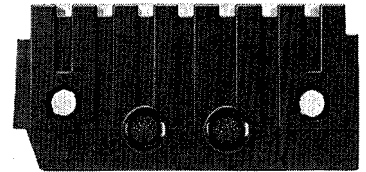


MULTITRACK  
CASSETTE RECORDER

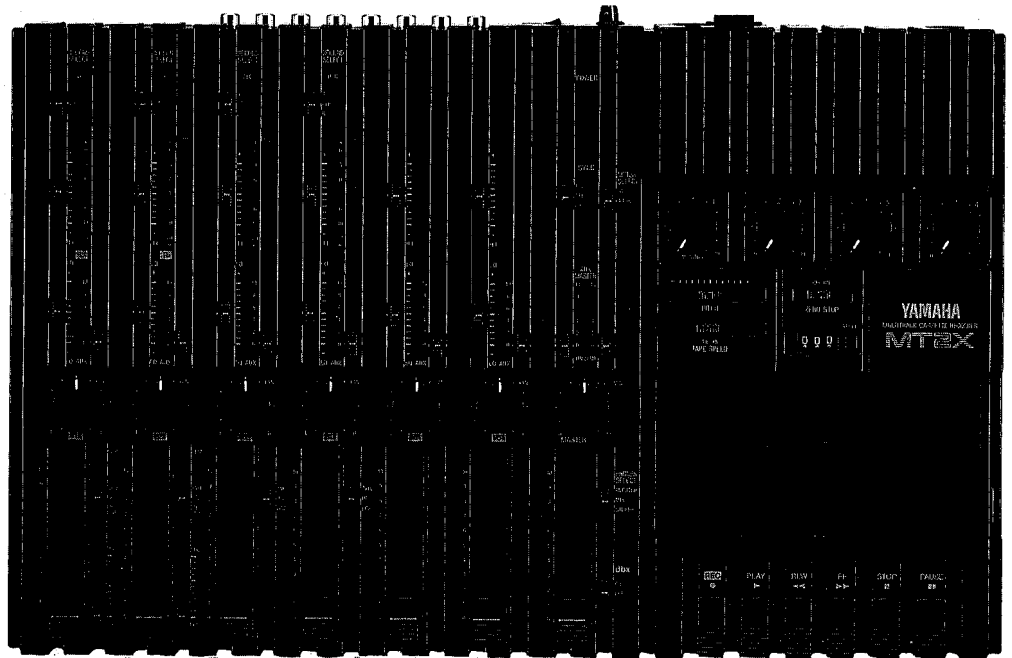
MIDI CONVERTER

# MT2X/YMC2

## SERVICE MANUAL



YMC2



MT2X

MT2X

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006755

SINCE 1887



# YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

2.5K-771 ① Printed in Japan '87.7

## IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

**WARNING:** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

**IMPORTANT:** The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit/s indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING:** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

**IMPORTANT:** Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

## ■ SPECIFICATIONS

### TRANSPORT

Tape type	Chrome (70 microsec. EQ)
Heads	4-channel Permalloy rec/play 4-channel ferrite erase
Tape speeds	4.8 cm/sec, 9.5 cm/sec
Pitch control	± 10%
Wow & flutter	Less than 0.05% WRMS
Fast wind	Approx 100 sec, for C-60 tape
Motor	DC servo

### CONNECTORS

Inputs 1, 2:	Input impedance	10 k-ohms
	Rated input level	- 10 to - 50 dB (fader nominal)
	Max. input level	+ 10 dB (trim min.)
	Min. input level	- 56 dB (trim, fader max.)
Inputs 3~6:	Input impedance	10 k-ohms
	Rated input level	- 10 dB (fader nominal)
	Min. input level	- 16 dB (fader max.)
Aux return L, R:	Input impedance	10 k-ohms
	Rated input level	- 10 dB (fader nominal)
	Min. input level	- 16 dB (fader max.)
Stereo L, R:	Output impedance	1 k-ohm
	Load impedance	Greater than 10 k-ohms
	Rated output level	- 10 dB into 50 k-ohms
Phones out:	Load impedance	8-40 ohms
	Max. output level	100 mW + 100 mW
Tape out 1-4:	Output impedance	1 k-ohm
	Load impedance	Greater than 10 k-ohms
	Rated output level	- 10 dB into 50 k-ohms
Aux send:	Output impedance	1 k-ohm
	Load impedance	Greater than 10 k-ohms
	Rated output level	- 10 dB into 50 k-ohms

### ELECTRICAL SPECIFICATIONS

Equalizer	HIGH: ± 10 dB at 10 kHz (shelving) LOW: ± 10 dB at 100 Hz (shelving)
Frequency responce	40 Hz ~ 18 kHz, ± 3 dB at 9.5 cm/sec 40 Hz ~ 12.5 kHz, ± 3 dB at 4.8 cm/sec
S/N ratio	85 dB, dbx ON, IHF-A
Distortion	Less than 1%, EIAJ 315 Hz
Channel separation	Greater than 55 dB at 1 kHz
Erasure ratio	Greater than 70 dB at 1 kHz
Noise reduction	dbx*

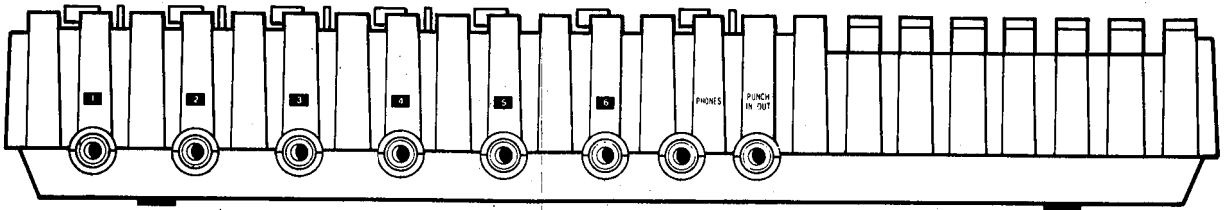
### OTHERS

Power supply	U.S. & Canadian Models: 120V, 50/60 Hz General Model: 110/120/220/240V, 50 Hz
Power consumption	U.S. Model: 23W Canadian Model: 21W General Model: 21W
Dimensions (W x H x D)	413 x 75 x 260 mm (16-1/4 x 3 x 10-1/4")
Weight	3.5 kg (7.7 lbs.)

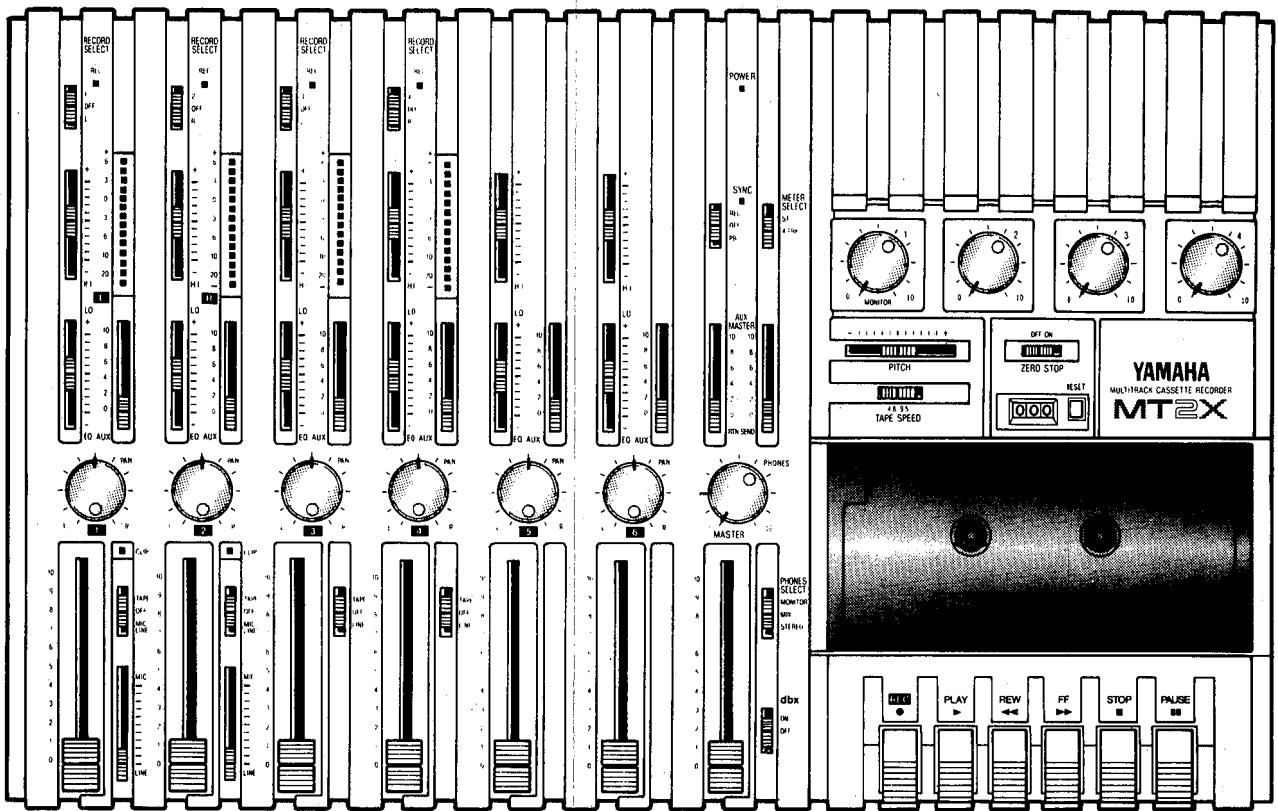
\*dbx is a trademark of dbx Incorporated.  
All specifications subject to change without notice.

# PANEL LAYOUT

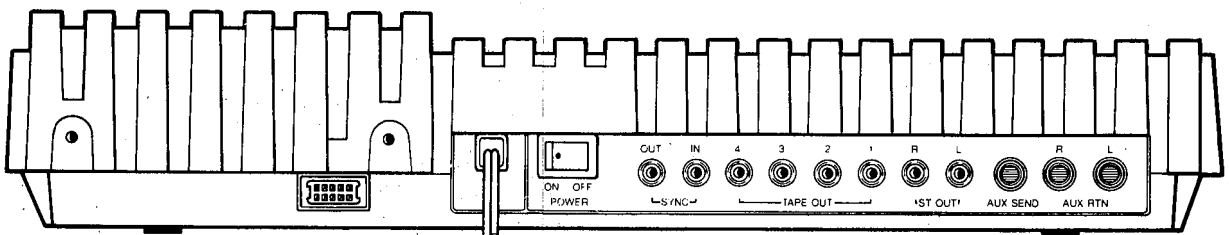
## ● Front Panel



## ● Mixer Section

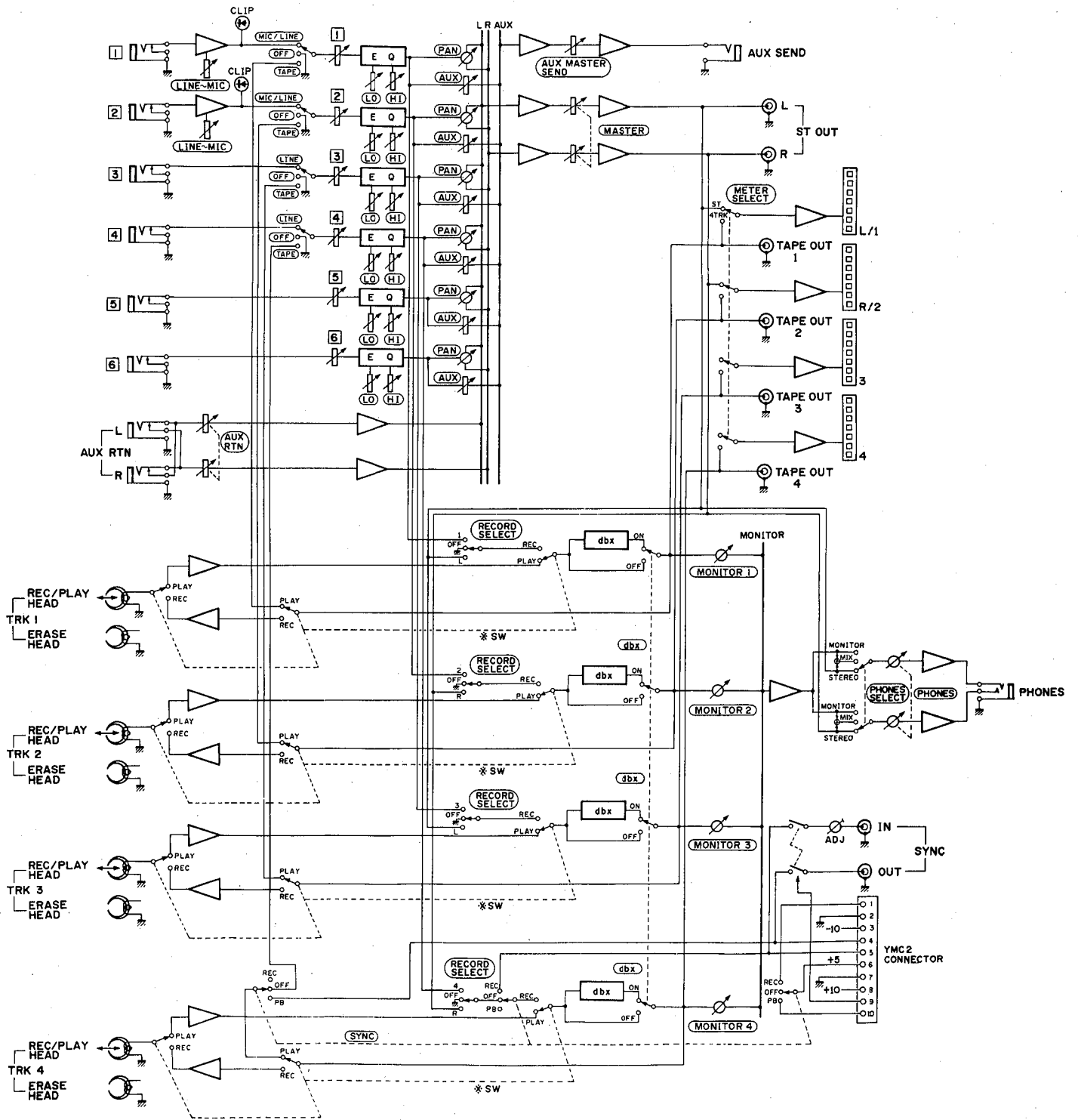


## ● Rear Panel



MT2X

**■ BLOCK DIAGRAM**

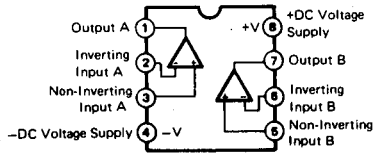


**NOTE:** When the REC button is engaged, the panel switches can be used to individually order recording on only those channels with RECORD SELECT not switched "OFF".

