

MJ-600 GENERAL SPEC



FEATURE

* FUNCTION

1. FUNCTION SELECTION SW

2. FREQ-CH / BEEP ON.OFF SW

3. LAST CH RECALL SW

4. AM/FM SELECTION SW

5. SCAN SEARCH / MEMORY1 SW

6. DW SEARCH / MEMORY2 SW

7. CH-9 / MEMORY3 SW

8. AUTO SQUELCH / MEMORY4 SW

*** CONTROLS**

1. AF VOLUME CONTROL W/ ON/OFF SW
2. SQUELCH CONTROL
3. CHANNEL UP/DOWN CONTROL

*** LCD DISPLAY**

1. CHANNEL / FREQUENCY
2. TX/ BP/ DW/ SC
3. MEMORY CHANNEL 1-4
4. FM/AM/AQ

5. 8 BAR LEVEL METER

* 3.5 PIE EXT SPEAKER JACK

* M-TYPE ANT CONNECTOR

* 6 PIN MIC JACK

1. MIC UP/DOEN SWITCH

2. DY-MICROPHONE

3. ASQ SWITCH

* BILT-IN NOISE BLANK and AUTOMATIC NOISE LIMIT

* DIMENSION : D-140mm . W-125mm . H-41mm.

* WEIGHT : 720 g.(gift total : 1250g)

ELECTRICAL

* GENERAL

@ TRANSMITTER..... CRSTAL CONTROLLED PLL SYNTHESIZER

@ RECEIVER..... DOUBLE CONVERSION, SUPERHETERODYNE

SYSTEM

@ VOLTAGE OPERATION..... DC 13.8 V

@ TEMPERATURE..... -10 °C ~ +50 °C

@ CHANNEL STEP 10 Khz

* TRANSMITTER

@ OUTPUT POWER.....

* FM :4 WATTS. AM : 4WATTS

* FM :10 WATTS . AM : 8 WATTS

@ FREQUENCY RANGE.....

* 40 CHANNEL : 26.965 ~ 27.405 MHz

* 240 CHANNEL: 25.615 ~ 28.305 MHz

@ FREQUENCY TOLERANCE..... +-300 Hz

@ MODULATION SENS..... 3mv(1.25KHz INPUT)

@ MODULATION CAPABILITY..... AM : 90 %

FM : 2 KHz

*** RECEIVER**

@ FREQUENCY RANGE.....

* 40 CHANNEL : 26.965 ~ 27.405 MHz

* 240 CHANNEL: 25.615 ~ 28.305 MHz

@ SENSITIVITY..... AM : 0.5 uV(S/N 10dB)

FM : 0.2 uV (SINAD12dB)

@ SQUELCH..... 1000 uV

@ AUTO SQUELCH..... 0.3 uV

@ S/N RATIO..... 40 dB

@ DISTORTION..... 3 %

@ MAX POWER..... 4 WATTS

@ S/METER(S-9)..... 100 uV

*** TEST CONDITION**

@ POWER SOURCE..... DC 13.8 VOLTS

@ ANT LOAD IMPEDANCE..... 50 ohm NON-INDUCTIVE

@ AUDIO LOAD IMPEDANCE..... 8 ohm NON-INDUCTIVE

THEORY OF CIRCUITS, ALIGNMENT PROCEDURES

1. CIRCUIT DESCRIPTION

1-1. PLL PARTY

Main CPU IC does Kondeurol to serial data to PLL IC doing function and Display indication function at the same time.

Also, EEP ROM IC stores data in addition that increase and do memory

VCO AND REFERENCE FREQUENCY OSCILRATE AND THE PHASE DETECTER HAVE DESIGNATED PLL CIRCUIT, WHICH PHASE BOTH FREQUENCIES.

THE OUTPUT OF PHASE DETECTOR CONTROLLED VCO AND MAKE STABLIZED OF VCO OSCILATE FRQUENCY.
THE PLL WILL WORKING STABLY WHEN THE PHASE OF VCO AND REFERENCE FREQUENCY SHOULD BE EQUAL.

PLL BLOCK DIAGRAM



1-2. RECEIVER PARTY

1-2-1. HIGH FREQUENCY AMPLIFICATION PARTY.

Q2 IS HIGH FREQUENCY AMPLIFICATION TRANSISTOR AND APPLIED COMMON EMITTER METHOD.

THIS CIRCUIT HAS BEEN FEATURED AS HIGH SENSITIVITY AND LOW NOISE.

D6 IS WORKING AS WHEN INCOMING STRONG SIGNAL ON RECEIVER.

1-2-2. FIRST MIXER PARTY

Q8, Q9 IS MIXER PARTY. AND IT HAS OUTPUT 10.700MHz (MID RANGE) BY MIXE HIGH FREQUENCY AMPLIFICATED SIGANL AND 1ST LOCAL OSCILLATED FREQUENCY.

FOR EXAMPLE, IF THIS EQUIPMENT IS 19CH, THE FREQUENCY IS 27.185MHz AND 1ST LOCAL FREQUENCY IS 16.485MHz.

SO, F_0 - 1ST LOCAL FREQUENCY (V.C.O FREQ.) ARE 10.700MHz.

1-2-3. FILTER APRTY

WHEN THE 10.700MHz WHICH MADE FROM THE FIRST MIXER PARTY PASSED MCF1,2 FILTER GETS REAL 10.700MHz SIGNAL WHICH HAS BAND WIDTH ± 7.5 kHz.

1-2-4. 2ND MIXER PARTY

WHEN THE 10.700MHz AND 2ND LOCAL FREQUENCY (10.245MHz) ARE MIXED BY IC 1, THE MIDDLE FREQUENCY 455kHz HAS OUTPUTED AND PASSING CF2 FILTER.

1-2-5. FM DETECTOR PARTY.

THE FM SIGNAL DETECTING BY IC 1 AND TURN TO VOICE
SIGNAL ON D12(SWITCH).

1-2-6. AM FREQUENCY DETECTOR PARTY

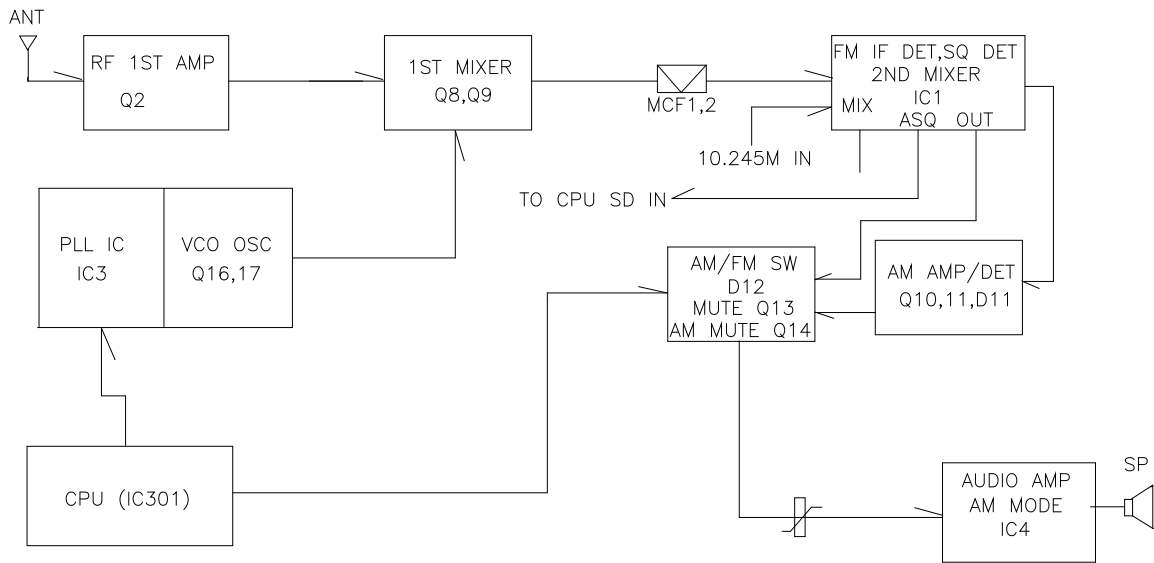
The AM detecting waves amplifies 455 KHz sign that appear in FM DET IC
in Q10, Q11, Boiseu signal that is detected by D11 is sent to D12(SWITCH).

1-2-7. AUDIO AMPLIFIER PARTY

MODIFIED VOICE SIGNAL WILL BE HEARED TROUGH SPEAKER
BY PASSING VOLUME AND AUDIO POWER AMP (IC 4).

RECEIVER BLOCK DIAGRAM

RX BLOCK DIAGRAM



1-3. TRANSMITTER PARTY.

