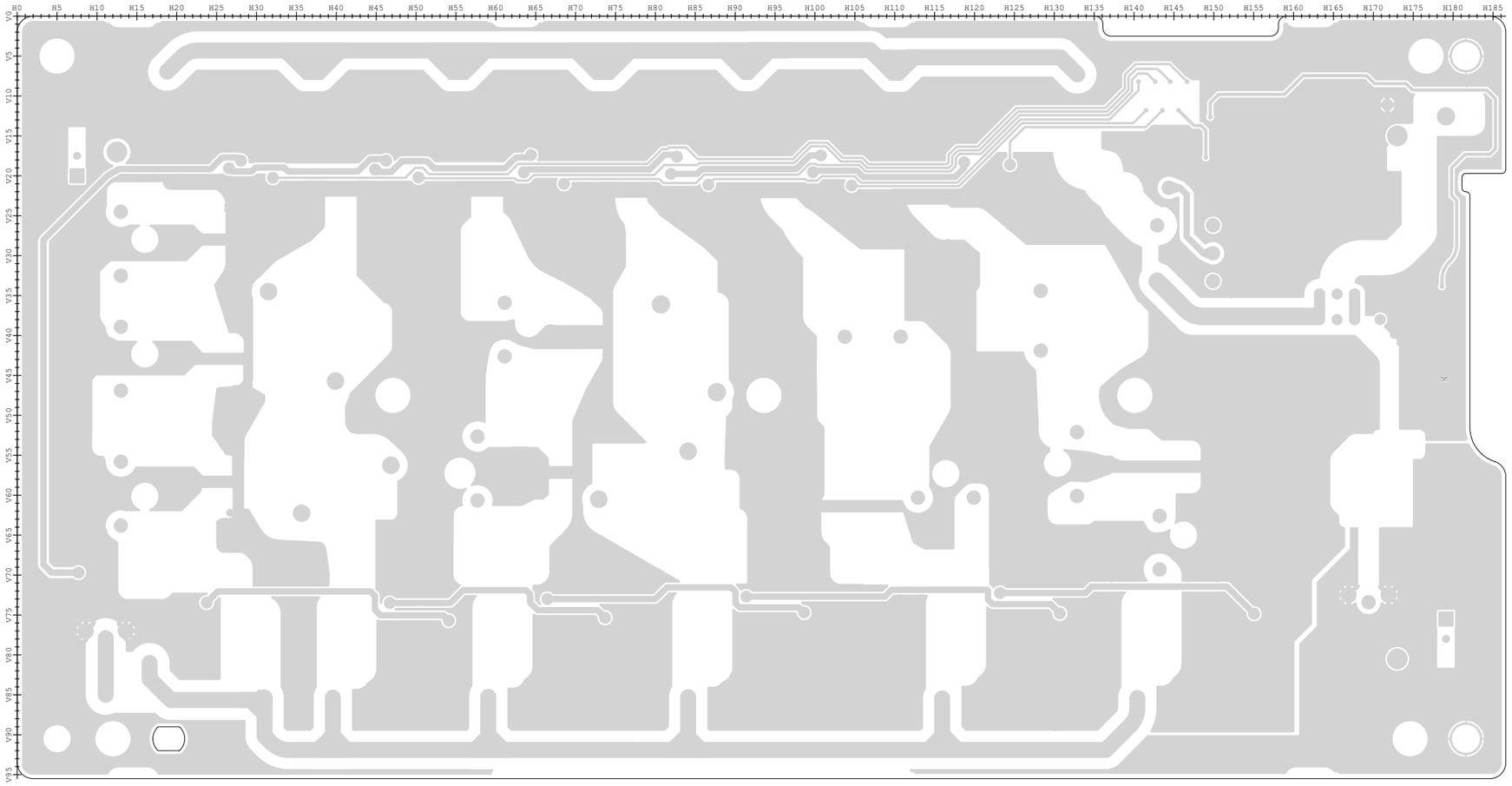
- **PA UNIT (B-10026C)**
  (Bottom view)



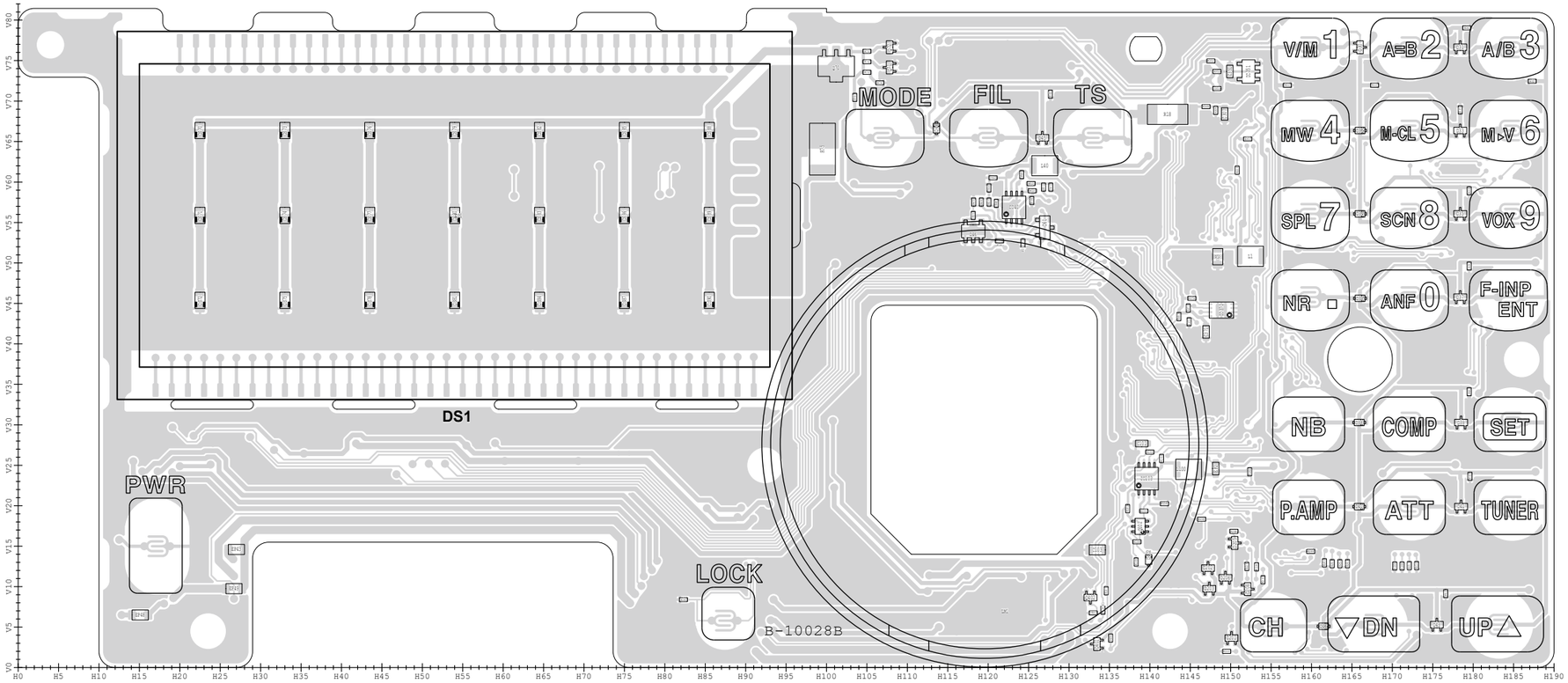
• **FILTER UNIT (B-10027B)**
(Top view)



• **FILTER UNIT (B-10027B)**
(Bottom view)

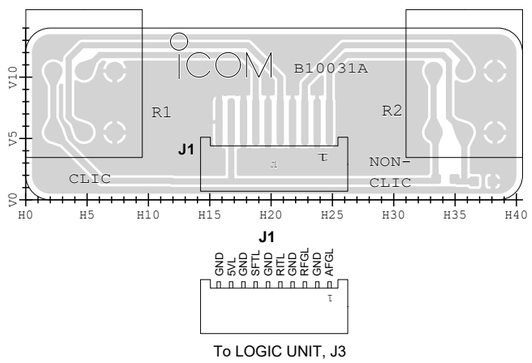


• **LOGIC UNIT (B-10028B)**
(Top view)

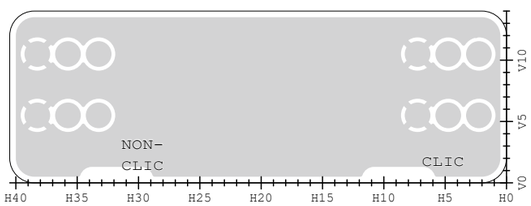


• **VR UNIT (B-10031A)**

(Top view)