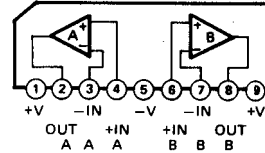
MT2X

# IC BLOCK DIAGRAM

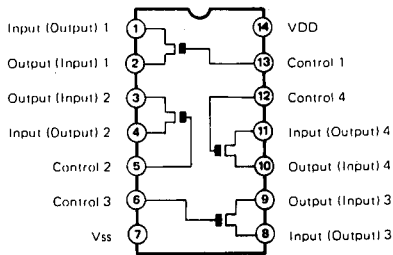
● **NJM2041S**  
● **NJM4559D**  
Dual Operational Amplifier



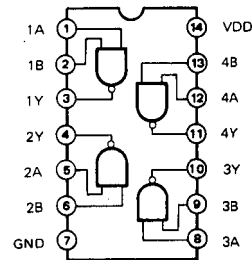
● **SVINJM2043SE**  
Dual Operational Amplifier



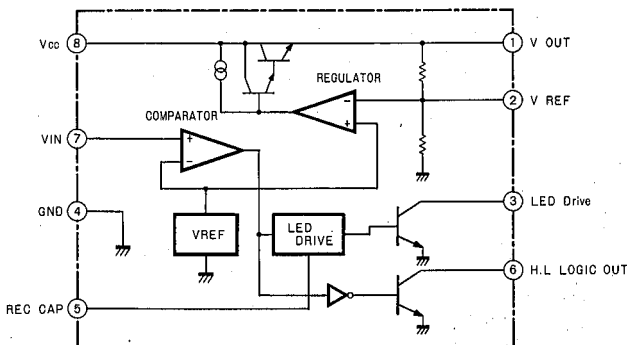
● **LC4066BS**  
Quad Bilateral Switch



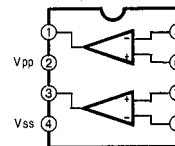
● **M4011BP**  
Quad 2 Input NAND



● **M5232L**

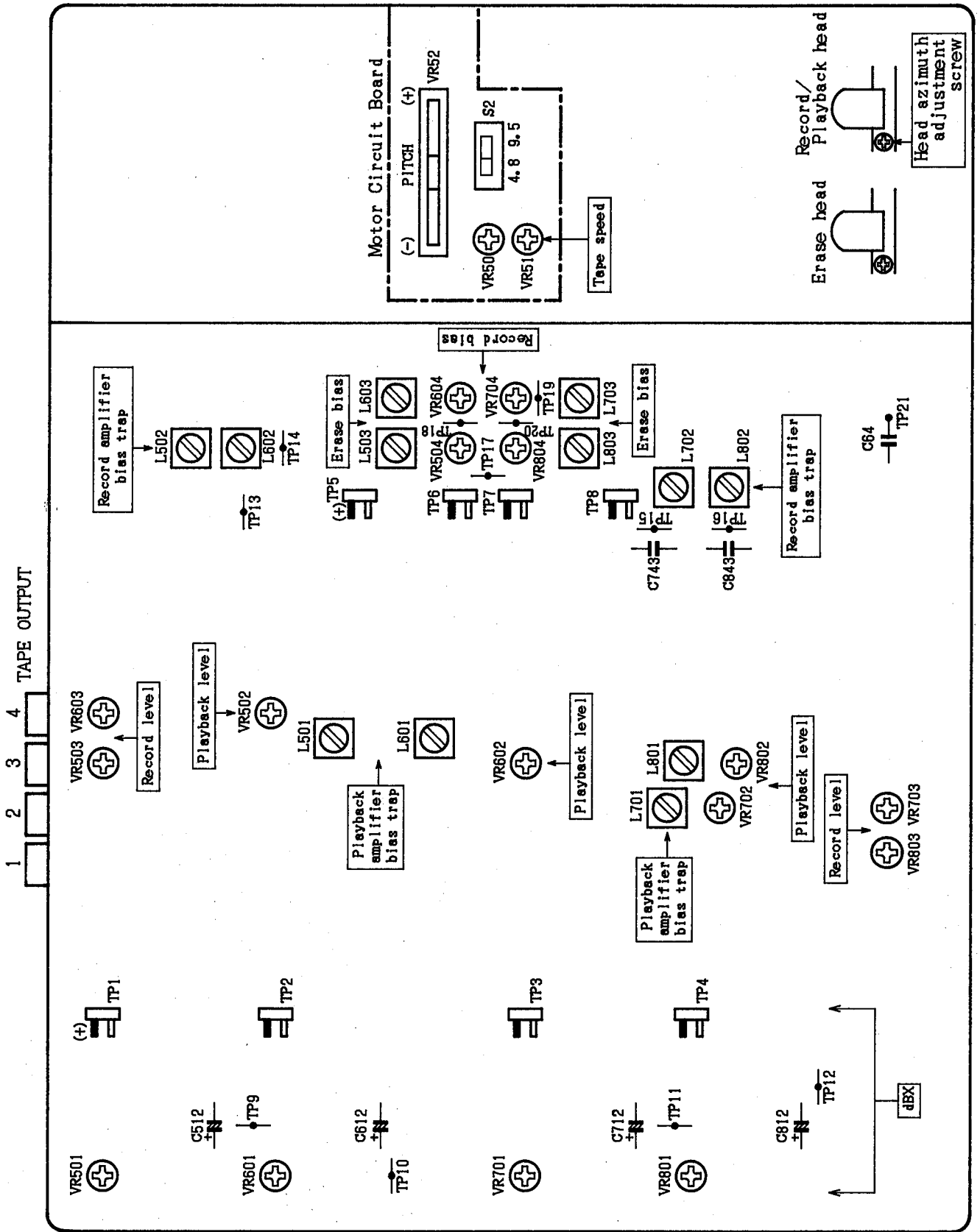


● **NJM2073**  
Dual Low Voltage Power Amplifier



# ADJUSTMENTS

## Adjustment Locations



### • Cassette Section Adjustments

Adjustment	Equipment Required	Control/Switch Settings	Measure at	Adjust	Rating
dbx	DC voltmeter	Apply a signal of 40mV at 1KHz to the AUX RTN JACK. AUX RTN Volume: MAX MASTER Volume: MAX REC switch: On dbx switch: On (TP9-12: 20mv)	TP 1 (CH1) TP 2 (CH2) TP 3 (CH3) TP 4 (CH4)	VR501 (CH1) VR601 (CH2) VR701 (CH3) VR801 (CH4)	Adjust for voltmeter reading of 15mV $\pm$ 1mV.
Erase bias	Oscilloscope	Record Select switch: On (CH1~CH4) REC button: On	TP17 (CH1) TP18 (CH2) TP19 (CH3) TP20 (CH4)	L503 (CH1) L603 (CH2) L703 (CH3) L803 (CH4)	Adjust for maximum peak to peak voltage (6-8v) at 77-87kHz.
Record amplifier bias trap	Oscilloscope	Same as the above.	TP13 (CH1) TP14 (CH2) TP15 (CH3) TP16 (CH4)	L502 (CH1) L602 (CH2) L702 (CH3) L802 (CH4)	Adjust for minimum peak to peak voltage.
Record bias	AC voltmeter	Same as the above.	TP 5 (CH1) TP 6 (CH2) TP 7 (CH3) TP 8 (CH4)	VR504 (CH1) VR604 (CH2) VR704 (CH3) VR804 (CH4)	Adjust for voltmeter reading of 5.0mV at about 82kHz.
Record level	AF oscillator AC voltmeter Oscilloscope	Same as the above.	TP 5 (CH1) TP 6 (CH2) TP 7 (CH3) TP 8 (CH4)	VR503 (CH1) VR603 (CH2) VR703 (CH3) VR803 (CH4)	Apply a 1kHz signal to the Input terminals. Adjust the input and master faders so that the output level at the Tape Out becomes -10dB (245mV). Connect the capacitor lead (C64) to the ground and adjust for voltmeter reading of 0.58mV.
Playback amplifier bias trap	Oscilloscope	Record Select switch for CH1 : Off (other 3 channels to be On) REC button: On CH2~CH4 are adjusted the same as CH1	Tape Out (CH1)	L501 (CH1) L601 (CH2) L701 (CH3) L801 (CH4)	Adjust for minimum peak to peak voltage at about 82kHz.
Azimuth	AC voltmeter Oscilloscope		Tape Out (CH1~CH4)	Azimuth adjustment screw	Play the test tape (TEAC* MTT-114N, 10kHz) and adjust for maximum output.
Tape speed	Wow/flutter meter or frequency counter	Pitch control (VR52): center	Tape Out (CH1)	VR50 VR51	Turn the TAPE SPEED switch "9.5cm/s." Play the test tape (TEAC MTT-111N, 3kHz) and adjust for 6,000Hz $\pm$ 10Hz. Turn the TAPE SPEED switch "4.8cm/s." Play the test tape and adjust for 3,000Hz $\pm$ 10Hz.
Playback level	AC voltmeter	dbx switch: Off RL: 10k $\Omega$	Tape Out (CH1~CH4)	VR502 (CH1) VR602 (CH2) VR702 (CH3) VR802 (CH4)	Play the TEAC MTT-212N test tape (or MTT-212CN) and adjust for -10dB, 245mV.
dBx ON/OFF	AF oscillator AC voltmeter Oscilloscope	Record Select switch : On (CH1~CH4) REC button : ON Input level: -20v $\mu$	TP 5 (CH1) TP 6 (CH2) TP 7 (CH3) TP 8 (CH4)	VR503 (CH1) VR603 (CH2) VR703 (CH3) VR803 (CH4)	Apply a 1kHz signal to the Input terminals. Adjust the input and master faders so that the output level at the Tape Out becomes -10dB (245mV). Connect the capacitor lead (C64) to the ground and adjust for voltmeter reading of 0.58mV. Turn the dBX on and adjust for $\pm$ 3.5dB at 1kHz.

\* TEAC is a trademark of TEAC Corporation.

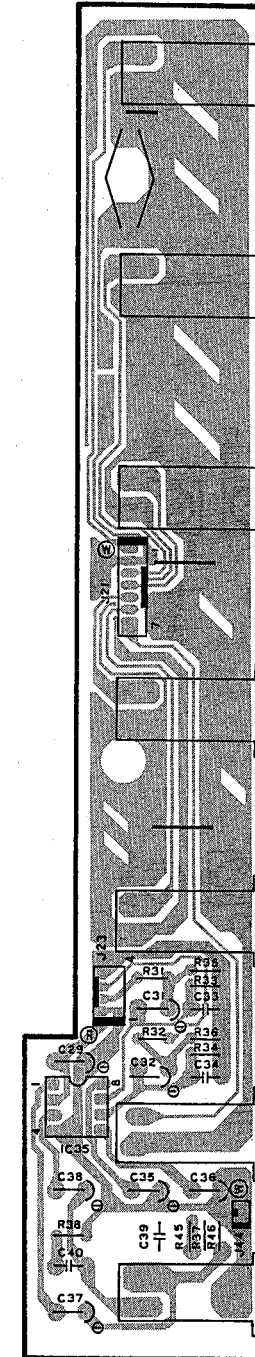
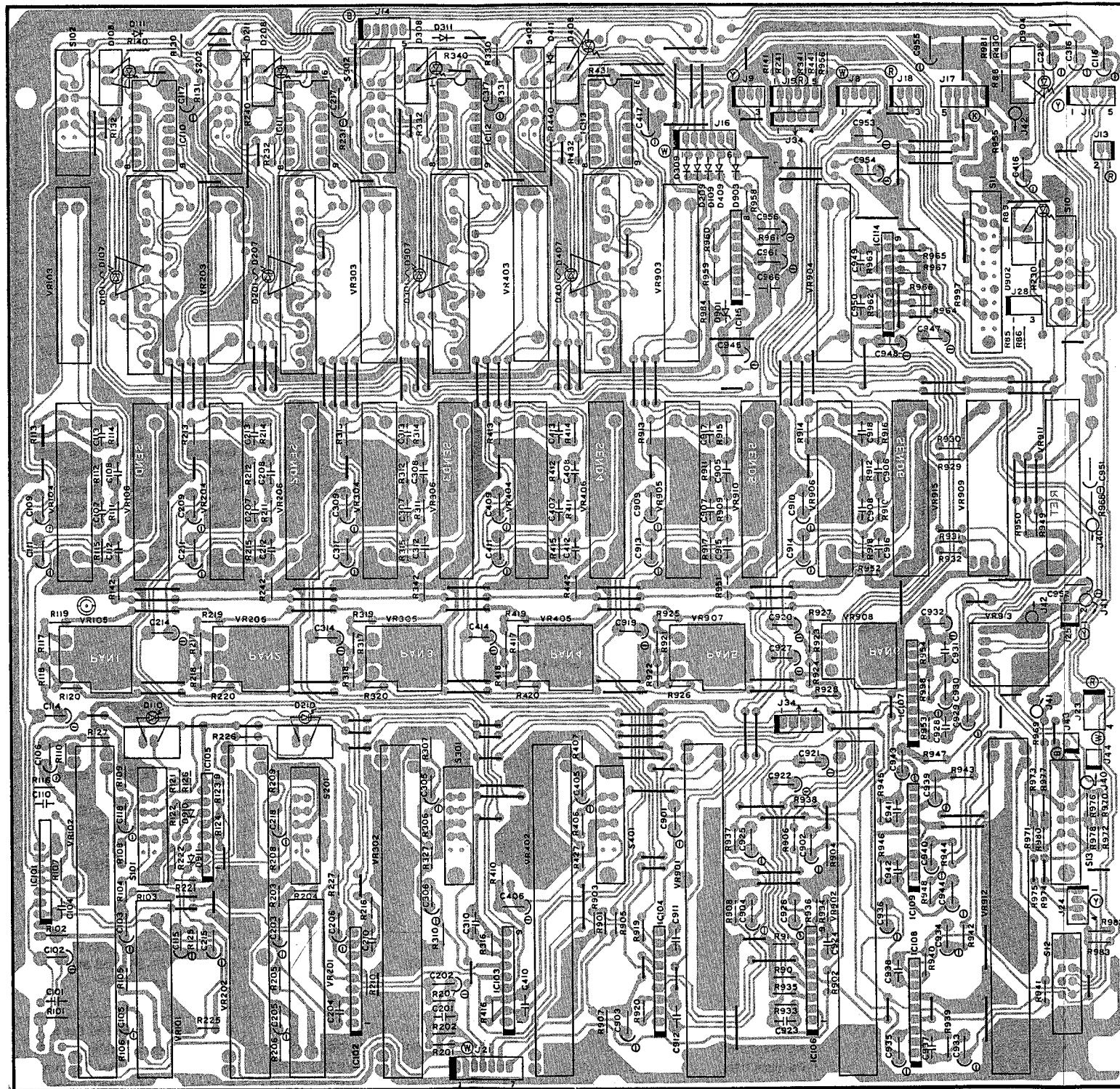
Connect a 10Kohm load resistor at the Tape Out jack when measuring the signal.  
When dB represents a specific voltage, OdB is referenced to 0.775VRMS.



