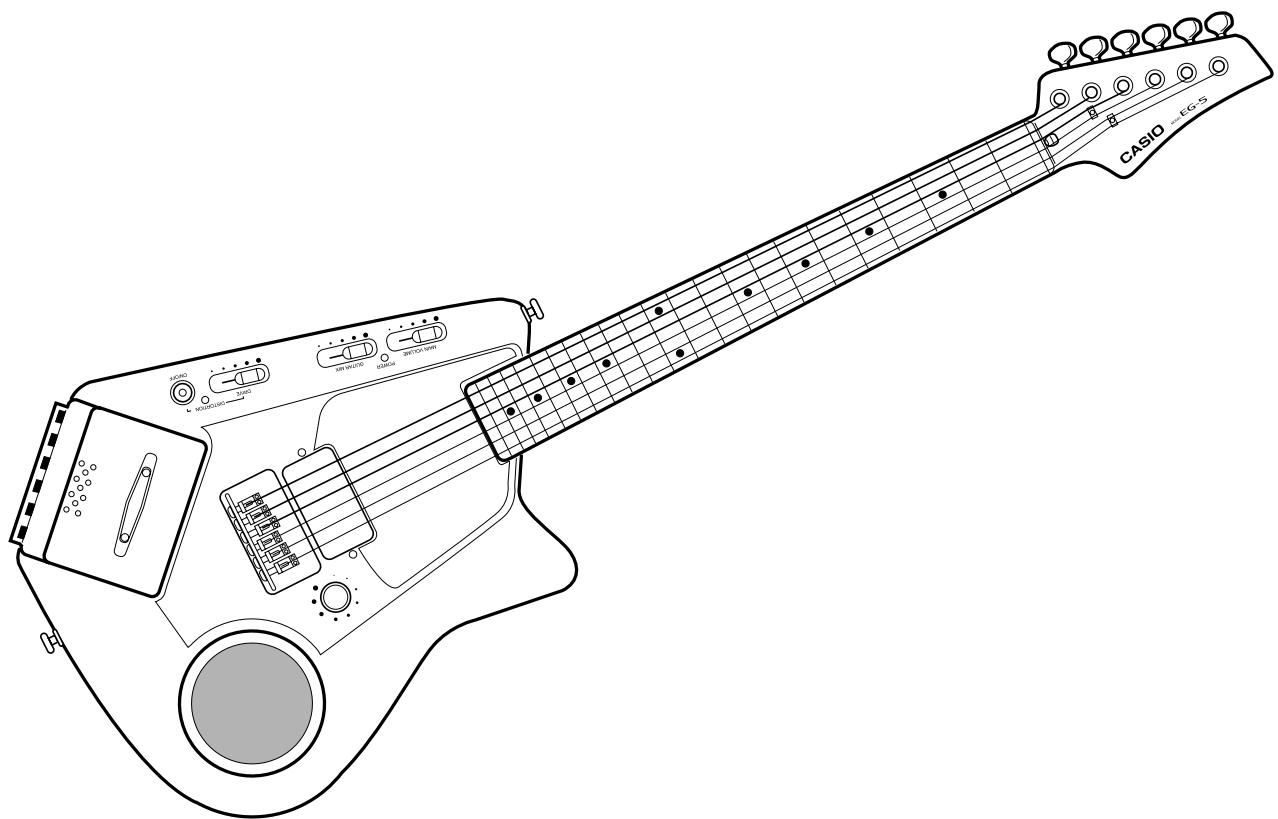


CASIO®

Service Manual

(without price)

EG-5



ELECTRIC GUITAR

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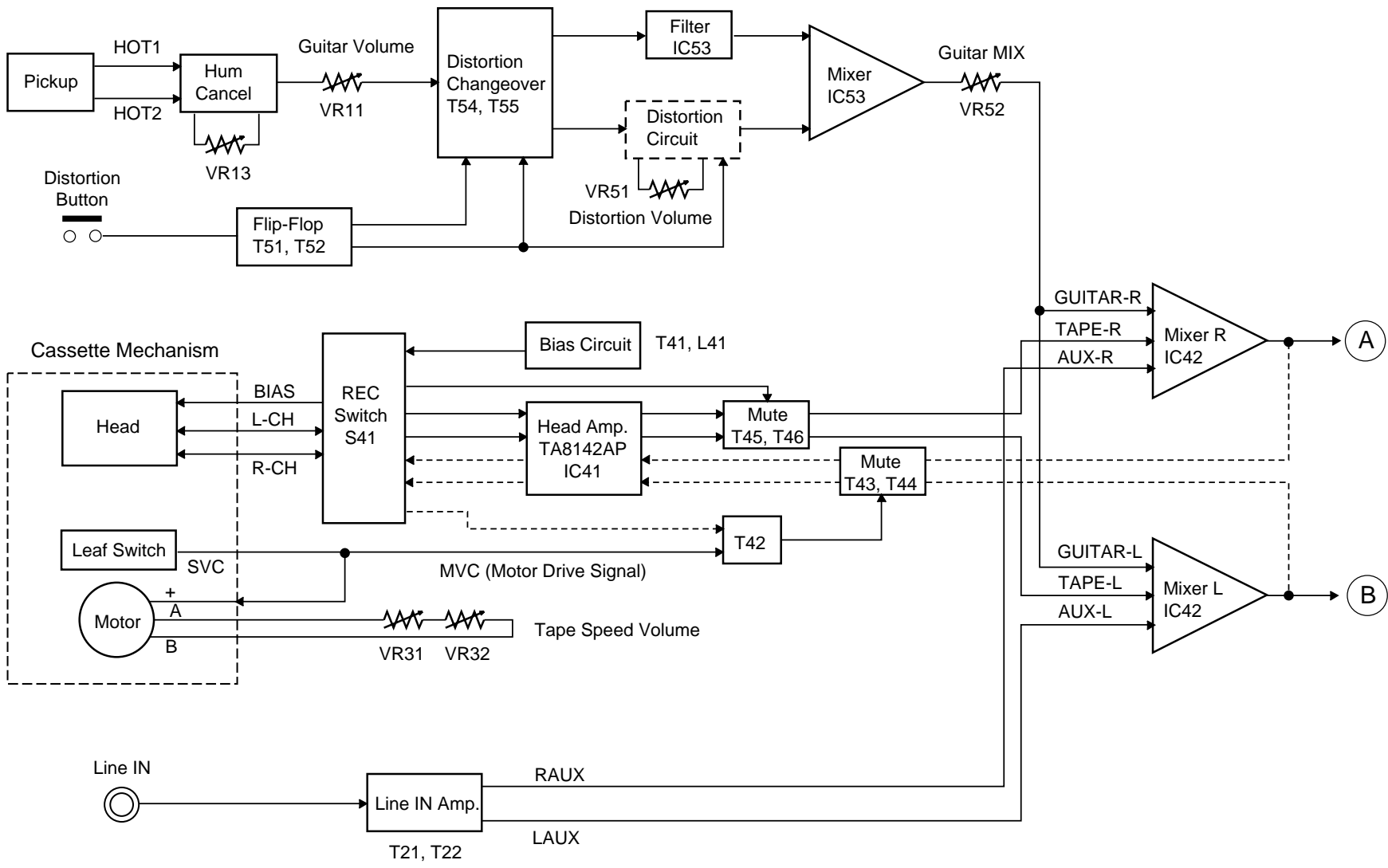
SPECIFICATIONS