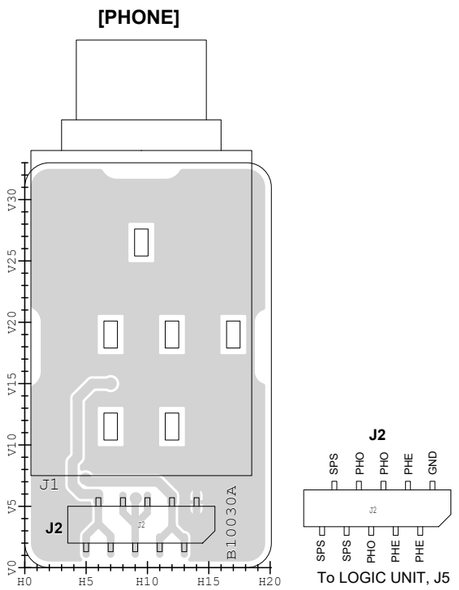


(Bottom view)

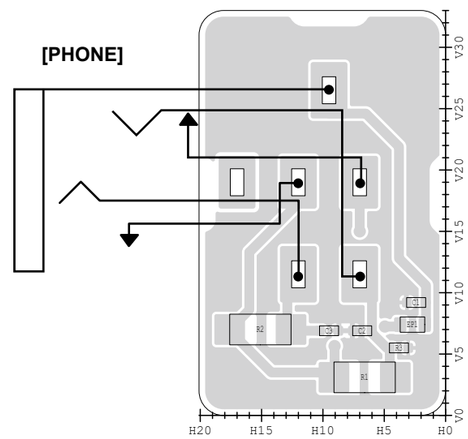


• **PHONE UNIT (B-10030A)**

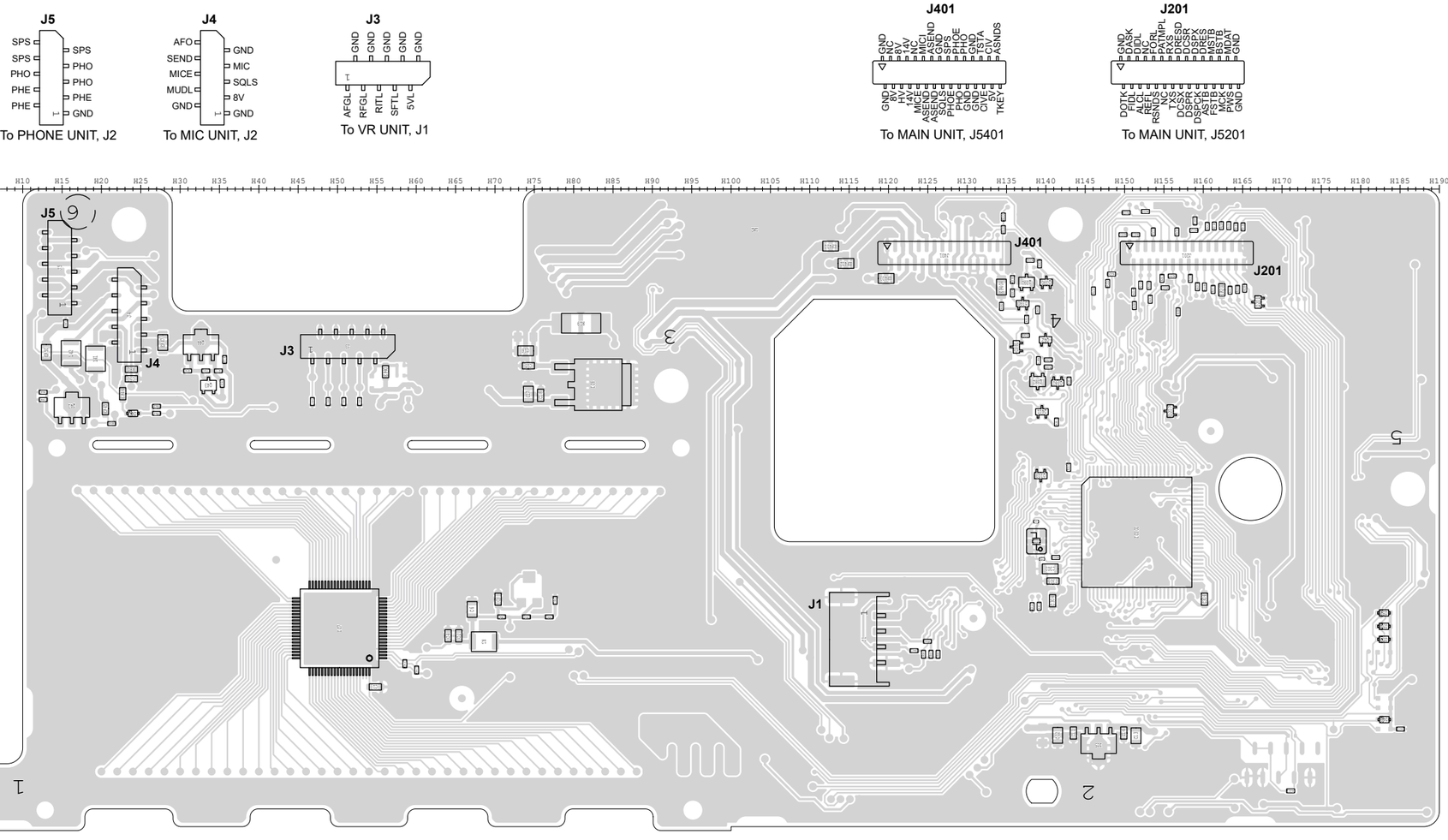
(Top view)

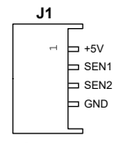


(Bottom view)



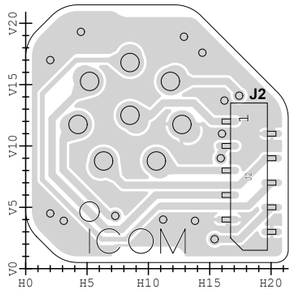
• **LOGIC UNIT (B-10028B)**
(Bottom view)

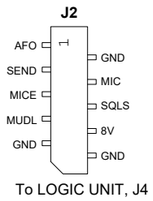




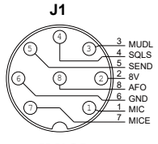
• **MIC UNIT (B-10029A)**

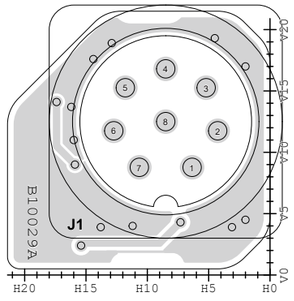
(Top view)