■CIRCUIT BOARDS

● Mixer Circuit Board

● Jack Circuit Board



Mixer Circuit Board  
Notes)

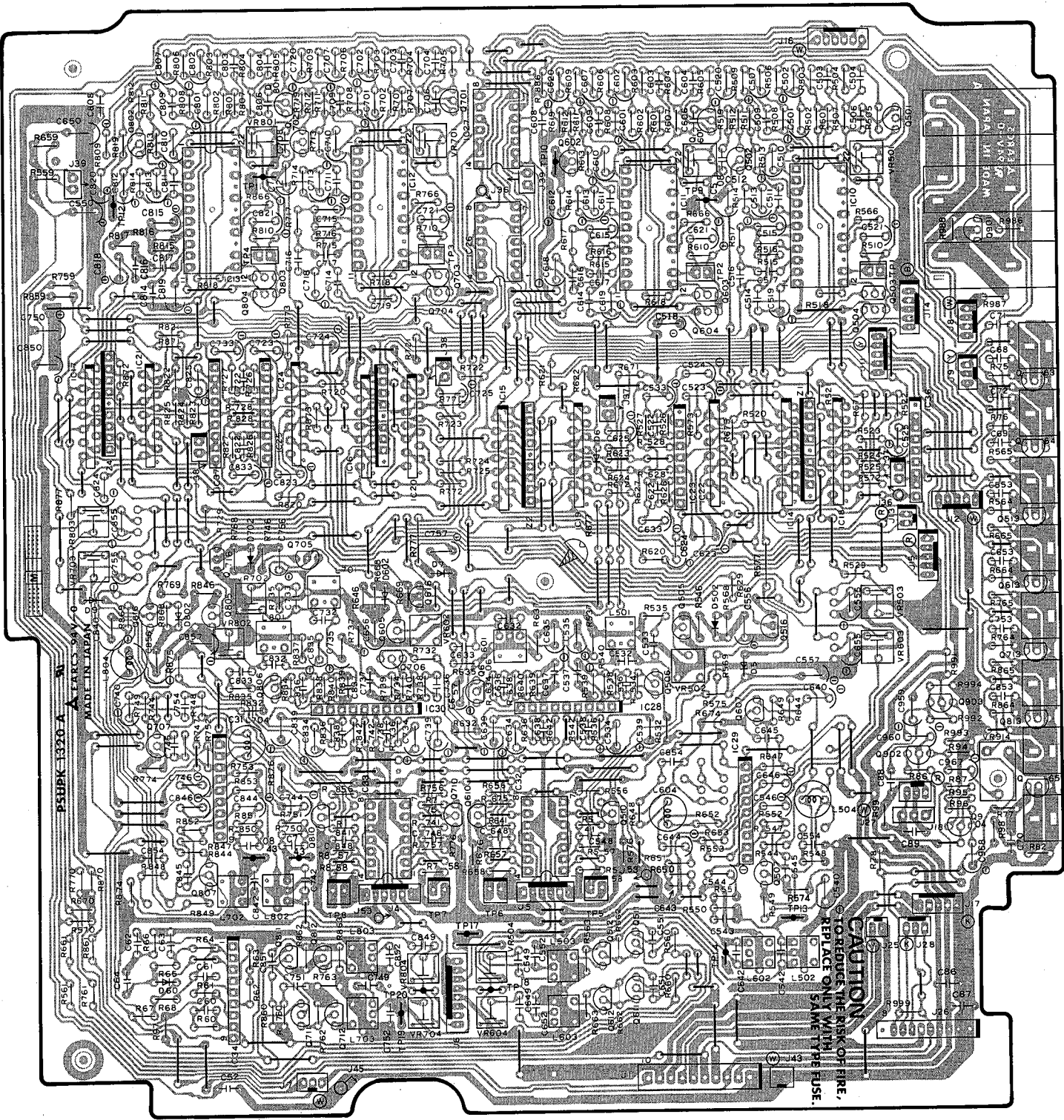
1. IC  
 IC101, 102: NJM2041S (IX801210)  
 IC103, 104, 106~109, 114: AN6555 (IX801670)  
 IC105: M5223L (XX808740)  
 IC110~113: LB1408 (IX801500)  
 IC115: M5232L (IG053800)
2. Diode  
 D901: MA4091LTA (XX809540)  
 D109, 209, 309, 409, 111, 211, 311, 411, 903, 910, 911: SVD1SS119-04T (XX808790)
3. LED  
 D101, 102, 201, 202, 301, 302, 401, 402: SVDGL-102R83 (XX808830) RED  
 D103~107, 203~207, 303~307, 403~407: SVDGL-105H83 (XX808840) ORANGE  
 D110, 210, 902, 904, 108, 208, 308, 408: LN265RPH (XX808820) RED
4. Variable Resistor  
 VR101, 201: PSVR251815A15 (HX801070) TRIM  
 VR102, 202, 302, 402, 901, 902: EWAQFOX15C14 (XX808920) CH FADER  
 VR103, 104, 203, 204, 303, 304, 403, 404, 903~906: BASS TRE  
 PSVS251815C15 (XX808930) BASS TRE  
 VR105, 205, 305, 405, 907, 908: PSVR121N015B14 (XX808890) PAN POT  
 VR106, 206, 306, 406, 910, 911, 915: AUX SEND  
 PSVS251815A14 (XX808940) AUX SEND  
 PSVR252815A14 (HX801080) AUX RTN  
 VR909: EWAQAOX15C14 (XX809100) MASTER FADER  
 VR912: PSVR122J015A15 (XX808970) PHONES LEVEL  
 VR913:
5. Switch  
 S10: PSSSK8 (XX809020) METER SELECTOR  
 S11: PSSSK12 (KX800470) TAPE SYNC  
 S12: PSSSK13 (KX800480) ZERO RETURN, DBX  
 S13, 101, 201, 301, 401: PSSSK7 (XX809030)  
 S102, 202, 302, 402: PSSSK9 (XX809050) REC SELECTOR

Jack Circuit Board  
Notes)

- IC35: NJM2073 (XX808770)

< Components side >

● Cassette Circuit Board



< Components side >

Cassette Circuit Board  
Notes)

- |  |                          |
|--|--------------------------|
| 1. IC  |                          |
| IC10~13:   | AN6291 (IG146100)        |
| IC14~22, 24:   | LC4066BS (IX801440)      |
| IC23, 25, 29, 31, 36, 37:                                | AN6555 (IX801670)        |
| IC26, 27:  | M4011BP (IG001240)       |
| IC28, 30, 34:  | SVINJM2043SE (XX808720)  |
| IC32,33:   | $\mu$ PC1290C (XA508001) |
| 2. Transistor  |                          |
| Q63~65, 513, 613, 713,<br>813, 901:                      | 2SC2878B-T (IX800060)    |
| Q501, 502, 601, 602,<br>701, 702, 801, 802, 903:         | 2SC3311 S-T (IX801680)   |
| Q503, 504, 603, 604,<br>703, 704, 803, 804:              | UN4114 R-T (IX802010)    |
| Q505, 605, 705, 805:                                     | 2SD1915--TA              |
| Q510, 610, 710, 810:                                     | UN4211 R-T (IX802020)    |
| Q511, 611, 711, 811:                                     | 2SD1302 R, S (ID130200)  |
| Q512, 612, 712, 812:                                     | 2SC1383 R (XX808800)     |
| Q516, 616, 716, 816:                                     | UN4214 (IX553400)        |
| 3. FET   |                          |
| Q506, 507, 606, 607,<br>706, 707, 806, 807,<br>902, 904: | 2SK655 (IX802000)        |
| 4. Diode   |                          |
| D5~7:  | SVD1SS119-04T (XX808790) |
| D8:  | SVD1SS119-04 (XX808790)  |
| D8:  | MA150 (IX801150)         |
| 5. Resistor Array  |                          |
| Z1~4:  | EXB-F8E104J (HX801150)   |
| 6. Variable Resistor                                     |                          |
| VR501, 601, 701, 801:                                    | EVND4AA00B23 (XX808850)  |
| VR502, 602, 702, 802:                                    | EVND4AA00B53 (XX808880)  |
| VR503, 603, 703, 803:                                    | EVND4AA00B14 (XX808860)  |
| VR504, 604, 704, 804:                                    | EVND4AA00B15 (XX808870)  |
| VR914:   | EVNB1AA00B54             |



# MT2X

## Motor Circuit Board

Notes)

1. IC  
IC5: AN78M09 (IG061200)
2. Transistor  
Q90: 2SC1383 R (XX808800)
3. Diode  
D50: SVD1SR35-200LF (XX808780)
4. Variable Resistor  
VR50, 51: EVND4AA00B53 (XX808880)  
VR52: PSVS251815B53 (XX808880)
5. Switch  
S5: PSSSK8 (XX809020)  
S6: PSSSK13 (KX800480)

## Power Switch Circuit Board

Notes)

Power Switch: EST2011B (KX800450)

## Power Supply Circuit Board

Notes)

1. IC  
IC1: AN78M10F (IG075400)  
IC2: AN79M10F (XB930001)  
IC4: AN78N05 (XA507001)
2. Transistor  
Q1: 2SC3311 S-T (IX801680)  
Q2: 2SA1015 Y, GR (IA101531)  
Q3: 2SD1265 O, P (IX606390)
3. Diode  
D1, 2: SVD1B4B42 (IX801170)  
D3, 4, 6: SVD1SS119-04T (XX808790)  
D5: MA29WA-T (IX801530)
4. Zener Diode  
D8: MA4120M (IX801130)


## Monitor Circuit Board

Notes)


1. IC  
IC6~8: NJM4559D (IG039600)
2. Variable Resistor  
VR107, 207, 307, 407: PSVR121N015A54 (XX808900)

• Product for CANADA only

### FUSE REPLACEMENT

 Symbol located near the fuse indicates fast operating type. To reduce the risk of fire, replace only with same type fuse.

### FUSIBLE REMPLACEMENT

 Le symbole qui se trouve près du fusible signifie un fusible à action rapide. Afin de réduire le risque de feu, remplacer uniquement par un fusible de même type.