1-3-1. V.C.O PARTY (VOLTAGE CONTROL OSCILLATOR)

ACCORDING TO VCO VOLTAGE MODIFIED OF EACH CHANNEL,
 $F_{VCO} \times 2$ FREQUENCY *(IN CASE IF 19CH, 27.185MHz) IS MADE
 BY VCO FREQUENCY & DIVIDE RATIO (N) ARE MODIFYING.

AT THIS TIME, THE VCO FREQ (13.5925MHz AT 19CH) IS FLOW IN Q30.
 AND ON Q30, DOUBLER THE $F_{VCO} \times 2$ MHz IS TURN TO 27.185MHz
 FLOW IN Q31 BSAE.

THE Q31 ARE PRE-AMPLIFIER. AND IT AMPLIFICATE WEAK CARRIER
 OF 27.185MHz. THE 27.185MHz FLOW IN TO Q32 AND IT AMPLIFICATE
 ON THE Q33 (TX POWER AMP) AND RADIATE BY ANTENNA THROUGH L.P.F.

1-3-2. L.P.F (LOW PASS FILTER)

TK1, L6, L7, L8, | 9, | 10 & C94, C128, C127, C95, C96, C97 ARE L.P.F CIRCUIT.
 54MHz TRAP L11, C137 AND THIS CIRCUIT DEPRESS THE NEEDLESS HARMONICS TO
 UNDER 90dB EXCEPT THE 27MHz.

1-3-4. AM MODULATION

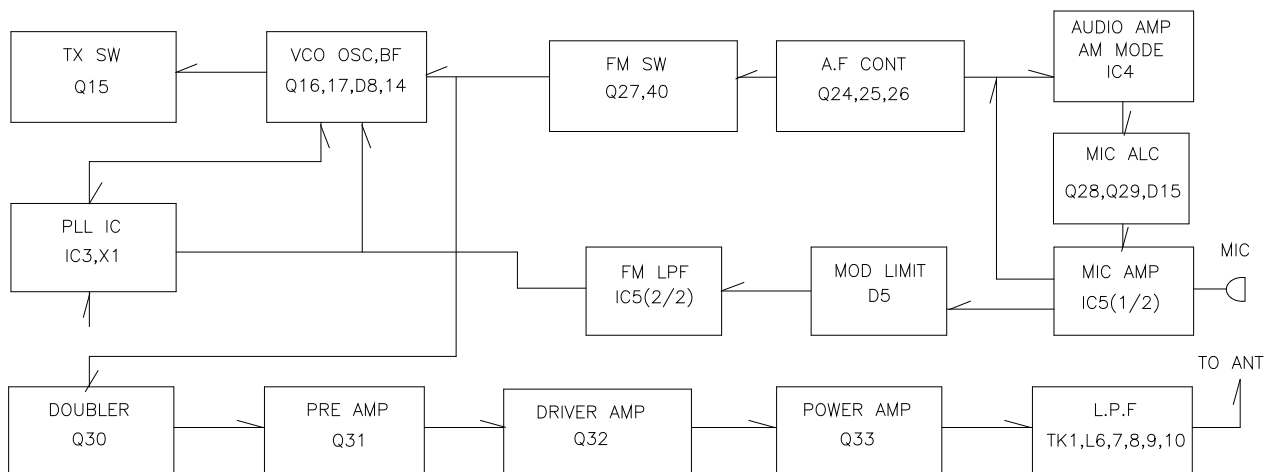
- A) THE AMPLIFICATED SIGNAL ON IC5(1/2) FLOW IN TO IC4. AND THIS SIGNAL MODULATED ON IC4, OPT1 THROUGH D24.
- B) AMC CONTROLLED BY Q28 AFTER DETECT ON Q29,D15.

1-3-5. FM MODULATION

THE AMPLIFICATED SIGNAL ON IC5(1/2) FLOW IN TO LIMIT DIODE D6 AND LPF IC5(2/2) FLOW IN TO MODULATED UNDER CONTROL OF FVCO WHICH MODIFIDE VARIABLE CAPACITOR D14 THROUGH FILTER.

TX BLOCK DIAGRAM

MJ-600 TX BLOCK DIAGRAM



2. HOW TO ADJUST

2-1. PREPARATION

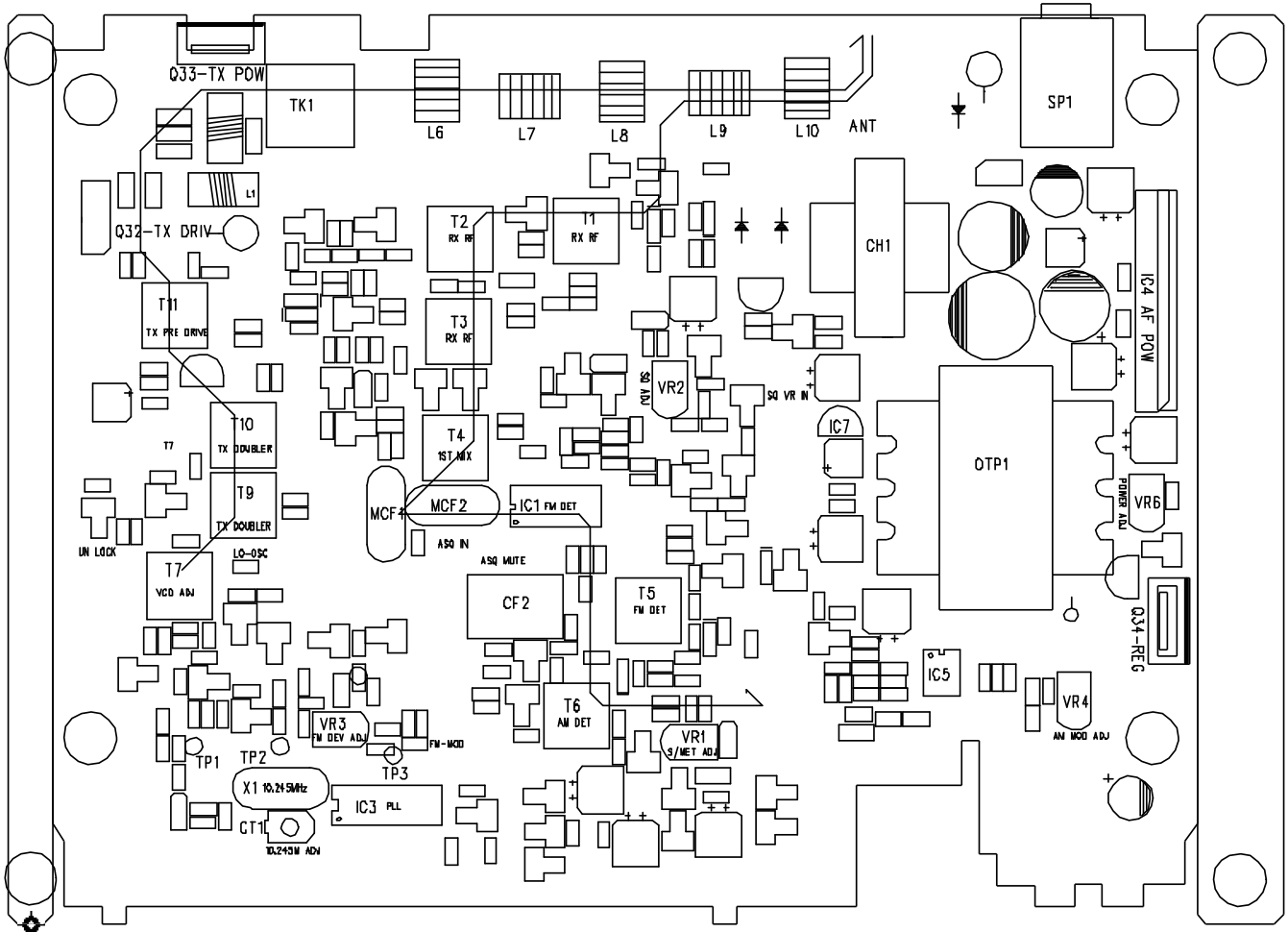
2-1-1. HOW TO DISASSEMBLE

TAKE OFF 8 PCS OF SCREWS ON SDIE PART OF BOTTOM COVER.