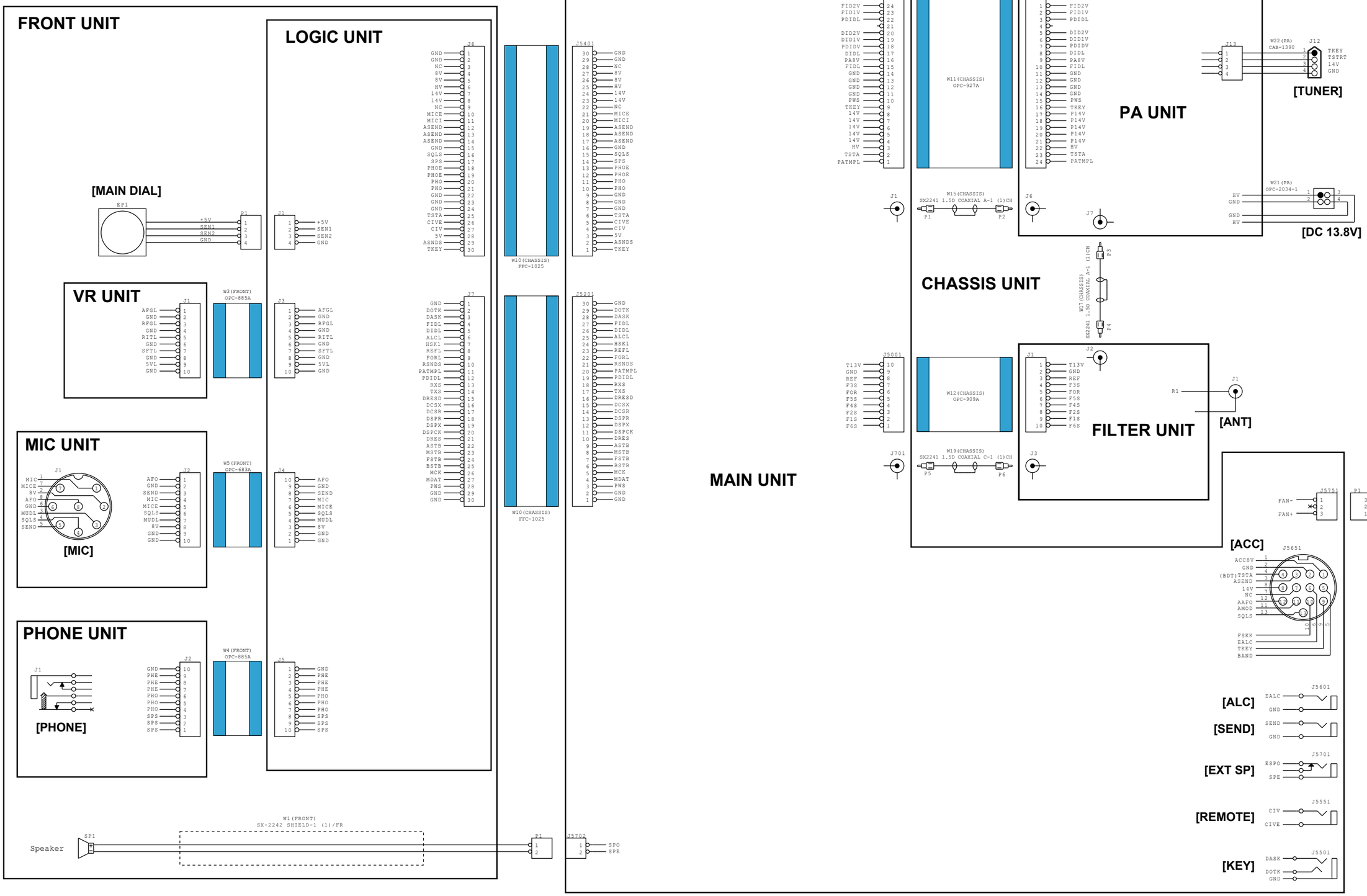




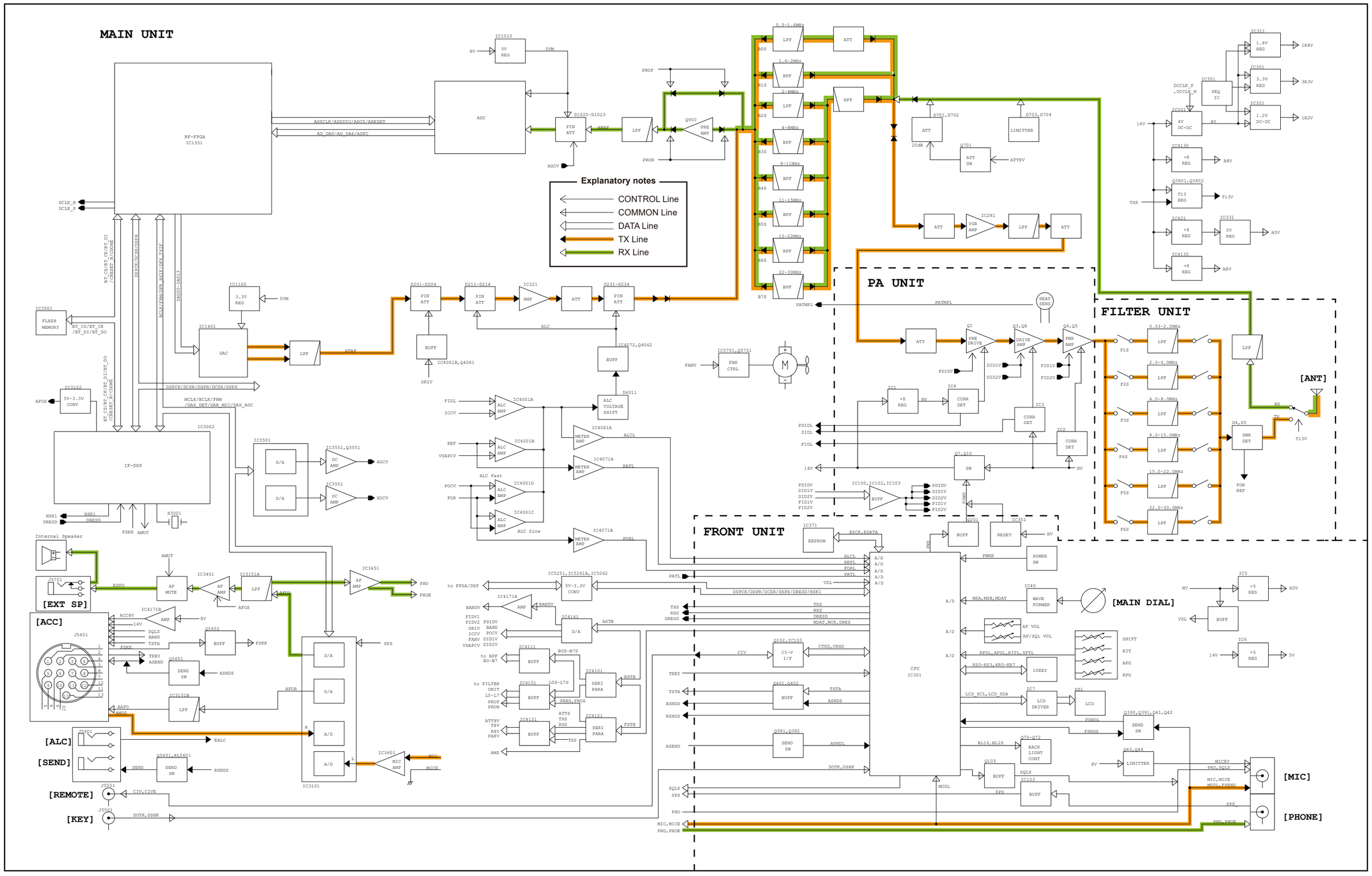
(Bottom view)





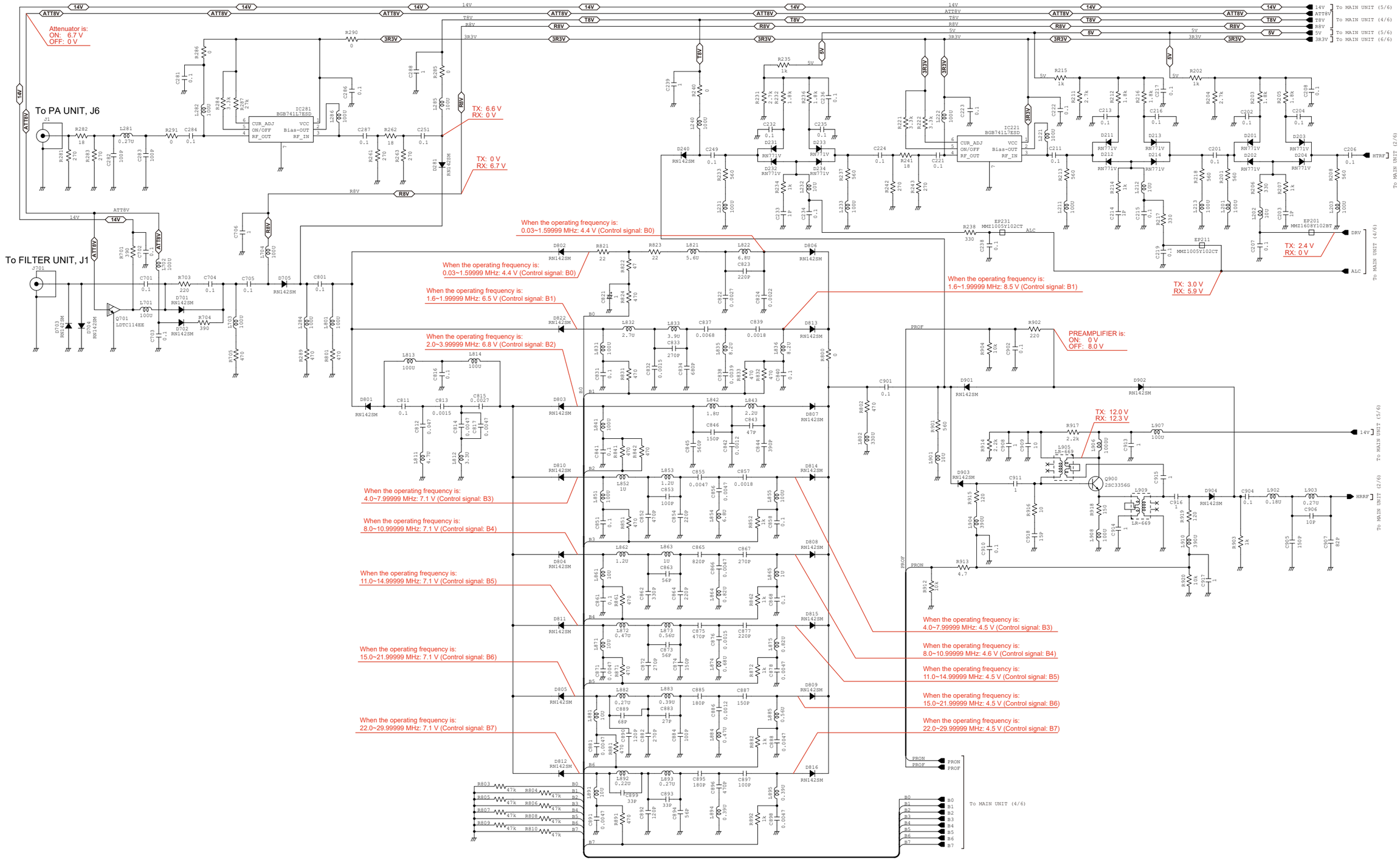

FRONT UNIT
LOGIC UNIT
[MAIN DIAL]
EP1
R1
+5V
SEN1
SEN2
GND
J1
J6
J7
J3
J4
J5
VR UNIT
W3(FRONT)
OPC-885A
AFGL
RFGL
RITL
SFTL
5VL
MIC UNIT
W5(FRONT)
OPC-683A
[MIC]
PHONE UNIT
W4(FRONT)
OPC-885A
[PHONE]
W10(CHASSIS)
FFC-1025
W1(FRONT)
SX-2242 SHIELD-1 (1)/FR
Speaker
SP1
P1
J5402
J5201
J5702
SPO
SPE
MAIN UNIT
J5101
J5001
J701
W11(CHASSIS)
OPC-927A
W15(CHASSIS)
SX2241 1.5D COAXIAL A-1 (1)CH
W12(CHASSIS)
OPC-909A
W19(CHASSIS)
SX2241 1.5D COAXIAL C-1 (1)CH
W17(CHASSIS)
SX2241 1.5D COAXIAL A-1 (1)CH
CHASSIS UNIT
PA UNIT
J12
W22(PA)
CAB-1390
[TUNER]
W21(PA)
OPC-2034-1
[DC 13.8V]
FILTER UNIT
[ANT]
R1
[ACC]
J5651
J5753
FAN
[ALC]
[SEND]
[EXT SP]
[REMOTE]
[KEY]
J5601
J5701
J5551
J5501

