

# Technical Manual

# MONO POWER AMPLIFIER RMB-100



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### Specifications

Rated power, rms. 20-20,000 Hz @ 0.03% THD	125 watts/8 ohms 200 watts/4 ohms
Frequency response (+0, -0.4 dB)	10 Hz-20 kHz
Total Harmonic Distortion (THD)	0.03%
Intermodulation Distortion (IMD)	0.03%
Signal to noise ratio (SN)	-100 dB (A weighted)
Voltage gain	29.2 dB
Input impedance	24K ohms
Damping factor	> 500
Dimensions	170 mm H x 165 mm W x 200 mm D ~6 3/4" H x 6 1/2" W x 7 7/8" D
Weight	7.5 kg (~16.5 LB)
Power requirements	120 volts/60 Hz 220/230/240 volts/50 Hz
Power consumption	
AUTO Standby	1.2 VA (240 Volts)
Idling	40 VA
Full Power-4 Ohm load	500 VA

Serial No. Beginning
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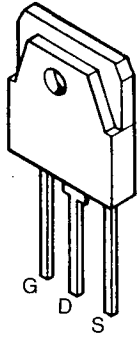
# Adjustment

Instruments : DC milli-voltmeter

Notes : Prior to Bias Adjustment, run about 5 minutes with rated output (8ohms) and warm up Power Transistor and Heat Sink. Set input off.

Step	Location		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
1	T P +	T P -	X-1233-03 PCB	VR601	DC milli-voltmeter reads 7mV

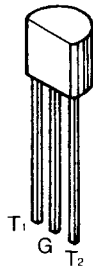
## Transistor



2SJ118  
2SK413



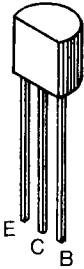
03P2M



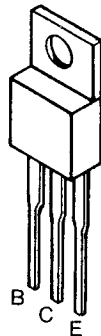
ACOV8DGM



78L05



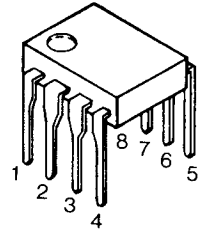
2SA1016K  
2SC2362K  
2SC2274K  
2SA984K



