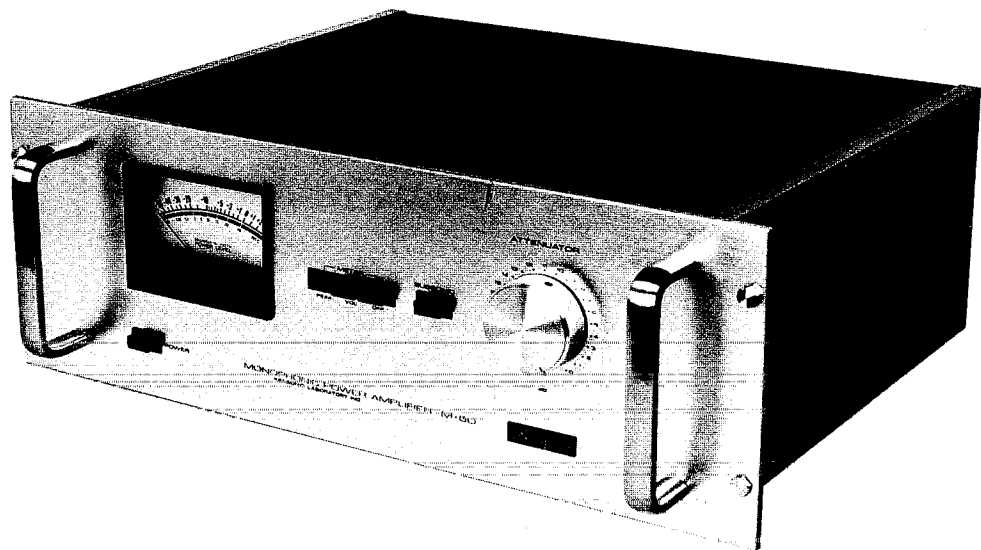


Accuphase

MONOPHONIC POWER AMPLIFIER M-60



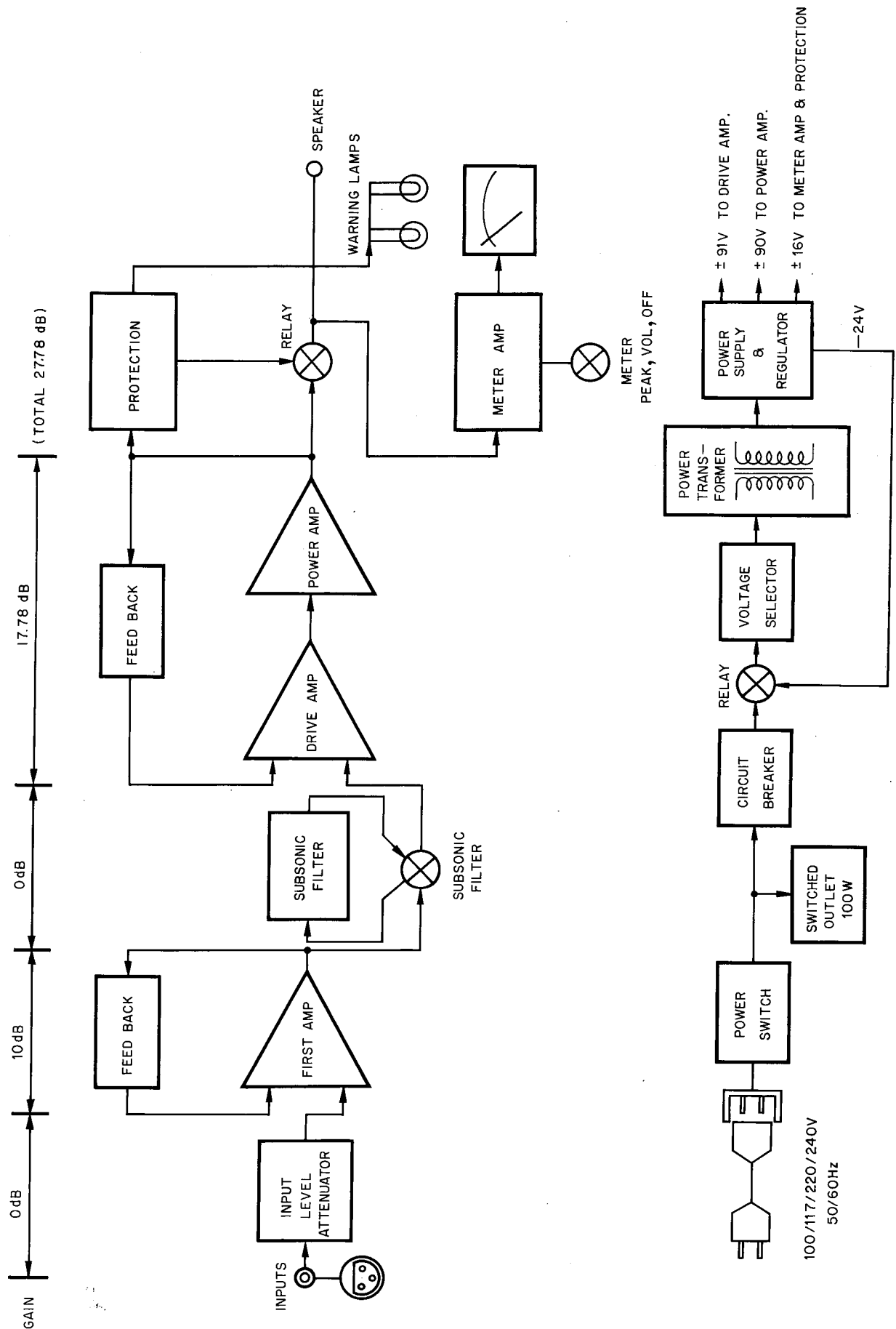
Service Information

STARTING WITH SERIAL NO. G5Y001

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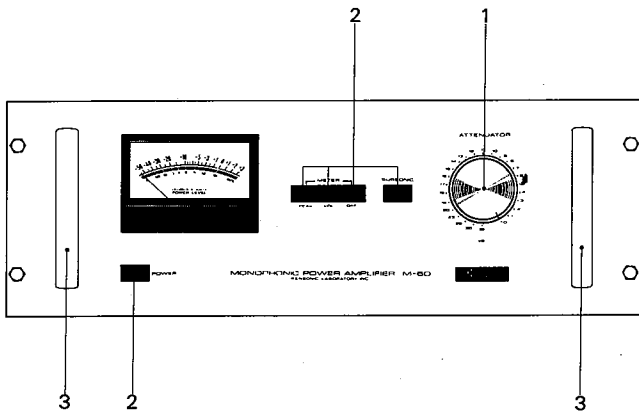
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BLOCK DIAGRAM