# MULTITRACK CASSETTE RECORDER

# MT2X

# PARTS LIST

## Notes DESTINATION ABBREVIATIONS

J : Japanese model	A : Australian model
U : U.S. model	E : European model
C : Canadian model	D : West German model
X : General model	B : British model
M : South African model	I : Indonesian model
H : North European model	

**ELECTRICAL PARTS**

Ref No.	Part No	Description	部品名	Remarks	ランク
	NX802970	Circuit Board, MIXER	ミキサーシート		
	NX802990	Circuit Board, Cassette	カセットシート		
	NX803010	Circuit Board, PU	電源シート	U, C	
	NX803020	Circuit Board, PU	電源シート	E	
	NX802980	Circuit Board, JACK	JACKシート		
	NX803040	Circuit Board, Motor	モーターシート		
	NX803030	Circuit Board, Monitor	モニターシート		
	NX803060	Circuit Board, Power SW	パワースイッチシート	U, C	
	NX803070	Circuit Board, Power SW	パワースイッチシート	E	
	NX803080	Circuit Board, Punch I/O	パンチイン/アウトシート		
	LX803090	Circuit Board, MIDI	MIDIシート		
	NX802970	Circuit Board, MIXER	ミキサーシート		
	IX801210	IC	NJM2041S	IC	03
	IX801670	IC	AN6555	IC	03
	XX808740	IC	M5223L	IC	04
	IX801500	IC	LB1408	IC	04
	IG053800	IC	M5232L	IC	04
	XX809540	Diode	MA4091LTA	ダイオード	01
	XX808790	Diode	SVD1SS119-04T	ダイオード	01
	XX808830	LED RED	SVDGL-102R83	LED	04
	XX808840	LED ORANGE	SVDGL-105H83	LED	06
	XX808820	LED RED	LN265RPH	LED	03
	HX801070	Variable Resistor	PSVR251815A15	可変抵抗器	TRIM
	XX808920	Variable Resistor C10K	EWAQFOX15C14	可変抵抗器	CH FADER
	XX808930	Variable Resistor C100K	PSVS251815C15	可変抵抗器	BASS TRE
	XX808890	Variable Resistor B10K	PSVR121N015B14	可変抵抗器	PAN POT
	XX808940	Variable Resistor A10K	PSVS251815A14	可変抵抗器	AUX SEND
	HX801080	Variable Resistor	PSVR252815A14	可変抵抗器	AUX RTN
	XX809100	Variable Resistor	EWAQAQX15C14	可変抵抗器	MASTER FADER
	XX808970	Variable Resistor A100KX2	PSVR122J015A15	可変抵抗器	PHONES LEVEL
	XX809020	Switch	PSSSK8	スイッチ	METER SELECTOR
	KX800470	Switch	PSSSK12	スイッチ	TAPE SYNC
	KX800480	Switch	PSSSK13	スイッチ	ZERO RETURN, DBX
	XX809030	Switch	PSSSK7	スイッチ	
	XX809050	Switch	PSSSK9	スイッチ	REC SELECTOR
	NX802990	Circuit Board, Cassette	カセットシート		
	IG146100	IC	AN6291	IC	07
	IX801440	IC	LC4066BS	IC	03
	IX801670	IC	AN6555	IC	03
	IG001240	IC	M4011BP	IC	03
	XX808720	IC	SVINJM2043SE	IC	06
	XA508001	IC	μ PC1290C	IC	04
	IX800060	Transistor	2SC2878B-T	トランジスタ	03
	IX801680	Transistor	2SC3311 S-T	トランジスタ	
	IX802010	Transistor	UN4114 R-T	トランジスタ	
		Transistor	2SD1915--TA	トランジスタ	
	IX802020	Transistor	UN4211 R-T	トランジスタ	
	ID130200	Transistor	2SD1302 R, S	トランジスタ	03
	XX808800	Transistor	2SC1383 R	トランジスタ	03
	IX553400	Transistor	UN4214	トランジスタ	02
	IX802000	FET	2SK655	FET	
	XX808790	Diode	SVD1SS119-04T	ダイオード	01
	XX808790	Diode	SVD1SS119-04	ダイオード	01
	IX801150	Diode	MA150	ダイオード	01
	HX801060	Resistor Array 100KΩ X6	EXB-F8E104J	抵抗アレイ	
	XX808850	Potentiometer	EVND4AA00B23	半固定抵抗	01
	XX808880	Potentiometer	EVND4AA00B53	半固定抵抗	05
	XX808860	Potentiometer	EVND4AA00B14	半固定抵抗	01
	XX808870	Potentiometer	EVND4AA00B15	半固定抵抗	01
		Potentiometer	EVNB1AA00B54	半固定抵抗	
	LX800630	Jack	PSJJK31J	ジャック	
	LX800820	Jack	PSJJK33A	ジャック	02
	NX803010	Circuit Board, PU	電源シート	U, C	
	NX803020	Circuit Board, PU	電源シート	E	
	IG075400	IC	AN78M10F	IC	03
	XB930001	IC	AN79M10F	IC	03
	XA507001	IC	AN78N05	IC	03
	IX801680	Transistor	2SC3311 S-T	トランジスタ	03
	IA101531	Transistor	2SA1015 Y, GR	トランジスタ	03
	IX606390	Transistor	2SD1265 O, P	トランジスタ	03
	IX801170	Diode	SVD1B4B42	ダイオード	02
	XX808790	Diode	SVD1SS119-04T	ダイオード	01
	IX801530	Diode	MA29WA-T	ダイオード	01
	IX801130	Zener Diode	MA4120M	ツェナーダイオード	01
	NX802980	Circuit Board, JACK	JACKシート		

\* : New Parts (新規部品)

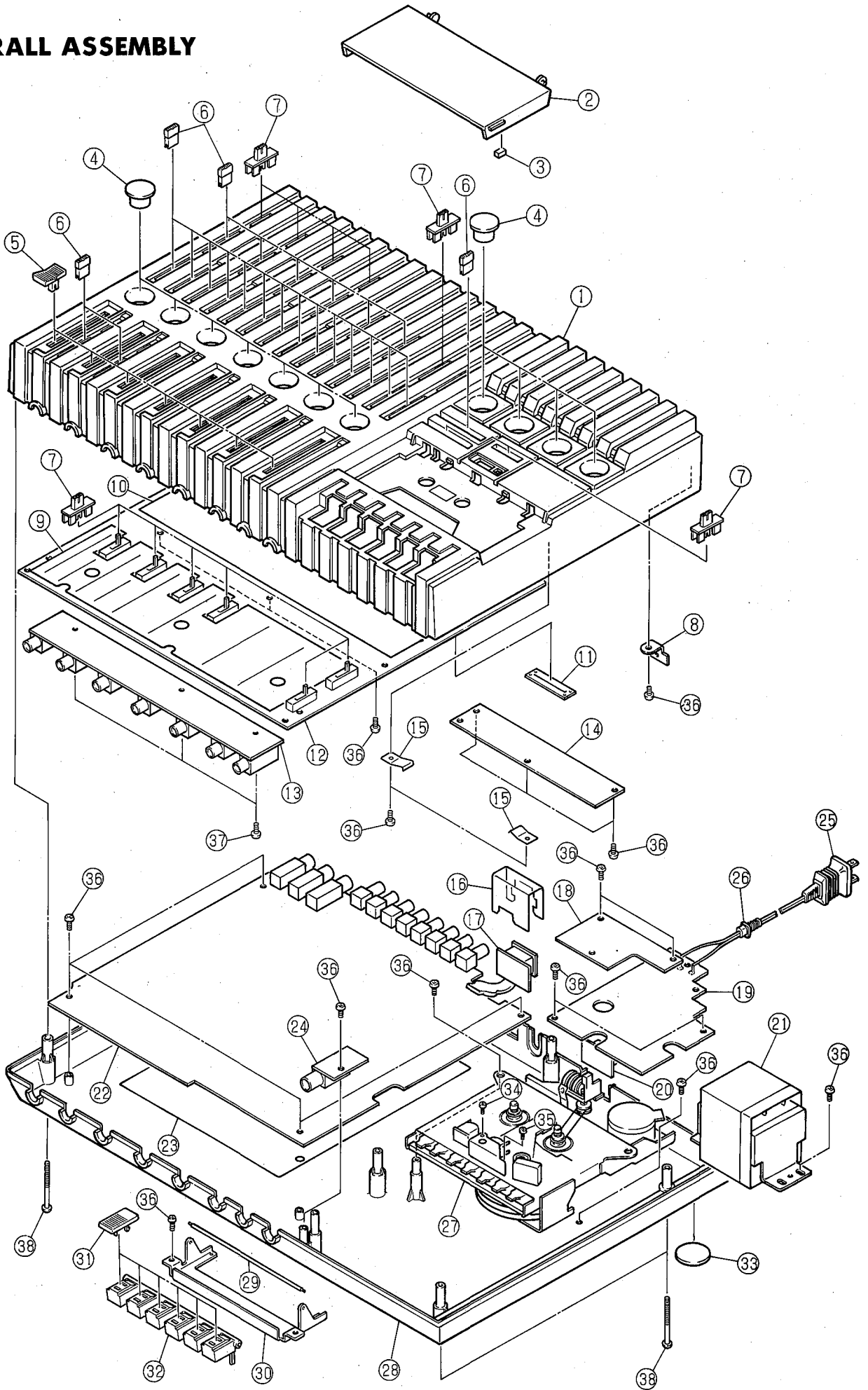
ランク : Japan only

MT2X





OVERALL ASSEMBLY



MT2X

Ref No.	Part No	Description		部品名	Remarks	ランク
1	DX803950	Top Cover	PSKMK250-1	上キャビネット		
2	CX800720	Cassette Door	PSGUK18-1	カセット扉スモーク		
3	XX807700	Catch Rubber,Cassette Door	PSHGK486	カセット扉受けゴム		01
4	XX807550	Knob	PSBNK43	ツマミ	VOLUME	07
5	XX807560	Knob	PSBDK18	ツマミ	FADER VOLUME	02
6	XX807570	Knob	PSBDK19	ツマミ	SLIDE VOLUME	02
7	XX807580	Knob,Slide Switch	PSBDK20	スライドSWツマミ		02
8	XX807700	Angle Bracket	PSUWK430	MIDI PACK取付金具		01
9	CX800730	Shield A,Volume	PSGXX119	Vol飾りヒメロンA		
10	CX800740	Shield B,Volume	PSGXX120	Vol飾りヒメロンB		
11	CX800780	Shield C,Volume	PSGXX109	Vol飾りヒメロンC		
12	NX802970	Circuit Board,MIXER		ミキサシート		
13	NX802980	Circuit Board,JACK		JACKシート		
14	NX803030	Circuit Board,Monitor		モニタシート		
15	XX807660	Spring,Cassette Door	PSUSK21	カセット扉板バネ		01
16	CX800760	Barrier	PSMXK44	バリアー		
17	NX803060	Circuit Board,Power SW		パワースイッチシート	U,C	
17	NX803070	Circuit Board,Power SW		パワースイッチシート	E	
18	NX803040	Circuit Board,Motor		モーターシート		
19	NX803010	Circuit Board,PU		電源シート	U,C	
19	NX803020	Circuit Board,PU		電源シート	E	
20	LX803090	Circuit Board,MIDI		MIDIシート		
21	GX800740	Power Transformer	PSLTK5V13-W	電源トランス	U	
21	GX800750	Power Transformer	PSLTK5V14-W	電源トランス	C	
21	GX800760	Power Transformer	PSLTK5V15-W	電源トランス	E	
22	NX802990	Circuit Board,Cassette		カセットシート		
23	CX800750	Shield,Bottom Cover	PSMCK27	底キャビネット板		
24	NX803080	Circuit Board,Punch I/O		ハンディン/アウトシート		
25	MX800190	AC Cord	PSJAK4	ACコード	U,C	
25	MX800200	AC Cord	PSJAK5	ACコード	E	
26	XX806460	Cord Strain Relief	SHR127	コードストッパー		02
27	NX803100	Block,Cassette	PSJDK14	デッキブロック		
28	DX803930	Bottom Cover	PSGPK410-1A	底キャビネット	U,C	
28	DX803940	Bottom Cover	PSGPK410-2A	底キャビネット	E	
29	XX807630	Shafft,Cassette Button	PSMQK5005	カセットボタンシャフト		03
30	XX807620	Plate,Cassette Knob	PSMQK3013	カセットツマミ取付金具		04
31	XX807640	Button	PSBWK29	ボタン	CASSETTE	01
32	XX807650	Base,Cassette Button	PSBZK36	カセットボタンベース		02
33	CX800770	Foot	SKLK1	セット脚		
34	EA020056	Pan Head Screw	XSN2+5FZ	ナベ小ネジ	2.0X5 ZMC2Y	01
35	EA020056	Pan Head Screw	XSN2+3	ナベ小ネジ	2.0X3 ZMC2Y	01
36	EI030086	Bind Tapping Screw	XTB3+8G	ハインドタッピングネジ	3.0X8 ZMC2Y	01
37	EI030106	Bind Tapping Screw	XTB3+10G	ハインドタッピングネジ	3.0+10 ZMC2Y	01
38	EA030306	Pan Head Screw	XTV3+30J	ナベ小ネジ	3.0X30 ZMC2Y	01

\* : New Parts (新規部品)

ランク : Japan only

MT2X

# MIDI CONVERTER

# YMC2

## ■ CONTENTS

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CIRCUIT BOARDS .....	2
PARTS LIST .....	3

## ■ SPECIFICATIONS

MIDI Receive Data ..... TIMING CLOCK, START, CONTINUE, STOP

FSK Signal Output ..... fH = 1.953 kHz, fL = 0.977 kHz

MIDI Transmit Data ..... TIMING CLOCK, START, STOP

Tempo Range ..... ♩ = 25 ~ ♩ = 300

Connection Terminals ..... MIDI IN, MIDI OUT, 10-pin connector

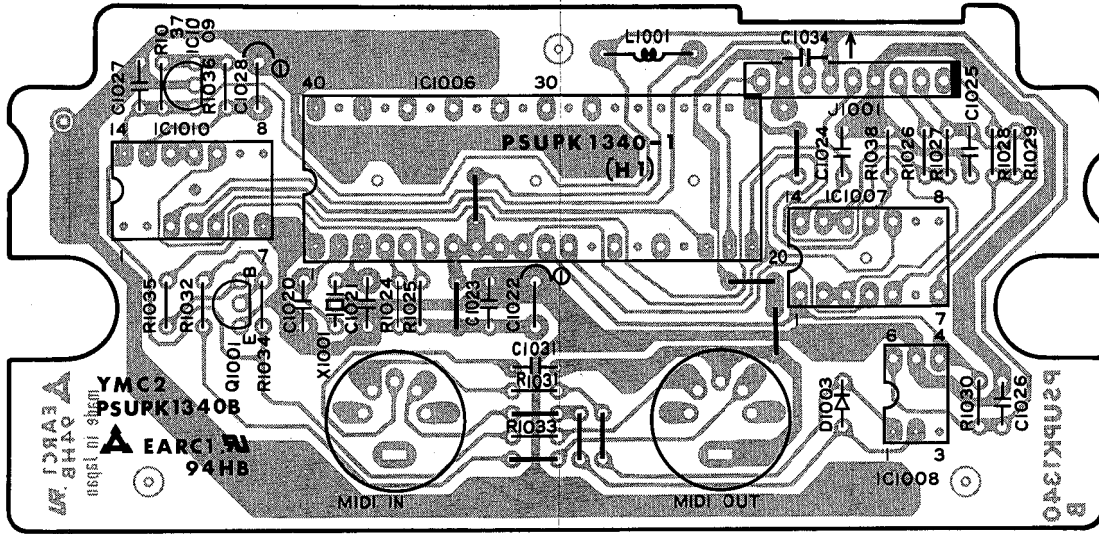
Dimensions (W × H × D)<sup>\*1</sup> ..... 152 × 73 × 50 mm (6" × 2-7/8" × 2")

Weight ..... 330 grams (0.7 lb.)