2-2. ADJUST & TEST POINT

PARTS LOCATION DIAGRAM

MJ-600 PART LOCATION



2-3. PASHE LOCKED LOOP & VCO PARTY

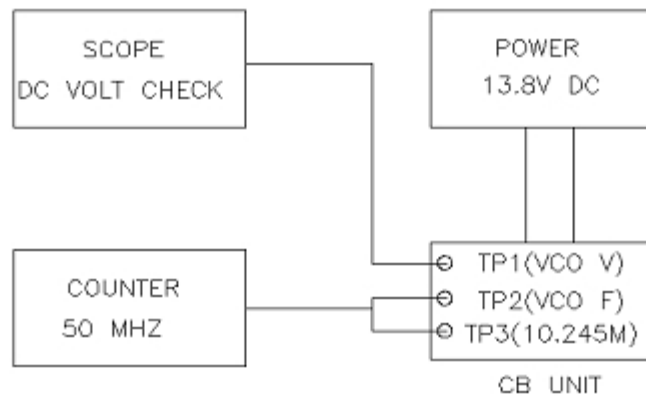
A) TEST EQUIPMENTS

- 1) FREQUENCY COUNTER
- 2) D.C POWER SUPPLY (13.8 VOLT. 3 Amp)
- 3) DC VOLTMETER
- 4) OSCILLOSCOPE

B) ADJUST ORDER

ORDER	PREPARATION	CONNECTION	POINT	ADJUST
1	10.245MHz ADJUST 1) PTT S/W : RX 2) VR/SQ : TX 3) CH : FM 1CH	CONNECT ON TP3 WITH PROBE AND CHECK THE FREQ COUNTER	CT1	10.245MHz +/- 100Hz
2	RX VCO ADJUST 1) PTT S/W : RX 2) VR/SQ : MORMAL 3) CH : FM 1CH	CONNECT ON DC VOLTMETER TO TP1	T7	2.5V
3	TX VCO CHECK 1) PTT S/W : TX 2) VR/SQ : NORMAL 3) CH : FM 1CH	SAME AS ABOVE	T7	2.5~3.0V
4	F VCO CHECK 1) PTT S/W : RX 2) VR/SQ : NORMAL 3) CH : FM 1CH	CONNECT ON PROBE TO TP2. FREQ.COUNTER		16.2625MHz

VCO TEST DIAGRAM



2-4. TRANSMITTER PARTY

A) TEST INSTRUMENTS

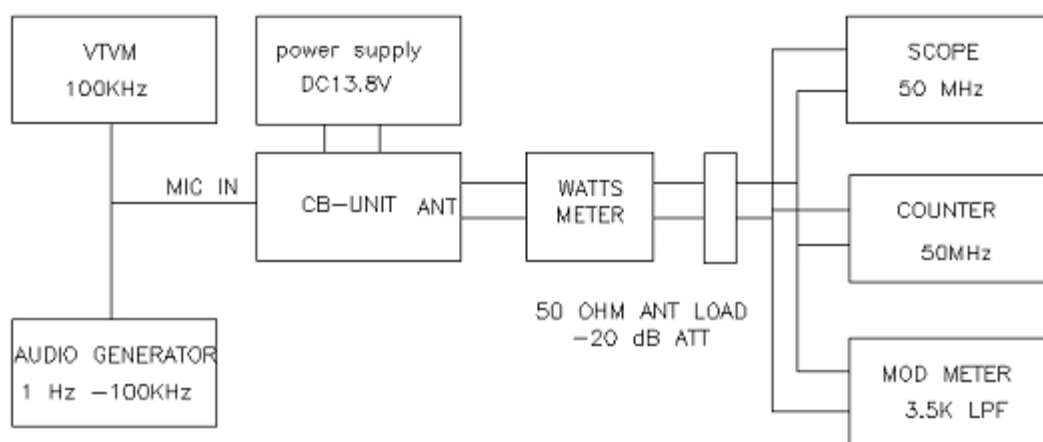
- 1) RF POWER METER
- 2) 50 ohm LOAD
- 3) RF ATTENUATOR
- 4) OSCILOSCOPE
- 5) AUDIO GENERATOR
- 6) DC POWER METER (13.8V 3A)
- 7) SPECTRUM ANALYZER
- 8) FREQUENCY COUNTER
- 9) COUPER
- 10) DUMMY LOAD
- 11) MODULATION METER

B) CONTROL ORDER

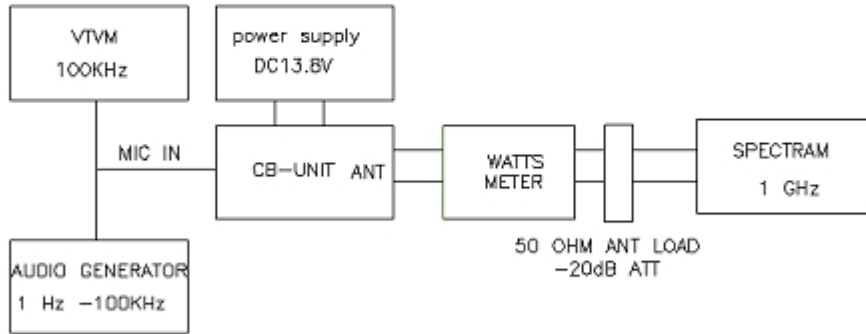
No	PREPARATION	CONNECTION	POINT	ADJUST
1	RF DRIVER & CURRENT ADJUST 1) PTT S/W : TX 2) VR/SQ : NORMAL 3) BAND: AM/FM 4) CH : 19CH	ADASHIVE 50ohm DUMMY LOAD ON RF POWER METER AND CONNECT ON ANTENNA JACK ON EQUIPMENT. TX TEST2	*T9,T10,,T11, L1, TK1 (AM:NO MOD)	*CONTROL UPTO MAXIM -UM RF DRIVER LEVEL MAXIMUM OUTPUT
2	ADJUST RF POWER 1)PTT S/W : TX MODE 2)VR/SQ : NORMAL 3)BAND:FM/AM 4)CH : 19CH	SAME AS ABOVE	*FM/AM:VR6	*ADJUST 4WATTS
3	2ND HRAMONIC CONFIR- MATION 1) PTT S/W:TX MODE 2) VOLUME: NORMAL 3) SQUELCH : NORMAL 4) CH: FM/AM 19CH	CONNET THE RF ATTENUATOR(-60dB) TO ANT JACK OF EQUIP AND CONNECT TO SPECTRUM. TX TEST2		CONFIRMATION DISPLAYED BASIC FRE -QUENCY AND 2ND,3RD FREQ.UNDER NONMOD -ULATE CONDITION

№	PREPARATION	CONNECTION	POINT	ADJUST
4	TX FREQUENCY CONFIRMATION 1) PTT S/W: TX MODE 2) VOLUME: NORMAL 3) SQUELCH: NORMAL 4) CH: FM/AM 19CH	CONNECT FRQUENCY COUNTER TO ON OUTPUT OF DUMMY LOAD. TX TEST1	CT1	ADJUST FREQUENCY AS 27.185MHZ +/-200HZ WHICH DISPLAY ON FREQ. COUNTER
5	AM MODULATION CONFIRMATION 1) PTT S/W : TX MODE 2) VOLUME : NORMAL 3) SQUELCH : NORMAL 4) CH : 19CH 5) BAND S/W : AM	CONNECT THE OUTPUT TO OSCILOSCOPE. INSERT TO 1KHZ SIGNAL OF AUDIO GENERATOR TO BOTH TERMINAL OF MIC OF SET.TX TEST1	VR4	ADJUST 85~ 90% MODULATE ON OSCILOSCOPE IN MODULATION SITUATION.
6	FM MODULATION CONFIRMATION 1) PTT S/W : TX MODE 2) VOLUME : NORMAL 3) SQUELCH : NORMAL 4) CH : 19CH 5) BAND S/W : FM	CONNECT THE RF OUT POWER METER TO DEV METER. INSERT THE 1.25KHZ 20mV SIGNAL OF AUDIO GENERATOR TO BOTH TERMINAL OF MIC OF SET. TX TEST1	VR3	ADJUST 2.0KHZ ON DEV.METER UNDER CONDITION OF MODULATION.