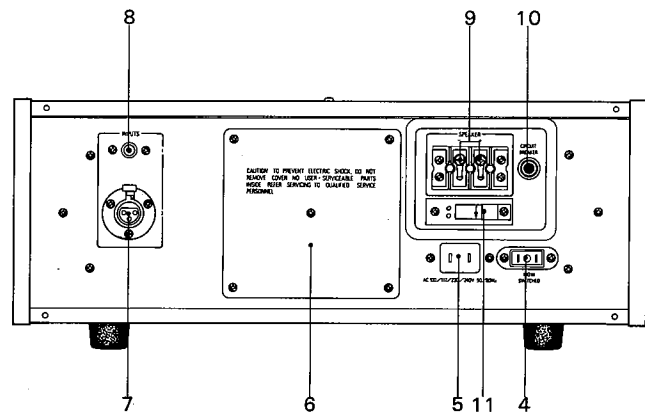


EXTERNAL VIEW

●FRONT



●REAR



●PARTS LIST

No.	Description	Part No.	Remarks
1	Knob for ATTENUATOR	381-5001-04	Ref. EXPLODED VIEW No.16
2	Push-button for POWER, METER, SUBSONIC	389-5001-14	Ref. EXPLODED VIEW No.14
3	Handle	132-0007-04	Ref. EXPLODED VIEW No. 1
4	AC Outlet	305-1201-00	
5	AC Connector Plug	301-3201-00	
6	AC Connector Plug	301-3301-00	for 3-Conductor
6	Square Plate	159-0003-04	

No.	Description	Part No.	Remarks
7	Cannon Receptacle	304-5301-00	XLR-3-13 for INPUT 2
8	Pin Jack 1-Pin	302-0101-00	for INPUT 1
9	Speaker Terminal	313-5021-00	
10	Circuit Breaker	311-0101-00	10A at 100, 117V(Black)
10	Circuit Breaker	311-0051-00	5A at 220, 240V(Red)
11	Voltage Selector Jack	302-4001-00	
	Voltage Selector Plug	301-4001-00	
	Voltage Selector Fixed Bracket	248-0001-14	

HOW TO REPLACE THE FOLLOWING PARTS

POWER TRANSISTOR Ref: INTERNAL VIEW NO.2

1. Remove the Side Plate held by 6 screws.
2. Transistors located above the heat sink can be replaced after removing the transistor locking screws.

LOAD CIRCUIT RELAY Ref: INTERNAL VIEW NO.11

1. Remove the Bottom Plate (6 screws) and the Side Plate (Left side: 8 screws).
2. The Relay can be removed from the Bottom Plate side after taking off the 4 screws.

METER CIRCUIT ASSEMBLY Ref: INTERNAL VIEW NO.4 & EXPLODED VIEW

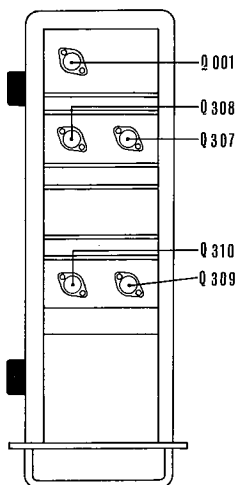
1. Remove in the following order: Top Plate, Sub-chassis Shield Cover.
2. Remove the Meter Selector and the Subsonic Filter Push-buttons.
3. Remove the Printed Board Connector Jacks (2 pcs).
4. The Meter Circuit Assembly can be removed when two screws holding the printed board are removed.

METER Ref: EXPLODED VIEW NO.16

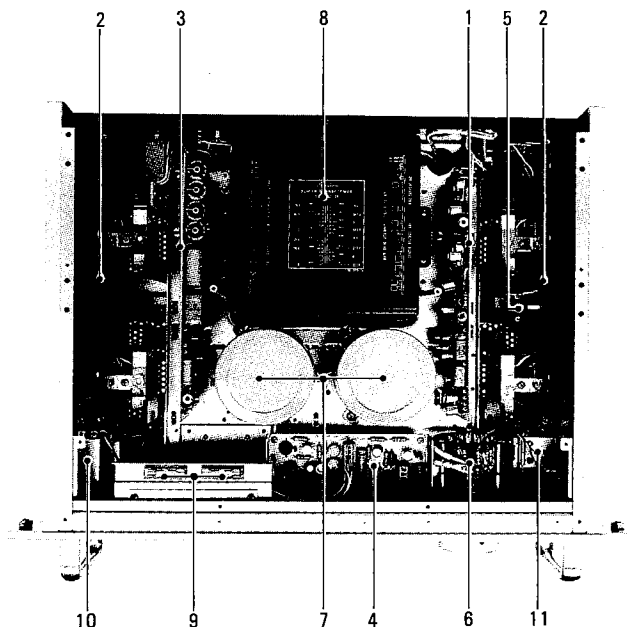
1. Remove the Top Plate.
2. First remove a knob on the Front Panel. Then take off the Front Panel after removing the Hex. Head Bolt, Hex. nut and the six locking screws.
3. The entire Meter Assembly can be pulled forward after unscrewing the three screws attached to the Meter Fix Bracket.
4. The Meter can then be removed after taking off the 4 nuts attached to the Meter Fixed Bracket at the rearside of the Meter.