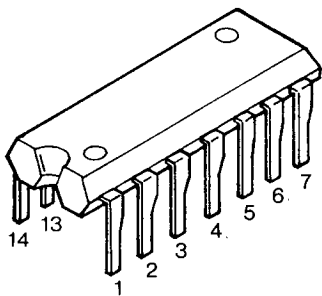
2SB633  
2SD613



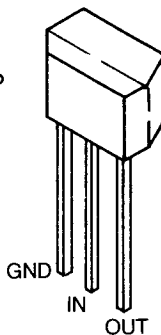
2SB631K  
2SD600K



NJM2043DD  
NJM072D  
PC827



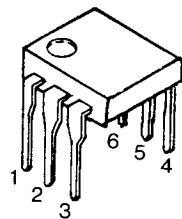
TC4077BP



79L05

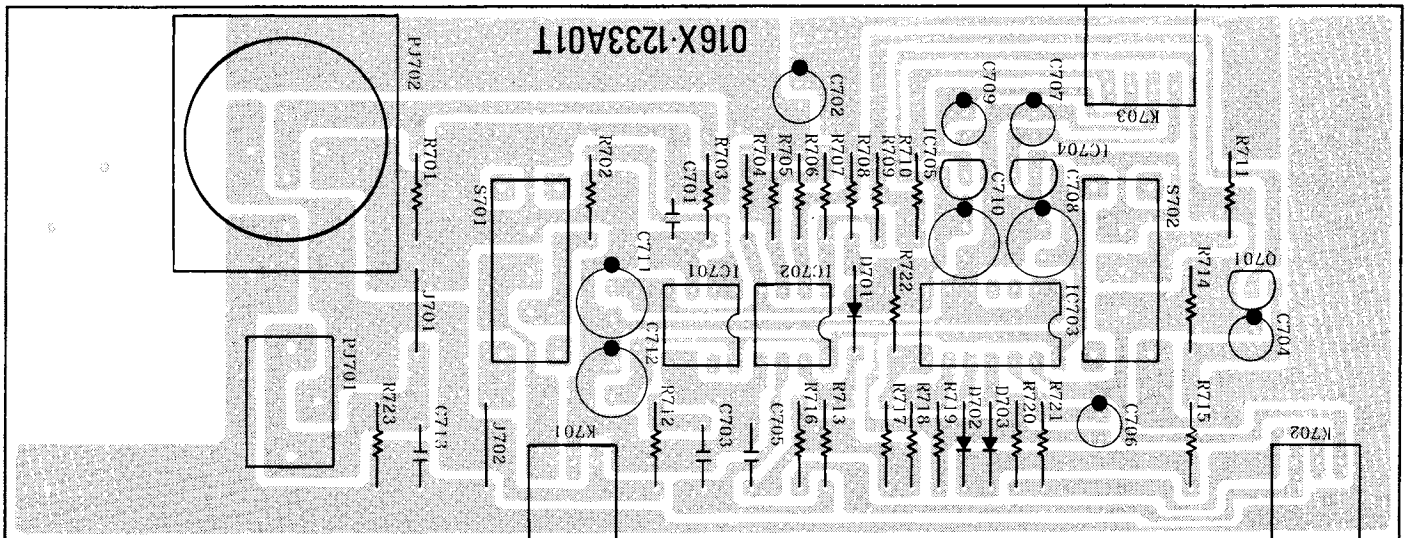