TX TEST DIAGRAM 1



TX TEST DIAGRAM 2



2-5 RECEIVER PARTY

A) TEST EQUIPMENTS

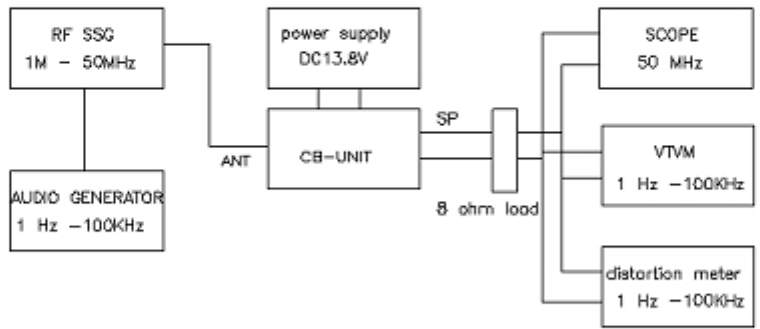
- 1) S.S.G
- 2) V.T.V.M
- 3) DISTORTION METER
- 4) DC POWER SUPPLY
- 5) 8 ohm DUMMY LOAD

B) ADJUST ORDER

NO	PREPARATION	CONNECTION	POINT	ADJUST
1	RF DRIVER/ 1F PARTY 1) PTT S/W : RX MODE 2) VOLUME : MINIMUM	CONNECT SSG TO ANT JACK AND CONNECT VTVM & DISTORTION	T1,T2,T3,T4, T6.	ADJUST VTVM TO MAXIMUM

	3) SQUELCH : MINIMUM 4) CH : 19CH 5) S.S.G : 27.185MHZ 1KHZ. ATT 30% MODE 6) MODE S/W : AM	METER TO 8ohm. RX TEST		
2	FM/DET PARTY 1) PTT S/W : RX MODE 2) VOLUME : STANDARD 3) SQUELCH : MINIMUM 4) CHANNEL : 19 CH 5) S.S.G : 27.185MHZ 1 KHZ, 1mV, 1.25 KHZ, DEV 6) MODE SW : FM	SAME AS ABOVE RX TEST	T5	SAME AS ABOVE
3	SQ ACTIVITY SITUATION 1) PTT S/W : RX MODE 2) VOLUME : STANDARD 3) SQUELCH : MAXIMUM 4) CH : 19 CH 5) S.S.G : 27.185MHZ ATT 1mV 1 KHZ 30% MOD 6) MODE S/W : AM	INSERT THE SSG TO ANT JACK AND CONNECT VTVM & DISTORTION METER TO 8 ohm LOAD. RX TEST	VR2	ADJUST UNTILL LOW FREQUENCY 1KHZ WILL APPEAR.
4	RX SIGNAL METER ADJUST 1) PTT S/W :RX MODE 2) VOLUME :STANDARD (2V) 3) SQUELCH : MINIMUM 4) CH : 19CH 5) S.S.G : 27.185MHZ 1 KHZ,1000uV30% MOD 6) MODE S/W : AM	CONNECT THE ANT JACK TO SSG AND CONNECT VTVM & DISTORTION METER TO 8 ohm LOAD. RX TEST	VR1	ADJUST UNTILL LIGHT ON LCD FULL

RX TEST DIAGRAM



23	5	R422-425	R-SMD,47KJ			
		R429				
24						
25	1	MSW1	SW-6A,PTT-SW	2C2P NON LOCK	MIC ASSY	
26	1	MSW4	SW-DIP,M-ASQ	TACT 4PIN	MIC ASSY	
27	1	MSW3	SW-DIP,M-DOWN	TACT 4PIN	MIC ASSY	
28	1	MSW2	SW-DIP,M-UP	TACT 4PIN	MIC ASSY	
29	1	SW401	SW-ENCD,	PLUS SW		
			CH-UP/DOWN			
30	1	SW402	TACT,	TACT 2PIN		
			AM/FM			
31	1	SW403	TACT,ASQ/M4			
32	1	SW407	TACT,CH9/M3			
33	1	SW406	TACT,DW/M2			
34	1	SW1	TACT,FC			
35	1	SW409	TACT,FR/BP			
36	1	SW408	TACT,LCR			
37	1	SW405	TACT,SC/M1			
60	1	MIC CON	6PIN			
61	1	MIC PLUG	6PIN PLUG		MIC ASSY	
62	1	COUL CORD	6PIN		MIC ASSY	
63	1	FRONT PCB	FR-4 1.6T		NEW MJ-600	
64	1	VR PCB	FR-4 1.6T		VR ASSY	
65	1	MIC PCB	FR-4 1.6T		MIC ASSY	
66	2	Q401-402	SOT23,KRA110S			
67	1	SQ1	VR-9Φ ,10KB		VR ASSY	
68	1	VR401	VR-9Φ ,50KA	W/ SW	VR ASSY	
69	1	X401	49/S,			
			8.MHZ,CL20P			
70	3	L1~3	1608,10uH			

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|MJ-600 MAIN-EU PART LIST

May 26 12:26:19 2006

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|Item|Qty |Reference|Part Name |Manufacturer |Description |

|---+---+-----+-----+-----+-----|

1	1	J2	ANT,ANT			
2	8	C1 C7 C10	C-SMD,0.001B			
		C56 C74				
		C86 C105				
		C117				
3	1	C20	C-SMD,0.0022B			
4	2	C5 C64	C-SMD,0.0047B			
5	1	C65	C-SMD,0.015B			
6	23	C4 C8-9	C-SMD,0.01B			
		C13-14				
		C16 C30				
		C33-36				
		C38 C58				
		C62				
		C69-70				
		C75				
		C77-78				
		C81				
		C84-85				
		C100				
7	11	C6 C23-24	C-SMD,0.022B			
		C29				
		C31-32				
		C46 C57				
		C59 C71				
		C80				
8	2	C90 C102	C-SMD,			
			0.022B(2012)			
9	1	C61	C-SMD,0.022B			
10	1	C68	C-SMD,0.068CH			
11	10	C19	C-SMD,0.1B			
		C21-22				

		C27 C37			
		C54 C63			
		C66 C72			
		C110			
12	5	C112-114	C-SMD,0.33B		
		C116 C132			
13	1	C28	C-SMD,100PCH		
14	1	C93	C-SMD,		
			100PCH(3216)		
15	1	C41	C-SMD,10PCH		
16	1	C2	C-SMD,12PCH		
17	3	C44 C73	C-SMD,150PCH		
		C83			
18	1	C97	C-SMD,		
			150PCHD/50V	ANT	
19	1	C51	C-SMD,15PCH		
20	1	C76	C-SMD,180PCH		
21	1	C96	C-SMD,		
			180PCH(3216)		
22	2	C133-134	C-SMD,1uFB		
23	4	C3 C39	C-SMD,220PCH		
		C53 C55			
24	1	C43	C-SMD,270PCH		
25	2	C127-128	C-SMD,		
			270PCH(3216)		
26	1	C95	C-SMD,		
			270PCH(3216)		
27	2	C11 C17	C-SMD,27PCH		
28	1	C98	C-SMD,		
			27PCH(3216)		
29	2	C26 C79	C-SMD,330PCH		
30	3	C25 C40	C-SMD,33PCH		
		C42			
31	1	C94	C-SMD,		
			390PCH(3216)		
32	2	C99 C135	C-SMD,3PCH		
33	3	C115	C-SMD,		

			4.7uFB(2012)			
34		C131				
35		C130				
36	1	C50	C-SMD,470PCH			
37	1	C88	C-SMD,			
			470PCH(2012)			
38	1	C89	C-SMD,			
			470PCH(3216)			
39	3	C47-49	C-SMD,47PCH			
40	1	C137	C-SMD,			
			47PCH(2012)			
41	3	C18 C45	C-SMD,5PCH			
		C82				
42	1	C91	C-SMD,			
			68PCH(2012)			
43	1	C67	C-SMD,680PCH			
44	1	C87	C-SMD,68PCH			
45	1	C118	C-SMD,			
			68PCH(2012)			
46	1	C15	C-SMD,7PCH			
47	1	C12	C-SMD,820PCH			
48	2	MCF1-2	CF-A,10.7MHZ			
49	1	CF2	CF-A,455HT			
50	1	TK1	COIL,L6			
51	1	CORD	GND,13.8V		POWER CORD W/FUSE5A	
52	1	CN1	CON-2B,IN-SP		SP TWIN 160mm assy	
53	1	CT1	CV-SMD,20P			
54	1	D20	D-A,1N4002			
55	2	D23-24	D-A,1N5401			
56	3	D1-2 D11	CHIP,KDR357			
57	6	D9 D13	CHIP,KDS160			
		D15-16				
		D18 D25				
58	3	D3 D6 D10	SOT23,KDS226			
59	2	D5 D17	SOT23,KDS181			
60	2	D4 D12	SOT23,KDS184			

