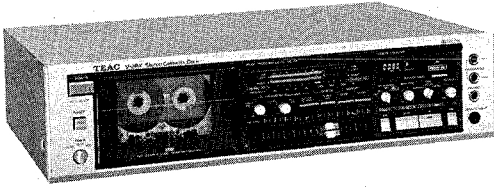


TEAC®



SERVICE MANUAL

V-2RX/V-4RX

Stereo Cassette Deck

1 SPECIFICATIONS AND SERVICE DATA

Notes:

- Improvements may result in changes in specifications and service data.
- 0 dB is referenced to 0.775 V in this manual.

SPECIFICATIONS

Track system 4-track, 2-channel stereo

Heads 3: Erase, record and playback (V-2RX)
2: Erase, record/playback (V-4RX)

Type of tape Cassette tape, C-60 and C-90 (Philips type)

Tape speed 4.76 cm/s (1-7/8 ips)

Input (level and impedance)

MICRO-PHONE: Specified input level: -57 dB (1.09 mV)/10 kohms
Minimum input level: -67 dB (346 μ V)

LINE IN: Specified input level: -9 dB (275 mV)/50 kohms
Minimum input level: -19 dB (86.9 mV)

Output (level and impedance)

OUTPUT: Specified output level: -3.5 dB (518 mV)/50 kohms

PHONES: Specified output level: -15 dB (138 mV)/8 ohms

Equalization

METAL: 3180 μ s + 70 μ s
Co (CrO₂): 3180 μ s + 70 μ s
NORMAL: 3180 μ s + 120 μ s

Head configuration

1/2-track, 1-channel erase head
1/4-track, 2-channel record and playback head (V-2RX)
1/4-track, 2-channel record/playback head (V-4RX)

Motors 1 DC servo motor (for capstan drive)
1 DC motor (for reel drive)

Bias frequency 100 kHz

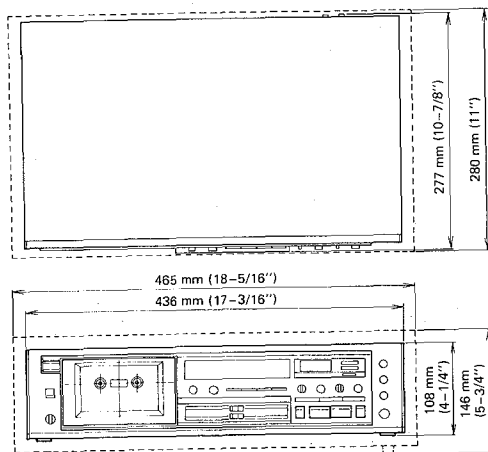
Operation position Horizontal

Power requirements

100/120/220/240 V AC, 50/60 Hz, 29 W (V-4RX: 28 W)
(General export)
120 V AC, 60 Hz, 29 W (V-4RX: 28 W) (U.S.A./Canada)
220 V AC, 50 Hz, 29 W (V-4RX: 28 W) (Europe)
240 V AC, 50 Hz, 29 W (V-4RX: 28 W) (U.K./Australia)

Weight 7.0 kg (15-7/16 lbs.) net

Dimensions

**Fig. 1-1****SERVICE DATA****MECHANICAL**

Tape speed deviation 3,000 Hz $\pm$ 70 Hz

Tape speed drift 70 Hz

Wow and flutter

Playback: 0.06% (WRMS)

Record/playback: 0.25% (RMS)

Pinch roller pressure 350 g to 450 g (12.3 oz to 15.9 oz.)

Reel Torque

Take-up: 35 to 65 g-cm (0.49 to 0.90 oz-inch)

Supply: 2 to 4 g-cm (0.028 to 0.056 oz-inch)

F.F./REW: 80 to 150 g-cm (1.1 to 2.1 oz-inch)

Fast winding time
90 seconds for MTT-501 (C-60)

ELECTRICAL

Frequency response
See Figs. 5-6 and 5-8 to 5-10

Signal-to-noise ratio

Playback: NORMAL: 47 dB min.

Overall: METAL, Co (CrO₂): 46 dB min.
NORMAL: 45 dB min.

Erase efficiency 65 dB min. at 1 kHz (measured with input 10 dB higher than the specified input level)

Channel separation 30 dB min. at 1 kHz

Adjacent track crosstalk 40 dB min. at 125 Hz

Total harmonic distortion 1.8% or less with METAL and Co (CrO₂) tapes
2.0% or less with NORMAL tape

- Dolby Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
- dbx Noise Reduction system made under license from dbx, Incorporated. The name "dbx" and the dbx symbol are trademarks of dbx, Incorporated.

CAUTION

- Parts marked with this sign are safety critical components. They must always be replaced with identical components — refer to the appropriate parts list and ensure exact replacement.