GENERAL

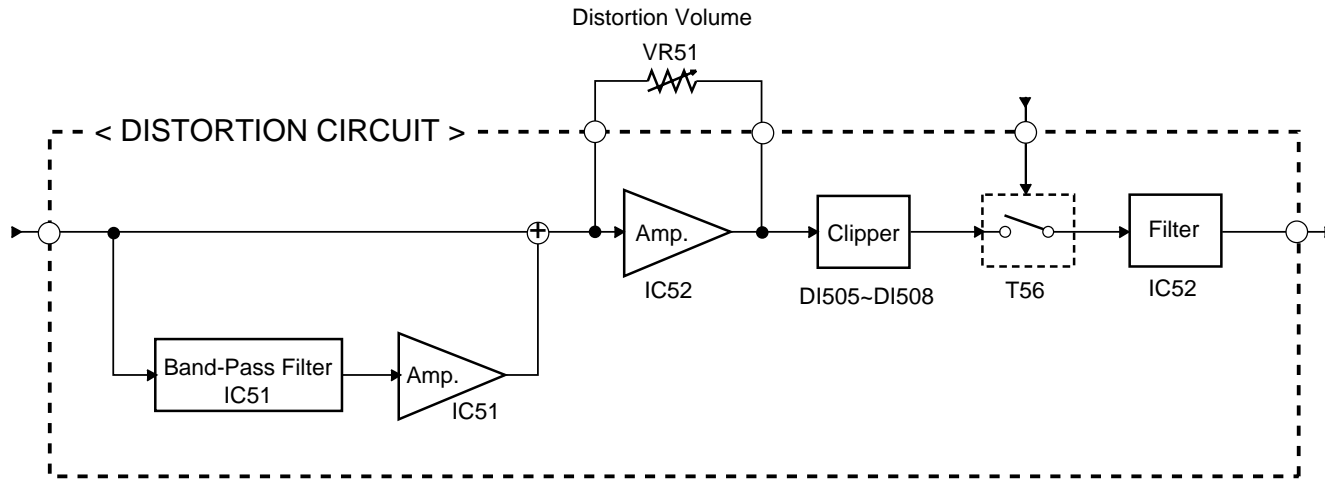
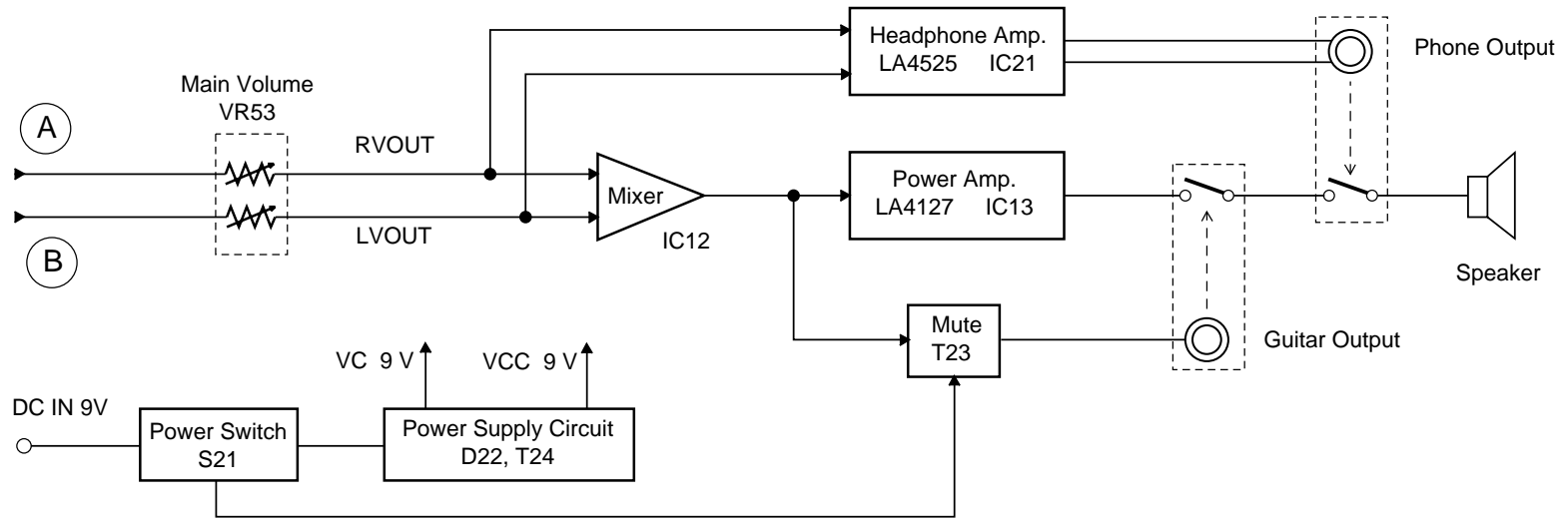
Body:	Inner; Die cast aluminum Outer; High impact PS resin
Neck:	Hard maple
Pickup:	CASIO original
Guitar controls:	Main Volume, Guitar Mix, Guitar Volume, Distortion ON/OFF, Distortion Drive
Tape recorder:	Recording system: Stereo Playback system: Stereo (monaural speaker and monaural guitar output) Tracks: 4-track, 2-channel stereo Tape type: Normal Tape speed: 4.76 cm/sec. Fast forward/reverse time: approximately 150 sec. (C-60) Recording level: Auto (automatically adjusted to prevent distortion) Basic functions: REC, PLAY, F.FWD, STOP/EJECT, PAUSE Other functions: Tape pitch adjustment (+/-3%), Auto stop
Built-In speaker:	10 cm dia. 2.0 W input rating: 1 pce.
Terminals:	Line In Jack [stereo mini jack, input impedance: 15 ohms] Guitar Out Jack [monaural standard jack, output impedance: 4.5 ohms, output voltage: 0.25 V (RMS) Maximum] Phones Jack [Stereo mini jack, output impedance: 4.5 ohms, output voltage: 0.50 V (RMS) Maximum] AC Adaptor Jack (DC 9 V)
Power source:	DC: 6 AA size dry batteries Battery life: Approx. two hours (R14P/SUM-2) Approx. four hours (LR14/AM2) AC: AC Adaptor AD-5
Power consumption:	7.7 W
Dimensions (HWD):	75 x 966 x 324 mm (2-15/16 x 38-1/16 x 12-3/4 inches)
Weight:	3.2 kg (7.0 lbs) including batteries

ELECTRICAL

Current drain with 9 V DC:	
No Sound Output	92 mA \pm 20%
Maximum volume	750 mA \pm 20%
Speaker Output Level (V _{rms} with 8 ohms load)	
with 6th string picked at 12th fret from 5th string	780 mA \pm 30%
Phone Output Level (V _{rms} with 8 ohms load)	
with 6th string picked at 12th fret from 5th string	65 mA \pm 30%
Guitar Output Level (V _{rms} with 8 ohms load)	
with 6th string picked at 12th fret from 5th string	32 mA \pm 30%
Minimum Operating Voltage:	6.3 V

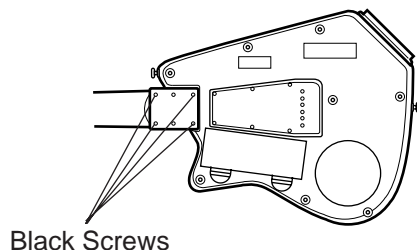


BLOCK DIAGRAMS



DISASSEMBLY INSTRUCTIONS

Note: EG-5 has a detachable neck. So do not loosen the four black screws attaching the neck to the body at usual repairs. Only when replacing the neck, remove the screws.