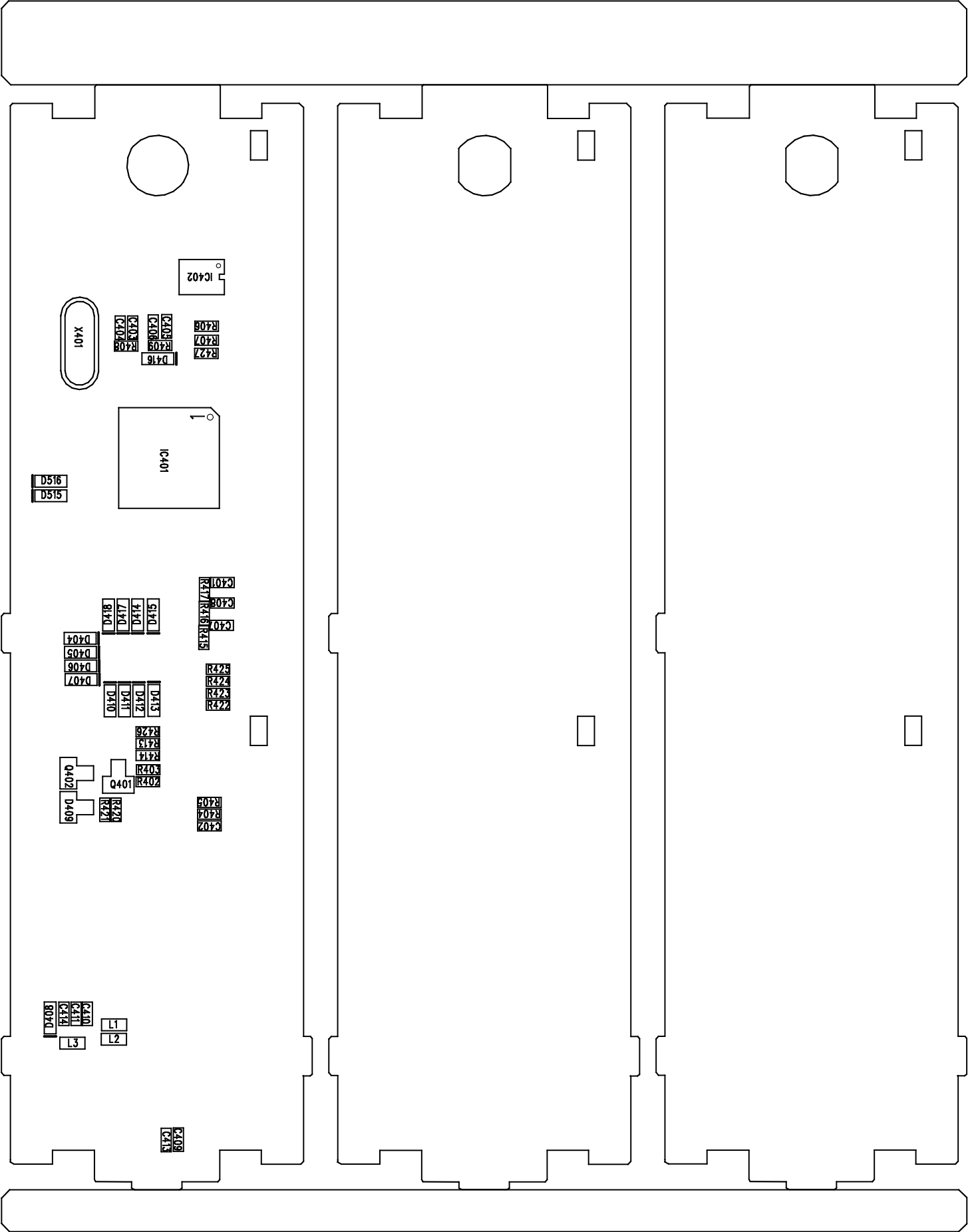
61	2	D8 D14	SOT23,KDV251Y		
62	1	D21	SOT23,3.0VB		
63	1	D22	SOT23,5.6VB		
64	1	D7	SOT23,9.1VB		
65	2	TE6 TE8	TANTAL,1/16		
66	2	TE1 TE14	TANTAL,10/16		
67	3	CE4 CE8	E-A,100/16		
		CE14			
68	1	CE9	E-A,1000/16		
69	1	TE2	TANTAL,2.2/16		
70	3	CE5 CE16	CHIP,22/16		
		CE21			
71	4	CE1 CE6	CHIP,33/16		
		CE11 CE20			
72	1	CE15	E-A,330/16		
73	1	TE4	TANTAL,4.7/16		
74	5	CE3 CE7	CHIP,47/16		
		CE13 CE19			
		CE30			
75	1	CE17	E-A,470/16		
76	1	Q5	FET,K211GR		
77	1	IC2	78L05 REG		
78	1	IC5	IC6,KIK4558		
79	1	IC4	IC10,KIA7217		
80	1	IC3	IC24-MFP24S,		
			LC7152M		
81	1	IC1	ICP16,MC3361		
82	1	T3	IFT,047		
83	1	T6	IFT,81450A		
84	1	T7	IFT,81460N		
85	1	T4	IFT,048		
86	1	T1	IFT6,81410A		
87	1	T2	IFT6,81420		
88	2	T9-10	IFT6,81480		
89	1	T11	IFT6,LX18		
90	1	T5	IFT-5,036		

91	1	J1	J-SP,EXT SP			
92	1	L11	L-D,			
			220nH(2012)			
93	1	L3	L-D,			
			6.8uH(2012)			
94	1	L1	L-D,6T			
95	1	L9	L-D,7-1/2T			
96	4	L6-8 L10	L-D,8-1/2T			
97	1	L4	L-D,PICKING			
			COIL			
98	2	R121 R141	R-SMD,0			
99	2	R2 R4	R-SMD,1 K			
100	2	R58 R129	R-SMD,1.5K			
101	1	R28	R-SMD,1.5M			
102	1	R126	R-SMD,1.8K			
103	1	R70	R-SMD,10(2012)			
104	6	R19 R63	R-SMD,100			
		R84				
		R100-101				
		R133				
105	10	R3 R5 R11	R-SMD,100K			
		R15 R23				
		R45 R49				
		R114-115				
		R138				
106	18	R7 R13	R-SMD,10K			
		R25 R44				
		R47				
		R50-51				
		R60 R67				
		R75				
		R77-79				
		R92 R98				
		R113 R119				
		R139				
107	1	R107	R-SMD,			
			120(1/2W)			

108	1	R117	R-SMD,150/1W			
109	1	R42	R-SMD,150K			
110	3	R27 R66	R-SMD,15K			
		R94				
111	1	R85	R-SMD,180K			
112	9	R18 R30	R-SMD,1K			
		R54 R93				
		R95 R111				
		R125 R127				
		R134				
113	1	R12	R-SMD,1M			
114	1	R52	R-SMD,10K			
115	12	R16 R36	R-SMD,2.2K			
		R46 R62				
		R65 R71				
		R91 R130				
		R132				
		R135-137				
116	6	R1 R20-21	R-SMD,2.7K			
		R76 R96				
		R123				
117	1	R72	R-SMD,22			
118	2	R22 R33	R-SMD,220			
119	3	R53 R57	R-SMD,220K			
		R99				
120	5	R31 R68	R-SMD,22K			
		R74 R128				
		R142				
121	1	R131	R-SMD,24K			
122	1	R120	R-SMD,270			
123	1	R88	R-SMD,270K			
124	1	R89	R-SMD,27K			
125	2	R82-83	R-SMD,3.3K			
126	3	R32 R97	R-SMD,330			
		R140				
127	6	R29 R37	R-SMD,33K			
		R41 R73				

		R86 R90			
128	2	R118 R124	R-SMD,390		
129	1	R69	R-SMD,4.7/2W		
130	3	R8	R-SMD,4.7K		
		R102-103			
131	1	R144	R-SMD,		
			4.7K(2012)		
132	3	R35	R-SMD,47		
		R105-106			
133	2	R26 R116	R-SMD,470		
134	1	R6	R-SMD,470K		
135	6	R38-39	R-SMD,47K		
		R43 R55			
		R80-81			
136	4	R9-10 R87	R-SMD,5.6K		
		R104			
137	1	R14	R-SMD,5.6M		
138	1	R56	R-SMD,56		
139	2	R24 R34	R-SMD,56K		
140	2	R48 R61	R-SMD,6.8K		
141	2	R64 R108	R-SMD,68		
142	1	R109	R-SMD,68(2012)		
143	1	R122	R-SMD,680		
144	1	R40	R-SMD,68K		
145	1	R112	R-SMD,820		
146	1	R17	R-SMD,82K		
147	2	Q21 Q25	T-220AB,A101S		
148	2	Q35 Q38	T-220AB,A1241Y		
149	2	Q6 Q29	T-220AB,A1504Y		
150	1	Q34	T-220AB,B988Y		
151	8	Q13-14	T-220AB,C102S		
		Q22 Q24			
		Q27 Q37			
		Q40 Q43			
152	1	Q26	T-220AB,C110S		
153	1	Q33	T-220AB,C2078E		
154	1	Q32	T-220AB,C2314F		

155	1	Q31	T-220AB,			
			C3199GR			
156	15	Q1 Q3-4	T-220AB,C3875Y			
		Q7 Q10-12				
		Q15 Q20				
		Q23 Q28				
		Q36 Q39				
		Q41-42				
157	6	Q2 Q8-9	T-220AB,C3880Y			
		Q16-17				
		Q30				
158	25	M1-17	TP1,+			
		VM1-8				
159	1	MV9	TP1,MIC IN			
160	1	OPT1	TRANS,28MM			
161	1	CH1	TRANS2,19MM			
162	1	VR4	VR-5H3P,1KB			
163	1	VR6	VR-5H3P,470B			
164	1	VR1	VR-6H3P,100KB			
165	1	VR2	VR-6H3P,10KB			
166	1	VR3	VR-6H3P,5KB			
167	1	X1	XTL-11X4.5,			
			10.245MHZ			