2 CASE AND FRONT PANEL REMOVAL

Disassemble in number-order

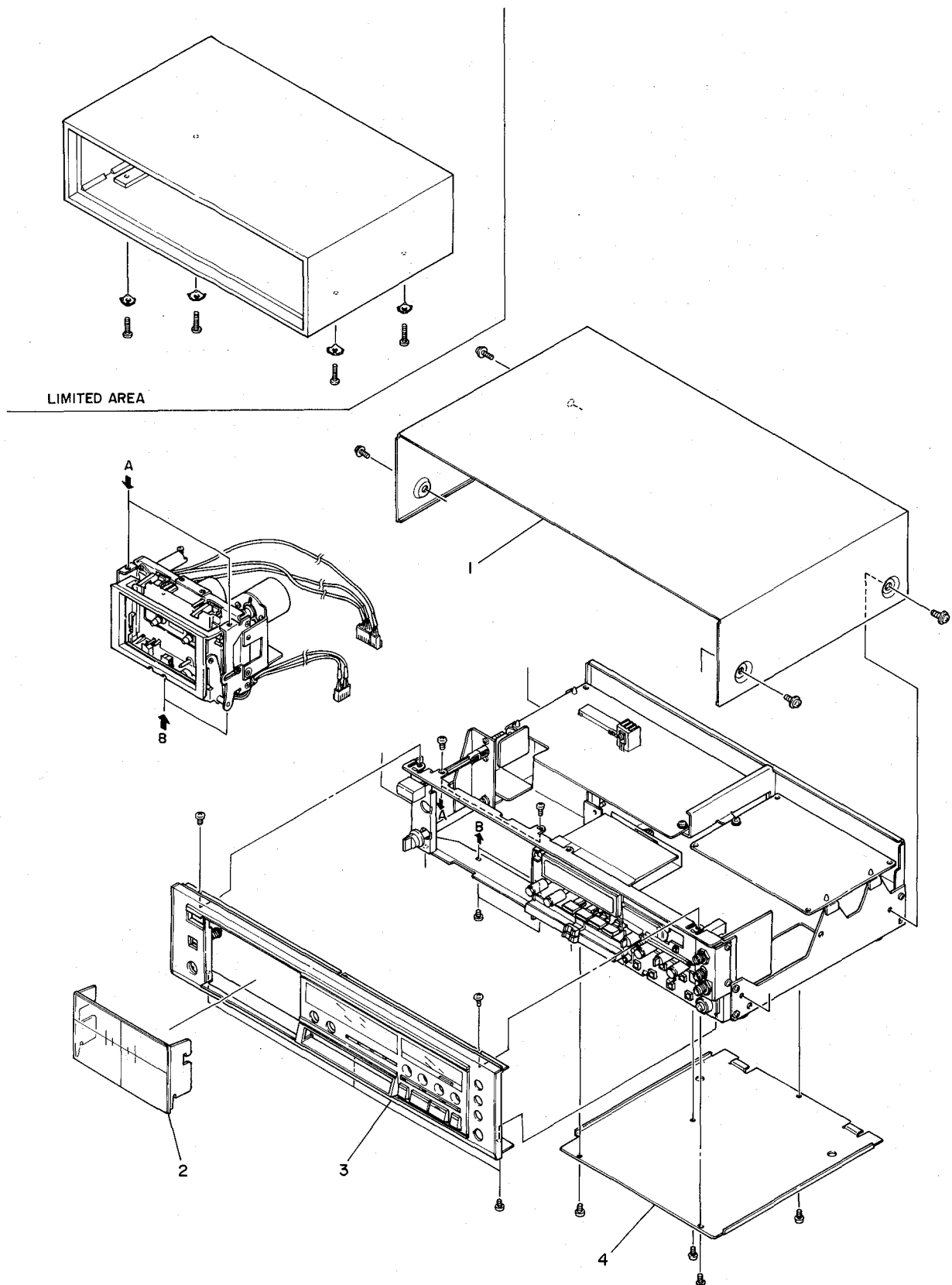


Fig. 2-1

3 PARTS LOCATION

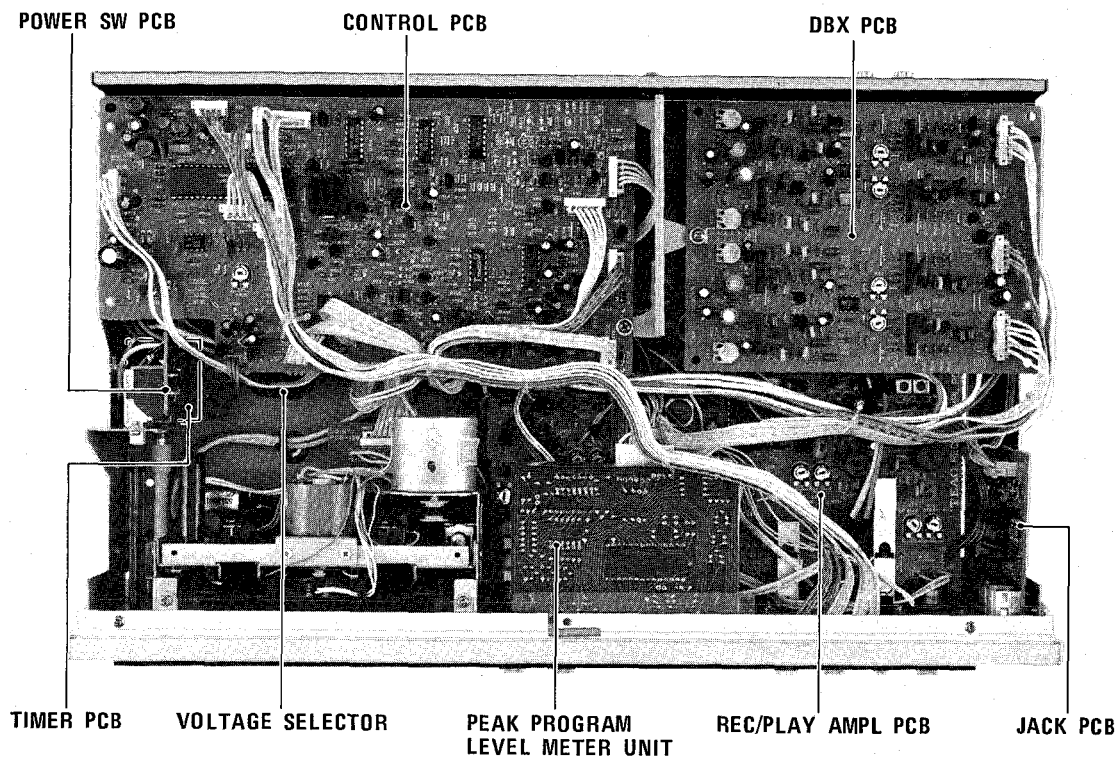


Fig. 3-1 Top view

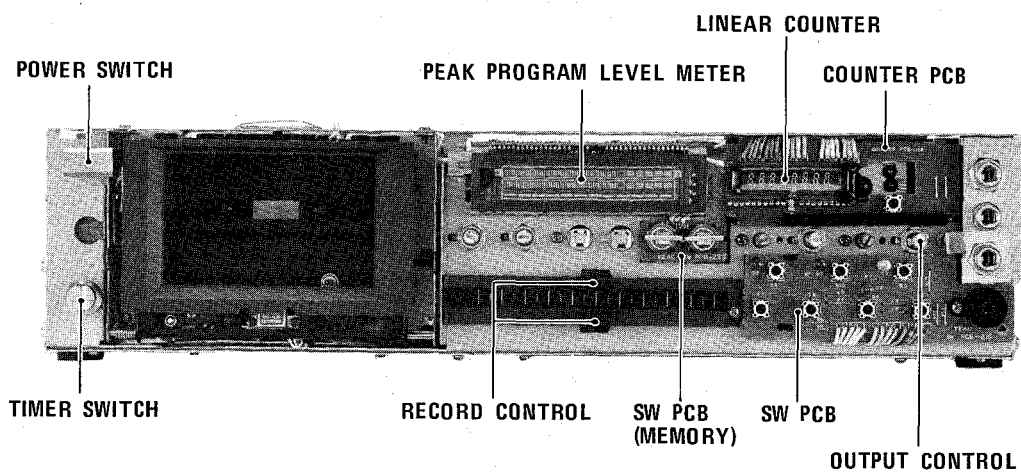


Fig. 3-2 Front view

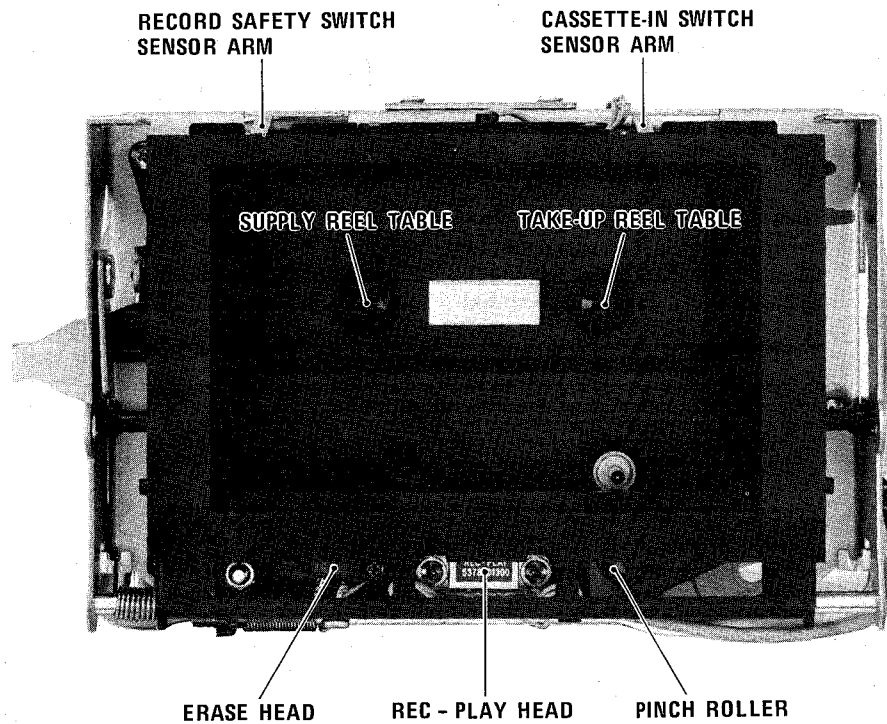


Fig. 3-3 Transport front view

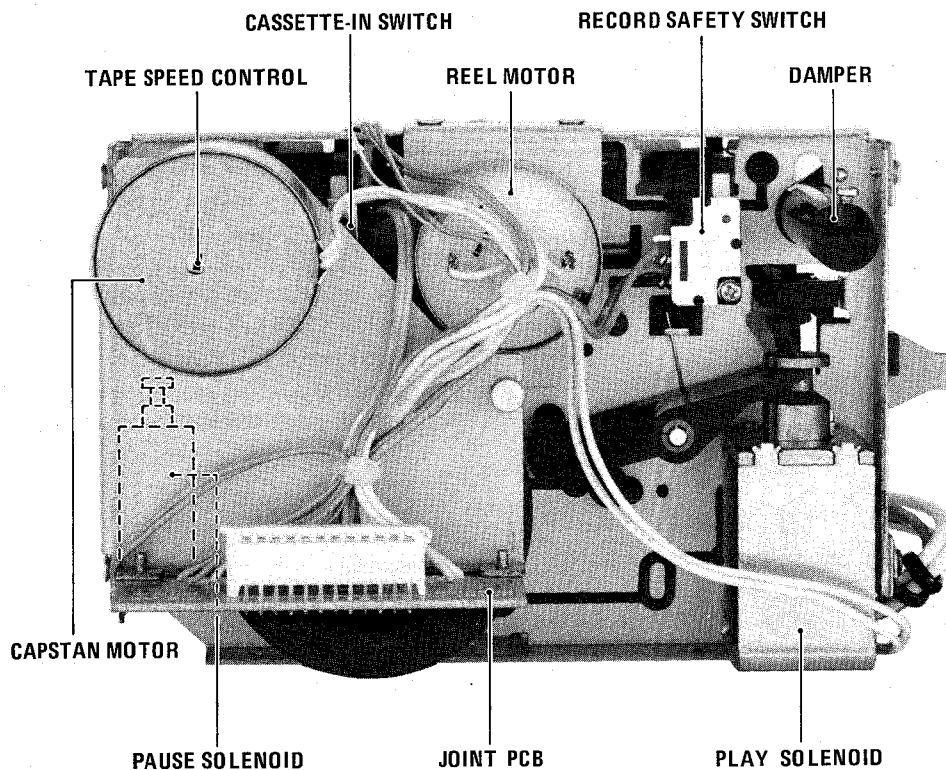


Fig. 3-4 Transport rear view

4 MECHANICAL CHECKS AND ADJUSTMENTS

4-1 PLAY SOLENOID

1. With the deck in the play mode, check that the pinch roller is pressing against the capstan shaft and that the pinch roller arm spring is released from the pinch roller arm.
2. If adjustment is required, adjust the position of the play solenoid.

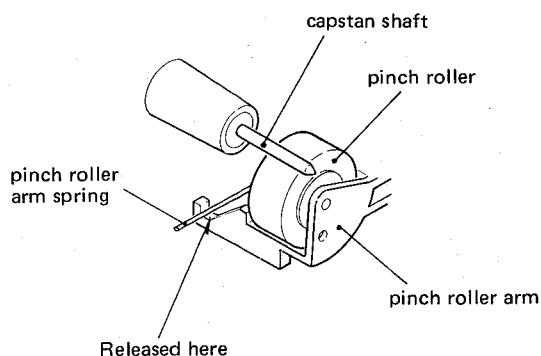


Fig. 4-1

4-2 PAUSE SOLENOID

1. The clearance between the pinch roller and the capstan shaft should be 0.3 mm ~ 0.5 mm when the deck is in the pause mode.
2. If adjustment is required, adjust the position of the pause solenoid.

4-3 TAPE PATH ADJUSTMENT (V-2RX ONLY)