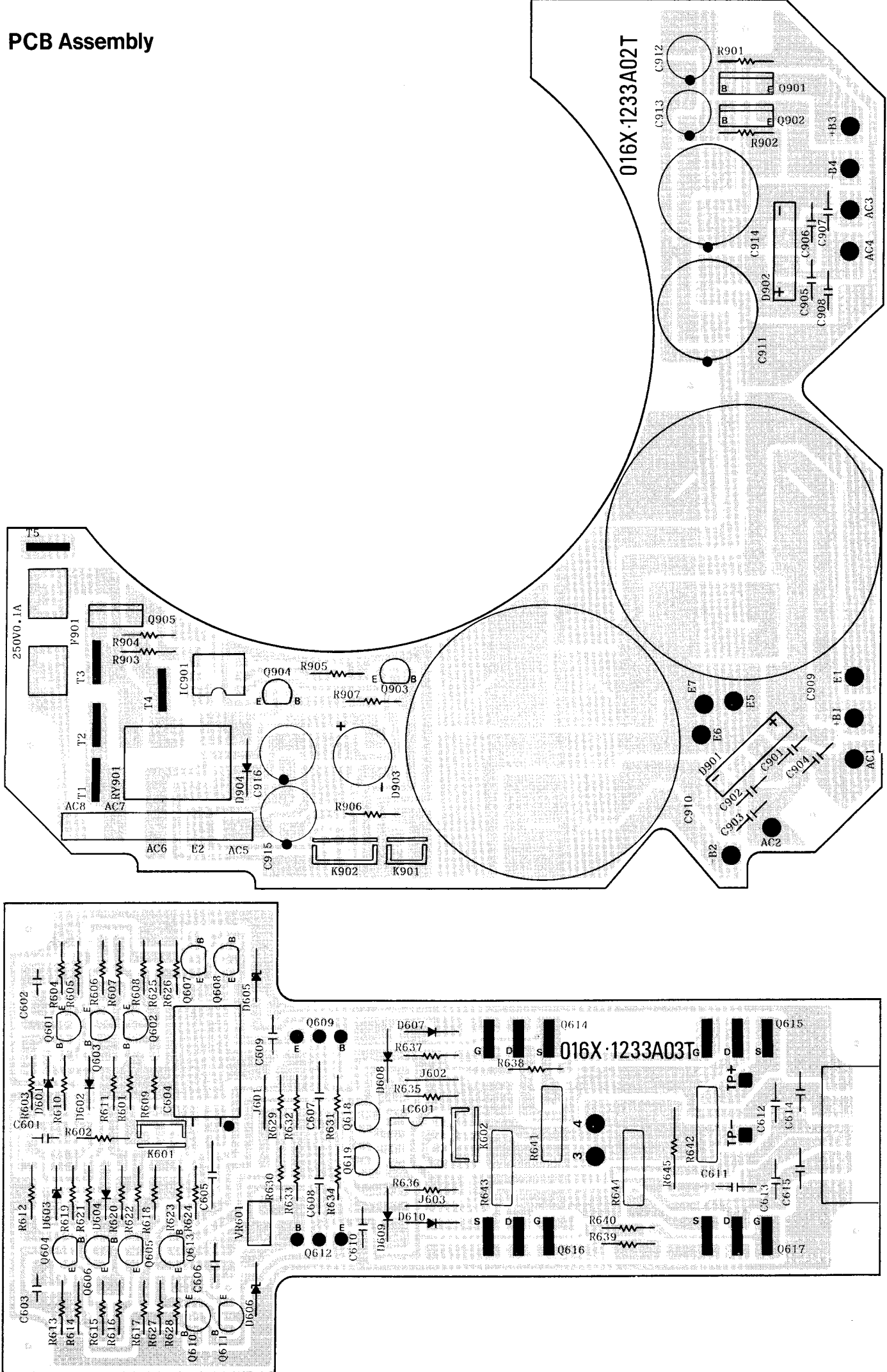
SM16GZ47A



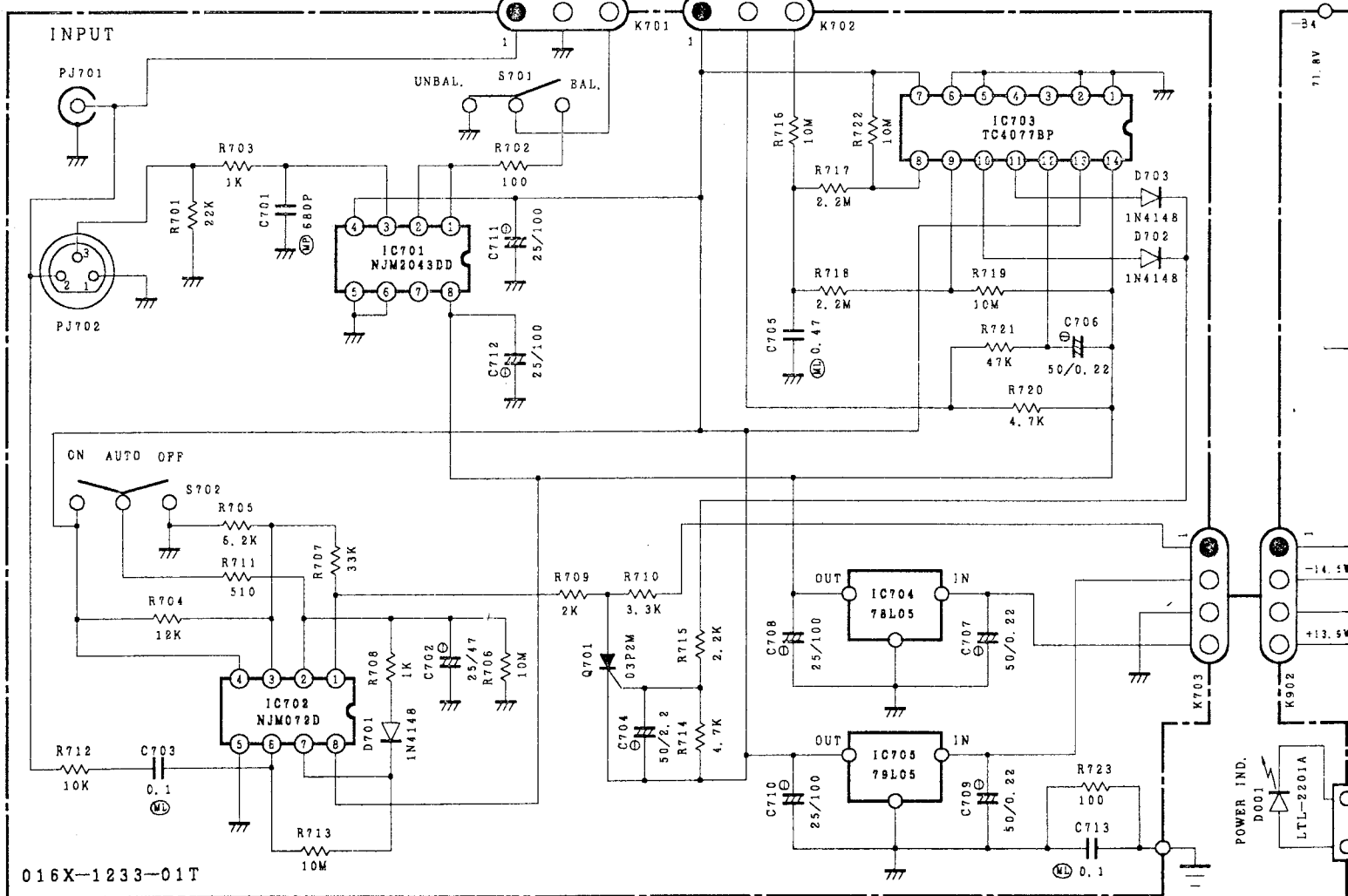
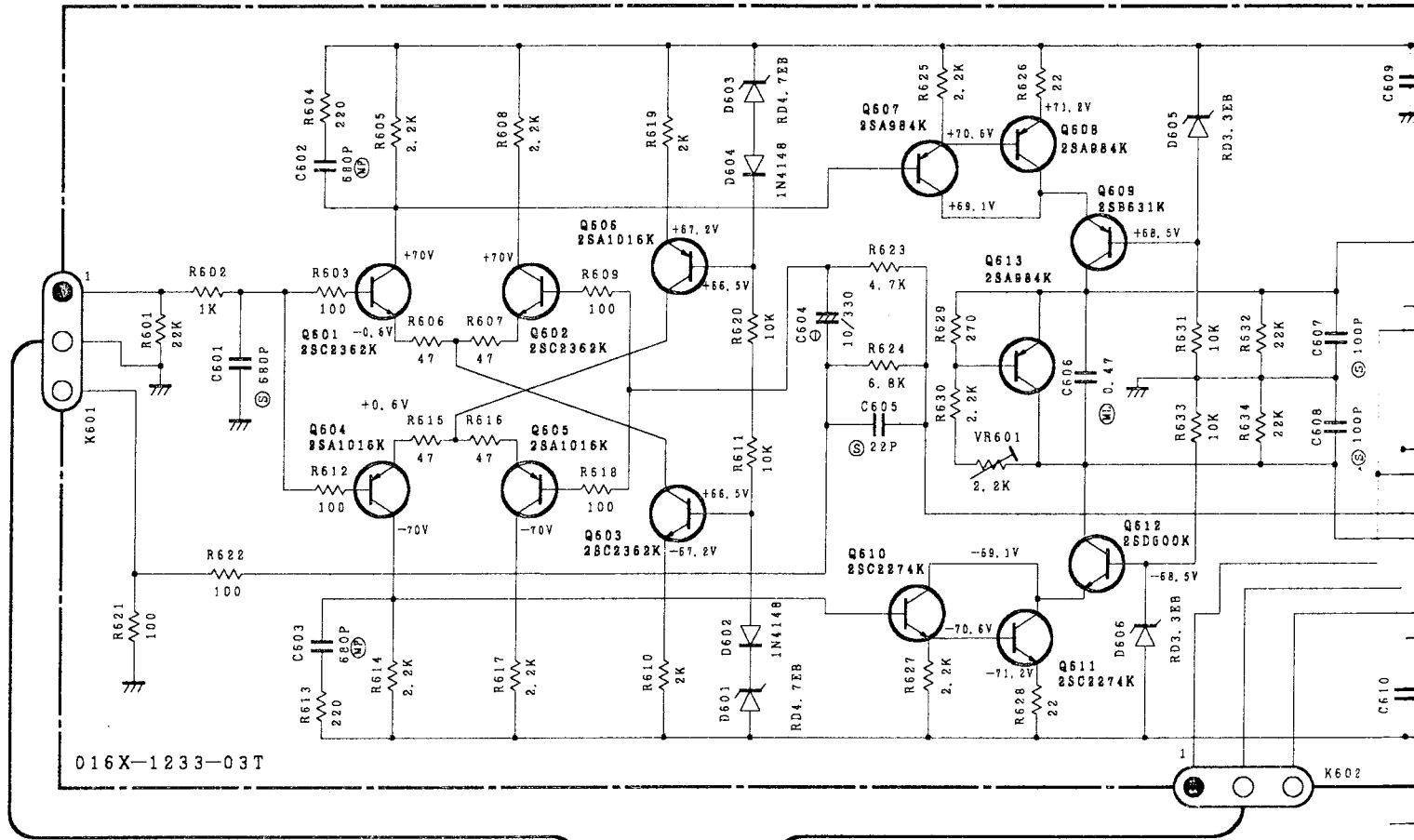
S21ME3