\*1 Including 5 mm locking screws.

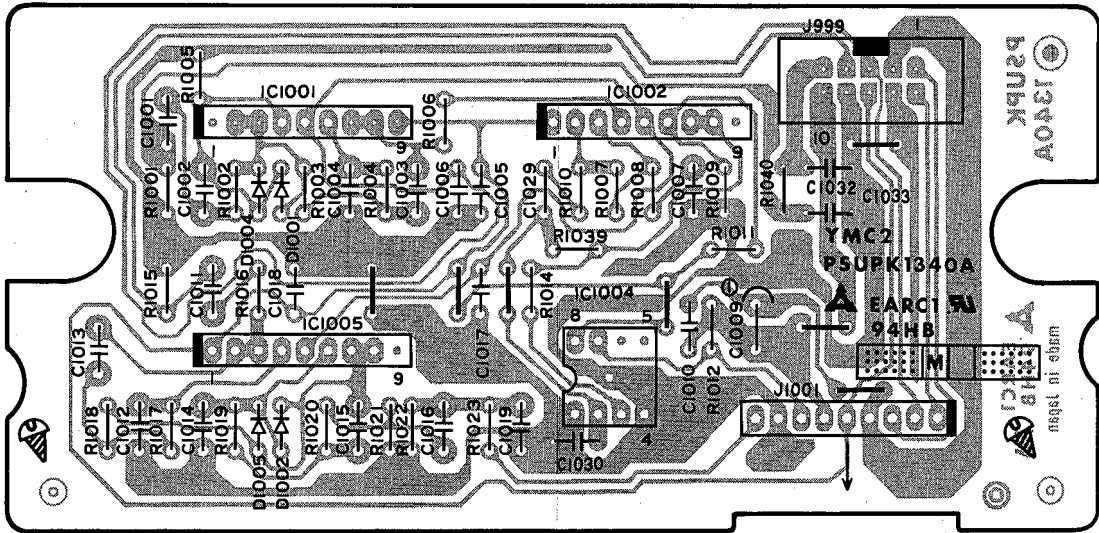
**■CIRCUIT BOARDS**

●YMC2-MIDI Circuit Board



< Components side >

●YMC2-DIN Circuit Board

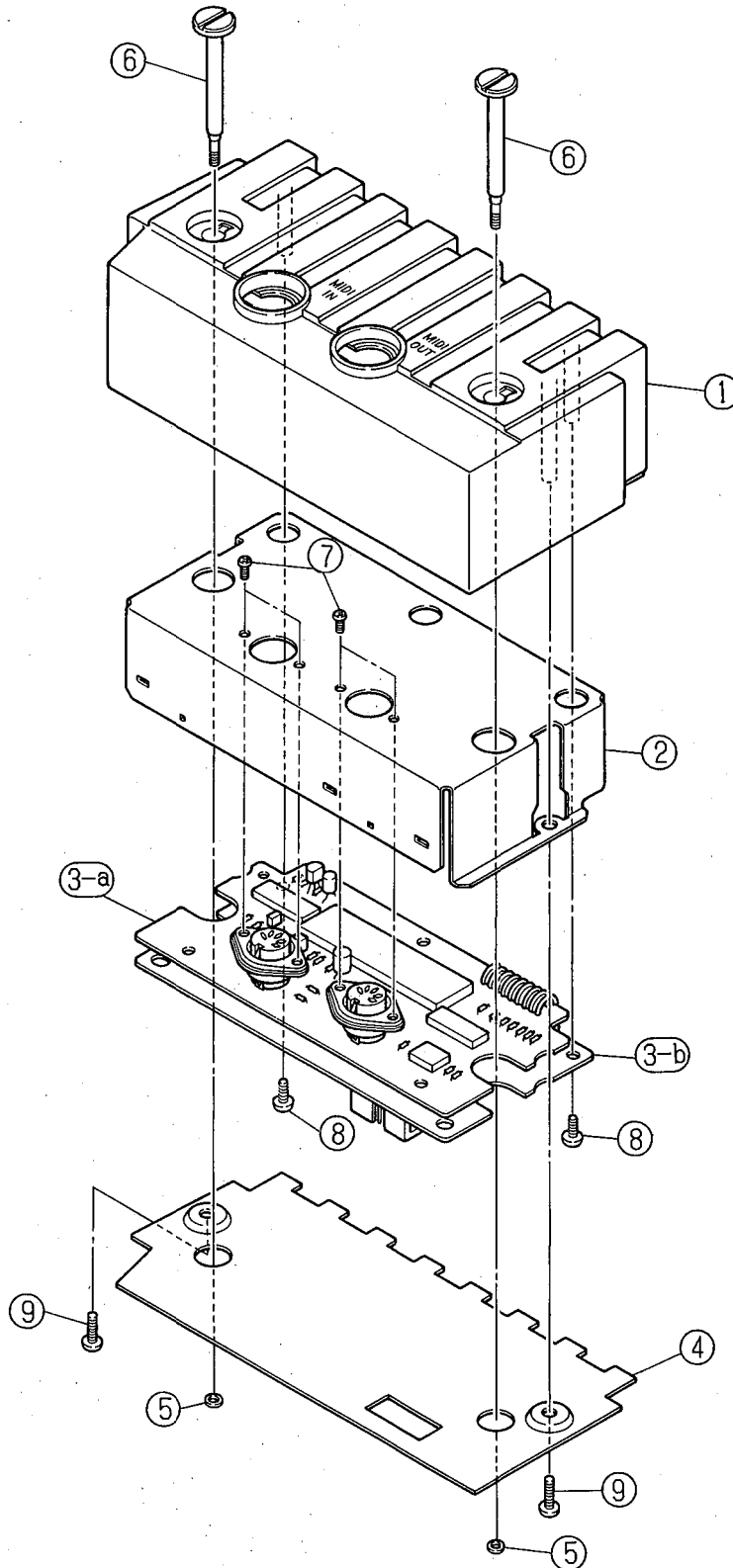


< Components side >

- Notes)
- |                      |                         |      |
|----------------------|-------------------------|------|
| 1. IC                |                         |      |
| IC1001, 1002, 1005:  | AN6555 (IX801670)       |      |
| 1004:                | NJM311D (IG123000)      |      |
| 1006:                | HD6301V1G13P (IG126230) |      |
| 1007:                | LC4066B (IG089200)      |      |
| 1009:                | PST520C (IG116200)      |      |
| 1010:                | M74HC14P (IR001490)     |      |
| 2. Photo Coupler     |                         |      |
| IC1008:              | PC900                   |      |
| 3. Transistor        |                         |      |
| Q 1001:              | 2SC3311 S-T             |      |
| 4. Diode             |                         |      |
| D 1001~1005:         | SVD1SS119-04T           |      |
| 5. Coil              |                         |      |
| L 1001:              | ELEBD100KA              |      |
| 6. Ceramic Resonator |                         |      |
| X 1001:              | EFO-FC2004A4            | 2MHz |

# YMC2 PARTS LIST

## OVERALL ASSEMBLY



YMC2

## OVERALL ASSEMBLY

Ref No.	Part No	Description	部品名	Remarks	ランク
1	AX800450	Cabinet	PSKMK260	キャビネット	
2	AX800470	Chassis	PSUHK18	シャーシ	
3	NX803110	Circuit Board, YMC2		YMC2シート	
3-a		Circuit Board, MIDI		YMC2-MIDIシート	
3-b		Circuit Board, DIN		YMC2-DINシート	
4	AX800460	Bottom Board	PSKUK200	底板	
5	EX800770	Nylon Washer	SNWK7	ナイロンワッシャー	01
6	EX800800	Screw	PSHDK7	飾りビス	
7	EA026040	Pan Head Screw	XSN26+4FZ	ナベ小ネジ	26X4 ZMC2Y 01
8	EI030086	Bind Tapping Screw	XTB3+8G	ハインドタッピングネジ	3.0X8 ZMC2Y 01
9	EI330106	Bind Tapping Screw	XTB3+10GFZ	ハインドタッピングネジ	3.0X10 FCM3BL 01

\* : New Parts (新規部品)

ランク : Japan only

## ELECTRICAL PARTS

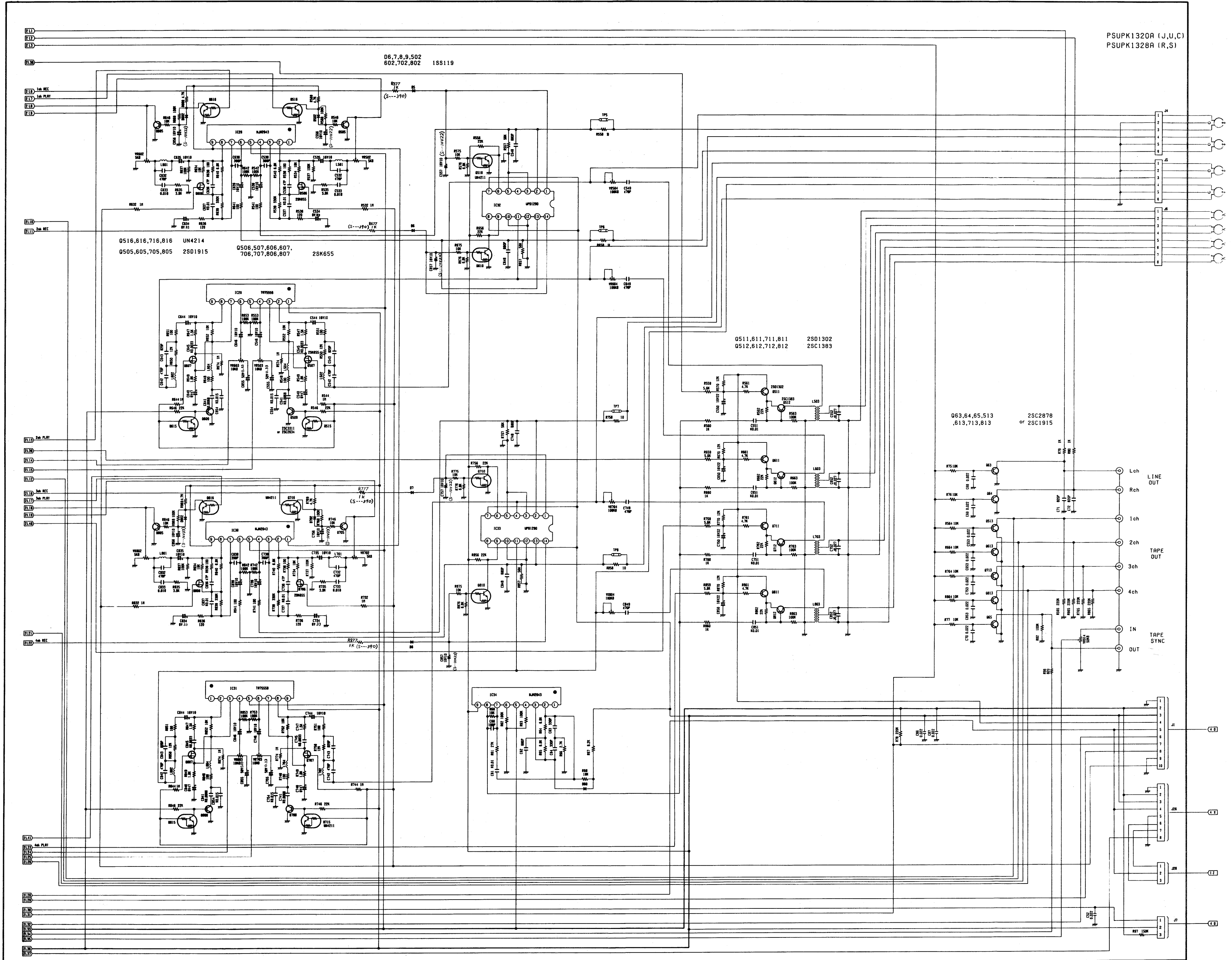
Ref No.	Part No	Description	部品名	Remarks	ランク
	NX803110	Circuit Board, YMC2		YMC2シート	
	IX801670	IC	AN6555	IC	03
	IG123000	IC	NJW311D	IC	04
	IG126230	IC	HD6301V1G13P	IC	14
	IG089200	IC	LC4066B	IC	04
	IG116200	IC	PST520C	IC	04
	IR001490	IC	M74HC14P	IC	04
	IK000420	Photo Coupler	PC900	フォトカプラー	05
	IX801680	Transistor	2SC3311 S-T	トランジスタ	03
	XX808790	Diode	SVD1SS119-04T	ダイオード	01
		Coil	ELEBD100KA	コイル	
	QX800140	Ceramic Resonator	EFO-FC2004A4	セラロック	2MHz
	LX800830	DIN Jack	PSJSK6501	DINジャック	
	LX800840	Connector	PSJTK31005BM	コネクター	10P

\* : New Parts (新規部品)