INTERNAL VIEW

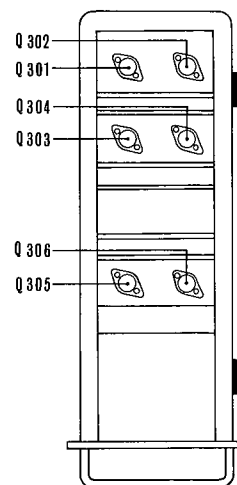
●LEFT SIDE



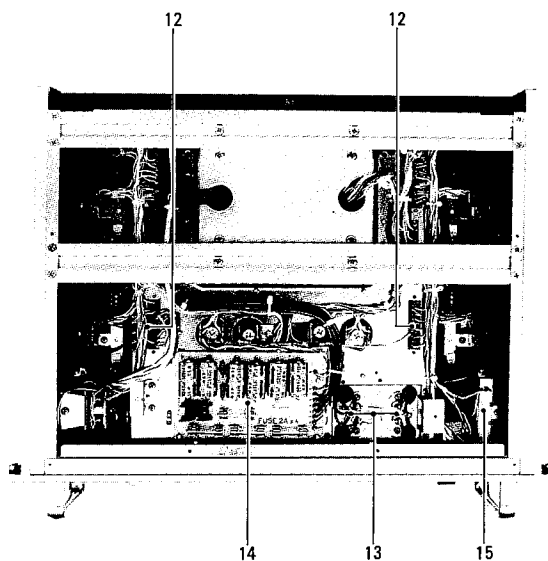
●TOP SIDE



●RIGHT SIDE



●BOTTOM SIDE

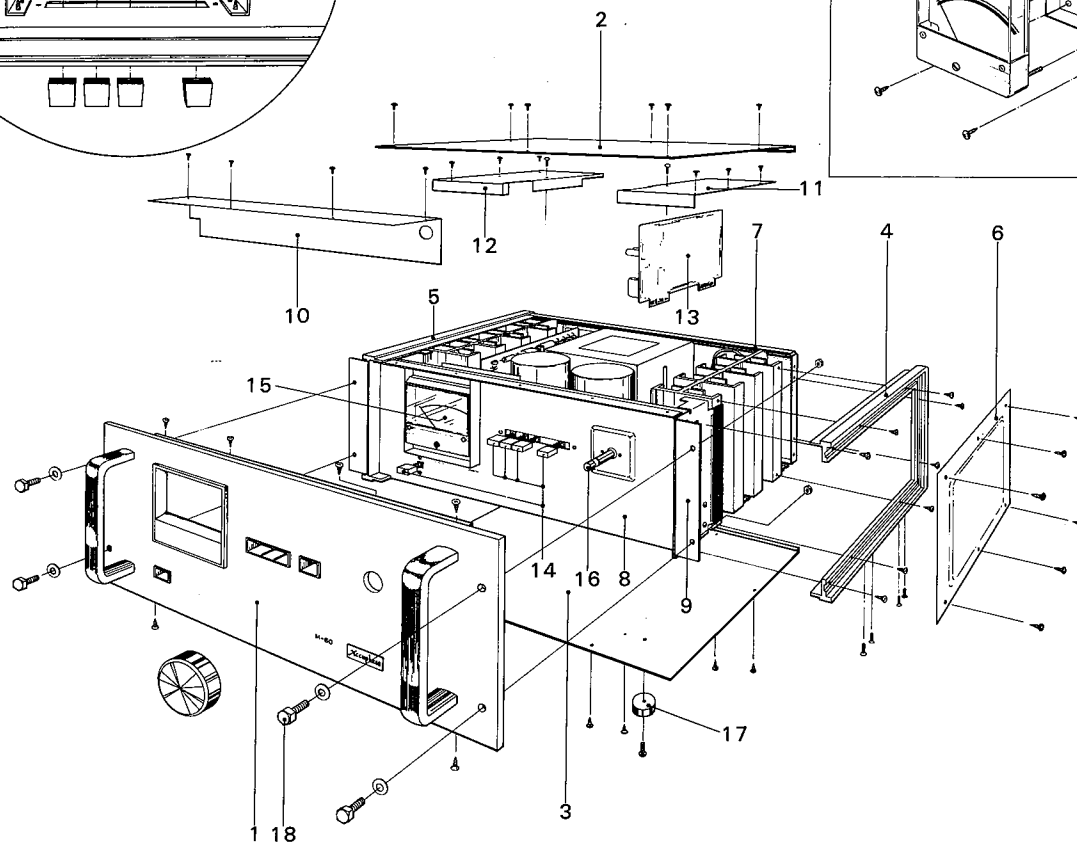
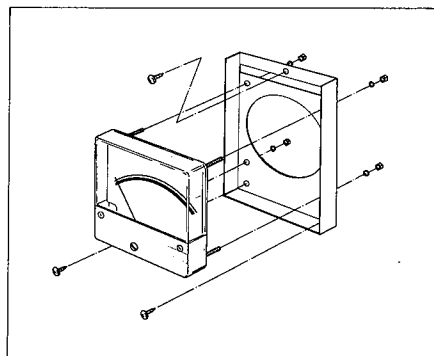
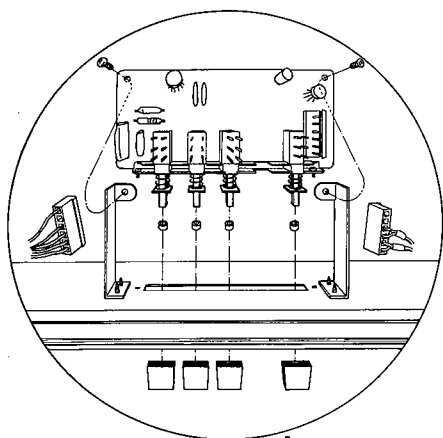


●PARTS LIST

No.	Description	Part No.	Remarks
1	Main Drive Amp. Assembly	710-0003-00	
2	Heat Sink	240-0003-02	for Power Transister
	Transistor PNP	28B554-0-K	Q ₃₀₄ , 308, 308, 310
	Transistor PNP	2SB555-K	Q ₃₀₂
	Transistor NPN	2SD424-0-K	Q ₃₀₃ , 305, 307, 309
	Transistor NPN	2SC1195-K	Q ₃₀₁
	Transistor NPN	2SD371-R or Y	Q ₀₀₁
	Silicon Varistor	STV-3H-0	D ₂₀₁ , 202
	Transistor Insulator	318-0001-00	
	Cement Coated Wirewound Resistor	RW864AG1ROK	1Ω ±10% 10W
3	Protection Circuit Assembly	720-0002-00	
4	Meter Circuit Assembly	716-0018-00	
5	Phase Correct Circuit Assembly	716-0017-00	
6	ATTENUATOR	578-1251-00	

No.	Description	Part No.	Remarks
7	Electrolytic Capacitor	CE33W2A223	22,000μF 100WV
8	Power Transformer	510-2002-00	
9	Pilot Lamp.	176-5201-00	8V-300mA
	Lamp Socket	306-1001-00	
10	Relay	362-2204-00	LY2-US (For Power Supply Circuit)
11	Relay	362-2203-10	MM2XL-K55 (Load Relay Circuit)
12	Printed Circuit Bord Connector	303-1001-00	10-pin
13	Rectifier	SG-5T(+)	D ₀₀₁
		SG-5T(-)	D ₀₀₂
	Transistor Insulator	318-0001-00	
	Insulating Bushing	318-1102-00	
14	Fuse Circuit Assembly	716-0016-00	
	Fuse	310-0201-00	2A F1, 2, 3, 4
15	Cement Coated Wirewound Resistor	RW864DG2R2K	2.2Ω ±10% 20W

EXPLODED VIEW



●PARTS LIST

No.	Description	Part No.	Remarks	
1	Front Panel Assembly	130-0007-03		
	Front Panel	131-0007-02		
	Handle	132-0007-04		
	Handle Fixed Bracket	247-0049-04		
	Meter Frame	113-0004-03		
	Push-button Frame	113-0008-14	for Meter Switch	
	Push-button Frame	113-0010-04	for Power Switch and Subsonic Switch	
	Badge	182-1001-04	Accuphase	
	Rubber Cushion	250-2008-04		
2	Top Plate	150-0004-02		
3	Bottom Plate	155-0005-02		
4	Frame Assembly (R)	112-0004-02		
	Frame D	112-1004-23	Upper	
	Frame E	112-1005-23	Lower	
	Frame F	112-1006-04	Back	
	Frame Fixed Bracket	244-0011-04		
	Flat Head B Type Self Tapping Screw	613-0308-04	3×8mmdia.	
	5	Frame Assembly (L)	112-0003-02	
		Frame A	112-1001-23	Upper
Frame B		112-1002-23	Lower	
Frame F		112-1006-04	Back	

No.	Description	Part No.	Remarks
	Frame Fixed Bracket	244-0011-04	
	Flat Head B Type Self Tapping Screw	613-0308-04	3×8mmdia.
	6	Side Plate	151-0003-02
7	Rear Panel	135-0008-02	
8	Sub Chassis	111-2003-02	
9	Front Panel Fixed Bracket	247-0048-04	
10	Sub Chassis Shield Cover	231-0027-03	
11	Shield Cover (R)	231-0015-03	
12	Shield Cover (L)	231-0014-03	
13	Main Drive AMP. Assembly	710-0003-00	Right Side Only
14	Push-button Switch	354-4003-00	for METER & SUBSONIC Switch
		354-1003-00	for Power Switch
15	Power Meter	178-2004-00	
		246-0004-04	
16	ATTENUATOR	578-1251-06	
		203-5004-04	
17	Plastic Foot	238-0001-14	
18	Hex. Head Bolt	630-0601-04	6×12mm
		633-2061-03	6mmdia.
		637-0061-59	6mmdia.