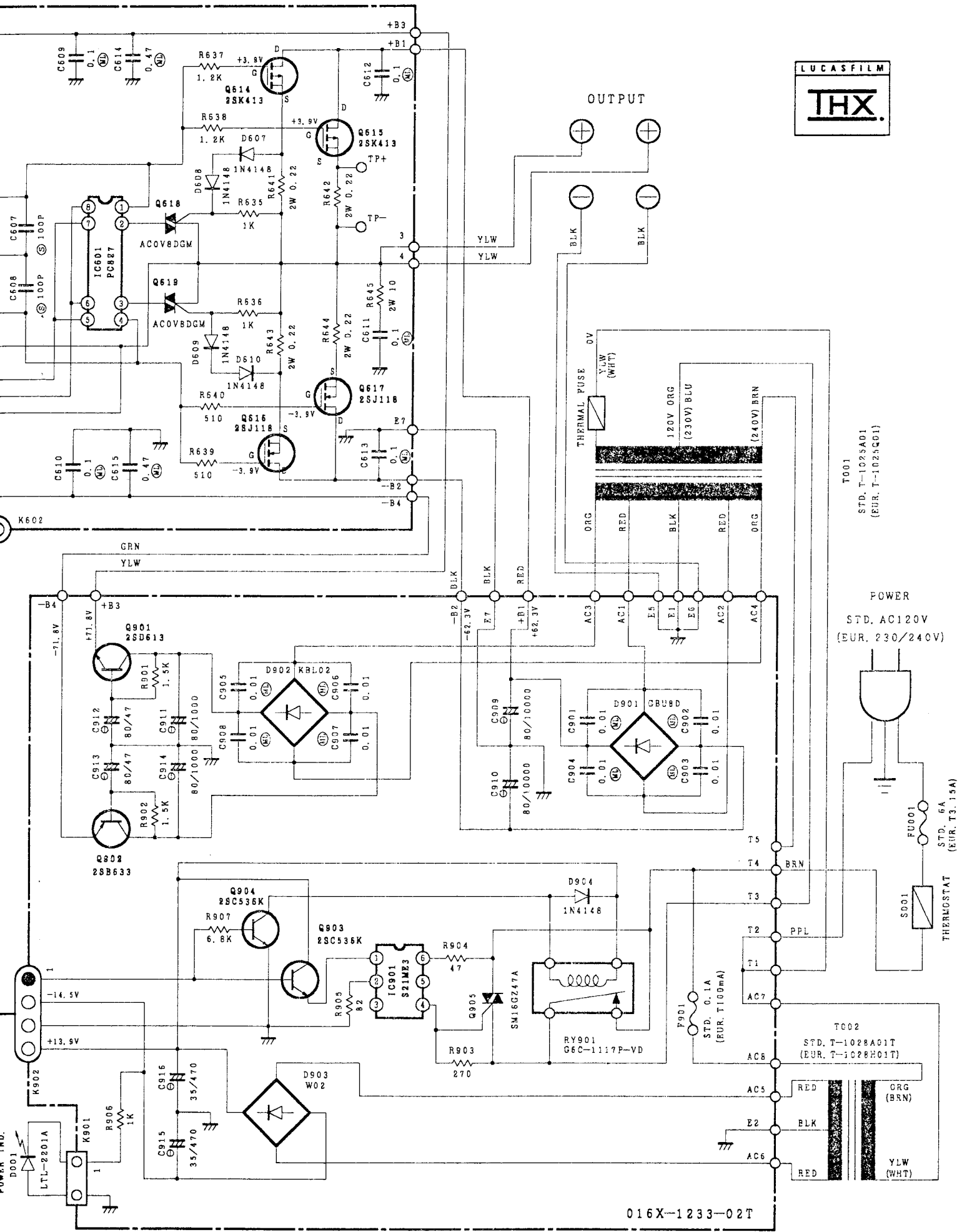
## PCB Assembly





# Schematic Diagram RMB-100





# Parts List

SYMBOL	PARTS NO.	DESCRIPTION
<u>X-1233-01T PCB ASSEMBLY</u>		
C701	044 FKP2-100V681H	CAP, P. P 100V680pF
C702	041 U25V47	CAP, ELEC. 25V47UF
C703	044 ML100V0. 1	CAP, LAYER 100V0. 1UF
C704	041 U50V2R2	CAP, ELEC. 50V2. 2UF
C705	044 ML100V0. 47	CAP, LAYER 100V0. 47UF
C706, 707	041 U50VR22	CAP, ELEC. 50V0. 22UF
C708	041 ECEA1EFS101	CAP, ELEC. 25V100UF
C709	041 U50VR22	CAP, ELEC. 50V0. 22UF
C710~712	041 ECEA1EFS101	CAP, ELEC. 25V100UF
C713	044 ML100V0. 1	CAP, LAYER 100V0. 1UF
D701~703	034 1N4148	DIODE
IC701	031 NJM2043DD	IC
IC702	031 NJM072D	IC
IC703	031 TC4077BP	IC
IC704	031 NJM78L05	IC
IC705	031 NJM79L05	IC
K701, 702	068 C-4382A03	PCB SOCKET 3P
K703	068 C-4382A04	PCB SOCKET 4P
PJ701	066 C-4383A02	1P PIN JACK
PJ702	066 C-4384A00	CANNON CONNECTOR 3P
Q701	034 03P2M	SCR
R701	054 MK2022KFECZ	R, METAL 1% 22K
R702	054 MK2100RFECZ	R, METAL 1% 100Q
R703	054 MK2001KFECZ	R, METAL 1% 1K