SECTION 10 BLOCK DIAGRAM

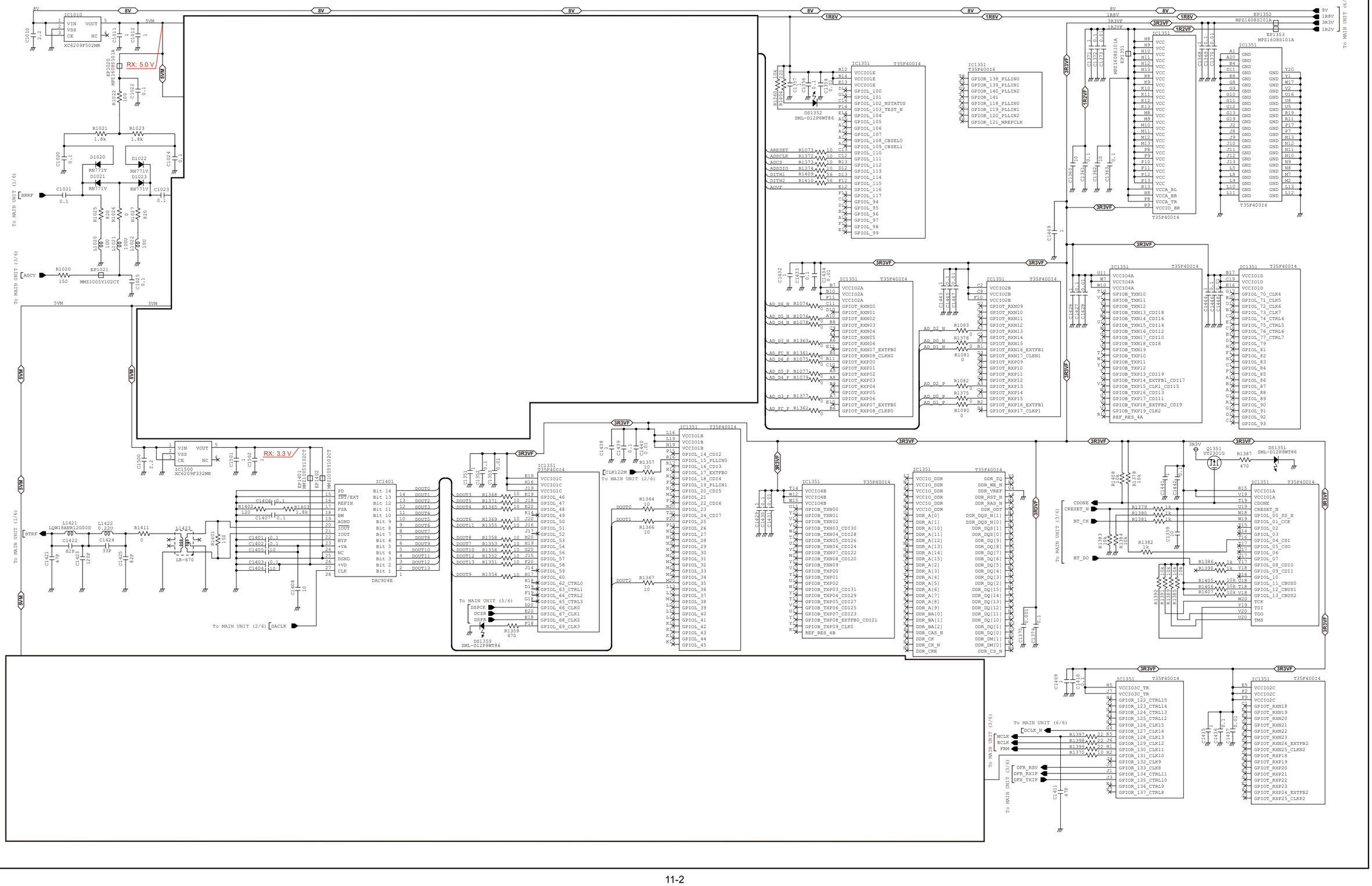


SECTION 11 VOLTAGE DIAGRAM

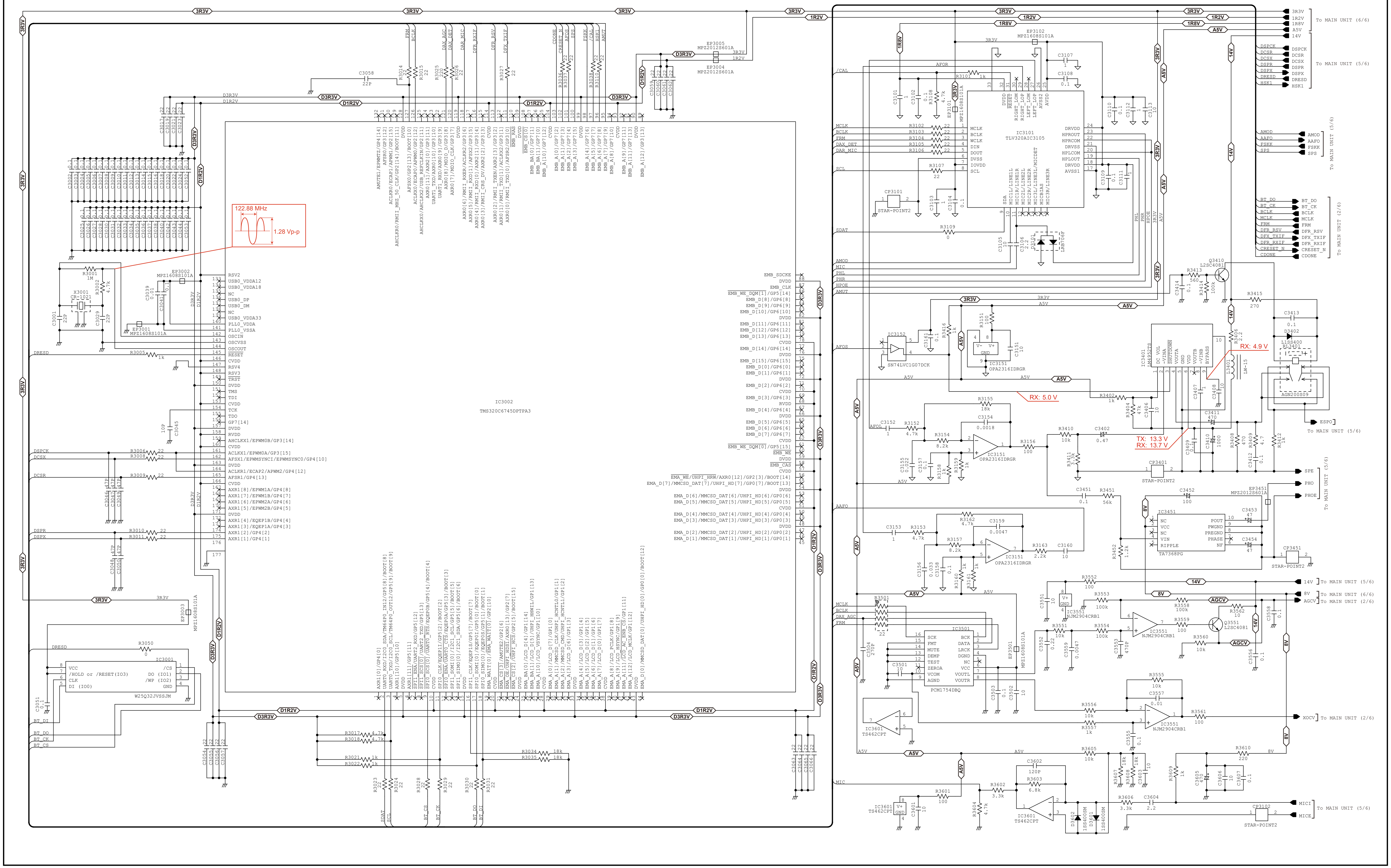
• MAIN UNIT (1/6)