< Figure 1 >

To open the lower body

1. Remove the battery cover.
2. Remove the eighteen screws holding the lower body.
3. Open the lower body.

To disassemble the cassette mechanism

1. Open the lower body.
2. Desolder PC cable, JD cable and PH cable on JCM370-MA4M PCB.
3. Remove three screws on JCM370-MA2M PCB and four screws on JCM370-MA4M PCB.
4. Remove all buttons from the cassette mechanism.
5. Remove the four screws holding the cassette mechanism.
6. Remove the cassette mechanism from the upper body.

To disassemble the pickup

1. Remove all strings from the guitar.
2. Open the lower body.
3. Desolder the cable of the pickup on JCM370-MA1M PCB.
4. Remove two black screws on the upper body.

To disassemble the bridge

1. Remove all strings from the guitar.
2. Remove four screws on the bridge.

To disassemble the neck

1. Remove all strings from the guitar.
2. Remove the four black screws on the lower body.

TUNING

Most guitar players tune their guitar by themselves as they like.

Do not adjust tunings of a customer's guitar at usual repairs, because the tunings may be re-adjusted by a customer. Only after replacing the neck, the bridge or the pickup, adjust a certain tuning item shown in the following table.

Items to be tuned	Replaced Part
Warp of neck	Neck
Pickup height	Pickup
String height	Bridge
Octave pitch	Bridge

Tools/Equipments required

4 mm hexagon key (Accessory tool)
1.5 mm hexagon key (Accessory tool)
Guitar tuning meter

TUNING PROCEDURE

Please refer to the tuning instructions in the operation manual also.

To adjust warp of neck

1. Check the space between a string and the 10th fret when pressing the string at the 1st fret and at the 19th fret.
And check all strings.
2. If the space exceeds 0.3 mm, straighten the neck by turning the nut in the head clockwise with a 4 mm hexagon key.

To adjust pickup height

1. Press a string at 22nd fret.
2. Use a screw driver, adjust a height of the pickup to be 2 mm off from the string by turning two screws at both ends of the pickup.

To adjust string height

1. Use a 1.5 mm hexagon key, adjust a height of the 1st string to be 2 mm above the 14th fret by turning two hexagon socket screws at the 1st saddle in the bridge.
2. Adjust height of other strings by the same way.

To adjust octave pitch

1. Use a guitar tuning meter, tune the 1st string at open string to the standard pitch.
2. Use a guitar tuning meter, compare pitch of two tones, a tone at the 12th fret with a harmonic*.
3. If pitch of the tone at the 12th fret is sharper over 3 cents than pitch of the harmonic tone, turn the adjustment screw clockwise.
4. If pitch of the tone at the 12th fret is flatter over 3 cents than pitch of the harmonic tone, turn the adjustment screw counterclockwise.
5. Repeat steps 1 to 4 until the difference of pitch between two tones is within 3 cents.
6. Adjust octave pitch of other strings.

* **Harmonic:** An overtone produced by touching a string above the 12th fret with a finger and by picking the string just before freeing the string.

ADJUSTMENT

Equipments required

Oscilloscope
Frequency counter
Test tapes, MTT-111N (0004 5032) and MTT-113N (0004 5033)
Two 8-ohm resistors

Pre-adjustment procedure

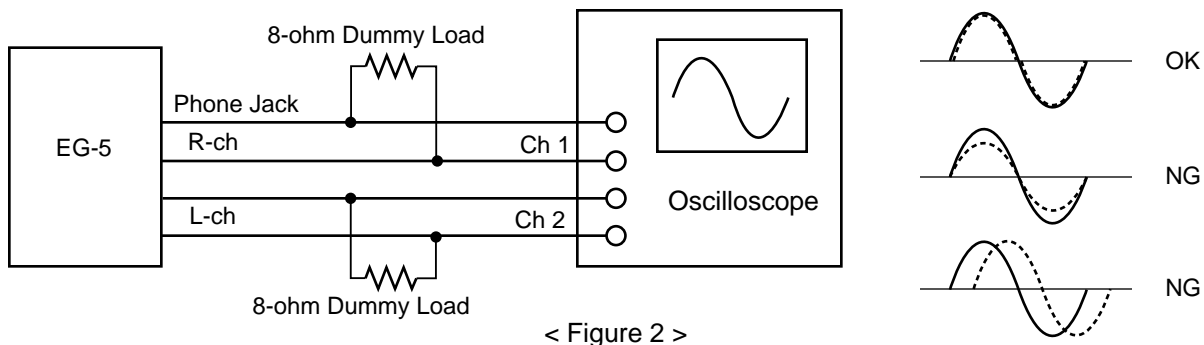
1. Clean the head and all tape handling surfaces using standard cleaner and cotton swabs.
2. Connect an 8-ohm dummy load to headphone jack of each channel.
3. Set the main volume to the maximum.
4. Set the tape speed volume to the center position.

Head azimuth adjustment

Never use a magnetized screwdriver for this adjustment.

The head azimuth adjustment screw is located just under the notch which can be seen when opening the cassette door.

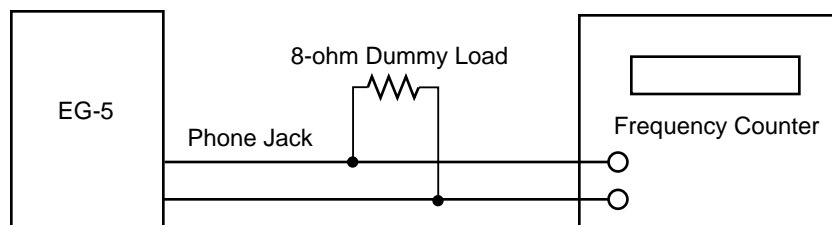
1. Connect a oscilloscope to the dummy loads.
2. Set a tape MTT-113N holding the door open, and playback the tape.
3. By turning the adjustment screw slowly, adjust for amplitude of both channels at maximum and adjust for the waveforms in the same phase reading on the oscilloscope.



Tape speed adjustment

The tape speed adjustment volume VR32 is located on M370-MA3M PCB.

1. Connect a frequency counter to the dummy load.
2. Playback a test tape MTT-111N.
3. By turning the volume, adjust for 3000 Hz \pm 30 Hz reading on the frequency counter.