1. Load and play a TEAC MTT-902 mirror tape (C-90) and check for any noticeable tape curling on the sides of the record-playback head guide.
2. Adjust the height of the erase head when curling is evident.
3. The clearance between the head base plate and the head stopper should be 0.3 mm ~ 0.5 mm, as shown in the figure below, when the erase head is touching the pad holder assembly during playback.

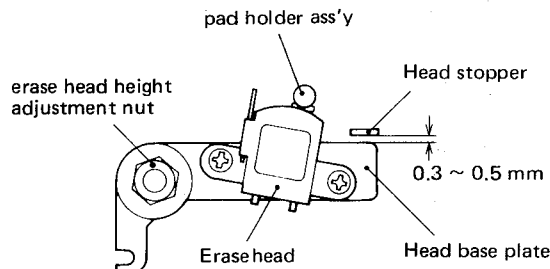


Fig. 4-2

4-4 PINCH ROLLER PRESSURE

1. With the cassette holder shut and no tape loaded, put the deck in the play mode after pushing the cassette-in switch sensor arm upwards and holding it.
2. Hook a spring scale on the pinch roller assembly as shown in the illustration.
3. Pull the scale downwards until there is sufficient force to separate the pinch roller from the capstan shaft.
4. Ease pressure until the pinch roller makes just enough contact with the capstan shaft so that the pinch roller just begins to turn. At this point, note the reading on the scale. It should be from 350 g to 450 g (12.3 oz. to 15.9 oz.).