R704	054 MK2012KFECZ	R, METAL 1% 12K
R705	054 MK206K2FECZ	R, METAL 1% 6. 2K
R706	054 MK2010MFECZ	R, METAL 1% 10M
R707	054 MK2033KFECZ	R, METAL 1% 33K
R708	054 MK2001KFECZ	R, METAL 1% 1K
R709	054 MK2002KFECZ	R, METAL 1% 2K
R710	054 MK203K3FECZ	R, METAL 1% 3. 3K
R711	054 MK2510RFECZ	R, METAL 1% 510Q
R712	054 MK2010KFECZ	R, METAL 1% 10K
R713	054 MK2010MFECZ	R, METAL 1% 10M
R714	054 MK204K7FECZ	R, METAL 1% 4. 7K
R715	054 MK202K2FECZ	R, METAL 1% 2. 2K
R716	054 MK2010MFECZ	R, METAL 1% 10M
R717, 718	054 MK202M2FECZ	R, METAL 1% 2. 2M
R719	054 MK2010MFECZ	R, METAL 1% 10M
R720	054 MK204K7FECZ	R, METAL 1% 4. 7K
R721	054 MK2047KFECZ	R, METAL 1% 47K
R722	054 MK2010MFECZ	R, METAL 1% 10M
R723	054 MK2100RFECZ	R, METAL 1% 100Q
S701	064 4TR-2754	SEE-SAW SWITCH (INPUT)
S702	064 4TR-2755	SEE-SAW SWITCH (POWER)
<u>X-1233-02T PCB ASSEMBLY</u>		
C901~908	044 ML400V0. 01	CAP, LAYER 400V0. 01UF
C909, 910	041 SME80LIS10000	CAP, ELEC. 80V10000UF
C911	041 SXE80V1000M	CAP, ELEC. 80V1000UF
C912, 913	041 SXE80V47M	CAP, ELEC. 80V47M