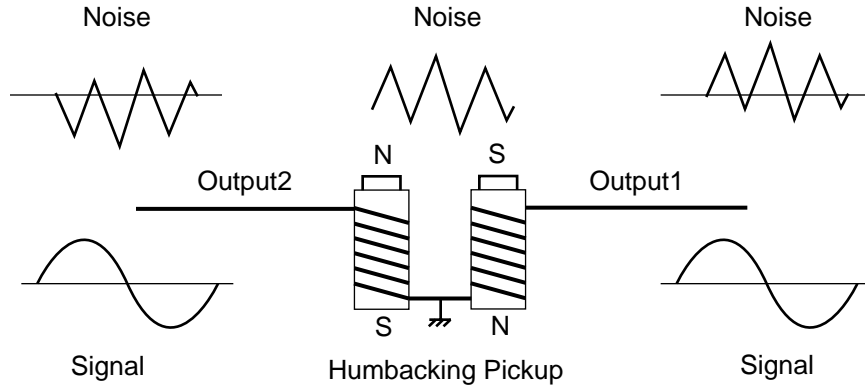


< Figure 3 >

CIRCUIT DESCRIPTION

Pickup

The pickup is a humbucking pickup, which consists of the two coils connected in series opposition. Each coil has the same turns but it has the opposite polarity of the core to the other one.



< Figure 4 >

Hum Cancel Circuit

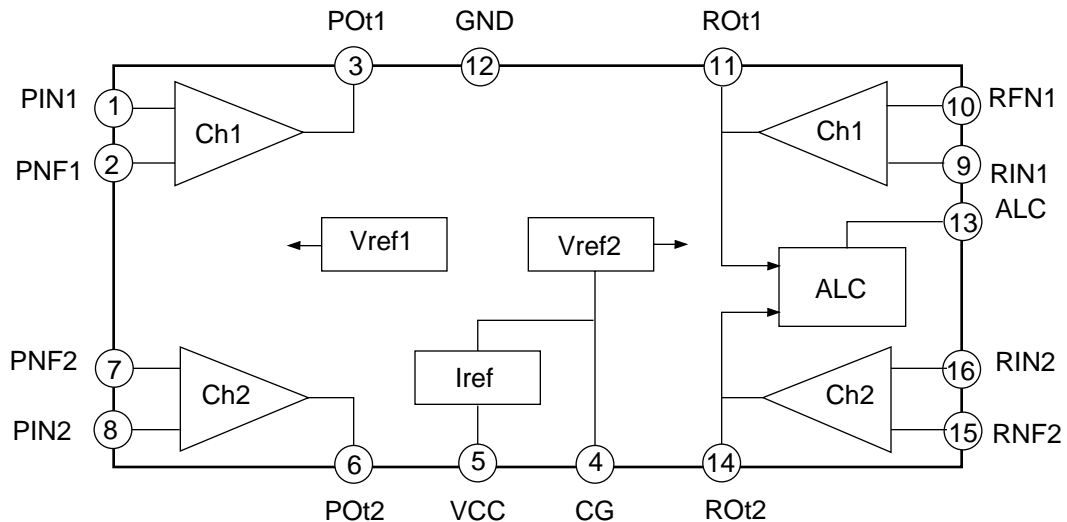
By adding two outputs from the pickup, the hum cancel circuit removes a hum noise, it also doubles amplitude of the signal.

Distortion Circuit

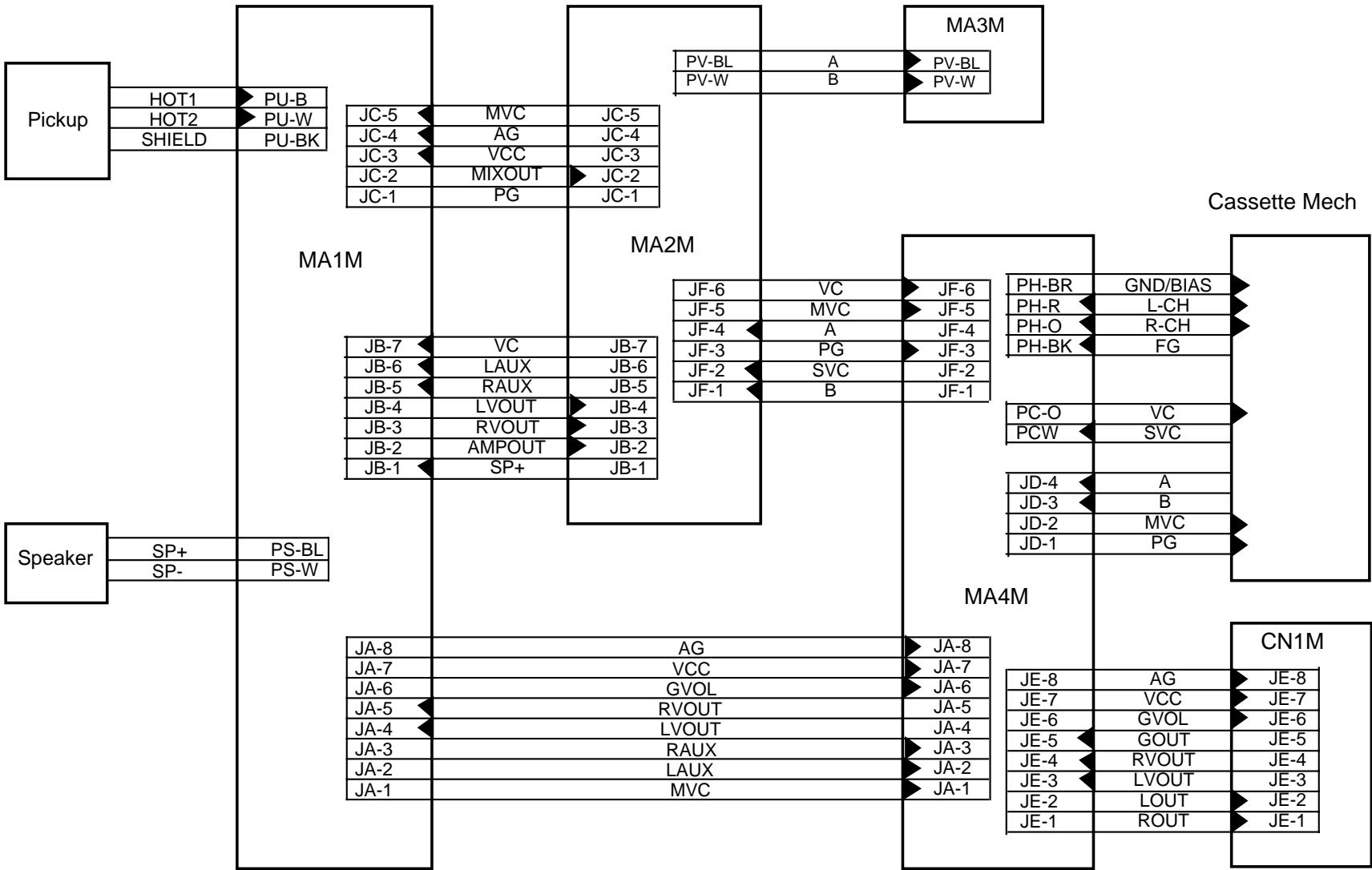
The distortion circuit adds a distortion effect to the original signal from the pickup. The circuit cuts off peak of the waveform, it also produces a sound signal like a howling sound.

Head Amp. (TA8142AP)

The internal block diagram is shown in Figure 5.