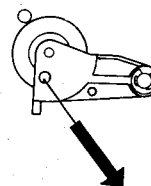


Fig. 4-3

4-5 REEL TORQUE

1. Load the cassette torque meter on the deck and read the pointer indication on the dial scale for each tape transport operation. The measured torque should be within the following values:
 Take-up: 35 to 65 g-cm (0.49 to 0.90 oz-inch)
 Supply: 2 to 4 g-cm (0.028 to 0.056 oz-inch)
 F.F/REW: 80 to 150 g-cm (1.1 to 2.1 oz-inch)

4-6 TAPE SPEED

1. Connect a frequency counter to the deck as shown in Fig. 4-4.
2. Play a tape for more than five minutes to warm up the deck, then load a TEAC MTT-111 test tape containing a 3000-Hz test tone and play the test tape.
3. While the tape is playing, use a non-metallic or insulated screwdriver and adjust the control on the capstan motor for a reading of 3015 to 3025 Hz on the frequency counter.
4. Play the tape at the beginning and at the end, and check that the speed deviation is within the prescribed limits by observing that the reading on the frequency counter never deviates more than ± 70 Hz from 3000 Hz, nor drifts more than 70 Hz at any given time.

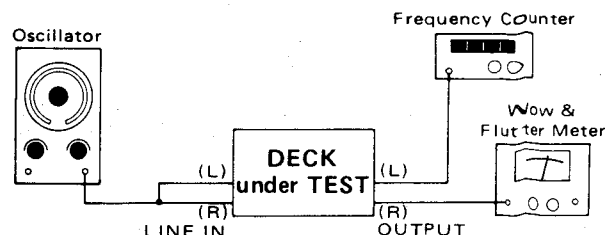


Fig. 4-4

4-7 WOW AND FLUTTER

Note: These measurements should be made at the beginning, middle and the end of the tape.

1) PLAYBACK

1. Connect a wow-and-flutter meter to the deck as shown in Fig. 4-4.
2. Load and play a TEAC MIT-111 test tape.
3. Check that the reading on the wow-and-flutter meter is within 0.06% (WRMS).

2) RECORD/PLAYBACK

4. Load a blank TEAC MTT-501 test tape and record a 3000-Hz signal.
5. Rewind the tape to the beginning of the recorded section, and play it.
6. The wow and flutter should not be more than 0.25% (RMS).

4-8 LUBRICATION

Lubrication is only required when parts are replaced. For this purpose, use the oil and grease specified below.

Oil: TEAC spindle oil (from TEAC TZ-255 oil kit), Mobil D.T.E. Oil Light, or equivalent

Grease: ORE-LUBE G1/3 or equivalent

1. Apply a drop of oil with an oil applicator to a point about 1/3 the way down the shaft, from the free end of the flywheel, then insert the shaft into the capstan housing.
2. Apply a suitable amount of light grease to the well of the flywheel bearing.

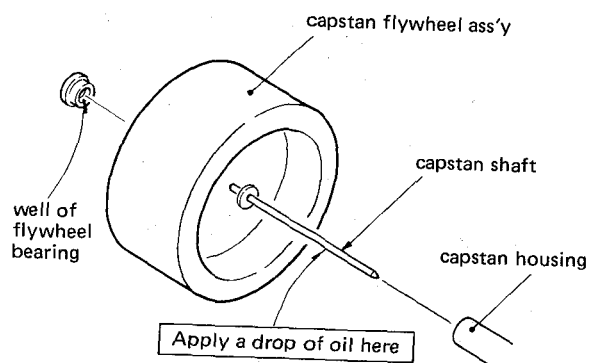


Fig. 4-5

4-9 VOLTAGE CONVERSION (GENERAL EXPORT MODELS ONLY)

1. Always disconnect the power line cord before making these adjustments.
2. Locate the voltage selector on the bottom side as shown in the illustration.
3. Using a regular screwdriver, turn the selector until the numerals corresponding to the voltage requirements of your area appear.

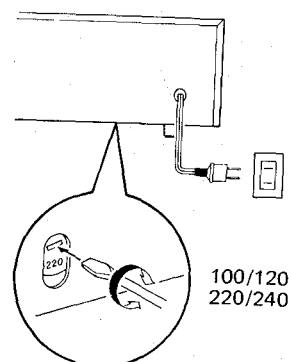


Fig. 4-6

5 ELECTRICAL CHECKS AND ADJUSTMENTS

PRECAUTIONS

- Before performing adjustments and checks, clean and demagnetize the entire tape path.
- Make sure the deck is properly set for the voltage in your locality.
- In general, adjustments and checks are made in the order of L-ch then R-ch. Double REF. Nos. and test point designations indicate L-ch/R-ch. (Example: R11/R21)
- 0 dB is referenced to 0.775 V. If an AC voltmeter that references 0 dB to 1 V is used, appropriate compensation should be made.
- The AC voltmeter used in the procedures must have an input impedance of $1M\Omega$ or more.
- Note the "deck settings" at the top of each chart. The settings apply to all checks for a specific chart unless explicitly stated otherwise.

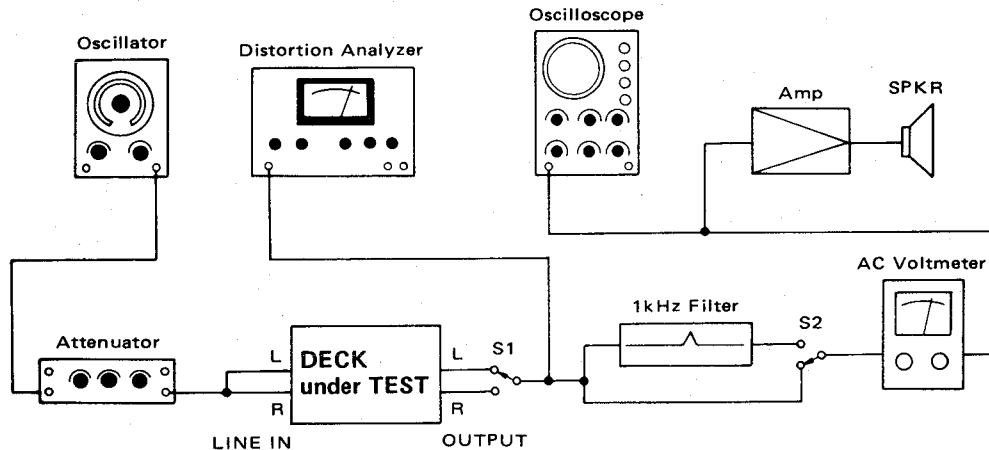


Fig. 5-1 Basic test setup

Deck settings:

LEVEL cont.: OFF (depressed)
 MONITOR sw (V-2RX only): TAPE
 NR SYSTEM sw: OUT
 TAPE sw: METAL
 OUTPUT cont.: MAX

TEAC test tapes:

MTT-150: For Dolby level calibration
 MTT-356: For playback frequency response check for METAL, Co (CrO₂)
 MTT-501: For S/N check with NORMAL