SYMBOL	PARTS NO.	DESCRIPTION
C914	041 SXE80V1000M	CAP, ELEC. 80V1000UF
C915, 916	041 U35V470	CAP, ELEC. 35V470UF
D901	034 GBU8D	BRIDGE DIODE
D902	034 KBL02	BRIDGE DIODE
D903	034 W02	BRIDGE DIODE
D904	034 1N4148	DIODE
F901	036 (U)F0. 1A	FUSE 5MF0. 1 for STD
	036 (S)T100mA	FUSE 5ST100 for EUR
IC901	034 S21ME3	PHOTO TRIAC COUPLER
K901	068 C-4381A02	PCB SOCKET 2P
K902	068 C-4381A04	PCB SOCKET 4P
Q901	033 2SD613-DE	TRANSISTOR
Q902	033 2SB633-DE	TRANSISTOR
Q903, 904	032 2SC536K-FG	TRANSISTOR
Q905	034 SM16GZ47A	TRIAC
R901, 902	054 MK201K5FECZ	R, METAL 1% 1. 5K
R903	054 MK2270RFECZ	R, METAL 1% 270Q
R904	054 MK2047RFECZ	R, METAL 1% 47Q
R905	054 MK2082RFECZ	R, METAL 1% 82Q
R906	054 MK2001KFECZ	R, METAL 1% 1K
R907	054 MK206K8FECZ	R, METAL 1% 6. 8K
RY901	063 G6C-1117P-VD	RELAY
<u>X-1233-03T PCB ASSEMBLY</u>		
C601~603	044 FKP2-100V681H	CAP, P. P 100V680pF
C604	041 U10V330	CAP, ELEC. 10V330UF
C605	044 FSC160V220H	CAP, STYROL 160V22pF
C606	044 ML100V0. 47	CAP, LAYER 100V0. 47UF
C607, 608	044 S630V101F	CAP, STYROL 630V100pF
C609~613	044 ML100V0. 1	CAP, LAYER 100V0. 1UF
C614, 615	044 ML100V0. 47	CAP, LAYER 100V0. 47UF
D601	034 RD4. 7JS	ZENER DIODE
D602	034 1N4148	DIODE
D603	034 RD4. 7JS	ZENER DIODE
D604	034 1N4148	DIODE
D605, 606	034 RD3. 3EB	ZENER DIODE
D607~610	034 1N4148	DIODE
IC601	031 PC827	PHOTO COUPLER
K601, 602	068 C-4381A03	PCB SOCKET 3P
Q601~603	033 2SC2362K-FG	TRANSISTOR
Q604~606	033 2SA1016K-FG	TRANSISTOR
Q607, 608	033 2SA984K-EF	TRANSISTOR
Q609	033 2SB631K-EF	TRANSISTOR
Q610, 611	033 2SC2274K-EF	TRANSISTOR
Q612	033 2SD600K-EF	TRANSISTOR
Q613	033 2SA984K-EF	TRANSISTOR
Q614, 615	033 2SK413	MOS FET
Q616, 617	033 2SJ118	MOS FET
Q618, 619	034 AC0V8DGM	TRIAC