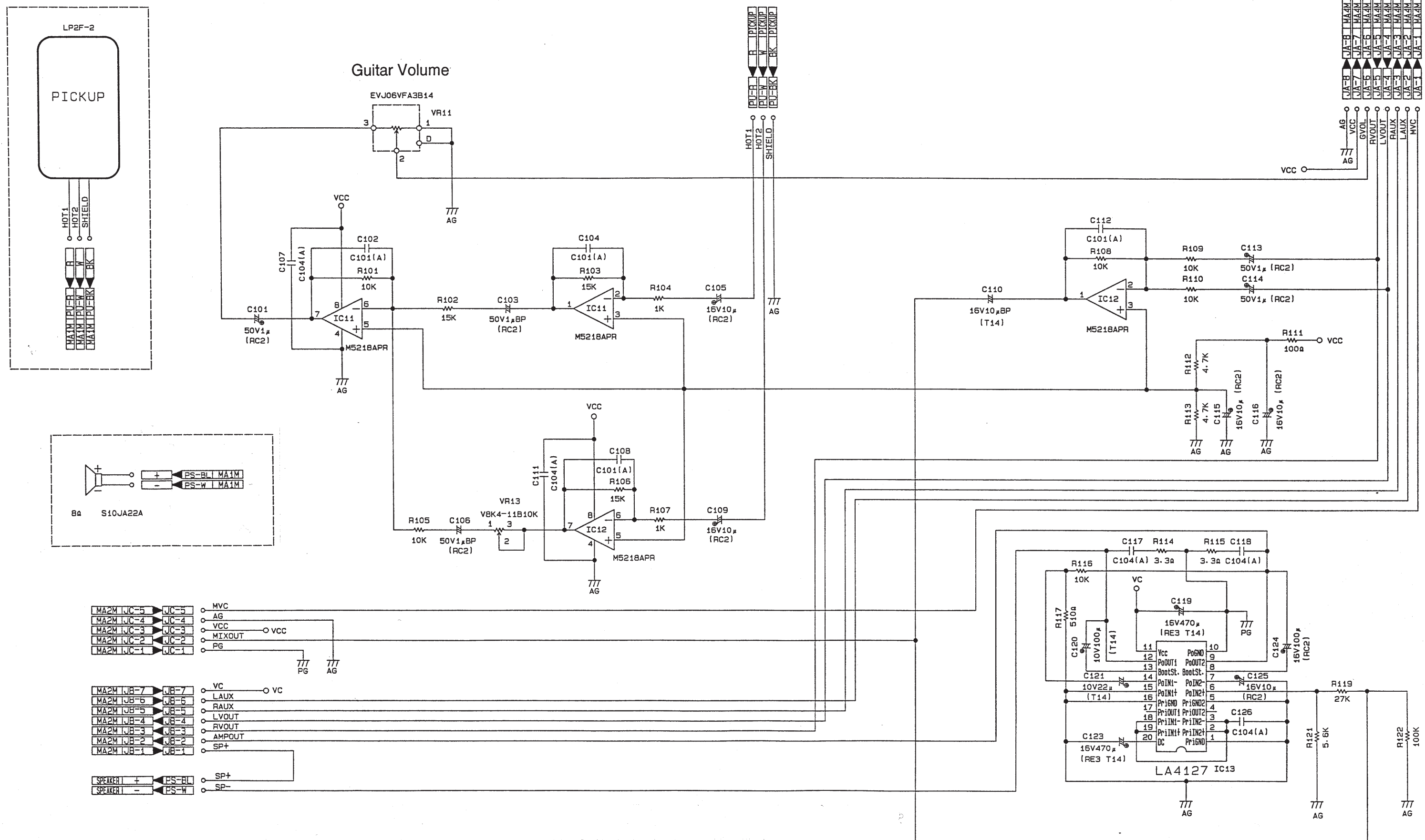
< Figure 5 >



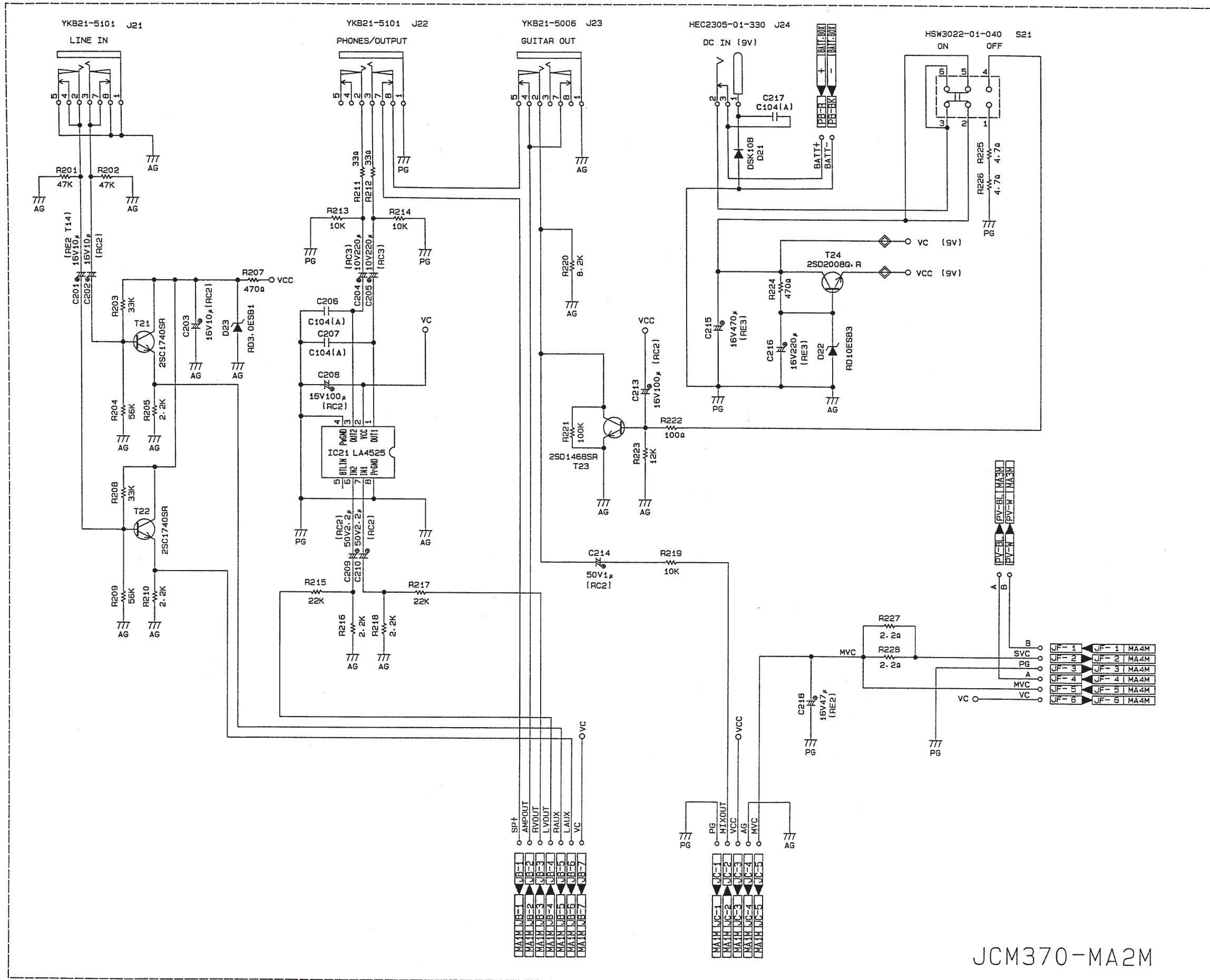
WIRING DIAGRAM

SCHEMATIC DIAGRAMS

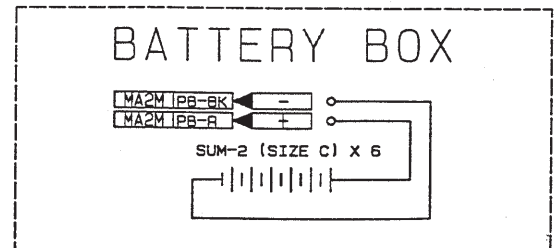
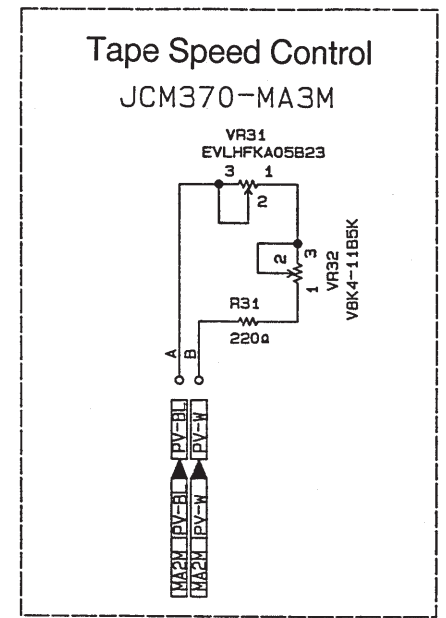
AMP PCB JCM370-MA1M