5-1 PLAYBACK PERFORMANCE

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
1. REC-PLAY head azimuth	Connection: Fig. 5-2	MTT-150	Check	OUTPUT: Phase: within 45°	Refer to Fig. 5-5.
		MTT-356 (12.5 kHz)	Azimuth screw of R-P head (Figs. 5-3, 5-4)	OUTPUT: Max. output at L- & R-ch's (on VTVM)	
2. Specified output level	_____	MTT-150	R11/R21	OUTPUT: -3.5 dB (518 mV)	Spec. output level
3. PEAK PROGRAM LEVEL METER	_____	MTT-150	R15/R25	PEAK PROGRAM LEVEL METER: 0 dB	
4. Frequency response	TAPE sw: METAL If 10 kHz output is lower than spec., connect C102 (C202) in parallel with C101 (C201) on REC/PLAY AMPL PCB.	MTT-356	Check	OUTPUT: Fig. 5-6	
	TAPE sw: NORMAL	MTT-356	Check	OUTPUT: At 10 kHz should be approx. 4 dB higher than measured in above step.	
5. Signal-to-noise ratio	TAPE sw: NORMAL	Fully-erased MTT-501 tape: (Use bulk tape eraser)	Check	OUTPUT: 47 dB min.	Ratio of spec. output of -3.5 dB to noise

Deck settings:

REC/PAUSE mode (V-4RX only)

LEVEL cont.: OFF (depressed)

MONITOR sw

(V-2RX only): SOURCE

NR SYSTEM sw: OUT

OUTPUT cont.: MAX

5-2 MONITOR PERFORMANCE

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
6. Min. input level	RECORD cont.: Max.	MICROPHONE: 400 Hz/-67 dB (346 μ V)	Check	OUTPUT: -3.5 dB $\pm$ 3 dB (367 mV ~ 731 mV)	MICROPHONE min. input level
		LINE IN: 400 Hz/-19 dB (86.9 mV)	Check	OUTPUT: -3.5 dB $\pm$ 3 dB	LINE min. input level
7. Specified LINE input level	_____	LINE IN: 400 Hz/-9 dB (275 mV)	RECORD cont. (L/R)	OUTPUT: -3.5 dB (518 mV)	Specified setting of RECORD cont.
		IMPORTANT: Do not change the setting of the RECORD control after establishing the setting as above.			
8. PEAK PROGRAM LEVEL METER	_____	LINE IN: 400 Hz/-9 dB (275 mV)	Check	PEAK PROGRAM LEVEL METER: 0 dB $\pm$ 1 dB	
9. PHONES output level	Connection: Fig. 5-7	LINE IN: 400 Hz/-9 dB (275 mV)	Check	PHONES: -15 dB $\pm$ 3 dB (97.5 mV ~ 195 mV)	

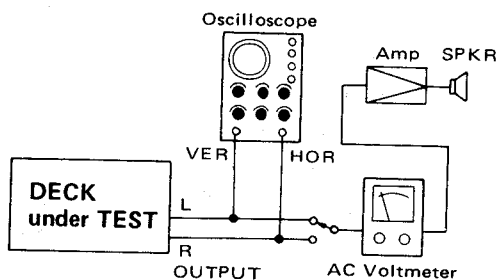


Fig. 5-2 Test setup for azimuth check

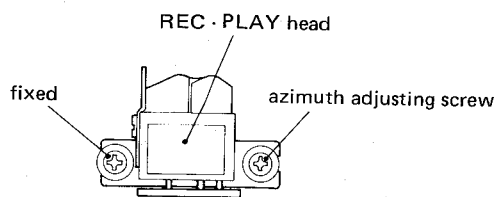


Fig. 5-3 Azimuth screw location (V-2RX)

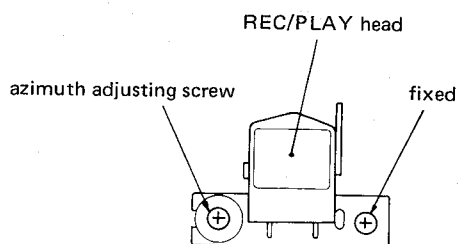


Fig. 5-4 Azimuth screw location (V-4RX)

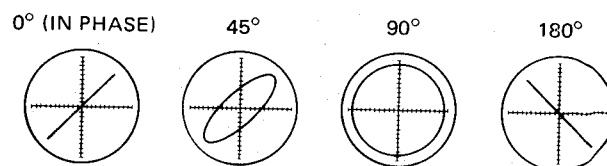


Fig. 5-5 Confirming phase relationship

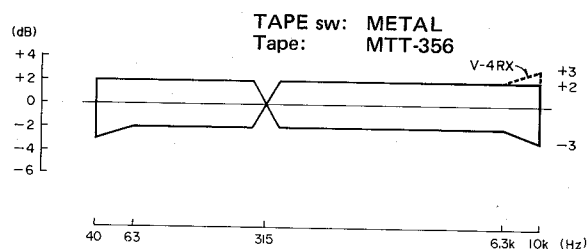


Fig. 5-6 Playback frequency response

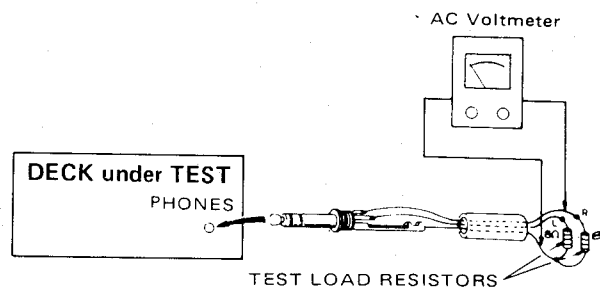


Fig. 5-7 Test setup for PHONES check

DECK settings:

LEVEL cont.: OFF (depressed)
 MONITOR sw
 (V-2RX only): TAPE
 RECORD cont.: Specified position (item 7)
 NR SYSTEM sw: OUT
 BIAS FINE cont.
 (V-2RX only): O (center detent position)
 OUTPUT cont.: MAX

TEAC test tapes:

MTT-5072: For METAL record test
 MTT-5061: For Co (CrO₂) record test
 MTT-501: For NORMAL record test