ランク : Japan only

6755 A ■ MT2X OVERALL CIRCUIT DIAGRAM

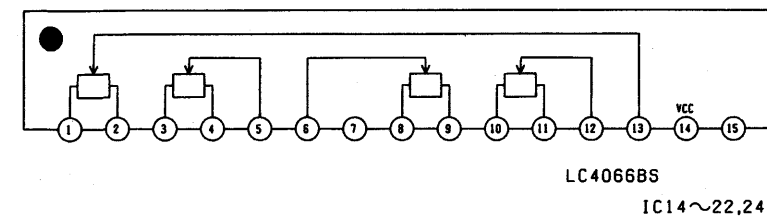
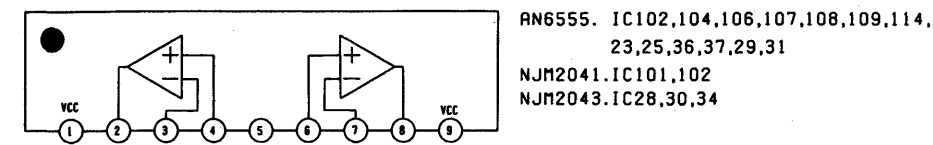
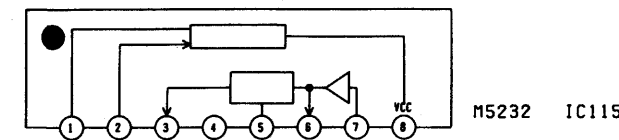
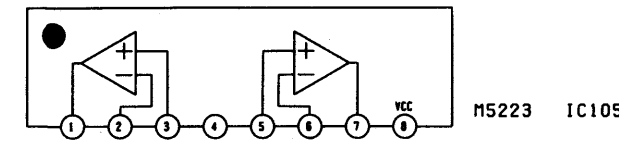
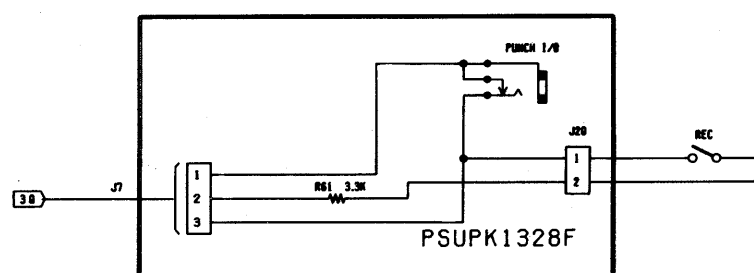
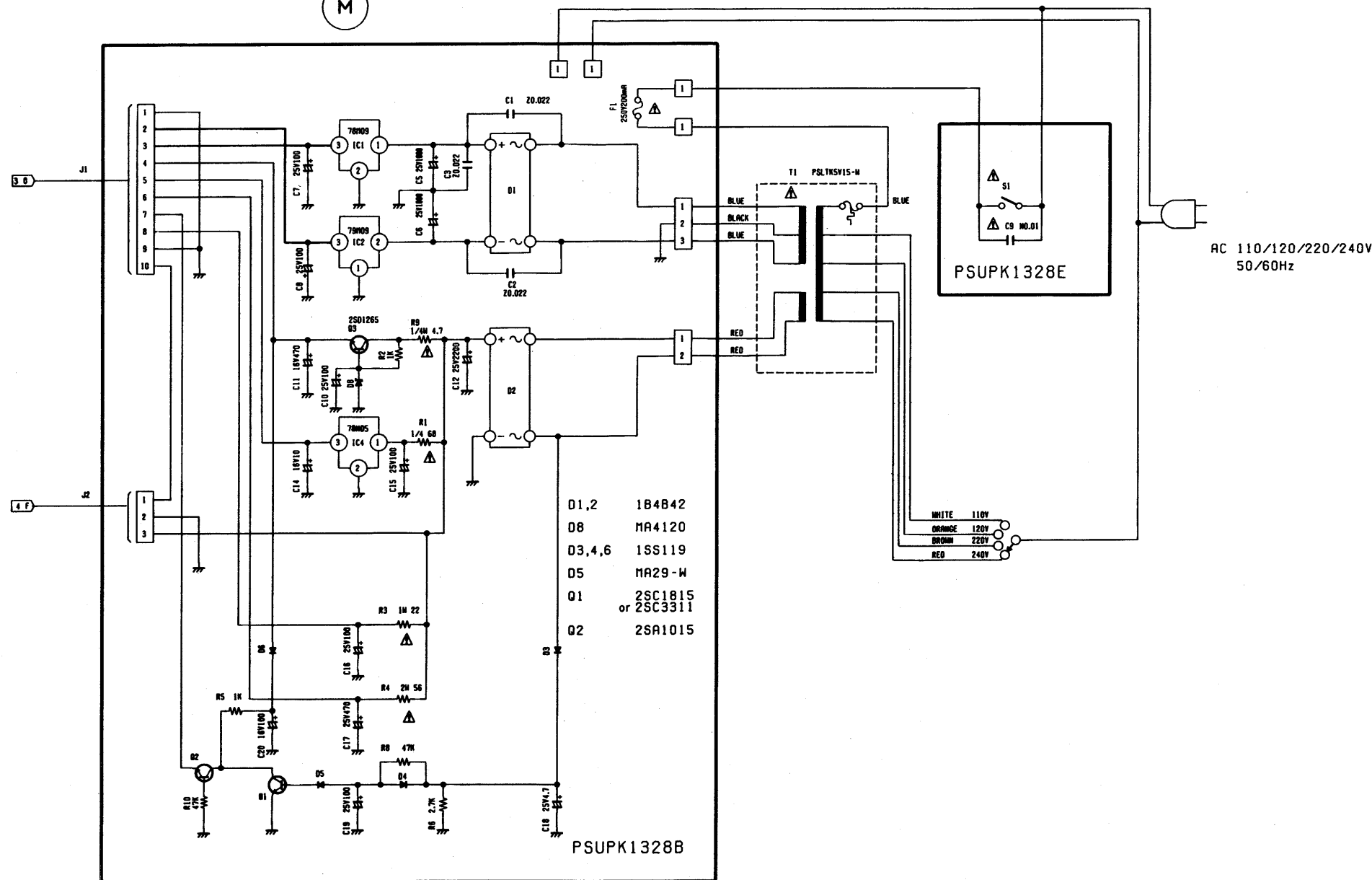
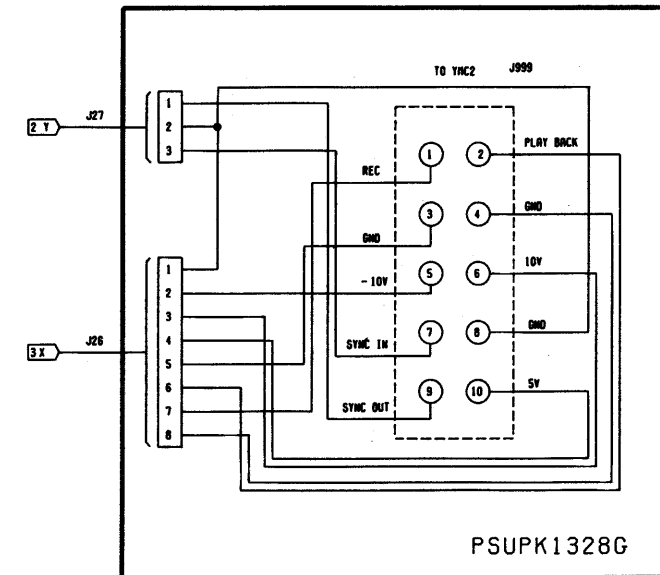
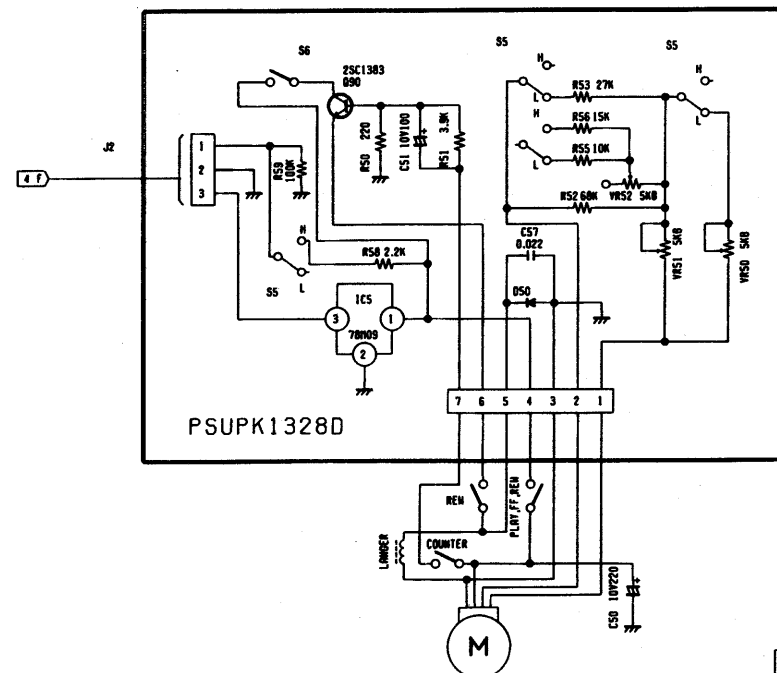
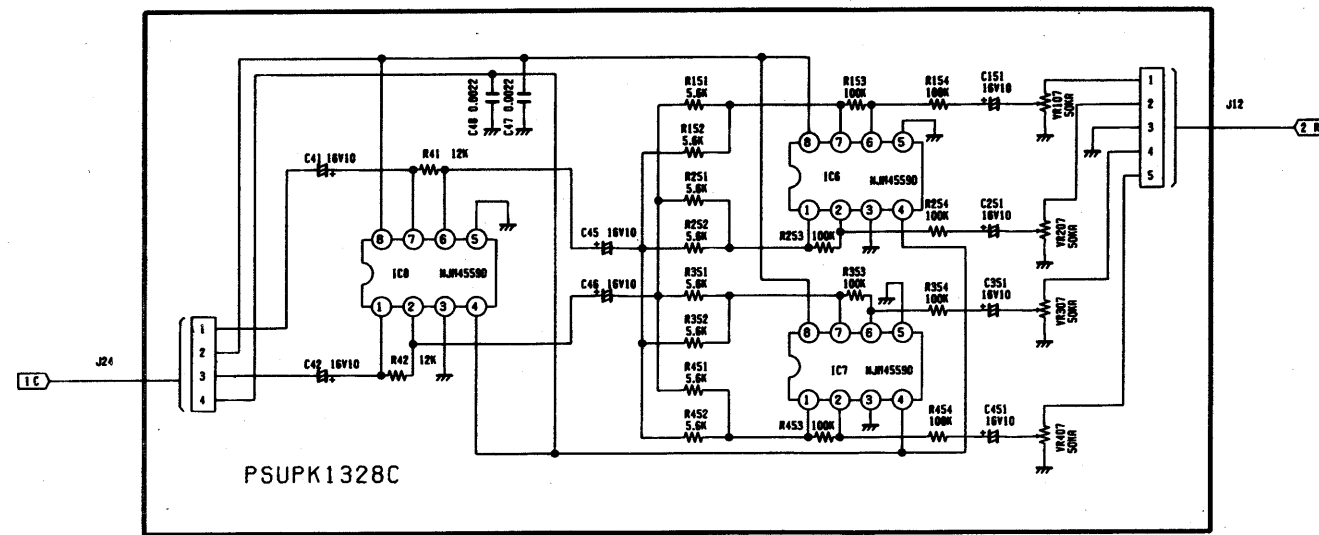
MT2X



MT2X

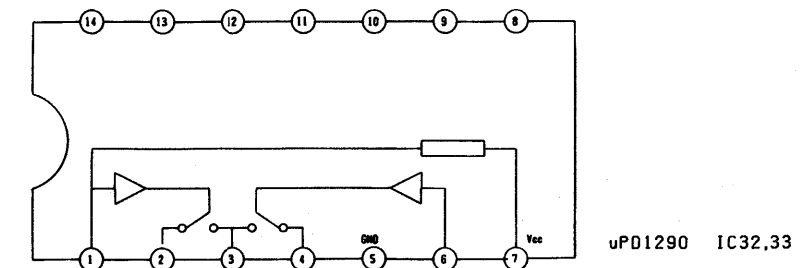
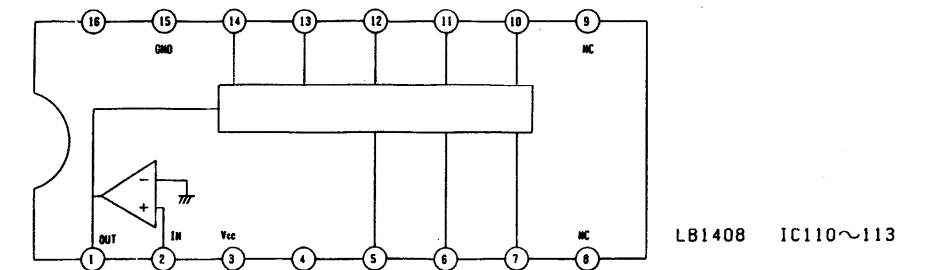
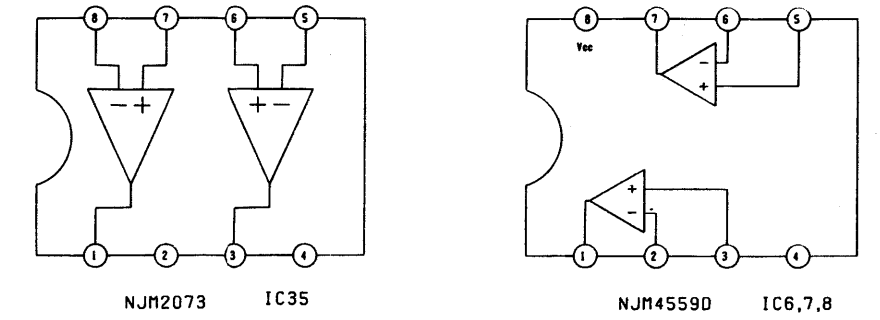
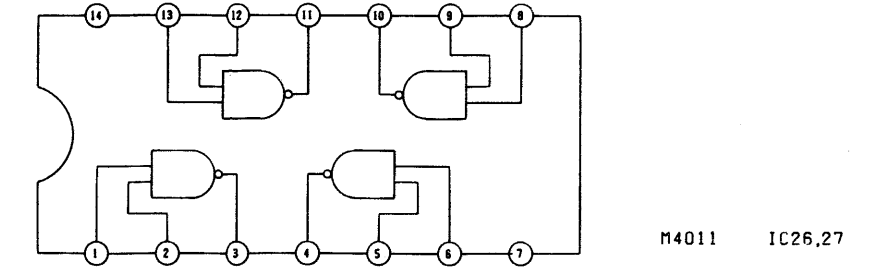
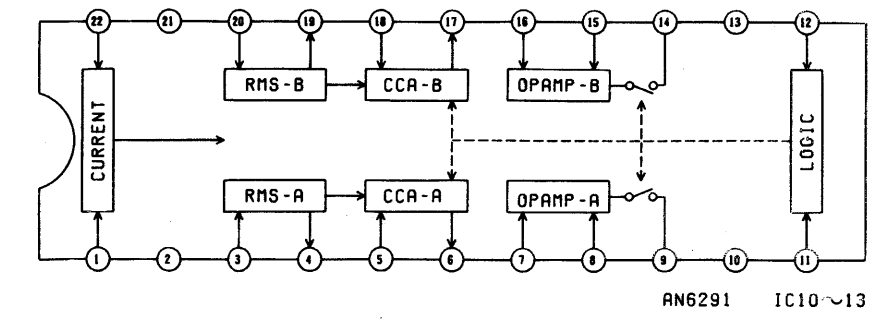
MT2X

**MT2X OVERALL CIRCUIT DIAGRAM** European model



- NOTE:
1. S1 : Power switch (ON/OFF)
  2. S5 : Tape speed select switch (9.5/4.8)
  3. S6 : Zero stop switch (ON/OFF)
  4. S10 : Meter select switch (STEREO/ 4 TRK)
  5. S11 : Tape synco select switch (REC/OFF/P.B.)
  6. S12 : dbx switch (ON/OFF)
  7. S13 : Phones select switch (MONITOR/MIX/STEREO)
  8. S101,201 : Input selector switch (MIC.LINE/OFF/TAPE)
  9. S301,401 : Input selector switch (LINE/OFF/TAPE)
  10. S102,202 : 1ch 4ch Record select switch (1 4/OFF/L,R)

• Important safety notice :  
 Components identified by  $\Delta$  mark have special important for safety. When replacing any of these components use only manufacture's specified parts.