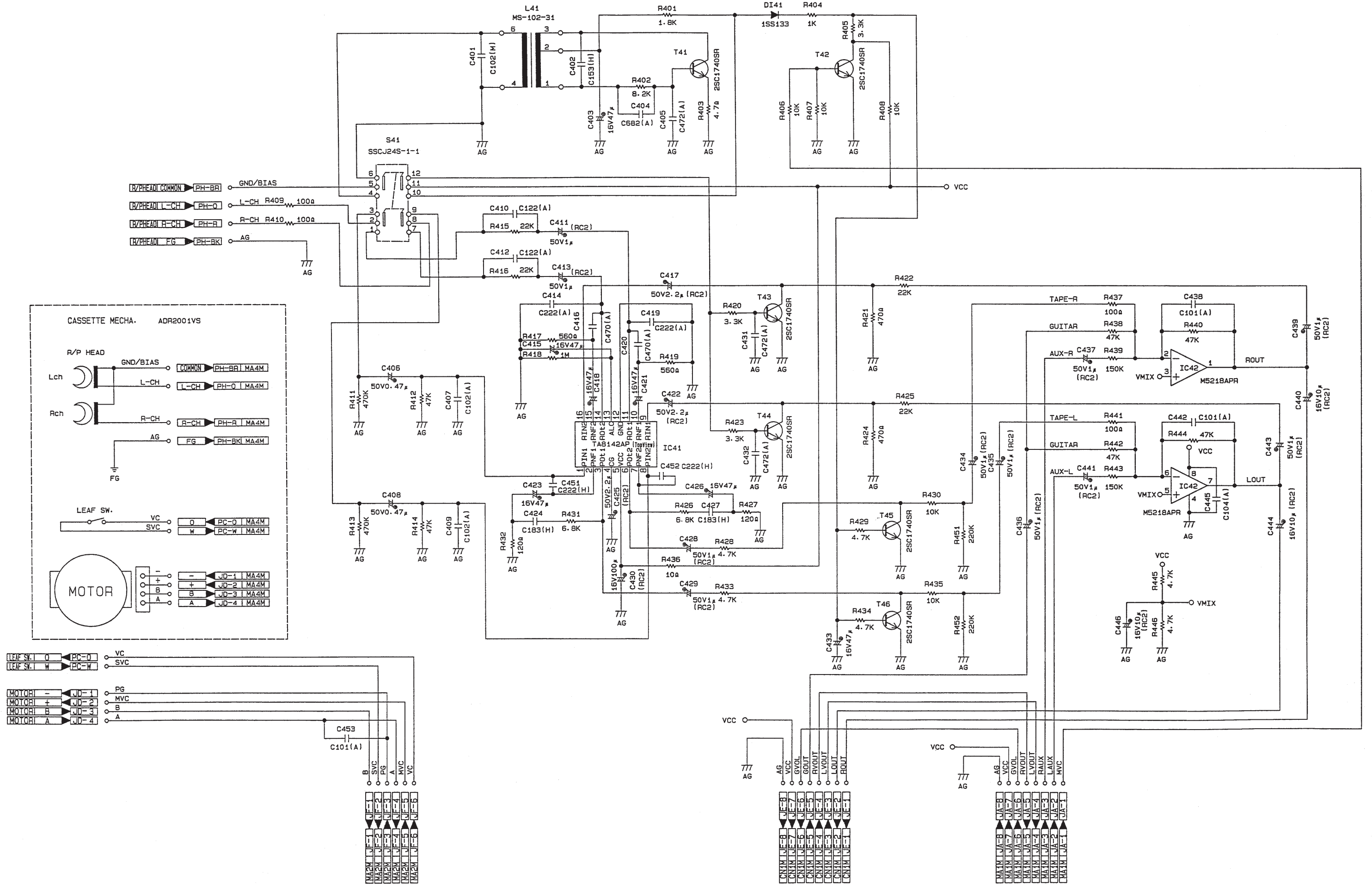
I/O PCB JCM370-MA2M, MA3M



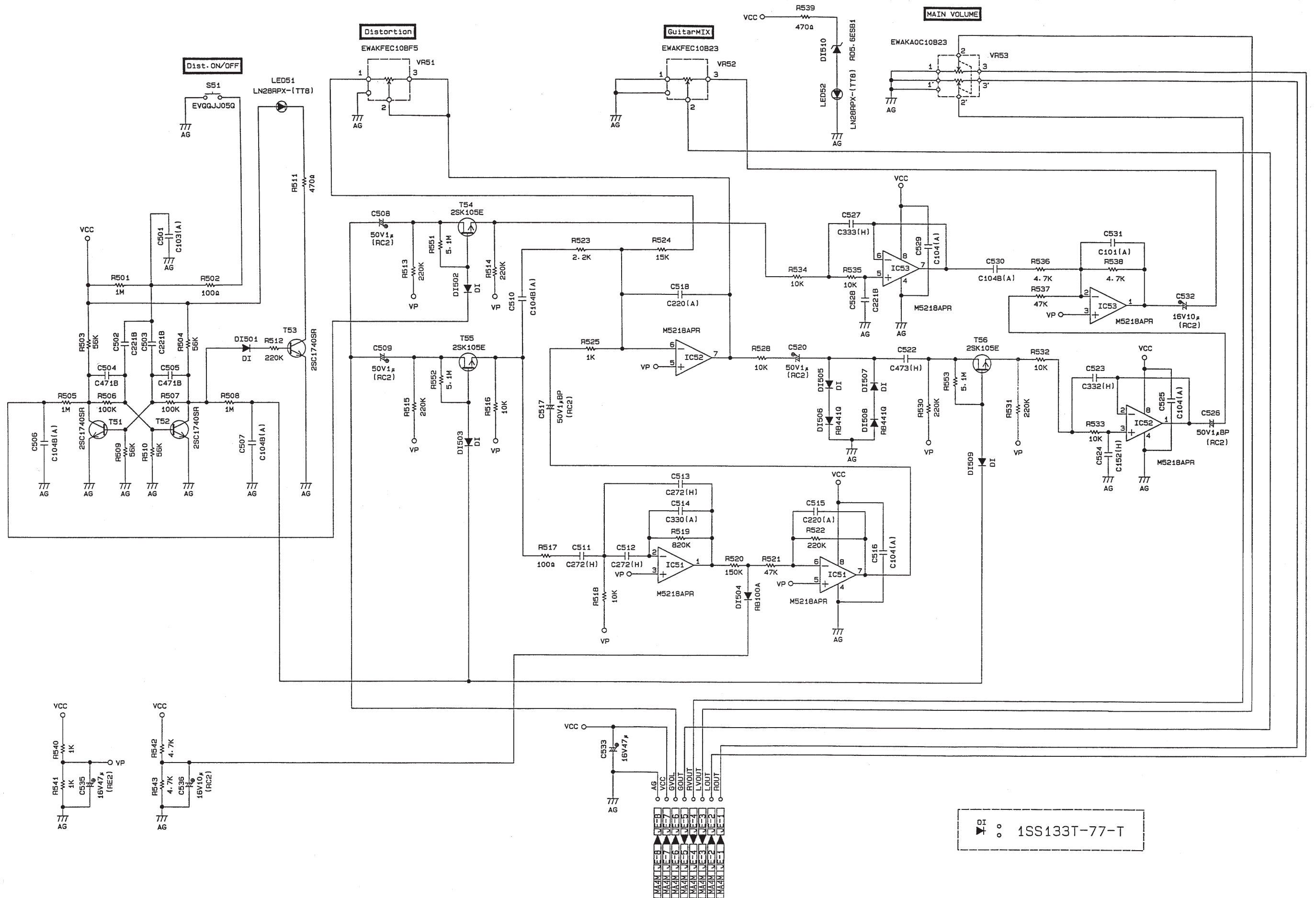
JCM370-MA2M



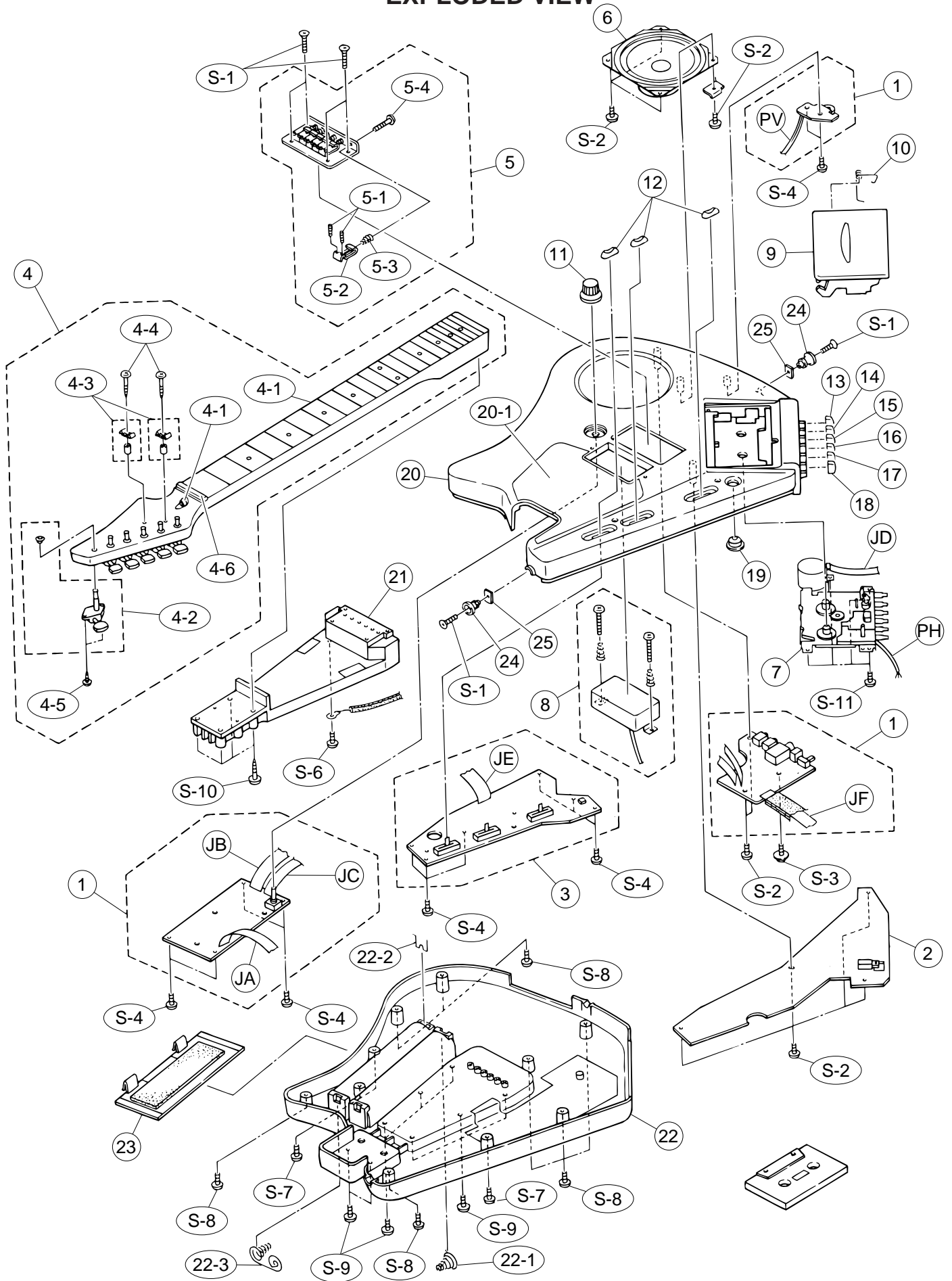
CASSETTE PCB JCM370-MA4M



CONSOLE PCB JCM370-CN1M



EXPLODED VIEW



PARTS LIST

EG-5

- Notes:
1. Prices and specifications are subject to change without prior notice.
 2. As for spare parts order and supply, refer to the "GUIDEBOOK for Spare parts Supply", published separately.
 3. The numbers in item column correspond to the same numbers in drawing.