• MAIN UNIT (2/6)

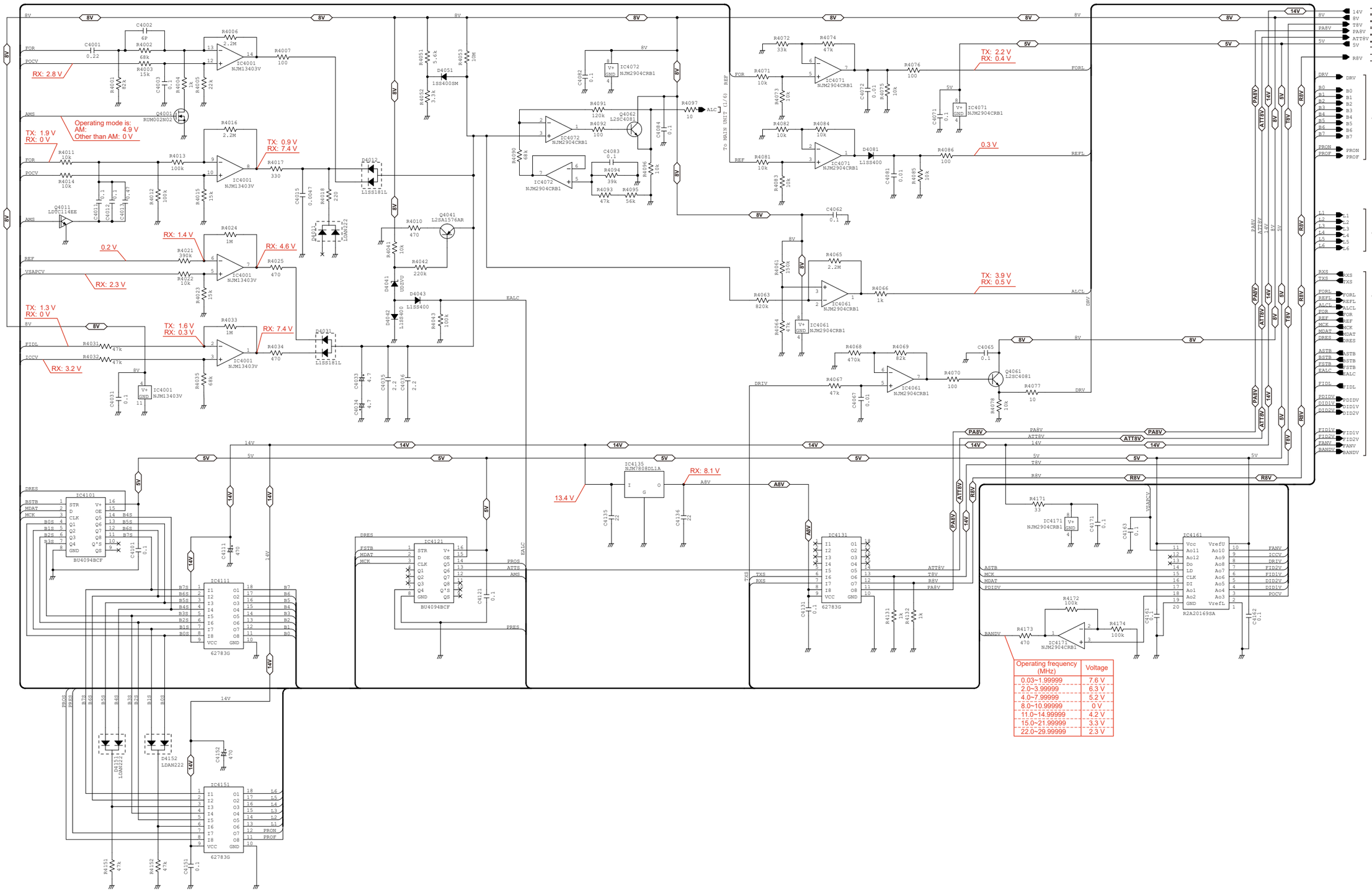

IC1010
XC6209F502MR
RX: 5.0 V
IC1500
XC6209F332MR
RX: 3.3 V
IC1401
DAC904E
IC1351
T35F400I4
DS1352
SML-D12P8WT86
DS1359
SML-D12P8WT86
Q1351
UT2301G
To MAIN UNIT (1/6)
To MAIN UNIT (2/6)
To MAIN UNIT (3/6)
To MAIN UNIT (5/6)
To MAIN UNIT (6/6)
To MAIN UNIT (6/6)

• MAIN UNIT (3/6)

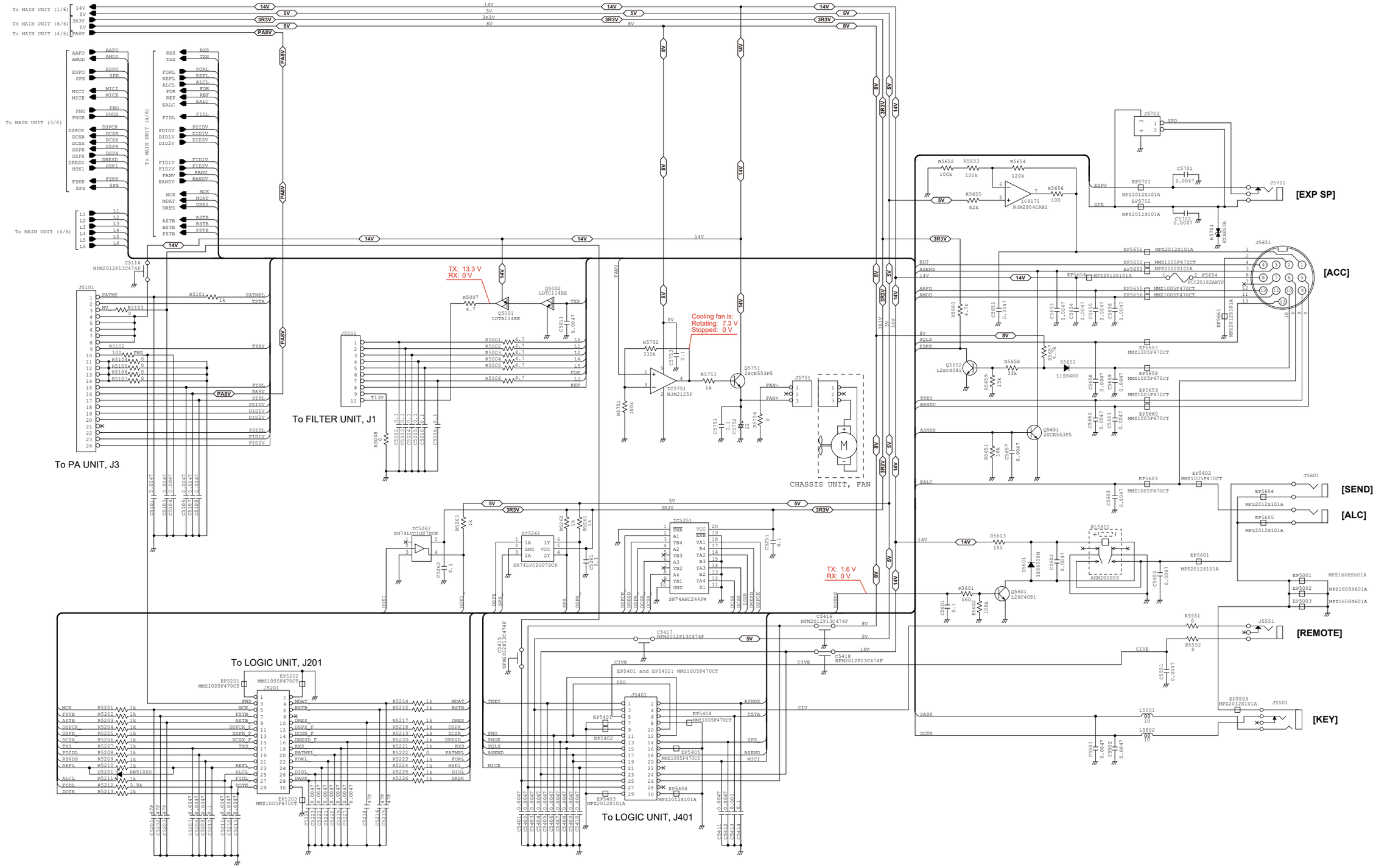


122.88 MHz
1.28 Vp-p
IC3002
TMS320C6745DPTPA3
IC3101
TLV320AIC3105
IC3401
LM4952TS
IC3451
TA7368PG
IC3501
PCM1754DBQ
IC3001
W25Q32JVSSJM
RX: 4.9 V
RX: 5.0 V
TX: 13.3 V
RX: 13.7 V
To MAIN UNIT (6/6)
To MAIN UNIT (5/6)
To MAIN UNIT (2/6)