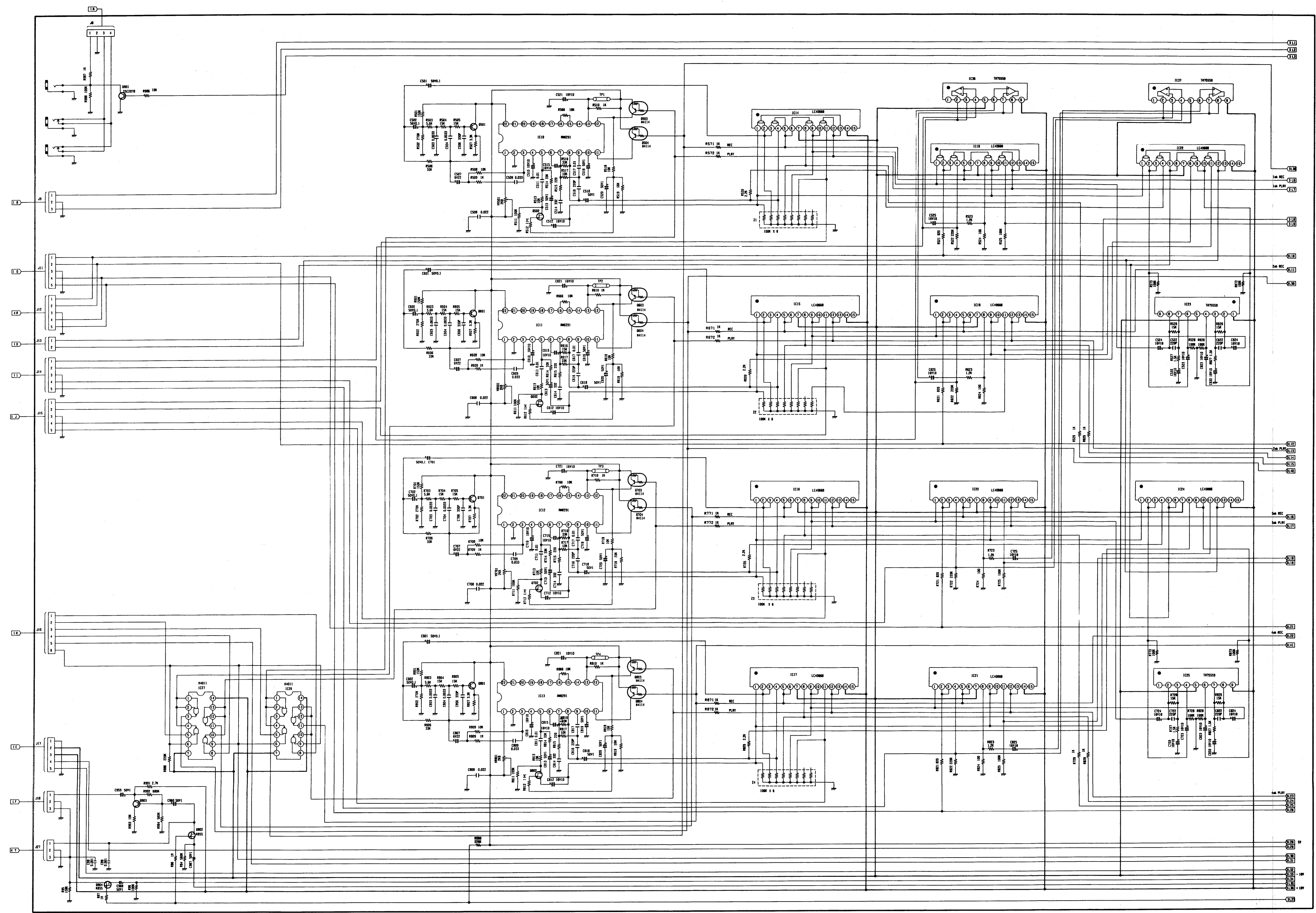




6755 A

# MT2X OVERALL CIRCUIT DIAGRAM

MT2X



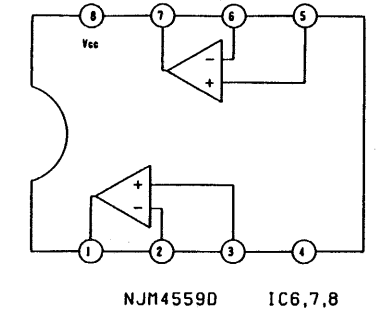
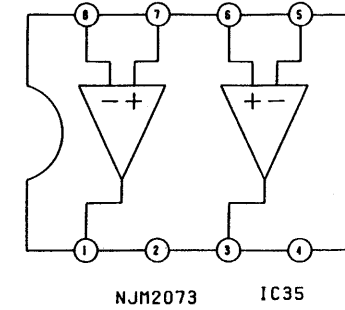
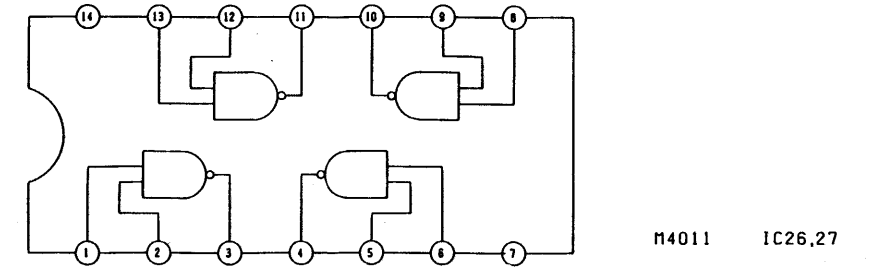
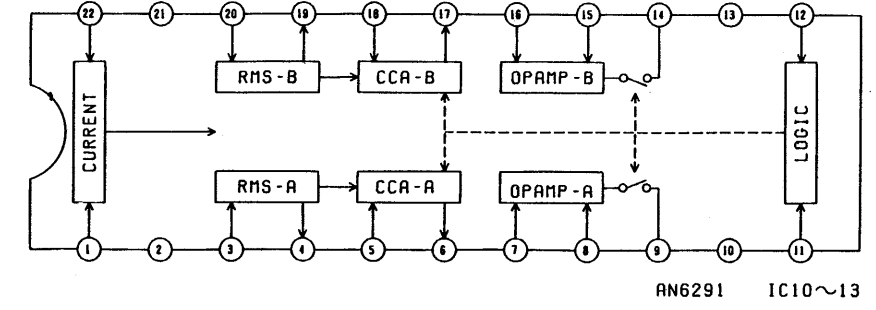
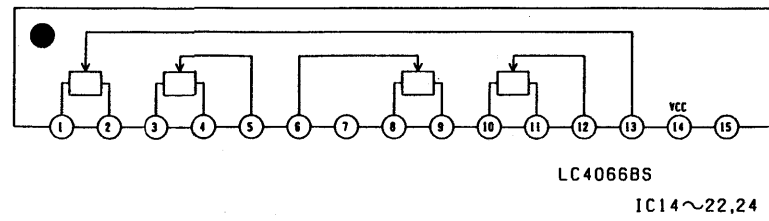
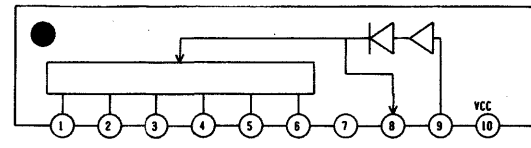
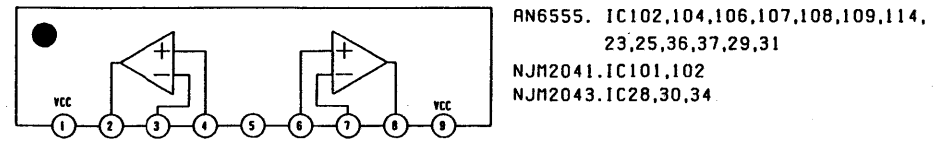
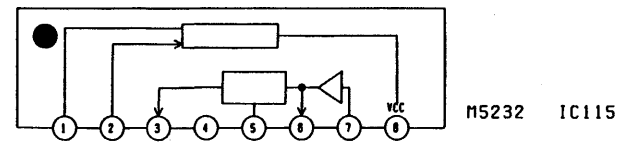
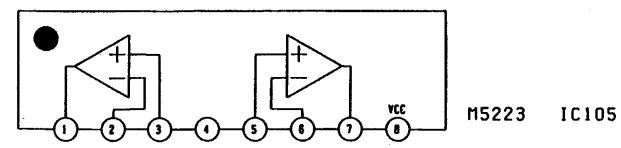
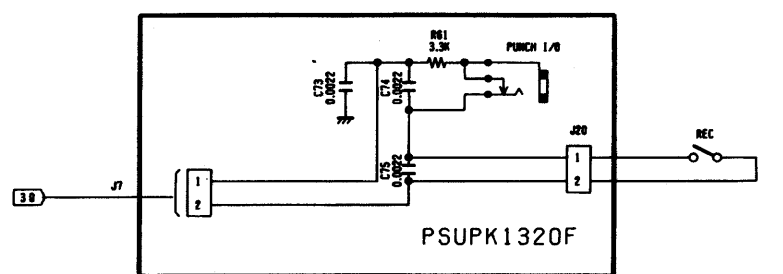
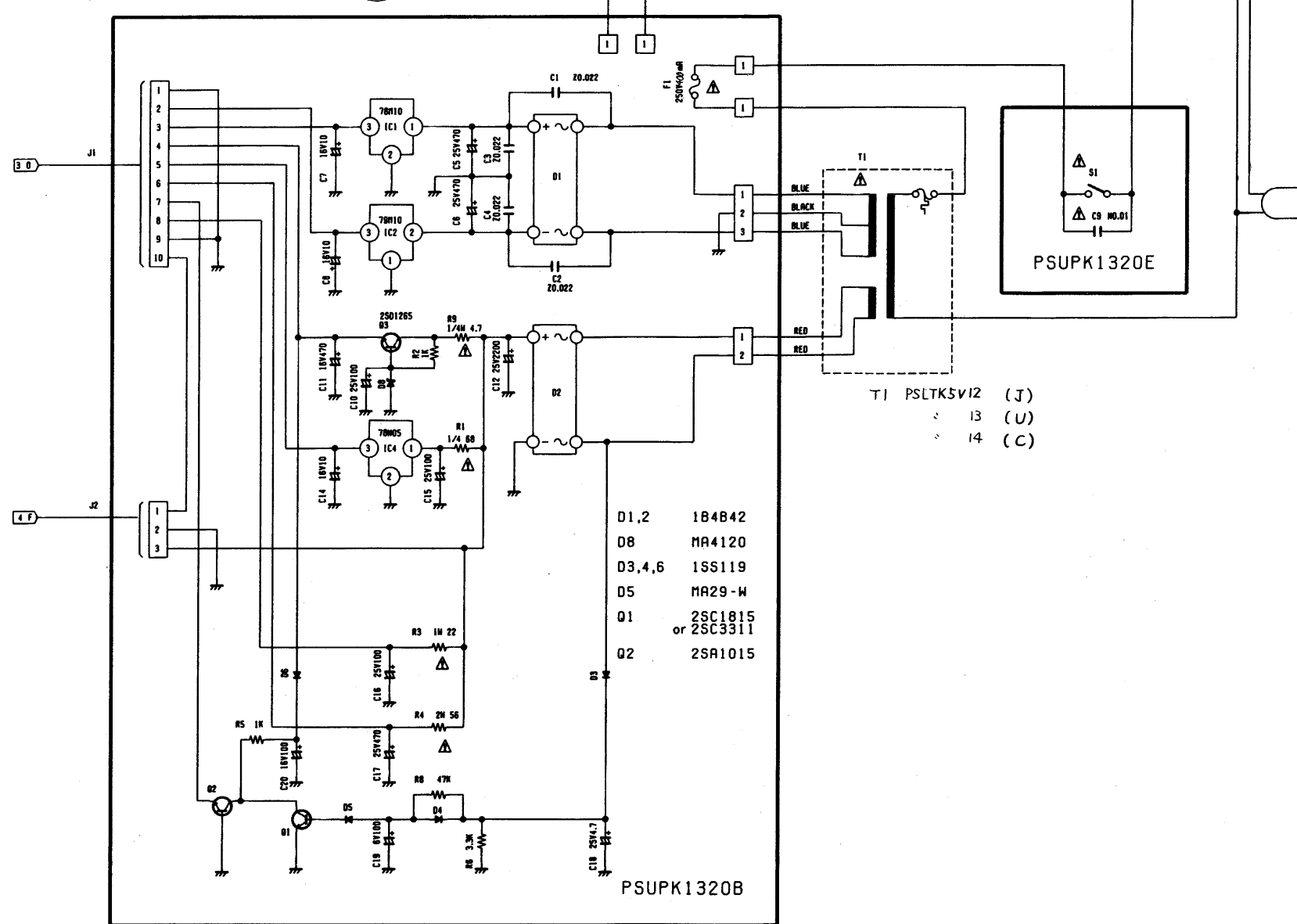
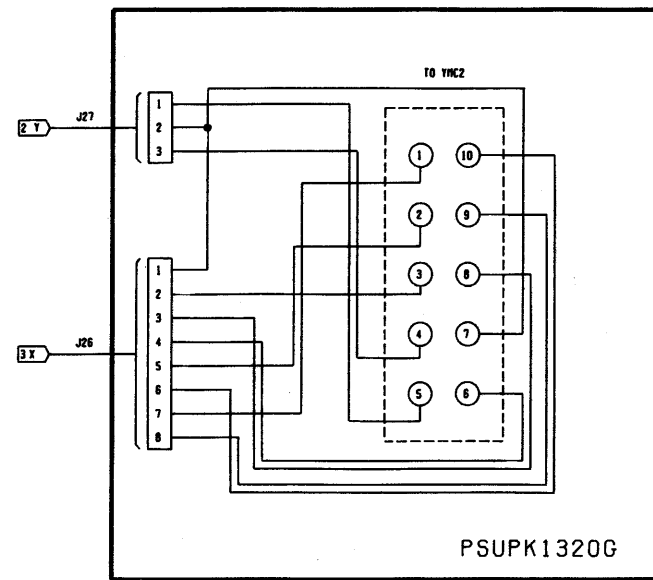
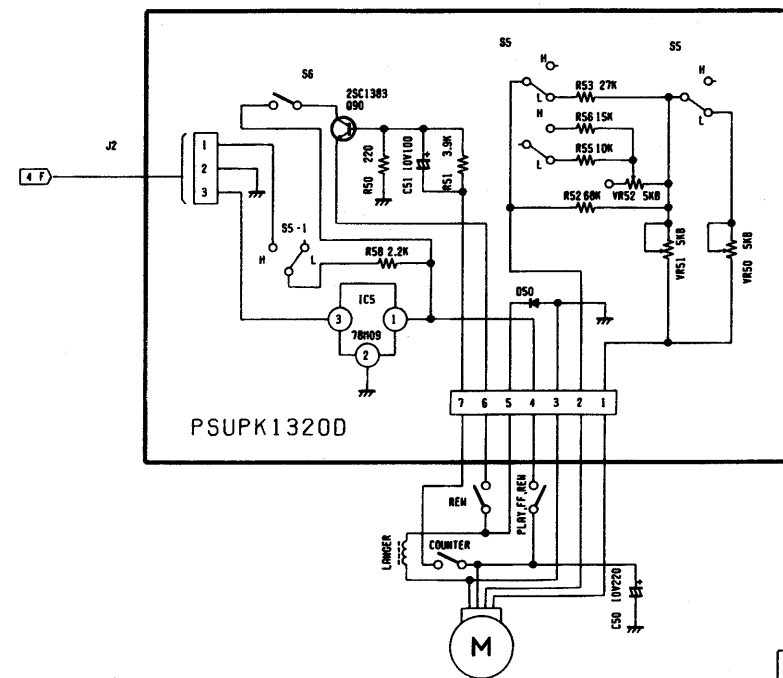
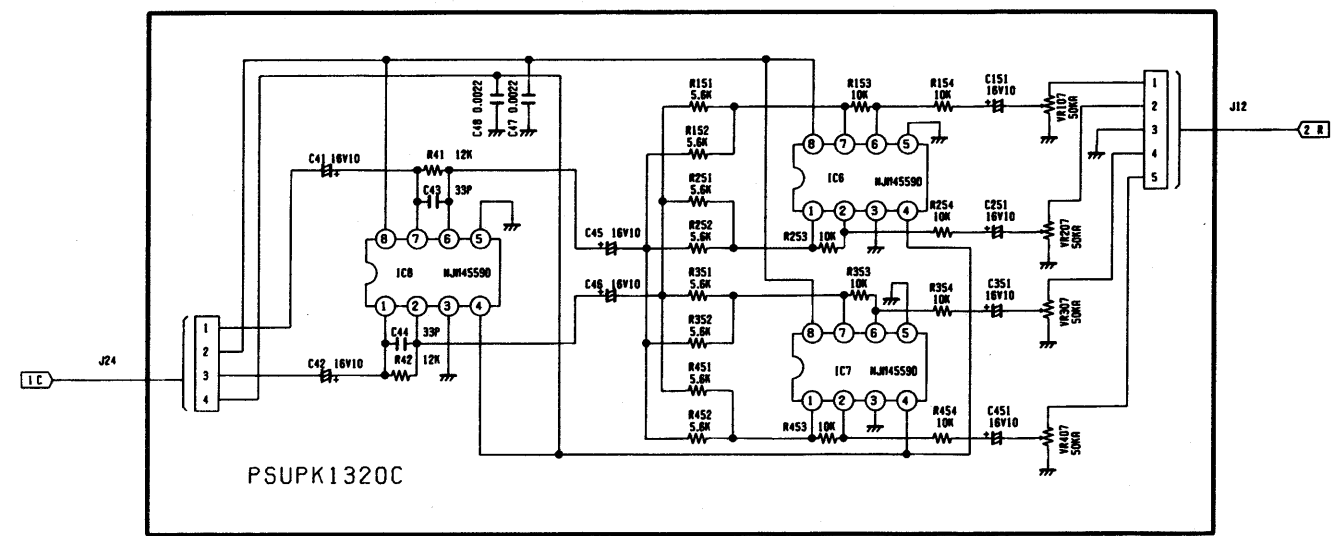
MT2X