IC402

X401

R408
R407
R406
R405
R404
R403
C408
C407
C406
C405
C404
C403
C402
C401
D408
D407
D406
D405
D404

IC401

D515
D514

C401
R417
R416
R415

S17C
S17D
A17C
A17D
B17C
B17D

D404
D405
D406
D407

R428
R427
R426

D413
D412
D411
D410

R428
R427
R426
R425
R424
R423
R422
R421

Q401

R408
R407
R406
R405

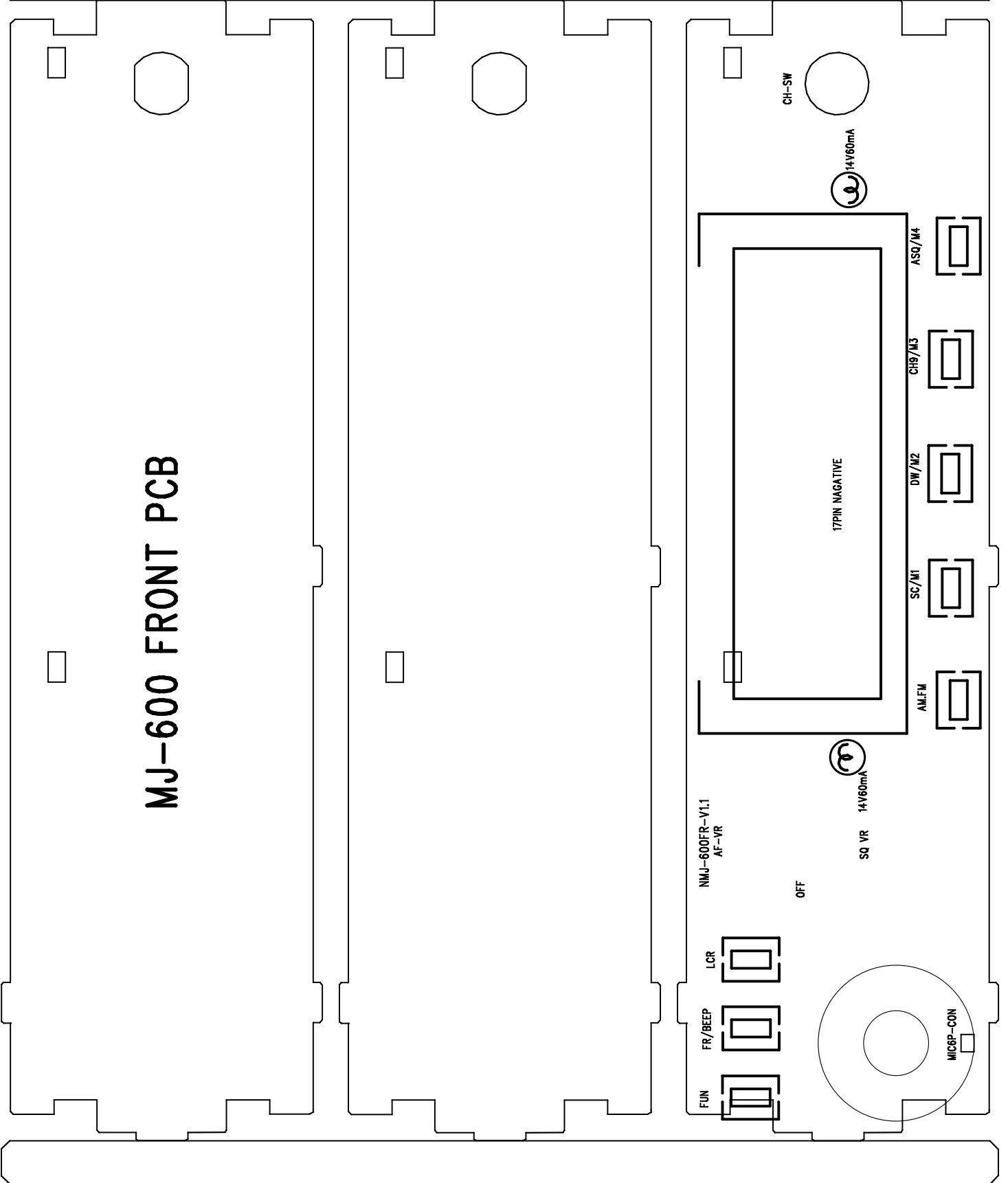
Q402
Q403
Q404
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Q407
Q408
Q409

C410
C411
C412
B0401
L1
L2
L3

R408
C413

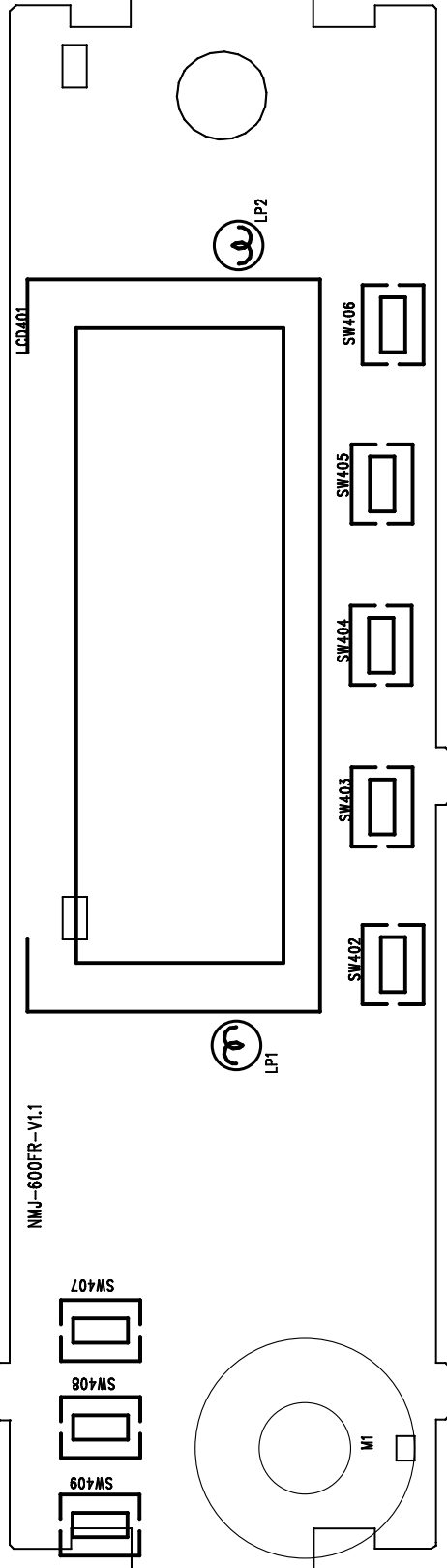
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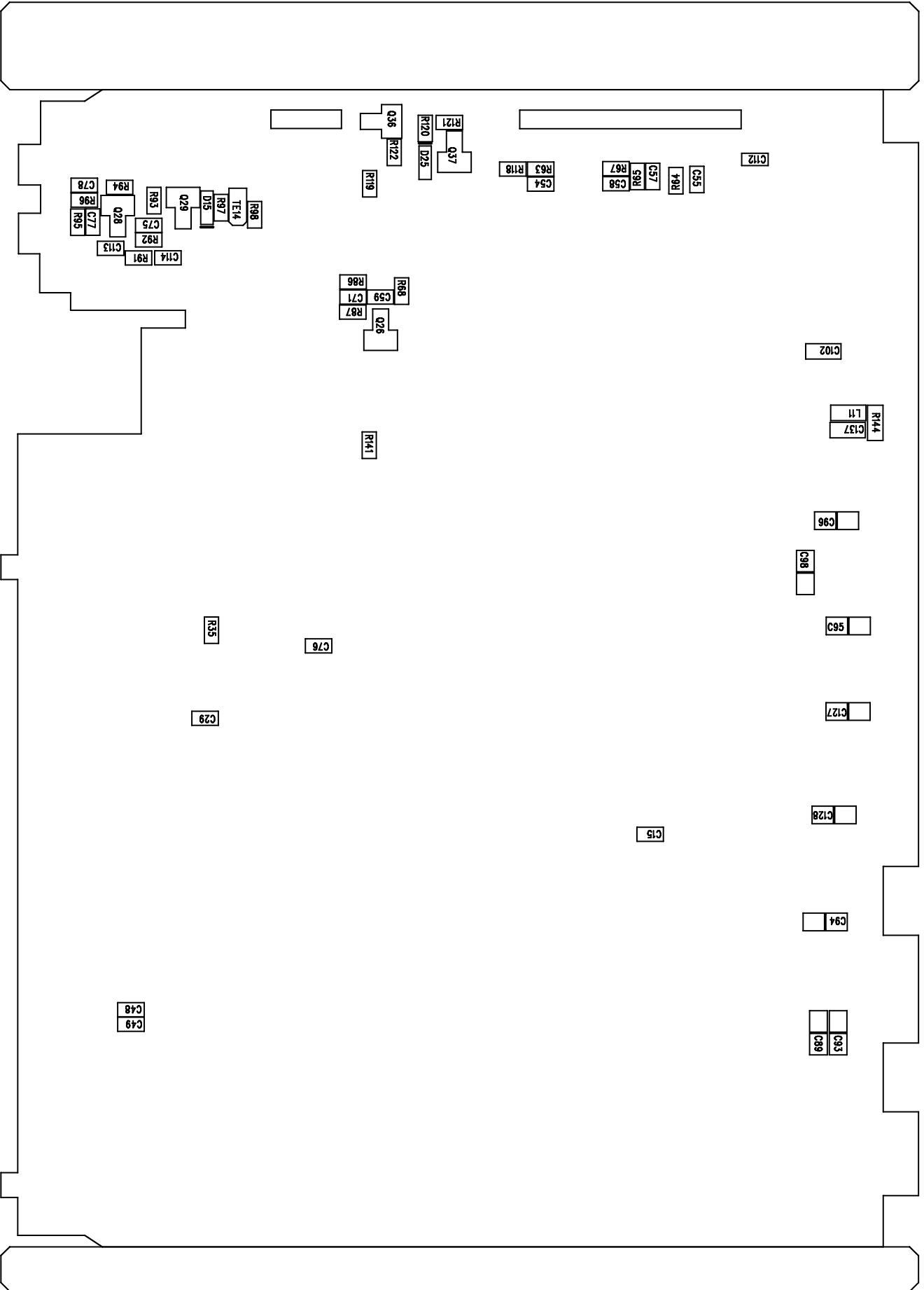
MJ-600 FRONT PCB