MISCELLANEOUS

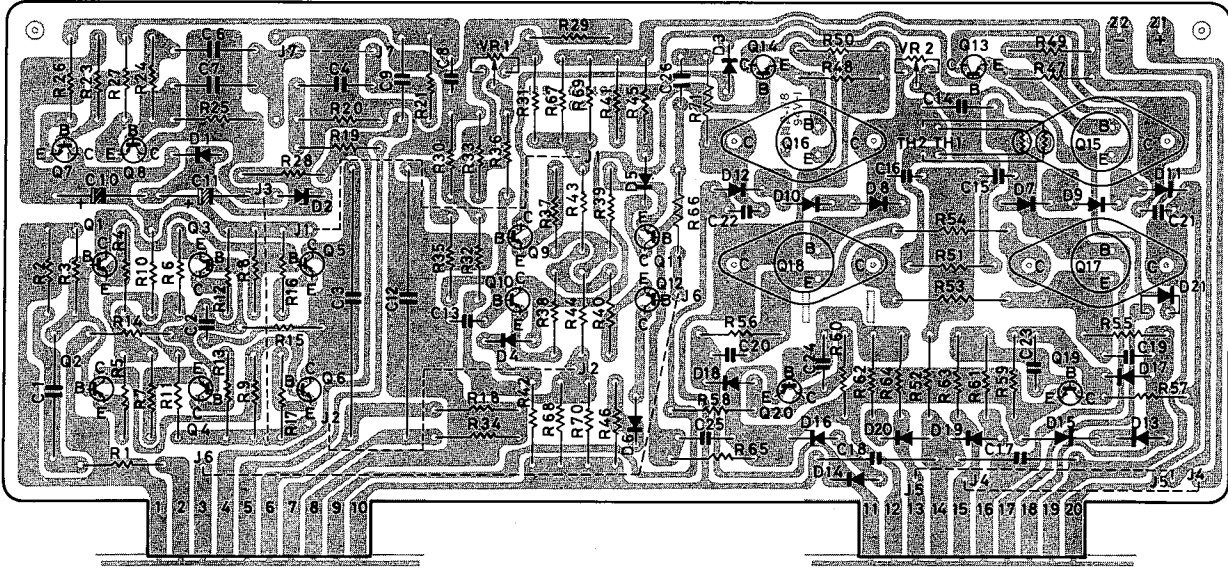
No.	Description	Part No.	Remarks
	Screws for		
	Top Plate	614-0308-02	3×8mm (3) 6pcs
	Nylon Washer	637-1031-50	3mmdia. 6pcs
	Front Panel	613-0308-04	3×8mm (2) 6pcs
	Hex. Head Bolt	630-0601-04	6×12mm 4pcs
	Hex. Nut	633-2061-03	6mmdia. 4pcs
	Nylon Washer	637-0061-59	6mmdia. 4pcs
	Frame Assembly	613-0308-04	3×8mm (2) 16pcs
	Handle	600-0510-04	5×10mm (1) 4pcs
	Side Plate	614-0306-02	3×6mm (3) 12pcs
	Bottom Plate	614-0306-02	3×6mm (3) 8pcs
	Rear Panel	614-0308-02	3×8mm (3) 10pcs
	Square Plate	600-0306-04	3×6mm (1) 4pcs
	Power Transistor	600-0312-04	3×12mm (1) 22pcs
	Rectifier (SG-5T)	600-0308-04	3×8mm (1) 4pcs
	Plastic Foot	600-0414-04	4×14mm (1) 4pcs
			Notes.
			(1) Pan Head ISO Metric Screw
			(2) Flat Head B Type Self Tapping Screw
			(3) Binding Head B Type Self Tapping Screw
Q001	Transistor NPN	2SD371-R or Y	for Voltage Regulator
Q301	Transistor NPN	2SC1195-K	for driver Stage
Q302	Transistor PNP	2SB555-K	for driver Stage
Q303, 305, 307, 309	Transistor NPN	2SD424-O-K	for Final Stage
Q304, 306 308, 310	Transistor PNP	2SB554-O-K	for Final Stage
D001	Rectifier	SG-5T (+)	
D002	Rectifier	SG-5T (-)	
D201, 202	Silicon Varistor	STV-3H-O	
R001, 002	Carbon Film Resistor	RD142HA183J	18kΩ ± 5% ½W
R003	Cement Coated Wirewound Resistor	RW864DG2R2K	2.2Ω ± 10% 20W
R101, 102 107, 108	Carbon Film Resistor	RD142HA123J	12kΩ ± 5% ½W
R103, 104 105, 106	Carbon Film Resistor	RD142HA133J	13kΩ ± 5% ½W
R109	Carbon Film Resistor	RD142HA113J	11kΩ ± 5% ½W
R110	Carbon Film Resistor	RD142HA103J	10kΩ ± 5% ½W