ELECTRICAL PARTS LIST

N	Item	Code No.	Part Name	Specification	Q	FOB Japan N.R. Yen Unit Price	R
PCB ASS'Y M370-MA123M							
N	1	6922 9140	PCB Ass'y M370-MA123M	M140005*1	1		B
	D21	2390 0371	Diode	DSK10B-BT-T	1		B
	D22	2310 7813	Zener Diode	RD10ESB3-T1-T	1		A
N	D23	2360 2408	Zener Diode	RD3.0ESB1-T1-T	1		B
	IC11, IC12	2114 1799	IC	M5218APR	2		B
	IC13	2114 0070	IC	LA4127	1		A
	IC21	2114 2632	IC	LA4525	1		A
	J21, J22	3612 0711	Mini Jack	YKB21-5101	2		A
	J23	3612 0665	Phone Jack	YKB21-5006	1		A
	J24	3501 7049	DC Jack	HEC2305-01-330	1		A
N	S21	3412 1407	Slide Switch	HSW3022-01-040	1		A
	T22, T22	2220 1409	Transistor	2SC1740SR-TP-T	2		B
	T23	2253 0420	Transistor	2SD1468SR,S-TP-T	1		B
	T24	2253 0357	Transistor	2SD2008Q,R-T105-T	1		A
N	VR11	2765 1701	Volume	EVJ06VFA3B14	1		A
	VR13	2760 2177	Semi-Fixed Resister	V8K4-11B10K	1		C
N	VR31	2765 1631	Volume	EVLHFKA05B23	1		A
	VR32	2765 0049	Semi-Fixed Resister	V8K4-11B5K	1		C
	JA	3719 4361	Ribbon Cable M370A	DF5H08155-8000M	1		C
	JB	3719 4368	Ribbon Cable M370B	DF5H07120-80008000	1		C
	JC	3719 4375	Ribbon Cable M370C	DF5H05215-80008000	1		C
	JF	3719 4389	Ribbon Cable M370F	DF5H06075-8000M	1		C
	PV	3749 4382	Ribbon Cable M370H	DF0H02120-80258025	1		C
PCB ASS'Y M370-MA4M							
N	2	6922 9150	PCB Ass'y M370-MA4M	M140006*1	1		B
	DI41	2390 1344	Diode	1SS133T-77-T	1		C
N	IC41	2114 3500	IC	TA8142AP	1		A
	IC42	2114 1799	IC	M5218APR	1		B
N	L41	3841 1344	Bias Coil	MS-102-31	1		B
N	S41	3412 1337	Slide Switch	SSCJ24S-1-1	1		A
	T41~T46	2220 1409	Transistor	2SC1740SR-TP-T	6		B
PCB ASS'Y M370-CN1M							
N	3	6922 9170	PCB Ass'y M370-CN1M	M140007*1	1		B
	DI505, DI507	2390 1344	Diode	1SS133T-77-T	6		C
	DI504	2390 1323	Diode	RB100A-T32-T	1		C
	DI506, DI508	2390 1967	Diode	RB441QT-77	2		C
	DI510	2360 1631	Zener Diode	RD5.6ESB1-T1-T	1		B
	IC51~IC53	2114 1799	IC	M5218APR	3		B
	LED51, LED52	2370 0112	LED	LN28RPX-(TT8)	2		C
N	S51	3412 1400	Tact Switch	EVQ QJJ 05Q	1		B
	T51~T53	2220 1409	Transistor	2SC1740SR-TP-T	3		B
	T54~T56	2240 1149	FET	2SK105E-T	3		B
N	VR51	2765 1652	Slide Volume	EWA KFEC10BF5	1		A
N	VR52	2765 1645	Slide Volume	EWA KFEC10B23	1		A
N	VR53	2765 1638	Slide Volume	EWA KA0C10B23	1		A
N	JE	3719 4396	Ribbon Cable M370E	DF5H08110-8000M	1		C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

MECHANICAL PARTS LIST

N	Item	Code No.	Parts Name	Specification	Q	FOB Japan N.R.Yen Unit Price	R
N	JD	3719 4403	Ribbon Cable M370D	DF5H04110-3535M	1		C
N	PH	6923 1071	Shield Cable M370	M440021A*1	1		C
N	4	6922 8911	Neck Ass'y	M240006A*1	1		B
N	4-1	0009 9175	Bullit-Shaped Nut	HOUDAN-M5	1		B
N	4-2	5860 8736	Tuning Peg	1DC41-07M-L	6		A
N	4-3	0009 9171	String Guide	RG130Ni	2		C
N	4-4	0009 9173	Pan Wood Screw	2.4X16	2		C
N	4-5	0009 9172	Pan Wood Screw	2.1X10	12		C
N	4-6	0009 9174	Nut	N06-42(BLACK)	1		A
N	5	6922 9502	Bridge Ass'y	M340002B*1	1		A
N	5-1	0009 9176	Hexagon Socket Screw	M3X10	12		B
N	5-2	6923 0611	Bridge Saddle	M412358A-1	6		B
N	5-3	6923 0621	Bridge Spring	M412359A-1	6		B
N	5-4	0007 8878	Pan Screw	M3X16	6		B
N	6	3831 0742	Speaker	S10JA22A	1		B
N	7	5860 8708	Cassette Mechanism	ADR2001VS	1		A
N	8	5860 9149	Pickup	CAH-F2	1		A
N	9	6923 0690	Cassette Door (Black)	M340004*1	1		B
N	9	6923 0710	Cassette Door (White)	M340004*2	1		B
N	10	6923 0680	Cassette Door Spring	M412361-1	1		B
N	11	6922 9510	Rotary Knob 370	M312224-1	1		B
N	12	6922 9520	Slide Knob 370	M312223-1	3		B
N	13	6922 9530	C Button REC	M211805-1	1		C
N	14	6922 9540	C Button PLAY	M211805-2	1		C
N	15	6922 9550	C Button REW	M211805-3	1		C
N	16	6922 9560	C Button FWD	M211805-4	1		C
N	17	6922 9570	C BUtton STOP	M211805-5	1		C
N	18	6922 9580	C Button PAUSE	M211805-6	1		C
N	19	6922 9610	T Button	M312225-1	1		C
N	20	6923 0670	Upper Body (Black)	M240003*1	1		C
N	20	6923 0700	Upper Body (White)	M240003*2	1		C
N	20-1	6923 0820	Pick Guard 370	M312236-1	1		C
N	21	6922 8150	Core 370	M111826-1	1		C
N	22	6923 0632	Lower Body (Black)	M240004B*1	1		C
N	22	6923 0652	Lower Body (White)	M240004B*2	1		C
N	22-1	6923 0740	Battery Spring (-) 370	M412347-1	1		B
N	22-2	6923 0750	Battery Spring (+) 370	M412348-1	1		B
N	22-3	6923 0760	Battery Spring (+-) 370	M412349-1	1		B
N	23	6923 0640	Battery Cover (Black)	M340003*1	1		B
N	23	6923 0660	Battery Cover (White)	M340003*2	1		B
N	24	6913 3520	Strap Pin	M43406-1	2		C
N	25	6908 4730	Strap-Pin Nut	M42806-2	2		C
N	S-1	5021 2246	Screw	4X16	6		C
N	S-2	0009 2680	Screw	4X8	10		C
N	S-3	0009 2681	Screw with Washer	4X8	1		C
N	S-4	0009 2682	Screw	2.6X8	11		C
N	S-6	5111 5333	Screw	4X6	1		C
N	S-7	5111 5384	Screw	4X12	3		C
N	S-8	0008 6417	Screw	4X10	7		C
N	S-9	5860 1218	Screw	4X10	8		C
N	S-10	0009 9179	Wood Screw	4.5X32	4		C
N	S-11	5111 1362	Screw	3X8	4		C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

N	Item	Code No.	Parts Name	Specification	Q	FOB Japan N.R.Yen Unit Price	R
N		1015 0007	Demo Tape	SO-91	1		B
N		3613 1393	Hexagon Key 4mm	4X70X25	1		B
N		6913 5900	Hexagon Key 1.5mm	M410113-1	1		B

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Sep, 1995