MJ-600FRONT-V1.1- 2005 .04.26.

MJ-600 FRONT PCB





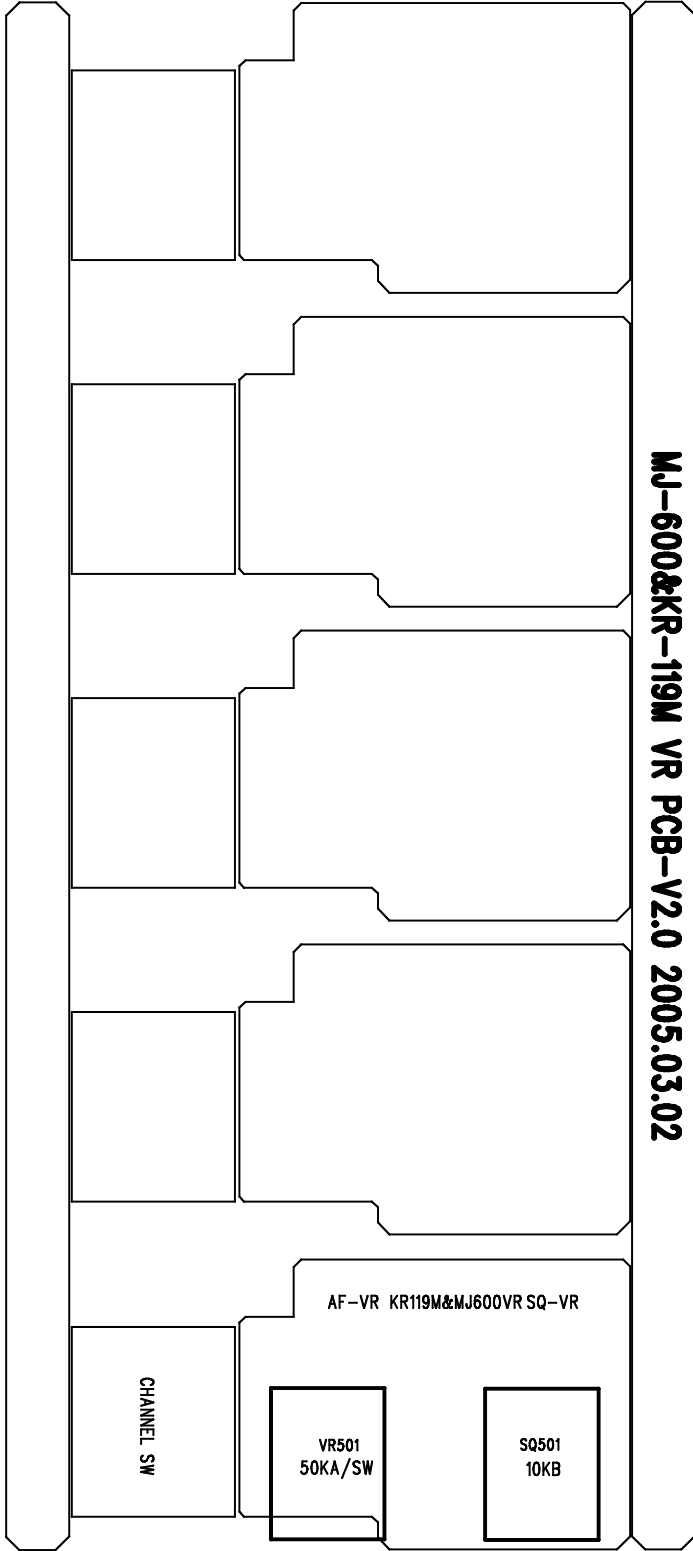
MJ-600&KR-119M VR PCB-V2.0 2005.03.02

AF-VR KR119M&MJ600VR SQ-VR

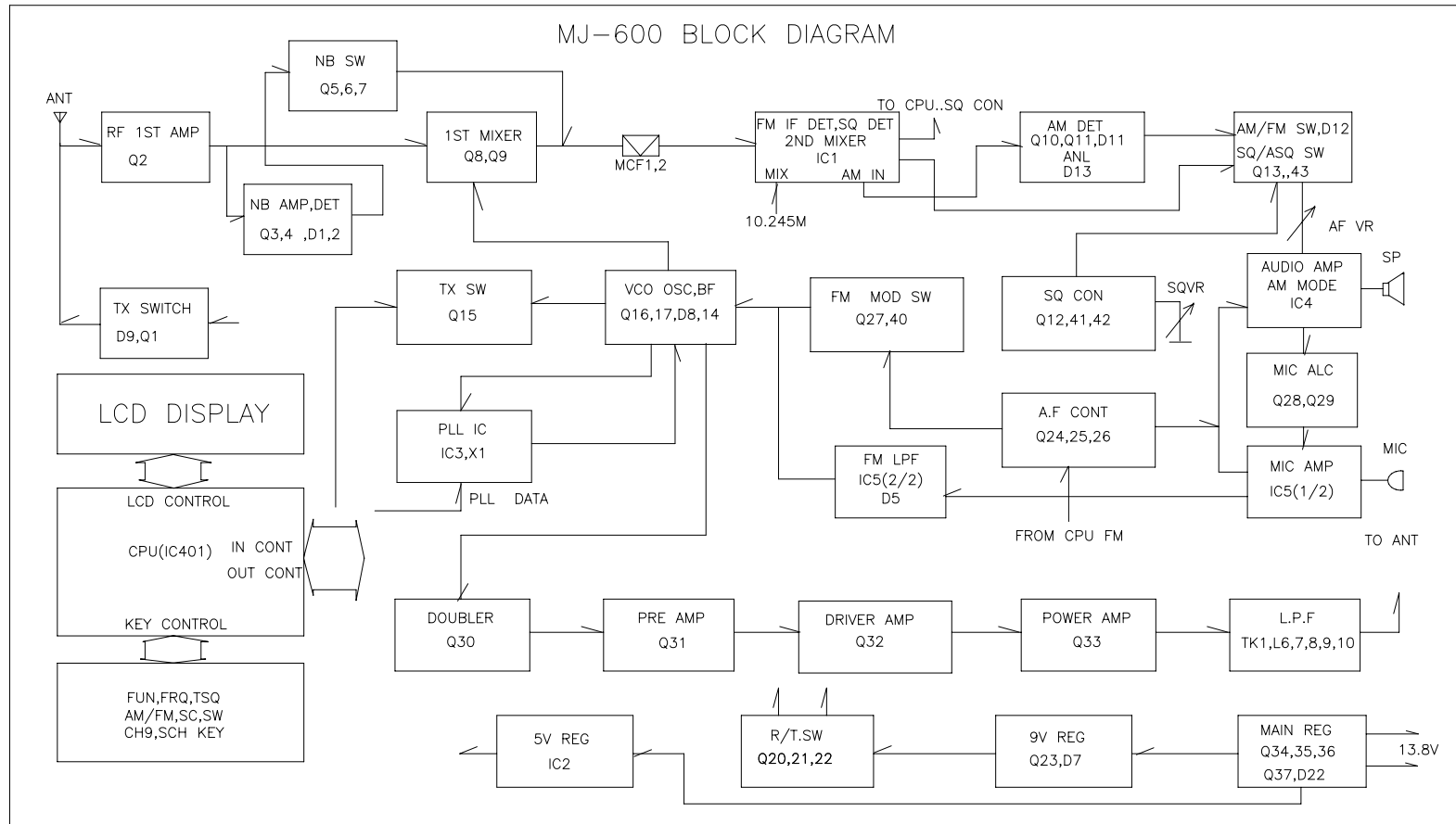
VR501
50KA/SW