No.	Description	Part No.	Remarks
R111	Carbon Film Resistor	RD142HA912J	9.1kΩ ± 5% ½W
R112	Carbon Film Resistor	RD142HA822J	8.2kΩ ± 5% ½W
R113	Carbon Film Resistor	RD142HA752J	7.5kΩ ± 5% ½W
R114	Carbon Film Resistor	RD142HA622J	6.2kΩ ± 5% ½W
R115	Carbon Film Resistor	RD142HA562J	5.6kΩ ± 5% ½W
R116, 122	Carbon Film Resistor	RD142HA472J	4.7kΩ ± 5% ½W
R117	Carbon Film Resistor	RD142HA432J	4.3kΩ ± 5% ½W
R118	Carbon Film Resistor	RD142HA392J	3.9kΩ ± 5% ½W
R119	Carbon Film Resistor	RD142HA332J	3.3kΩ ± 5% ½W
R120	Carbon Film Resistor	RD142HA302J	3kΩ ± 5% ½W
R121, 124	Carbon Film Resistor	RD142HA682J	6.8kΩ ± 5% ½W
R301-308	Cement Coated Wirewound Resistor	RW864AG1R0K	1Ω ± 10% 10W
R309, 310	Metal Film Resistor	RS143AA180J	18Ω ± 5% 1W
R311-318	Carbon Film Resistor	RD142HA132J	1.3kΩ ± 5% ½W
C001	Mylar Film Capacitor	CQ93M2E103MUL	0.01μF ± 20% 250 WV
C002-005 301	Ceramic Capacitor	CK45F2H103P	0.01μF +100% - 0% 500 WV
C006, 007	Electrolytic Capacitor	CE33W2A223	22,000μF 100 WV
C201	Bipolar Electrolytic Capacitor	559-0001-00	100μF 10WV
C302, 303	Metallized Film Capacitor	CQ91M2E474K	0.47μF 250 WV
	Accessories		
	Power Supply Cord	680-2201-00	
	Power Supply Cord	680-3401-00	3-Conductor
	Case	801-0011-03	
	Owner's Manual	820-2009-00	
	Poly Bag	812-2536-04	
	Packing Materials		
	Shipping Carton		
	Outer Carton	800-0007-04	
	Inner Carton	801-0011-04	
	Plastic Cover	810-5153-04	Clear (Outside)
	Plastic Cover	810-5052-04	White (Inside)
	Front Protector	803-0018-03	
	Rear Protector A	803-0019-03	
	Rear Protector B	803-0020-03	

MAIN DRIVE AMP. ASSEMBLY (710-0003-00)

●PRINTED CIRCUIT BOARD

* Printed circuit board as seen from the reverse side.



●PARTS LIST

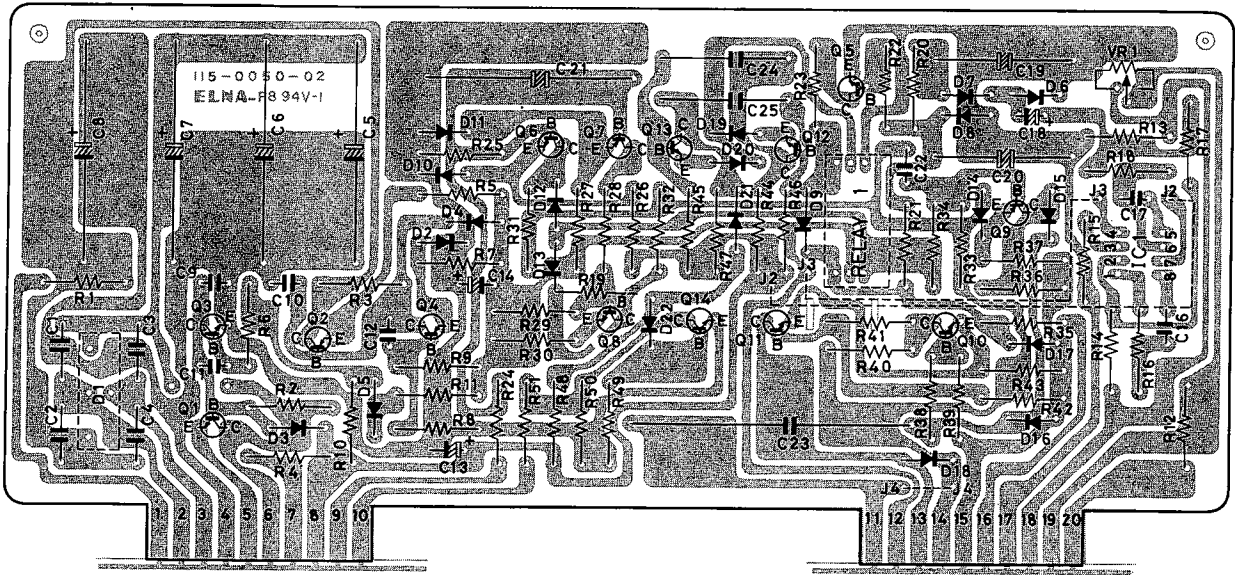
No.	Description	Part No.	Remarks
Q1, 3	Transistor NPN	2SC1746A-GRorBL-K	
Q2, 4	Transistor PNP	2SA856A-GR or BL-K	
Q5, 8, 10, 12	Transistor PNP	2SA809-V/002	
Q6, 7, 9, 11	Transistor NPN	2 SC1451-V/004	
Q13	Transistor PNP	2SA810-B/101	
Q14	Transistor NPN	2 SC1452-B/101	
Q15, 18	Transistor PNP	2SA483-0orY-K1	
Q16	Transistor NPN	2SC515A	
Q17	Transistor NPN	2SC783-0orY-K1	
Q19	Transistor NPN	2SC497-O or Y	
D1, 2	Zener Diode	YZ-350	
D3~6	Silicon Diode	1S1555	
D7~14, 17, 18	Silicon Diode	1S1553	
D15, 16	Zener Diode	CZ-060	
D19, 20	Silicon Diode	1S2091-BL	
D21	Silicon Varistor	STV-3H-O	
TH1, 2	Thermistor	5TP-31L	
VR1	Potentiometer 5kΩ B	581-0532-00	for Center Voltage Adj.
VR2	Potentiometer 200Ω B	581-0221-00	for Bias Current Adj.
R1, 35	Carbon Film Resistor	RD142HA222J	2.2kΩ ± 5% ½ W
R2	Metal Film Resistor	RN142HA125JL	1.2MΩ ± 5% ½ W
R3	Metal Film Resistor	RN142HA244J	240kΩ ± 5% ½ W
R4~7, 16, 17, 29, 30, 33, 47, 48	Carbon Film Resistor	RD142HA102J	1kΩ ± 5% ½ W
R8, 9, 12, 13	Metal Film Resistor	RN142HA163J	16kΩ ± 5% ½ W
R10, 11	Metal Film Resistor	RN142HA164J	160kΩ ± 5% ½ W
R14	Carbon Film Resistor	RD142HA1502G	15kΩ ± 2% ½ W
R15	Carbon Film Resistor	RD142HA3302G	33kΩ ± 2% ½ W
R18, 20, 34	Carbon Film Resistor	RD142HA105J	1MΩ ± 5% ½ W
R19	Carbon Film Resistor	RD142HA391J	390Ω ± 5% ½ W
R21	Carbon Film Resistor	RD142HA203J	20kΩ ± 5% ½ W
R23, 25	Carbon Film Resistor	RD142HA204J	200kΩ ± 5% ½ W
R24	Carbon Film Resistor	RD142HA103J	10kΩ ± 5% ½ W
R26, 27	Carbon Film Resistor	RD142HA221J	220Ω ± 5% ½ W
R28	Carbon Film Resistor	RD142HA184J	180kΩ ± 5% ½ W
R31, 32	Carbon Film Resistor	RD142HA333J	33kΩ ± 5% ½ W