SYMBOL	PARTS NO.	DESCRIPTION
R601	054 MK2022KFECZ	R, METAL 1% 22K
R602	054 MK2001KFECZ	R, METAL 1% 1K
R603	054 MK2100RFECZ	R, METAL 1% 100Ω
R604	054 MK2220RFECZ	R, METAL 1% 220Ω
R605	054 MK202K2FECZ	R, METAL 1% 2.2K
R606, 607	054 MK2047RFECZ	R, METAL 1% 47Ω
R608	054 MK202K2FECZ	R, METAL 1% 2.2K
R609	054 MK2100RFECZ	R, METAL 1% 100Ω
R610	054 MK2002KFECZ	R, METAL 1% 2K
R611	054 MK2010KFECZ	R, METAL 1% 10K
R612	054 MK2100RFECZ	R, METAL 1% 100Ω
R613	054 MK2220RFECZ	R, METAL 1% 220Ω
R614	054 MK202K2FECZ	R, METAL 1% 2.2K
R615, 616	054 MK2047RFECZ	R, METAL 1% 47Ω
R617	054 MK202K2FECZ	R, METAL 1% 2.2K
R618	054 MK2100RFECZ	R, METAL 1% 100Ω
R619	054 MK2002KFECZ	R, METAL 1% 2K
R620	054 MK2010KFECZ	R, METAL 1% 10K
R621, 622	054 MK2100RFECZ	R, METAL 1% 100Ω
R623	054 MK204K7FECZ	R, METAL 1% 4.7K
R624	054 MK206K8FECZ	R, METAL 1% 6.8K
R625	054 MK202K2FECZ	R, METAL 1% 2.2K
R626	054 MK2022RFECZ	R, METAL 1% 22Ω
R627	054 MK202K2FECZ	R, METAL 1% 2.2K
R628	054 MK2022RFECZ	R, METAL 1% 22Ω
R629	054 MK2270RFECZ	R, METAL 1% 270Ω
R630	054 MK202K2FECZ	R, METAL 1% 2.2K
R631	054 MK2010KFECZ	R, METAL 1% 10K
R632	054 MK2022KFECZ	R, METAL 1% 22K
R633	054 MK2010KFECZ	R, METAL 1% 10K
R634	054 MK2022KFECZ	R, METAL 1% 22K
R635, 636	054 MK2001KFECZ	R, METAL 1% 1K
R637, 638	054 MK201K2FECZ	R, METAL 1% 1.2K
R639, 640	054 MK2510RFECZ	R, METAL 1% 510Ω
R641~644	054 MPC70-0.22	R, PLATE 2W 0.22Ω
R645	054 RSS2X-10F	R, METAL 2W 10Ω
VR601	051 VM6CKPH1S-2.2K	SEMI-FIXED RESISTOR

SYMBOL	PARTS NO.	DESCRIPTION
<u>OTHERS</u>		
D001	034 LTL2201A	LED
FU001	036 (U)F6A	AC FUSE 5MF6 for STD
	036 (S)T3.15A	AC FUSE 5ST3.15 for EUR
S001	063 4TR-2753	THERMO-STAT
T001	022 T-1025A01	POWER TRANSFORMER for STD
	022 T-1025Q01	POWER TRANSFORMER for EUR
T002	022 T-1028A01T	SUB TRANSFORMER for STD
	022 T-1028H01T	SUB TRANSFORMER for EUR
	011 FP-462	FRONT PANEL(HEAT SINKER)
	014 2TSU-1	BONNET
	015 TRP-670B	PRINTED REAR CHASSIS
	067 4TR-2744#1	SPEAKER TERMINAL(RED)
	067 4TR-2744#2	SPEAKER TERMINAL(BLK)
	068 C-4386B02	2P CONNECTOR WITH WIRE
	068 C-4386B03	3P CONNECTOR WITH WIRE
	068 C-4386B04	4P CONNECTOR WITH WIRE
	069 4TR-1257	FOOT
	071 4TSU-5#1	CYLINDER BUSH 22mm
	071 4TSU-5#2	CYLINDER BUSH 42mm
	071 4TSU-5#3	CYLINDER BUSH 85mm
	072 4TR-2461#4	AC CORD for STD
	072 4TR-2631#2	AC CORD for EUR

# Wiring Diagram RMB-100