MT2X

**MT2X OVERALL CIRCUIT DIAGRAM**

U.S. and Canadian model

MT2X



AC 100V 50/60Hz (J)  
AC 120V 60Hz (U,C)

- NOTE:
1. S1 : Power switch (ON/OFF)
  2. S5 : Tape speed select switch (9.5/4.8)
  3. S6 : Zero stop switch (ON/OFF)
  4. S10 : Meter select switch (STEREO/ 4 TRK)
  5. S11 : Tape syncro select switch (REC/OFF/P.B.)
  6. S12 : dbx switch (ON/OFF)
  7. S13 : Phones select switch (MONITOR/MIX/STEREO)
  8. S101,201 : Input selector switch (MIC.LINE/OFF/TAPE)
  9. S301,401 : Input selector switch (LINE/OFF/TAPE)
  10. S102,202 : 1ch 4ch Record select switch (1 4/OFF/L.R)
  - S302,402

• Important safety notice :  
Components identified by  $\Delta$  mark have special  
important for safety. When replacing any of these components  
use only manufacture's specified parts.

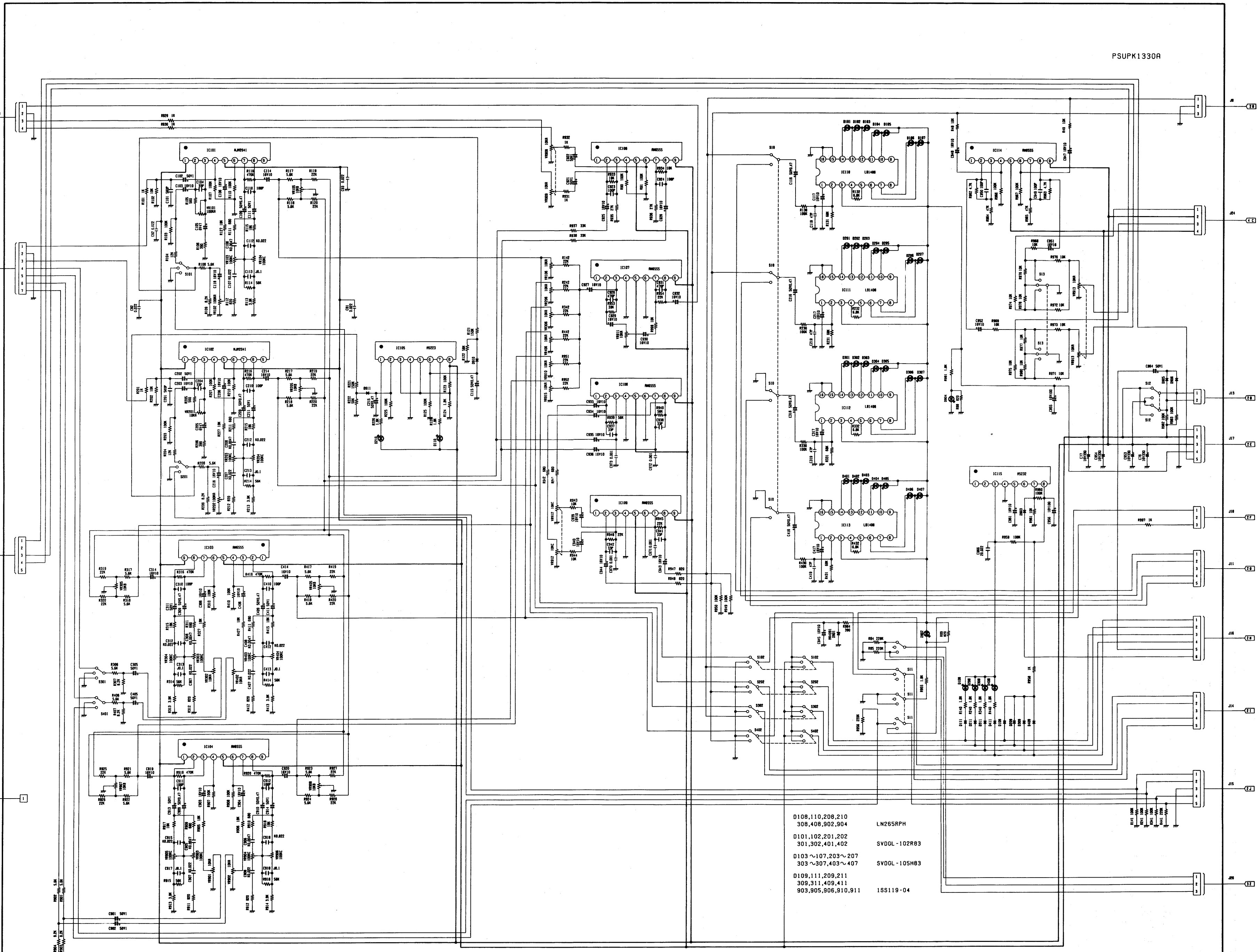
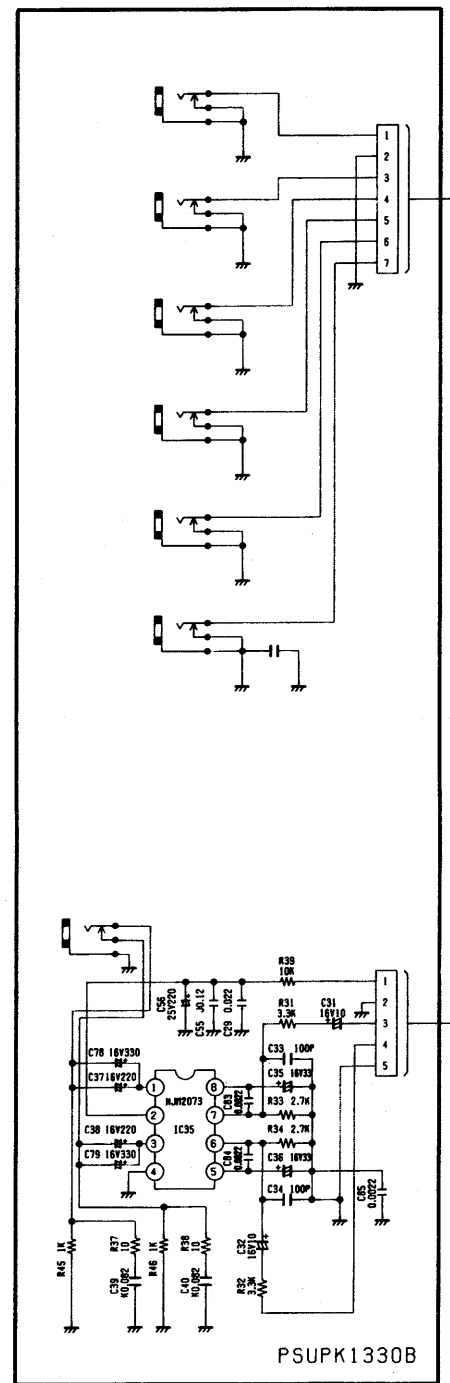
- D1,2 1B4B42
- D8 MA4120
- D3,4,6 1SS119
- D5 MA29-W
- Q1 2SC1815  
or 2SC3311
- Q2 2SR1015

- T1 PSLTKSV12 (J)
- 13 (U)
- 14 (C)

MT2X

MT2X

# MT2X OVERALL CIRCUIT DIAGRAM



- D108,110,208,210  
308,408,902,904 LN265RPH
- D101,102,201,202  
301,302,401,402 SV0GL-102R83
- D103 ~107,203~207  
303 ~307,403~407 SV0GL-105H83
- D109,111,209,211  
309,311,409,411 1SS119-04