No.	Description	Part No.	Remarks
R36	Carbon Film Resistor	RD142HA513J	51kΩ ± 5% ½ W
R37~40	Carbon Film Resistor	RD142HA121J	120Ω ± 5% ½ W
R41, 42	Carbon Film Resistor	RD142HA152J	1.5kΩ ± 5% ½ W
R43, 44	Carbon Film Resistor	RD142HA183J	18kΩ ± 5% ½ W
R49, 50	Oxide Metal Film Resistor	RS143AA101J	100Ω ± 5% 1 W
R51	Carbon Film Resistor	RD142HA100J	10Ω ± 5% ½ W
R52	Carbon Film Resistor	RD142HA750J	75Ω ± 5% ½ W
R53, 54	Oxide Metal Film Resistor	RS143DA103J	10kΩ ± 5% 2 W
R55, 56	Oxide Metal Film Resistor	RS143AA331J	330Ω ± 5% 1 W
R57, 58	Carbon Film Resistor	RD142HA104J	100kΩ ± 5% ½ W
R59, 60	Carbon Film Resistor	RD142HA623J	62kΩ ± 5% ½ W
R61, 62	Oxide Metal Film Resistor	RS143AA822J	8.2kΩ ± 5% 1 W
R63, 64	Carbon Film Resistor	RD142HA331J	330Ω ± 5% ½ W
R65	Carbon Film Resistor	RD142HA1692G	16.9kΩ ± 2% ½ W
R66	Carbon Film Resistor	RD142HA2401G	2.4kΩ ± 2% ½ W
R67~70	Oxide Metal Film Resistor	RS143AA103J	10kΩ ± 5% 1 W
R71	Carbon Film Resistor	RD142HA823J	82kΩ ± 5% ½ W
C1	Metallized Film Capacitor	CQ93M2E105K	1μF ±10% 250 WV
C2, C25	Mica Capacitor	CM93D2A200J	20pF ± 5% 100 WV
C3, 12	Metallized Film Capacitor	CQ91M2E335K	3.3μF ±10% 250 WV
C4, 9	Metallized Film Capacitor	CQ93M2E224K	0.22μF ±10% 250 WV
C6, 7, 14	Metallized Film Capacitor	CQ93M2E104K	0.1μF ±10% 250 WV
C8	Mica Capacitor	CM93D2A470J	47pF ± 5% 100 WV
C10, 11	Electrolytic Capacitor	CE02W1H4R7	4.7μF 50 WV
C13, 15, 16	Mica Capacitor	CM93D2A101J	100pF ± 5% 100 WV
C17, 18	Metallized Film Capacitor	CQ93M2E474K	0.47μF ±10% 250 WV
C19, 20	Mica Capacitor	CM93D2A561J	560pF ± 5% 100 WV
C21, 22	Mica Capacitor	CM93D2F331J	330pF ± 5% 315 WV
C23, 24	Ceramic Capacitor	CK45F2H103P	0.01μF ^{+100%} _{-0%} 500 WV
C26	Mica Capacitor	CM93D2A100D	10pF ±0.5% 100 WV
	Pan Head ISO Metric Screw	600-0312-01	3×12mm for Q15-18
	Nex. Nut	633-2031-01	3mm dia. for Q15-18
	Lock Washer	639-2031-01	for Q15-18
	Transistor Spacer	250-0003-00	for Q19, 20

PROTECTION CIRCUIT ASSEMBLY (720-0002-00)

●PRINTED CIRCUIT BOARD

* Printed circuit board as seen from the reverse side



●PARTS LIST

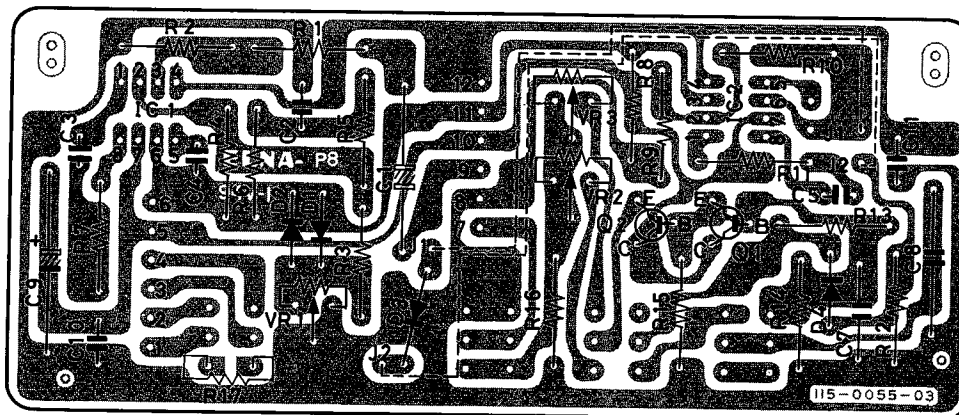
No.	Description	Part No.	Remarks
RELAY 1	Reed Relay	363-2201-00	LAB2-24V
Q1, 11	Transistor NPN	2SC497-O or Y	
Q2, 9	Transistor PNP	2SA485-Y	
Q3, 5, 6, 8	Transistor NPN	2SC1746-GR or BL	
Q10	Transistor NPN	2SC1746-BL-Ⓢ	Ⓢ : Selected
IC1	IC	LM709CH	
D1	Full Wave Bridge	S1RB-10	
D2	Zener Diode	XZ-060	
D3, 5	Silicon Varistor	SV-03	
D4	Silicon Varistor	SV-02	
D6-11, 14-16 19-22	Silicon Diode	1S1555	
D12, 13	Silicon Diode	1S1553	
D17	Zener Diode	XZ-245	
VR1	Potentiometer 10kΩ B	581-0142-00	for Protection Level Adj.
R1	Carbon Film Resistor	RD142HA101J	100Ω ± 5% ½W
R2, 3	Carbon Film Resistor	RD142HA392J	3.9kΩ ± 5% ½W
R4	Metal Film Resistor	RN143AAR47J	0.47Ω ± 5% 1W
R5	Carbon Film Resistor	RD142HA6R8J	6.8Ω ± 5% ½W
R6, 30	Carbon Film Resistor	RD142HA100J	10Ω ± 5% ½W
R7	Carbon Film Resistor	RD142HA122J	1.2kΩ ± 5% ½W
R8	Carbon Film Resistor	RD142HA1002G	10kΩ ± 2% ½W
R9	Carbon Film Resistor	RD142HA1472G	14.7kΩ ± 2% ½W
R10, 11	Carbon Film Resistor	RD142HA2002G	20kΩ ± 2% ½W
R12, 40	Carbon Film Resistor	RD142HA472J	4.7kΩ ± 5% ½W
R13	Metal Film Resistor	RN143AA1R0J	1Ω ± 5% 1W
R14, 15	Carbon Film Resistor	RD142HA271J	270Ω ± 5% ½W
R16	Carbon Film Resistor	RD142HA152J	1.5kΩ ± 5% ½W
R17	Carbon Film Resistor	RD142HA564J	560kΩ ± 5% ½W
R18	Carbon Film Resistor	RD142HA330J	33Ω ± 5% ½W
R19, 36, 37	Carbon Film Resistor	RD142HA153J	15kΩ ± 5% ½W
R20, 24, 28 35, 41, 42	Carbon Film Resistor	RD142HA103J	10kΩ ± 5% ½W
R21	Carbon Film Resistor	RD142HA513J	51kΩ ± 5% ½W
R22	Carbon Film Resistor	RD142HA102J	1kΩ ± 5% ½W
R23	Carbon Film Resistor	RD142HA240J	24Ω ± 5% ½W
R25, 34	Carbon Film Resistor	RD142HA333J	33kΩ ± 5% ½W