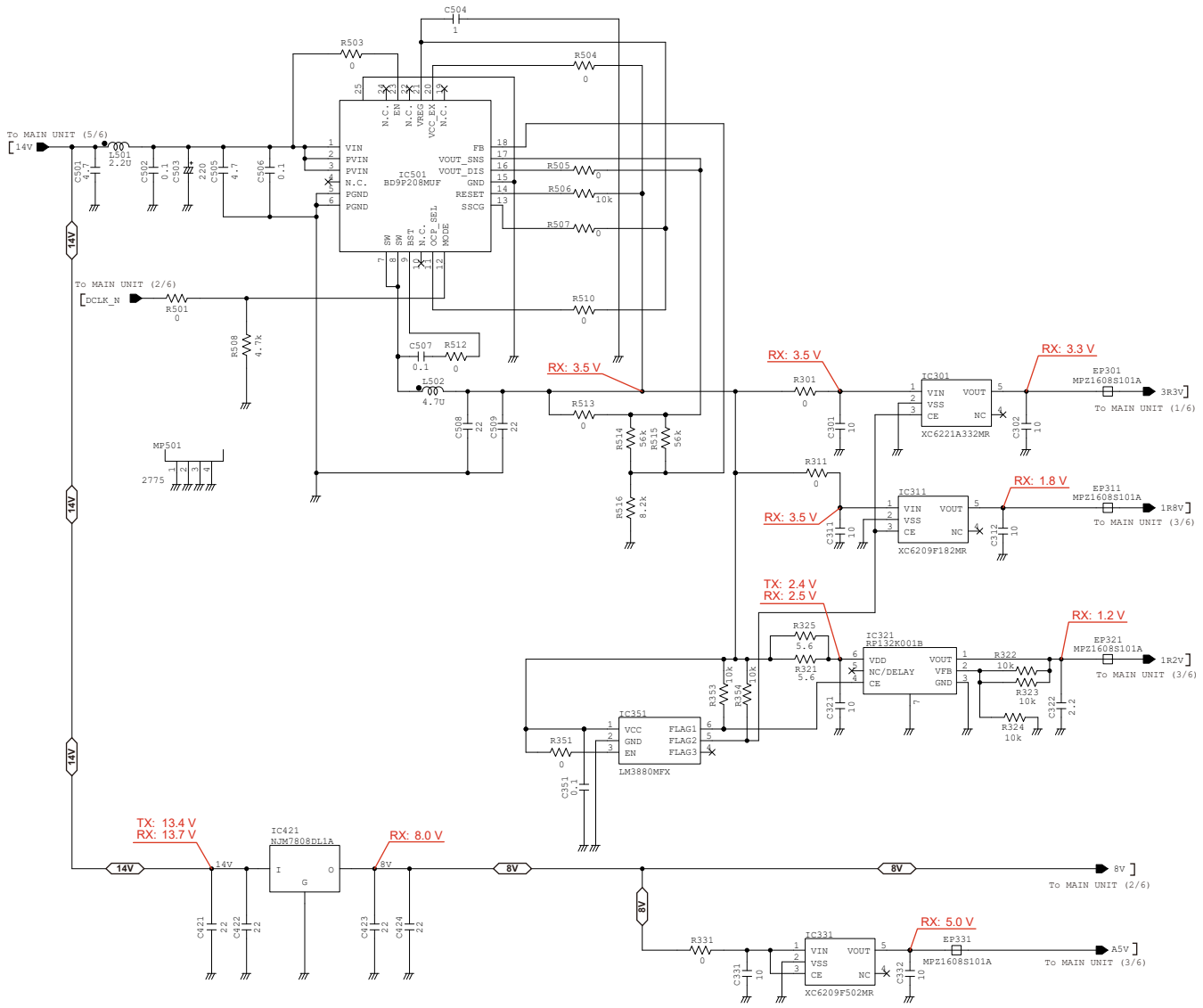
• MAIN UNIT (4/6)


RX: 2.8 V
Operating mode is:
AM: 4.9 V
Other than AM: 0 V
TX: 1.9 V
RX: 0 V
TX: 0.9 V
RX: 7.4 V
RX: 1.4 V
RX: 4.6 V
0.2 V
RX: 2.3 V
TX: 1.3 V
RX: 0 V
TX: 1.6 V
RX: 0.3 V
RX: 7.4 V
RX: 3.2 V
TX: 2.2 V
RX: 0.4 V
0.3 V
TX: 3.9 V
RX: 0.5 V
RX: 8.1 V
13.4 V
To MAIN UNIT (5/6)
To MAIN UNIT (6/6)
To MAIN UNIT (1/6)
To MAIN UNIT (5/6)
To MAIN UNIT (1/6)
To MAIN UNIT (5/6)
To MAIN UNIT (5/6)
To MAIN UNIT (1/6)
Operating frequency (MHz) | Voltage
0.03~1.99999 | 7.6 V
2.0~3.99999 | 6.3 V
4.0~7.99999 | 5.2 V
8.0~10.99999 | 0 V
11.0~14.99999 | 4.2 V
15.0~21.99999 | 3.3 V
22.0~29.99999 | 2.3 V

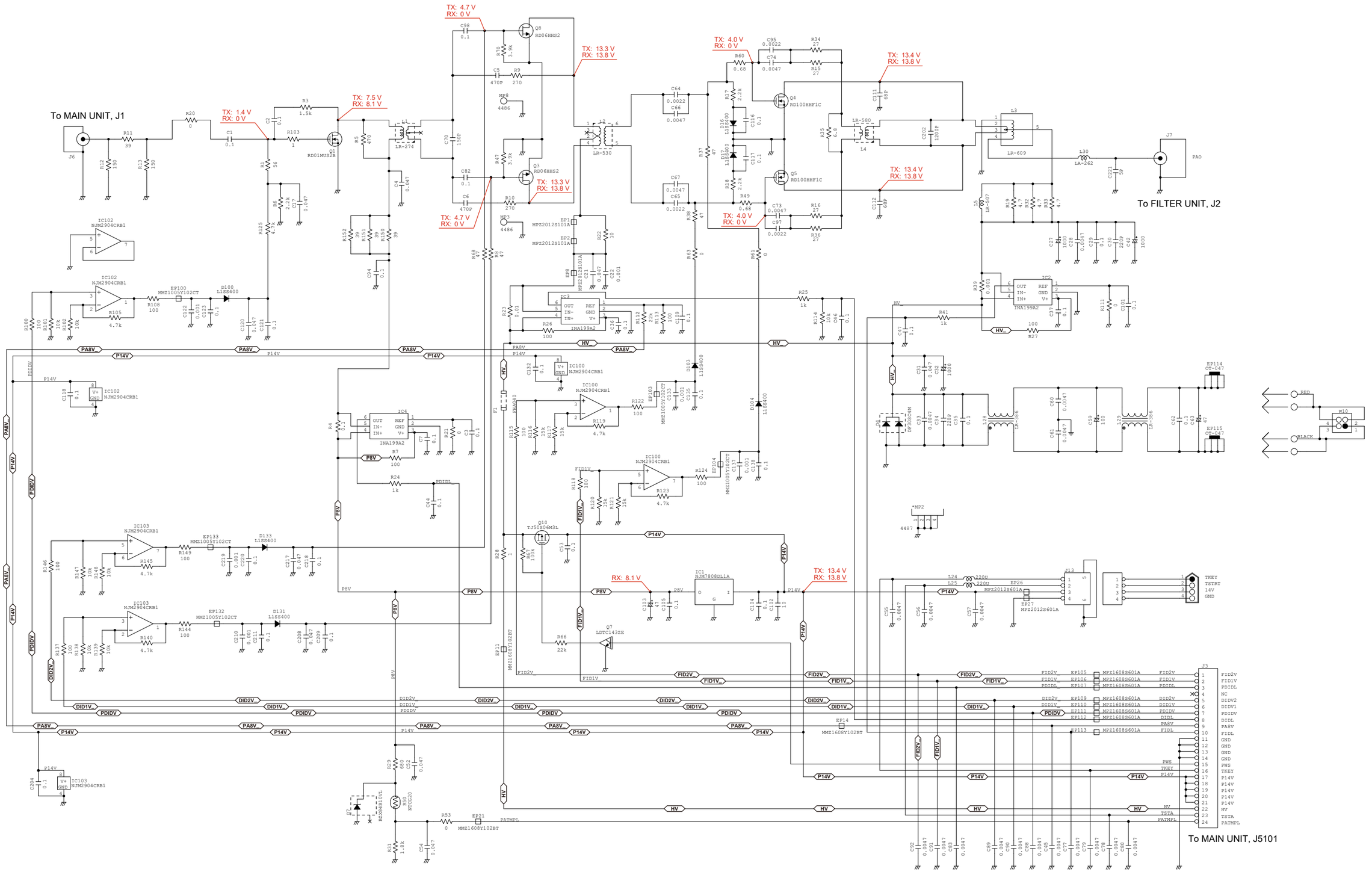
• MAIN UNIT (5/6)