5-3 RECORDING PERFORMANCE

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
10. BIAS trap	REC/PLAY → REC/PAUSE	LINE IN: No signal	L104/L204 (V-2RX) U104/U204 (V-4RX)	TP11/TP21 Min. reading	
11. Record bias	1) Adjust in the order of steps (2) (3) (4).				
	2) TAPE sw.: METAL Tape: MTT-5072	LINE IN: 400 Hz & 6.3 kHz alternately/-42 dB (6.15 mV)	C155/C255 (V-2RX) C131/C231 (V-4RX)	OUTPUT: Nearly equal level at both frequencies	
	3) TAPE sw.: Co (CrO ₂) Tape: MTT-5061	LINE IN: 400 Hz & 6.3 kHz alternately/-42 dB (6.15 mV)	R13	OUTPUT: Nearly equal level at both frequencies	... For L- & R-ch
	4) TAPE sw.: NORMAL Tape: MTT-501	LINE IN: 400 Hz & 6.3 kHz alternately/-42 dB (6.15 mV)	R12	OUTPUT: Nearly equal level at both frequencies	... For L- & R-ch
12. Record level	TAPE sw.: METAL Tape: MTT-5072	LINE IN: 400 Hz/-12 dB (195 mV)	R14/R24	OUTPUT: -6.5 dB (367 mV)	
	TAPE sw.: CO (CrO ₂) Tape: MTT-5061	LINE IN: 400 Hz/-12 dB (195 mV)	Check	OUTPUT: -6.5 dB ± 1.5 dB (308 to 436 mV)	
	TAPE sw.: NORMAL Tape: MTT-501	LINE IN: 400 Hz/-12 dB (195 mV)	Check	OUTPUT: -6.5 dB ± 1.5 dB	
13. Total harmonic distortion	Same as 12 above.	LINE IN: 400 Hz/-12 dB (195 mV)	Check	OUTPUT: 1.8% or less with METAL, Co (CrO ₂) 2.0% or less with NORMAL	
14. Frequency response	TAPE sw.: METAL Tape: MTT-5072	LINE IN: Required signal/ -42 dB (6.15 mV)	Check	OUTPUT: Fig. 5-8	
	TAPE sw.: Co (CrO ₂) Tape: MTT-5061	LINE IN: Required signal/ -42 dB (6.15 mV)	Check	OUTPUT: Fig. 5-9	
	TAPE sw.: NORMAL Tape: MTT-501	LINE IN: Required signal/ -42 dB (6.15 mV)	Check	OUTPUT: Fig. 5-10	
	If frequency response is out of specification, recheck #11. "Record bias".				
15. Signal-to-noise ratio	TAPE sw.: METAL Tape: MTT-5072	LINE IN: 400 Hz/-9 dB (275 mV) ↓ no signal	Check	OUTPUT: 46 dB min.	Ratio of spec- ified output of -3.5 dB to noise
	TAPE sw.: Co (CrO ₂) Tape: MTT-5061	LINE IN: 400 Hz/-9 dB (275 mV) ↓ no signal	Check	OUTPUT: 46 dB min.	
	TAPE sw.: NORMAL Tape: MTT-501	LINE IN: 400 Hz/-9 dB (275 mV) ↓ no signal	Check	OUTPUT: 45 dB min.	

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
16. Erase efficiency	- Connection is same as in Fig. 5-1, but engage 1-kHz filter. - Record a 1-kHz signal. Rewind tape to midpoint of recorded portion. Record a "no signal" portion. Find the difference between the 1-kHz portion and the "no-signal" portion.				
	TAPE sw.: METAL Tape: MTT-5072	LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal	Check	OUTPUT: 65 dB min. ratio	
17. REC MUTE function	- Connection: Fig. 5-1, but engage 1-kHz filter. - Record a 1-kHz signal. Hold REC MUTE button depressed for several seconds. (At this time, make sure LED on the button lights). Rewind and play the tape. Find the difference between the 1-kHz portion and the "no-signal" portion.				
	TAPE sw.: METAL Tape: MTT-5072	LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal	Check	OUTPUT: 65 dB min. ratio	
18. Channel separation	- Connection Fig. 5-1, but do not connect LINE IN (R), and engage 1-kHz filter. - Set the deck to record mode. Find the difference between the 1-kHz recorded portion (L-ch) and the "no signal" portion (R-ch).				
	TAPE sw.: METAL Tape: MTT-5072	LINE IN: L-ch 1 kHz/-9 dB (275 mV) R-ch No signal	Check	OUTPUT: 30 dB min. ratio	
19. Adjacent track crosstalk	- Connection: Fig. 5-1, but do not connect LINE IN (L) and OUTPUT (L). - Record a 125-Hz signal on R-ch and note output level. Invert tape and play R-ch track. Check leakage level against the output reference of previously recorded portion.				
	TAPE sw.: METAL Tape: MTT-5072	LINE IN: L-ch No signal R-ch 125 Hz/-9 dB (275 mV)	Check	OUTPUT: 40 dB min. ratio	
20. DOLBY NR effect	Record a 1-kHz signal with NR SYSTEM switch set to OUT. Play this portion with NR SYSTEM switch set to OUT and set to □□. Obtain the difference in output level between OUT and □□ positions. Repeat the above process using a 10-kHz signal.				
	TAPE sw.: METAL Tape: MTT-5072	LINE IN: 1 kHz/-32 dB (19.5 mV)	Check	OUTPUT: Variation 3 dB ~ 8 dB	
	TAPE sw.: METAL Tape: MTT-5072	LINE IN: 10 kHz/-42 dB (6.15 mV)	Check	OUTPUT: Variation 8 dB ~ 12 dB	

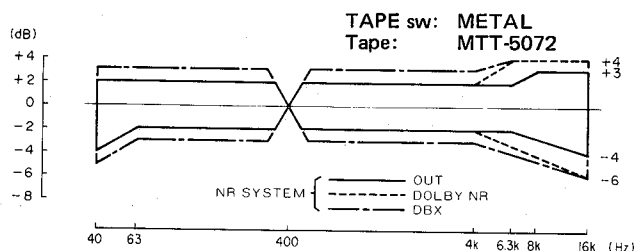


Fig. 5-8 Overall frequency response [METAL]

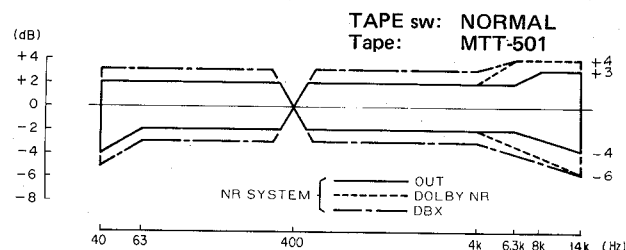


Fig. 5-10 Overall frequency response [NORMAL]

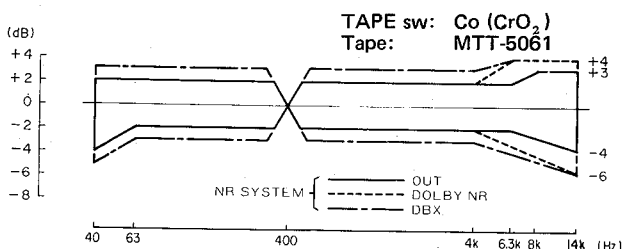


Fig. 5-9 Overall frequency response [Co (CrO₂)]

5-4 DBX PERFORMANCE

Note: Test this performance only after you are sure that the "5-6 DBX PCB ADJUSTMENT" is correct.