No.	Description	Part No.	Remarks
R26, 27, 33	Carbon Film Resistor	RD142HA332J	3.3kΩ ± 5% ½W
R29	Carbon Film Resistor	RD142HA222J	2.2kΩ ± 5% ½W
R31, 32	Carbon Film Resistor	RD142HA104J	100kΩ ± 5% ½W
R38, 39 45, 46	Carbon Film Resistor	RD142HA334J	330kΩ ± 5% ½W
R43	Carbon Film Resistor	RD142HA470J	47Ω ± 5% ½W
R44, 47, 49	Carbon Film Resistor	RD142HA223J	22Ω ± 5% ½W
R48	Carbon Film Resistor	RD142HA242J	2.4kΩ ± 5% ½W
R50	Oxide Metal Film Resistor	RS143AA221J	220Ω ± 5% 1W
R51	Metal Film Resistor	RN143AA5R6J	5.6Ω ± 5% 1W
C1-4	Ceramic Capacitor	CK45F2H103P	0.1μF ±100% -0% 500WV
C5-8	Electrolytic Capacitor	CE02W1V471	470μF 35WV
C9-12	Ceramic Capacitor	CC45SL1H470K	47pF ±10% 50WV
C13, 14, 18	Tantalum Solid Capacitor	CS15E1V100M	10μF ±20% 35WV
C16	Mylor Film Capacitor	CQ93M1H472K	4700pF ±10% 50WV
C17	Ceramic Capacitor	CC45SL1H221K	220pF ±10% 50WV
C19	Bipolar Electrolytic Capacitor	CE02D1H3R3(B.P.)	3.3μF 50WV
C20	Bipolar Electrolytic Capacitor	CE02D1H100(B.P.)	10μF -35WV
C21	Bipolar Electrolytic Capacitor	CE02D1A221(B.P.)	220μF 10WV
C22	Mylar Film Capacitor	CQ93M1H102K	1000pF ±10% 50WV
C23	Metallized Film Capacitor	CQ91M2E475K	4.7μF ±10% 250WV
C24, 25	Metallized Film Capacitor	CQ93M2E105K	1μF ±10% 250WV
※	Transistor Spacer	250-0003-00	for Q1, 2, 9, 11, 14
	Heat Sink	240-2001-00	for Q2

METER CIRCUIT ASSEMBLY (716-0018-00)

●PRINTED CIRCUIT BOARD

* Printed circuit board as seen from the reverse side.



●PARTS LIST

No.	Description	Part No.	Remarks
	Connector Plug	304-0603-00	
	Push-button Switch	354-4003-00	
Q1	Transistor NPN	2SCI746-GR or BL	
Q2	Transistor NPN	2SCI451-B or G	
IC1, 2	IC	LM709CH	
D1, 2, 4	Silicon Diode	1S1555	
D3	Silicon Varistor	SV-07	
VR1	Potentiometer 100Ω B	580-0121-00	for -40dB Calibration Adj.
VR2, 3	Potentiometer 470Ω B	580-0521-00	VR2 for PEAK 0dB Adj. VR3 for VOL 0dB Adj.
R1	Carbon Film Resistor	RD142HA823J	82kΩ ± 5% ½ W
R2	Carbon Film Resistor	RD142HA301J	300Ω ± 5% ½ W
R3	Carbon Film Resistor	RD142HA471J	470Ω ± 5% ½ W
R4	Metal Film Resistor	RN142HA225JL	2.2MΩ ± 5% ½ W
R5, 6, 13	Carbon Film Resistor	RD142HA473J	47kΩ ± 5% ½ W
R7, 11	Carbon Film Resistor	RD142HA152J	1.5kΩ ± 5% ½ W
R8	Carbon Film Resistor	RD142HA393J	39kΩ ± 5% ½ W
R9	Carbon Film Resistor	RD142HA433J	43kΩ ± 5% ½ W

No.	Description	Part No.	Remarks
R10	Carbon Film Resistor	RD142HA474J	470kΩ ± 5% ½ W
R12	Carbon Film Resistor	RD142HA562J	5.6kΩ ± 5% ½ W
R14	Metal Film Resistor	RN142HA475JL	4.7MΩ ± 5% ½ W
R15	Carbon Film Resistor	RD142HA104J	100kΩ ± 5% ½ W
R16	Carbon Film Resistor	RD142HA331J	330Ω ± 5% ½ W
R17	Carbon Film Resistor	RD142HA331J	330Ω ± 5% ½ W
C1	Bipolar Electrolytic Capacitor	CE02D1H2R2(B.P.)	2.2μF 50 WV
C2	Bipolar Electrolytic Capacitor	CE02D1C330(B.P.)	33μF 16 WV
C3	Ceramic Capacitor	CK45B1H471K	470pF ± 10% 50 WV
C4	Ceramic Capacitor	CC45SL1H100D	10pF ± 0.5% 50 WV
C5	Ceramic Capacitor	CC45SL1H331K	330pF ± 10% 50 WV
C6	Ceramic Capacitor	CC45SL1H040C	4pF ± 0.25% 50 WV
C7	Metallized Film Capacitor	CQ93M2E154K	0.15μF ± 10% 250 WV
C8	Metallized Film Capacitor	CQ93M2E334K	0.33μF ± 10% 250 WV
C9	Electrolytic Capacitor	CE02W1C101	100μF 16 WV
C10, 11	Ceramic Capacitor	CK45F1H103Z	0.01μF +80% -20% 50 WV

FUSE CIRCUIT ASSEMBLY (716-0016-00)

●PARTS LIST

No.	Description	Part No.	Remarks
	Fuse Holder	306-1101-00	
F1~4	Fuse	310-0201-00	2A
D1	Full Wave Bridge	S1RB-40	
R1, 2	Oxide Metal Film Resistor	RS143AA221J	220Ω ± 5% 1 W
C1~4	Ceramic Capacitor	CK45F2H103P	0.01μF +100% -0% 500 WV
C5~10	Electrolytic Capacitor	CE02W2C470	47μF 160 WV

PHASE CORRECT CIRCUIT ASSEMBLY (716-0017-00)

●PARTS LIST

No.	Description	Part No.	Remarks
L1	Choke Coil	506-0001-00	2μH
R1	Cement Coated Wirewound Resistor	RW983HG100J	10Ω ± 5% 5 W
R2, 3, 4	Metal Film Resistor	RN143JA150J	15Ω ± 5% 6.3 W
C1	Metallized Film Capacitor	CQ93M2E224K	0.22μF ± 10% 250 WV