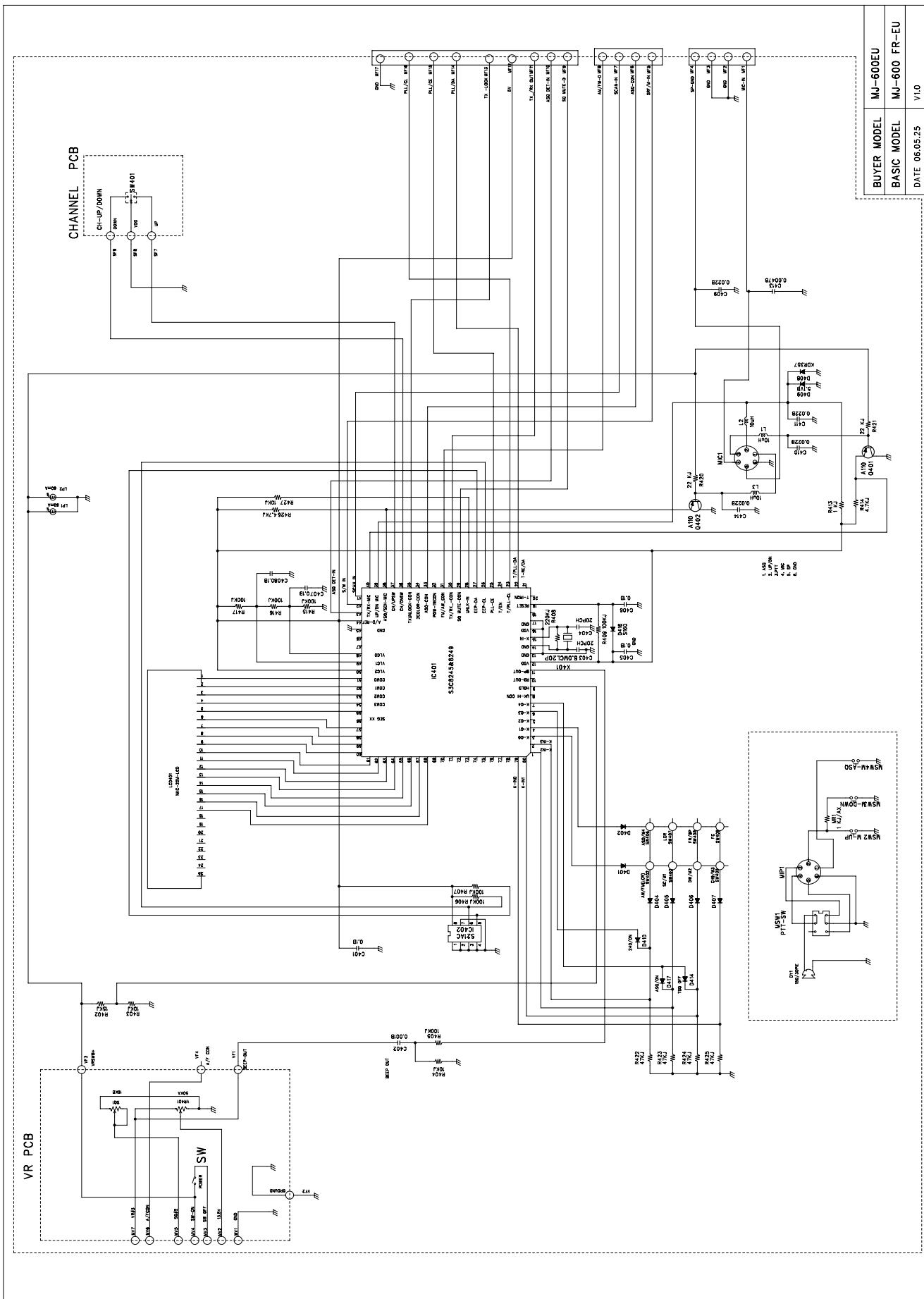
SQ501
10KB

CHANNEL SW

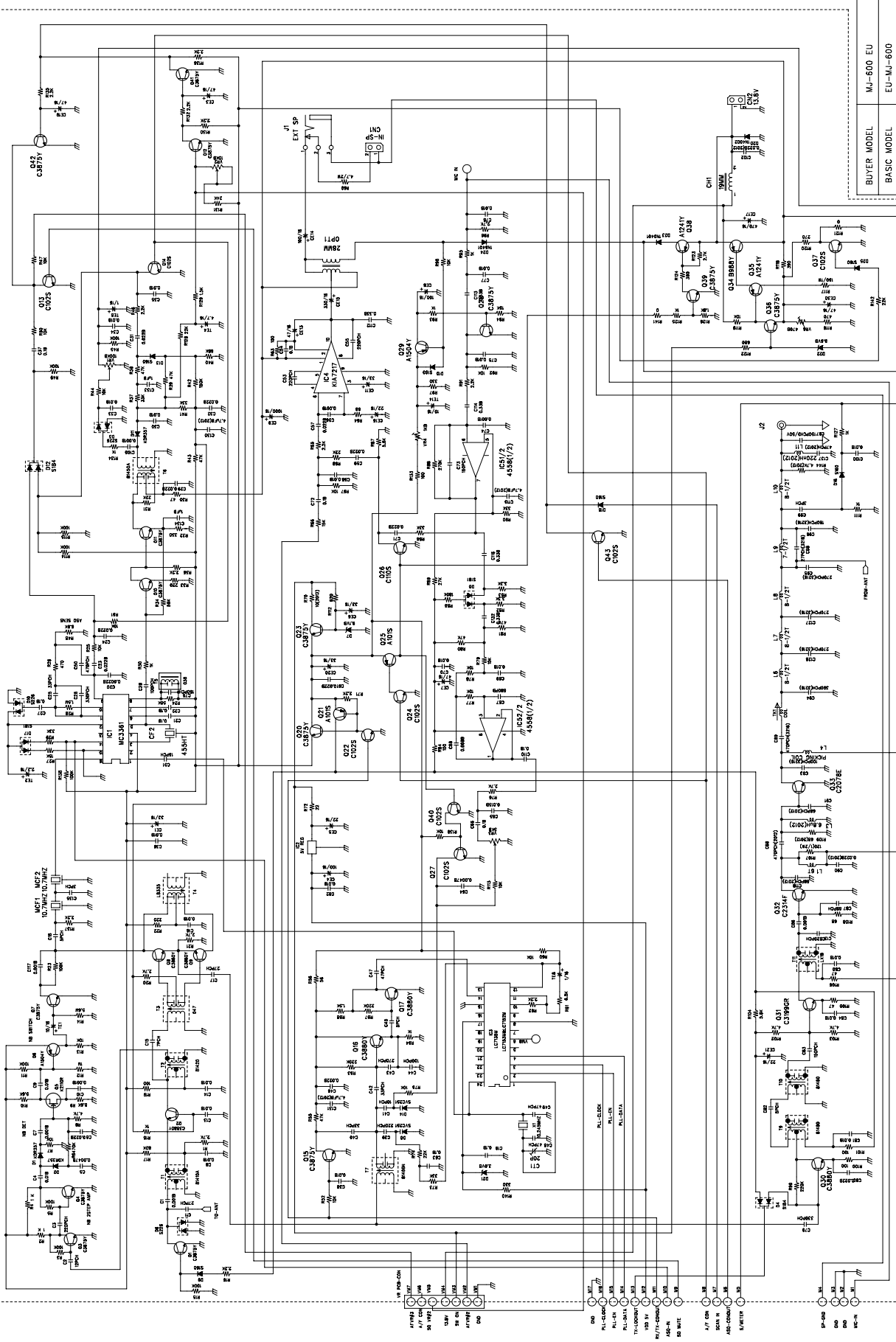


MJ-600 BLOCK DIAGRAM





NJ-600 EU MANE UNIT



BUYER MODEL	MJ-600 EU
BASIC MODEL	EU-NJ-600
DATE	06.05.24
	V1.0

MJ-600 PART LOCATION