DECK settings:

LEVEL cont.: OFF (depressed)
 MONITOR sw
 (V-2RX only): TAPE
 RECORD cont.: Specified position (item 7)
 NR SYSTEM sw: NR- dbx
 BIAS FINE cont.
 (V-2RX only): 0 (center detent position)
 OUTPUT cont.: MAX

TEAC test tapes:

MTT-5072: For METAL record test
 MTT-5061: For Co (CrO₂) record test
 MTT-501: For NORMAL record test

ITEM	SETTING		INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
21.Encoding level	REC/PAUSE mode		LINE IN: 400 Hz/-14.5 dB (146 mV)	Check	TP51/TP61 on DBX PCB: -8.2 dB (300 mV)	
	If, in the above step, the RESULT is out of specification, correct using the RECORD control so that the correct value is obtained when the control is in the specified position (item 7).					
	REC/PAUSE mode		LINE IN: 400 Hz/-14.5 dB* ¹ (146 mV)	R52/R62	TP52/TP62 on DBX PCB: -8.2 dB* ² (300 mV)	* ¹ Reference 1 * ² Reference 2
22.Encoding single frequency response	REC/PAUSE mode		LINE IN: 100 Hz/-14.5 dB (146 mV)	Check	TP52/TP62 on DBX PCB: +0.5 dB ±1 dB against Ref. 2 (283 mV ~ 357 mV)	
			LINE IN: 10 kHz/-14.5 dB	Check	TP52/TP62 on DBX PCB: -2.8 dB ±1 dB against Ref. 2 (194 mV ~ 244 mV)	
23.Encoding operation level	REC/PAUSE mode		LINE IN: 400 Hz/-74.5 dB* ³ (146 μV)	Check	TP52/TP62 on DBX PCB: -30 dB ±0.5 dB against Ref. 2 (8.96 mV ~ 10.1 mV)	* ³ -60 dB against Ref. 1
			LINE IN: 400 Hz/+5.5 dB* ⁴ (1.46 V)	Check	TP52/TP62 on DBX PCB: +10 dB ±0.5 dB against Ref. 2 (0.896 V ~ 1.01 V)	* ⁴ +20 dB against Ref. 1
24.Decoding level	Record a 400 Hz signal with NR SYSTEM switch OUT. Rewind and play the recorded portion. Note the off-the-tape level from OUTPUT (1). Repeat the above process with NR SYSTEM switch set to NR- <u>dbx</u> . Note the off-the-tape level (2). Compare the difference between (1) and (2). On V-2RX (only), if ±1 dB or more, correct by R54/R64 using (1) as Reference.					
	REC/PLAY mode TAPE: METAL Tape: MTT- 5072	NR SYSTEM: OUT	LINE IN: 400 Hz/-14.5 dB (146 mV)	Check	OUTPUT: Note the off-the- tape level * ⁵	* ⁵ Reference 3
		NR SYSTEM: NR- <u>dbx</u>	LINE IN: 400 Hz/-14.5 dB	Check (R54/R64* ⁶)	OUTPUT: V-2RX: ±1 dB against Ref. 3 V-4RX: ±1.5 dB against Ref. 3	* ⁶ V-2RX only
25.Distortion	REC/PLAY mode Measure the off-the-tape level [TAPE sw: METAL Tape: MTT-5072 [TAPE sw: Co (CrO ₂) Tape: MTT-5061 [TAPE sw: NORMAL Tape: MTT-501		LINE IN: 400 Hz/-12 dB (195 mV)	Check	OUTPUT: 1.0% or less	
26.Signal-to-noise ratio	Same as above		LINE IN: 400 Hz/-9 dB (275 mV) ↓ No signal	Check	OUTPUT: 65 dB min. ratio	Ratio of 1 kHz output (-3.5 dB) to noise

5-5 PARAMETRIC EQUALIZER ADJUSTMENT

Deck settings:

REC/PAUSE mode (V-4RX only)

PARAMETRIC EQUALIZER:

FREQ cont.: Follow chart designation.

LEVEL cont.: Pull ON, then follow chart designation.

PRE/POST sw: PRE

MONITOR sw (V-2RX only): SOURCE

RECORD cont.:

NR SYSTEM sw:

BIAS FINE cont. (V-2RX only):

TAPE sw:

OUTPUT cont.:

Specified position (item 7)

Not applicable

Not applicable

Not applicable

MAX

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
27. PARAM-EQ frequency indicator	FREQ cont.: 500 Hz (fully cw.)	LINE IN: No signal	R31	PARAM-EQ frequency indicator: 500 Hz segment should light up.	
	FREQ cont.: 60 Hz (fully ccw.)	LINE IN: No signal	Check	PARAM-EQ frequency indicator: 60 Hz segment should light up.	
28. Frequency response	LEVEL cont.: Center detent position	LINE IN: 400 Hz/-19 dB (86.9 mV)	RECORD cont.	OUTPUT: -13.5 dB (164 mV)	Reference
		LINE IN: 40 Hz~16 kHz/-19 dB	Check	OUTPUT: Within ± 2 dB of Ref.	
29. Frequency response (500 Hz)	FREQ cont.: 500 Hz (fully cw.) LEVEL cont.: Fully cw.	LINE IN: Affected freqs./-19 dB (86.9 mV)	Check	OUTPUT: Center frequency (c.f.): 500 Hz ± 50 Hz $+15$ dB $+3$ dB against c.f. Ref.	Refer to Fig. 5-11.
	LEVEL cont.: Fully ccw.	LINE IN: Affected freqs./-19 dB	Check	OUTPUT: -15 dB -3 dB against c.f. Ref.	
30. Frequency response (60 Hz)	FREQ cont.: 60 Hz (fully ccw.) LEVEL cont.: Fully cw.	LINE IN: Affected freqs./-19 dB (86.9 mV)	Check	OUTPUT: Center frequency: 60 Hz ± 10 Hz $+15$ dB ± 2 dB against c. f. Ref.	Refer to Fig. 5-11.
	LEVEL cont.: Fully ccw.	LINE IN: Affected freqs./-19 dB	Check	OUTPUT: -15 dB ± 2 dB against c.f. Ref.	

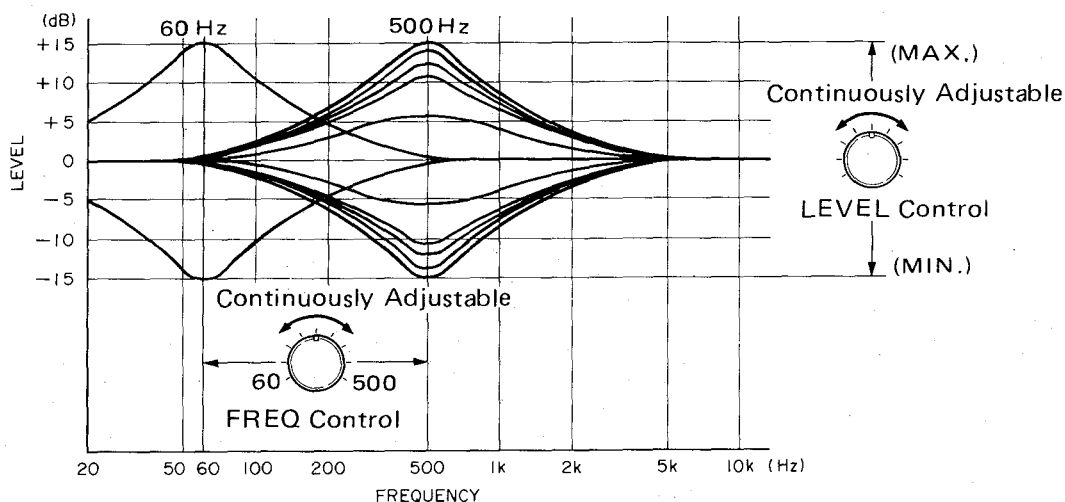


Fig. 5-11 LEVEL and FREQ control response

5-6 DBX PCB ADJUSTMENT

Note:

Since the DBX PCB assembly has been precisely adjusted at the factory, this section adjustment is not usually needed unless any of the trimmers have been changed, or any components on the PCB have sustained damage.