To MAIN UNIT (1/6)
To MAIN UNIT (6/6)
To MAIN UNIT (4/6)
To MAIN UNIT (3/6)
To MAIN UNIT (4/6)
To MAIN UNIT (4/6)
14V
5V
3R3V
8V
PA8V
To PA UNIT, J3
To FILTER UNIT, J1
TX: 13.3 V
RX: 0 V
Cooling fan is:
Rotating: 7.3 V
Stopped: 0 V
CHASSIS UNIT, FAN
TX: 1.6 V
RX: 0 V
To LOGIC UNIT, J201
To LOGIC UNIT, J401
EP5401 and EP5402: MMZ1005F470CT
[EXP SP]
[ACC]
[SEND]
[ALC]
[REMOTE]
[KEY]

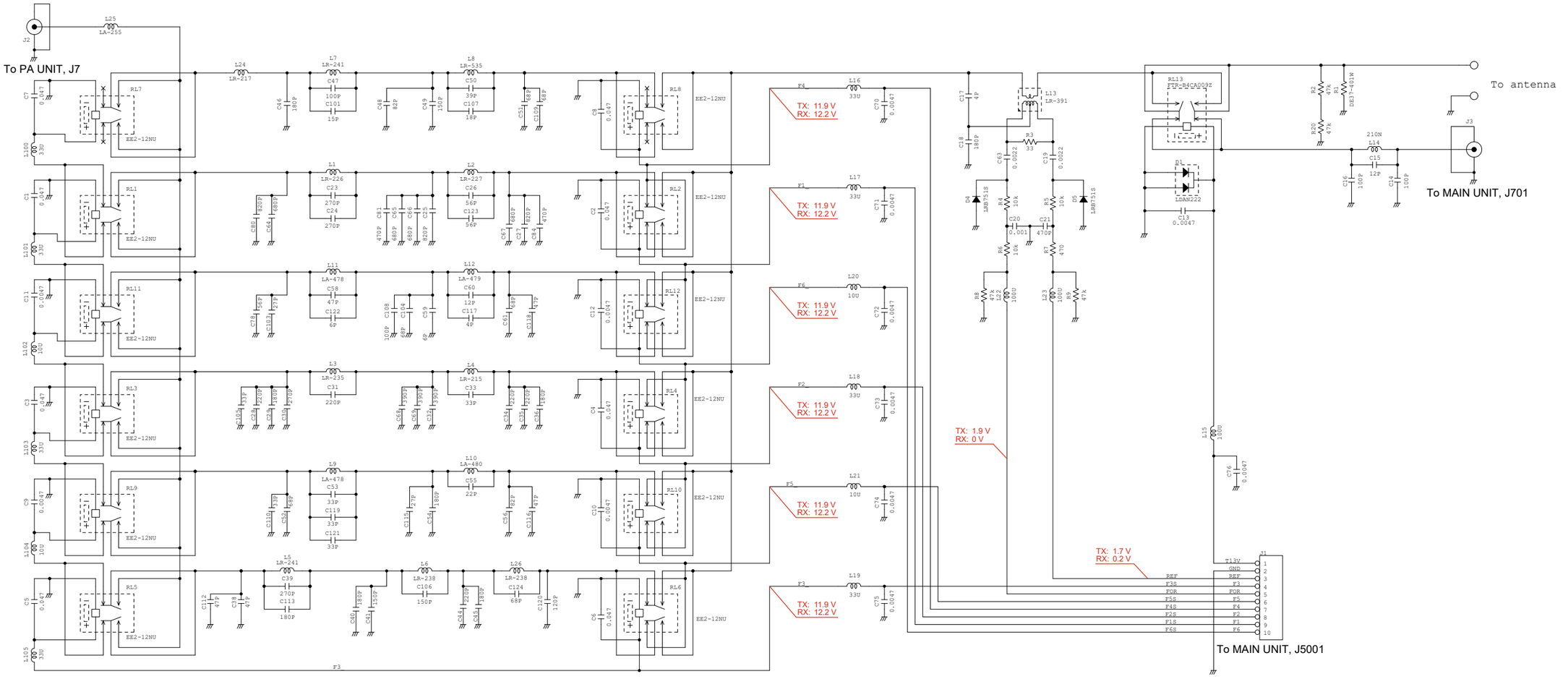
• MAIN UNIT (6/6)


To MAIN UNIT (5/6)
14V
L501 2.2U
C501 4.7
C502 0.1
C503 220
C505 4.7
C506 0.1
C504 1
R503 0
R504 0
IC501 BD9P208MUF
VIN
PVIN
PVIN
N.C.
PGND
PGND
FB
VOUT_SNS
VOUT_DIS
GND
RESET
SSCG
N.C.
EN
VREG
VCC_EX
OCP_SEL
MODE
SW
SW
BST
R505 0
R506 10k
R507 0
R510 0
To MAIN UNIT (2/6)
DCLK_N
R501 0
R508 4.7k
C507 0.1
R512 0
L502 4.7U
C508 22
C509 22
MP501
2775
R513 0
R514 56k
R515 56k
R516 8.2k
RX: 3.5 V
R301 0
C301 10
IC301
XC6221A332MR
VIN
VSS
CE
VOUT
NC
RX: 3.3 V
EP301
MPZ1608S101A
3R3V
To MAIN UNIT (1/6)
C302 10
R311 0
C311 10
IC311
XC6209F182MR
RX: 1.8 V
EP311
MPZ1608S101A
1R8V
To MAIN UNIT (3/6)
C312 10
TX: 2.4 V
RX: 2.5 V
R325 5.6
R321 5.6
IC321
RP132K001B
VDD
NC/DELAY
CE
VOUT
VFB
GND
RX: 1.2 V
EP321
MPZ1608S101A
1R2V
To MAIN UNIT (3/6)
R322 10k
R323 10k
R324 10k
C321 10
C322 2.2
R353 10k
R354 10k
IC351
LM3880MFX
VCC
GND
EN
FLAG1
FLAG2
FLAG3
R351 0
C351 0.1
TX: 13.4 V
RX: 13.7 V
IC421
NJM7808DL1A
RX: 8.0 V
8V
C421 22
C422 22
C423 22
C424 22
R331 0
C331 10
IC331
XC6209F502MR
RX: 5.0 V
EP331
MPZ1608S101A
A5V
To MAIN UNIT (3/6)
C332 10