IMPROVED METER CIRCUIT FOR M-60

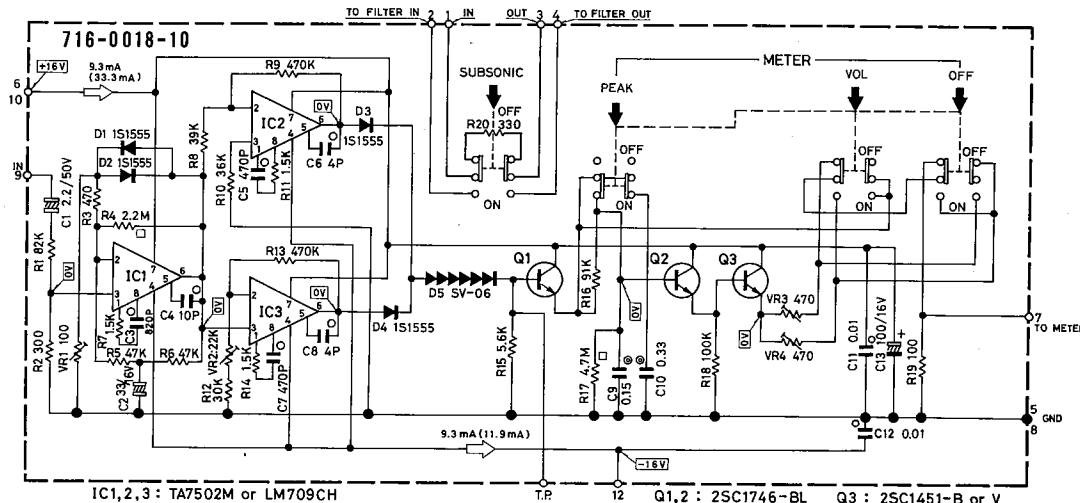
METER CIRCUIT ASSEMBLY (716-0018-10)

The Meter Circuit has been improved and revision details are explained in this service sheet. Please, attach it between pages 8 and 9 of

the M-60 Service Manual for future reference.

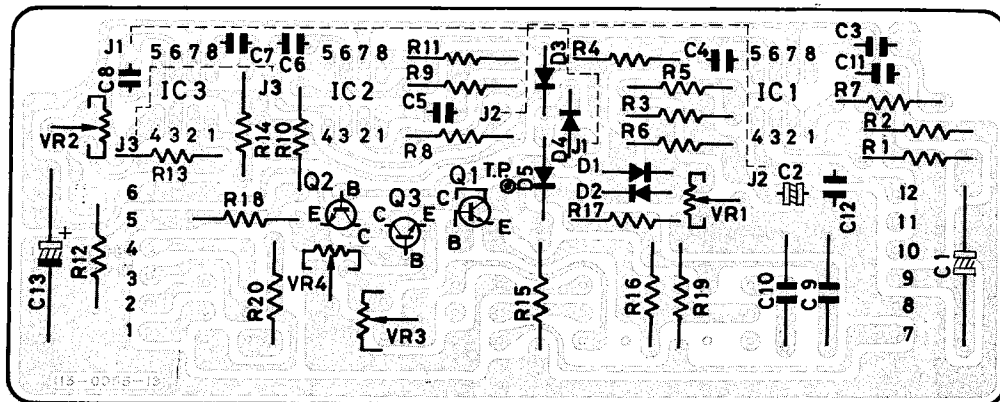
* It applies only to M-60 units from Serial No. B6Y301 and up. (It does not apply to units from Serial No. G5Y001 ~ J5Y300.)

SCHEMATIC DIAGRAM



PRINTED CIRCUIT BOARD

*Printed Circuit Board as seen from the reverse side.



PARTS LIST

No.	Description	Part No.	Remark
	Connector Plug	304-0603-00	
	Push-button Switch	354-4003-00	
Q1,2	Transistor NPN	2SC1746-BL	
Q3	Transistor NPN	2SC1451-V or S	
IC1~3	IC	TA7502M or LM709CH	
D1~4	Silicon Diode	1S1555	
D5	Silicon Varistor	SV-06	
VR1	Potentiometer 100ΩB	580-0121-00	for -40dB Calibration Adj.
VR2	Potentiometer 22kΩB	580-0241-00	for Level Adj.
VR3	Potentiometer 470ΩB	580-0521-00	for PEAK 0dB Adj.
VR4	Potentiometer 470ΩB	580-0521-00	for VOL 0dB Adj.
R1	Carbon Film Resistor	RD142HA823J	82kΩ ±5% ½W
R2	Carbon Film Resistor	RD142HA301J	300Ω ±5% ½W
R3	Carbon Film Resistor	RD142HA471J	470Ω ±5% ½W
R4	Metal Film Resistor	RN142HA225JL	2.2MΩ ±5% ½W
R5,6	Carbon Film Resistor	RD142HA473J	47kΩ ±5% ½W
R7,11,14	Carbon Film Resistor	RD142HA152J	1.5kΩ ±5% ½W
R8	Carbon Film Resistor	RD142HA393J	39kΩ ±5% ½W
R9,13	Carbon Film Resistor	RD142HA474J	470kΩ ±5% ½W

No.	Description	Part No.	Remark
R10	Carbon Film Resistor	RD142HA363J	36kΩ ±5% ½W
R12	Carbon Film Resistor	RD142HA303J	30kΩ ±5% ½W
R15	Carbon Film Resistor	RD142HA562J	5.6kΩ ±5% ½W
R16	Carbon Film Resistor	RD142HA913J	91kΩ ±5% ½W
R17	Metal Film Resistor	RN142HA475JL	4.7MΩ ±5% ½W
R18	Carbon Film Resistor	RD142HA104J	100kΩ ±5% ½W
R19	Carbon Film Resistor	RD142HA101J	100Ω ±5% ½W
R20	Carbon Film Resistor	RD142HA331J	330Ω ±5% ½W
C1	Bipolar Electrolytic Capacitor	CE02D1H2R2 (B.P.)	2.2μF 50WV
C2	Bipolar Electrolytic Capacitor	CE04D1C330 (B.P.)	33μF 16WV
C3	Ceramic Capacitor	CK45B1H821K	820pF ±10% 50WV
C4	Ceramic Capacitor	CC45SL1H100D	10pF ±0.5% 50WV
C5,7	Ceramic Capacitor	CK45B1H471K	470pF ±10% 50WV
C6,8	Ceramic Capacitor	CC45SL1H040C	4pF ±0.25% 50WV
C9	Mylar Film Capacitor	CQ93M1H154J	0.15μF ±5% 50WV
C10	Mylar Film Capacitor	CQ93M1H334J	0.33μF ±5% 50WV
C11,12	Ceramic Capacitor	CK45K1H103Z	0.01μF ±80% 50WV
C13	Electrolytic Capacitor	CE02W1C101	100μF -20% 16WV