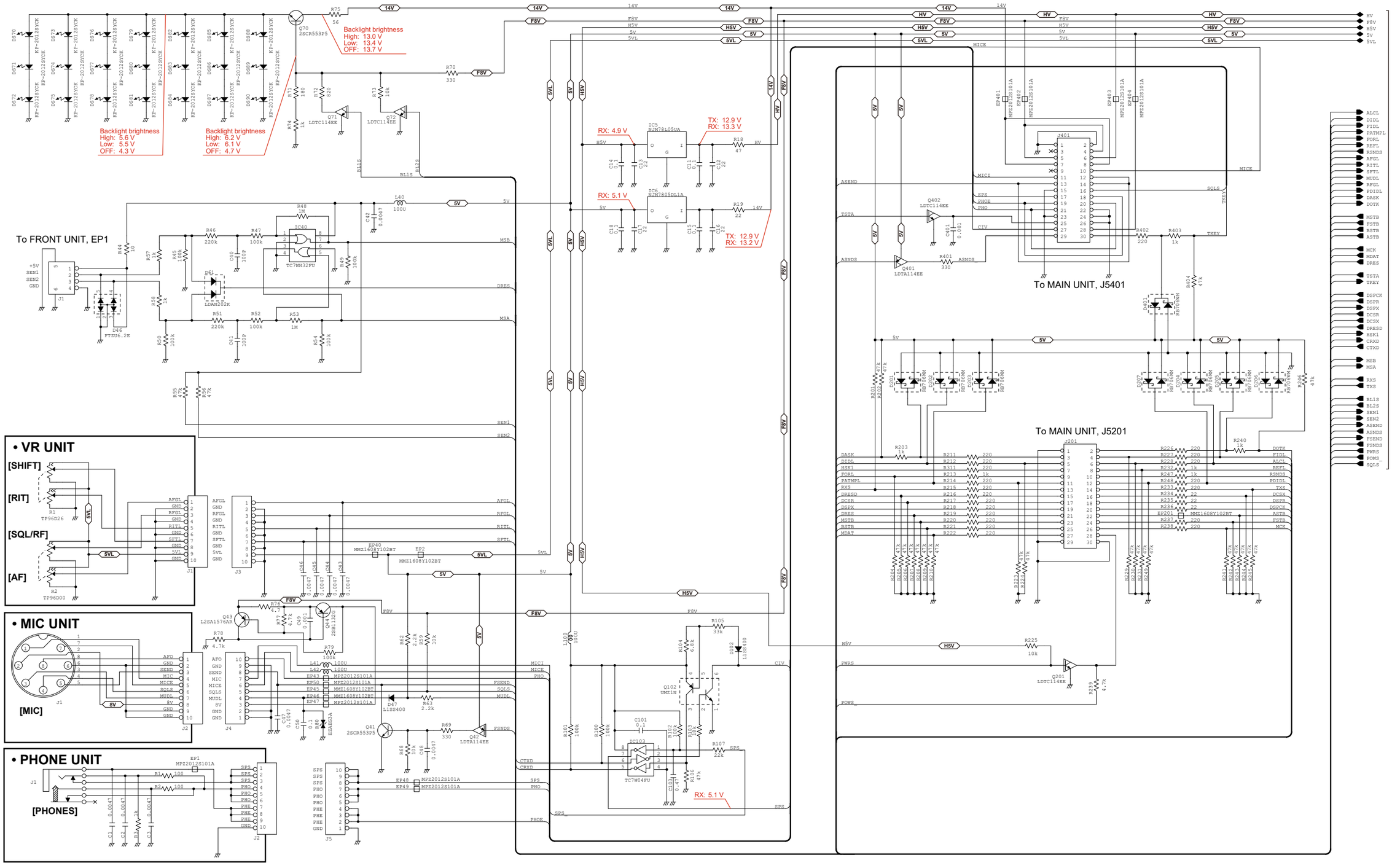
• PA UNIT


To MAIN UNIT, J1
TX: 1.4 V
RX: 0 V
TX: 7.5 V
RX: 8.1 V
TX: 4.7 V
RX: 0 V
TX: 13.3 V
RX: 13.8 V
TX: 4.0 V
RX: 0 V
TX: 13.4 V
RX: 13.8 V
RX: 8.1 V
TX: 13.4 V
RX: 13.8 V
To FILTER UNIT, J2
To MAIN UNIT, J5101
RED
BLACK
TKEY
TSTRT
14V
GND
PA8V_
P14V
P8V
PDIDV
DID2V_
DID1V_
FID2V_
FID1V_
HV_
HV
PDIDL_

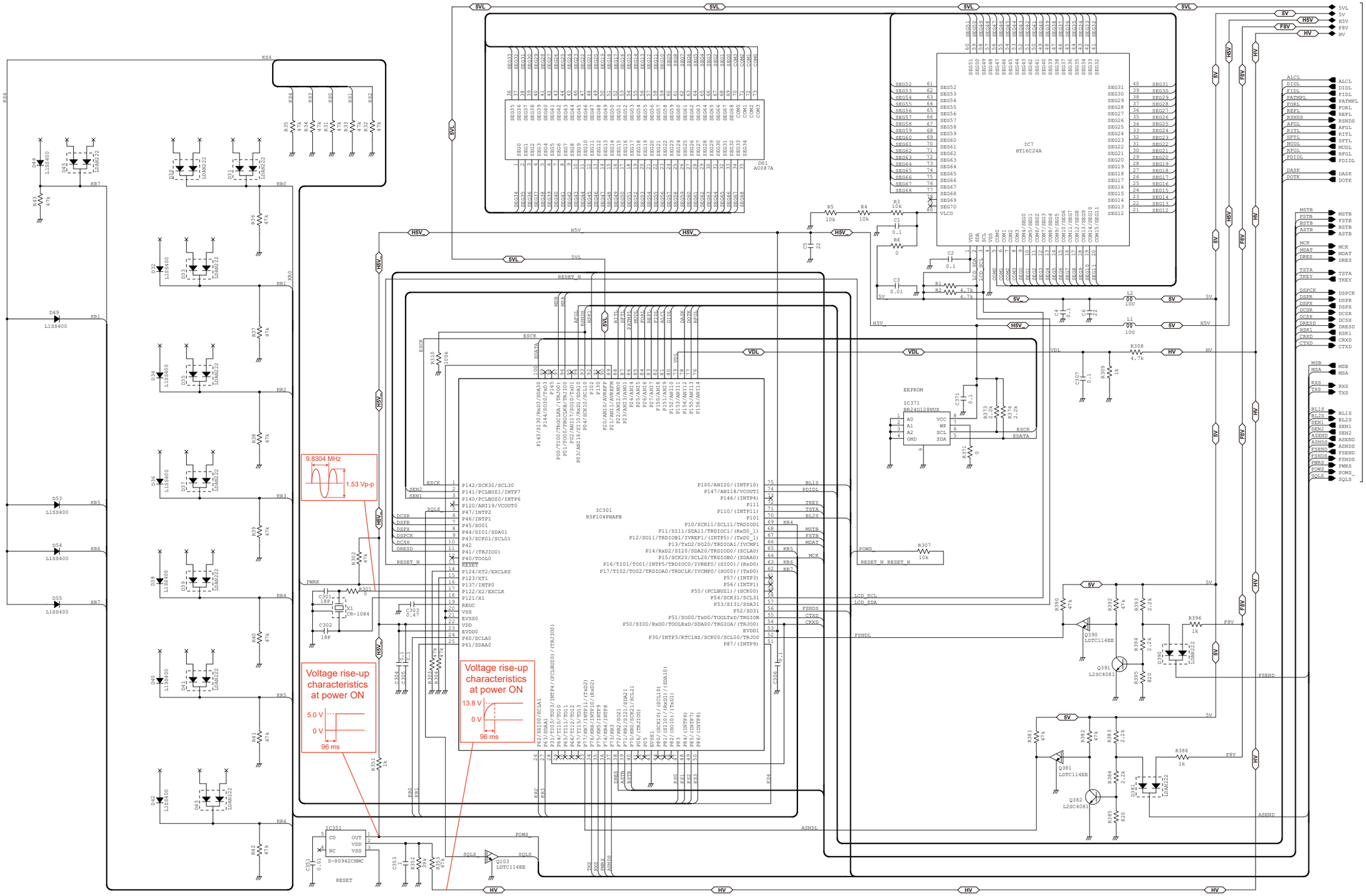
• FILTER UNIT


To PA UNIT, J7
J2
L25
LA-295
L24
LR-217
L7
LR-241
C47
100P
C101
15P
C46
180P
L8
LR-535
C50
39P
C107
18P
C48
82P
C49
15P
C51
680P
C109
680P
C9
0.047
RL8
EE2-12NU
F4
TX: 11.9 V
RX: 12.2 V
L16
33U
C70
0.0047
C17
4P
C18
1800P
L13
LR-391
R3
33
C63
0.0022
C19
0.0022
D4
1RB751S
R4
10k
R5
10k
D5
1RB751S
C20
0.001
C21
470P
R6
10k
R7
470
R8
47k
L23
1000
R9
47k
RL13
FTR-B4CA009Z
D1
LDAN222
C13
0.0047
R2
47k
R1
47k
DET-401W
R10
47k
210N
L14
C15
12P
C16
100P
C14
100P
J3
To antenna
To MAIN UNIT, J701
L1
LR-226
C23
270P
C24
270P
C26
56P
C123
56P
C2
0.047
RL2
F1
TX: 11.9 V
RX: 12.2 V
L17
33U
C71
0.0047
L11
LA-478
C58
47P
C122
6P
L12
LA-479
C60
12P
C117
4P
C12
0.0047
RL12
F6
TX: 11.9 V
RX: 12.2 V
L20
10U
C72
0.0047
L3
LR-235
C31
220P
L4
LR-215
C33
33P
C4
0.047
RL4
F2
TX: 11.9 V
RX: 12.2 V
L18
33U
C73
0.0047
L9
LA-478
C53
33P
C119
33P
C121
33P
L10
LA-480
C55
22P
C10
0.0047
RL10
F5
TX: 11.9 V
RX: 12.2 V
L21
10U
C74
0.0047
L5
LR-241
C39
270P
C113
180P
L6
LR-238
C106
150P
L26
LR-238
C124
68P
C120
120P
C6
0.047
RL6
F3
TX: 11.9 V
RX: 12.2 V
L19
33U
C75
0.0047
TX: 1.9 V
RX: 0 V
L15
1000
C76
0.0047
TX: 1.7 V
RX: 0.2 V
J1
T13V
GND
REF
F3
FOR
F5
F4
F2
F1
F6
REF
F3S
FOR
F5S
F4S
F2S
F1S
F6S
1
2
3
4
5
6
7
8
9
10
To MAIN UNIT, J5001
RL7
RL1
RL11
RL3
RL9
RL5
EE2-12NU
L100
33U
L101
33U
L102
10U
L103
33U
L104
10U
L105
33U
L106
33U
C7
0.047
C1
0.047
C11
0.0047
C3
0.047
C9
0.0047
C5
0.047
C46
180P
C48
82P
C49
15P
C51
680P
C109
680P
C64
680P
C31
470P
C55
680P
C65
680P
C25
820P
C27
680P
C54
820P
C84
470P
C72
56P
C103
27P
C108
100P
C104
8P
C59
6P
C61
68P
C118
47P
C105
33P
C24
220P
C29
180P
C30
270P
C68
390P
C62
390P
C32
390P
C34
220P
C35
220P
C36
180P
C110
33P
C52
68P
C115
27P
C56
180P
C116
82P
C57
47P
C112
4P
C38
4P
C40
330P
C41
150P
C44
220P
C45
180P
C42
120P
F3

• LOGIC UNIT (1/2)



• LOGIC UNIT (2/2)



If you have any inquiries regarding service, contact your distributor. The contact number or E-mail address of your distributor can be found on our website.

https://www.icomjapan.com/

How the World Communicates

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