5-6-1 PREPARATION

1. Disconnect the wires from the P501 and P503 connectors (P503 for V-2RX) on the DBX PCB. Turn the deck OFF to prevent

accidental damage when disconnecting or reconnecting.

2. Make the following initial settings.

- POWER switch: ON (for supplying power via the P502 connector to the DBX PCB).
 - NR SYSTEM switch: OUT
 - DBX PCB trimmers: Approximate center positions
- All other front panel switches and controls have no effect on this adjustment.

5-6-2 ENCODING ADJUSTMENT

For V-4RX, check in the REC/PAUSE mode.

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	RESULT	REMARKS
1. RMS SYM	Fig. 5-14	100 Hz/-8.2 dB (300 mV)	Check	Clean 200 Hz sine-wave.	Refer to Figs. 5-12 and 5-13.
2. Encoding level	Fig. 5-15	400 Hz/-8.2 dB* ¹ (300 mV)	R52/R62	-8.2 dB* ² (300 mV)	* ¹ Reference 1 * ² Reference 2
3. VCA SYM	Fig. 5-15	400 Hz/-8.2 dB (300 mV)	R51/R61	Min. distortion (0.16% or less)	
4. Encoding single frequency response	Fig. 5-15	100 Hz/-8.2 dB (300 mV)	Check	+0.2 dB±0.5 dB against Ref. 2 (290 mV ~ 325 mV)	
		10 kHz/-8.2 dB	Check	-3.3 dB±0.5 dB against Ref. 2 (194 mV ~ 217 mV)	
5. Encoding operation level	Fig. 5-15	400 Hz/-68.2 dB* ³ (300μV)	Check	-30 dB±0.5 dB against Ref. 2 (8.96 mV ~ 10.1 mV)	* ³ -60 dB against Ref. 1
		400 Hz/+11.8 dB* ⁴ (3.00 V)	Check	+10 dB±0.5 dB against Ref. 2 (0.896 V ~ 1.01 V) Distortion: 0.3% or less	* ⁴ +20 dB against Ref. 1

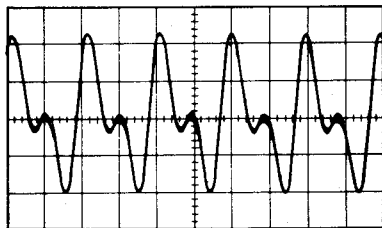


Fig. 5-12 RMS SYM check (Incorrect)

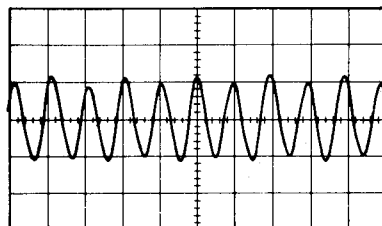


Fig. 5-13 RMS SYM check (Correct)

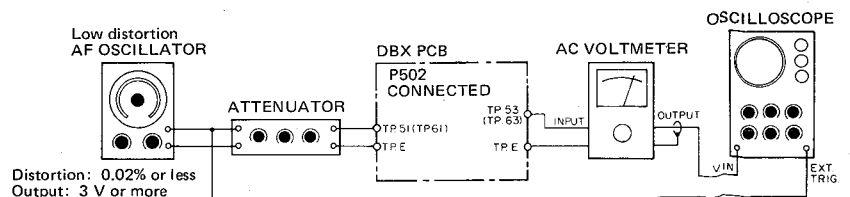


Fig. 5-14

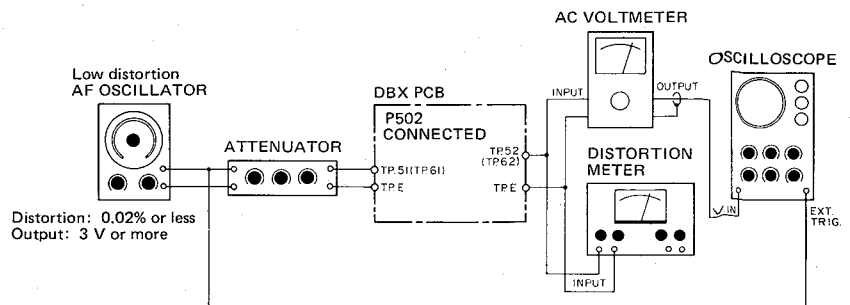


Fig. 5-15

5-6-3 DECODING ADJUSTMENT

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	RESULT	REMARKS
1. RMS SYM	Fig. 5-16 (V-2RX) Fig. 5-14 (V-4RX)	100 Hz/-8.2 dB (300 mV)	Check	Clean 200 Hz sine-wave.	Refer to figs. 5-12 and 5-13.
2. Decoding level	Fig. 5-17 (V-2RX) Fig. 5-15 (V-4RX)	400 Hz/-8.2 dB* ¹ (300 mV)	R54/R64	-8.2 dB* ² (300 mV)	V-2RX * ¹ Ref.1
			Check	-8.2 dB* ² (± 0.5 dB) (283 mV ~ 318 mV)	V-4RX * ¹ Ref.2
3. VCA SYM	Fig. 5-17 (V-2RX) Fig. 5-15 (V-4RX)	400 Hz/-8.2 dB (300 mV)	R53/R63	Min. distortion (0.12% or less)	V-2RX
			Check	Min. distortion (0.12% or less)	V-4RX
4. Decoding single frequency response	Fig. 5-17 (V-2RX) Fig. 5-15 (V-4RX)	100 Hz/-8.2 dB (300 mV)	Check	-0.2 dB ± 1 dB against Ref. 2 (261 mV ~ 329 mV)	
		10 kHz/-8.2 dB	Check	+5.5 dB ± 1 dB against Ref. 2 (504 mV ~ 634 mV)	
5. Decoding operation level	Fig. 5-17 (V-2RX) Fig. 5-15 (V-4RX)	400 Hz/-38.2 dB* ³ (9.49 mV)	Check	-60 dB ± 1 dB against Ref. 2 (267 μ V ~ 337 μ V)	* ³ -30 dB against Ref. 1
		400 Hz/+1.8 dB* ⁴ (0.949 V)	Check	+20 dB ± 1 dB against Ref. 2 (2.67 V ~ 3.37 V)	* ⁴ +10 dB against Ref. 1
6. DISC- ☒ dbx	Fig. 5-17 (V-2RX)	NR SYSTEM: OUT	Check	-16 dB ± 1.5 dB against Ref. 2 (40.0 mV ~ 56.5 mV)	
	Fig. 5-15 (V-4RX)	NR SYSTEM: DISC- ☒ dbx	Check	-24 dB ± 1.5 dB against Ref. 2 (15.9 mV ~ 22.5 mV)	

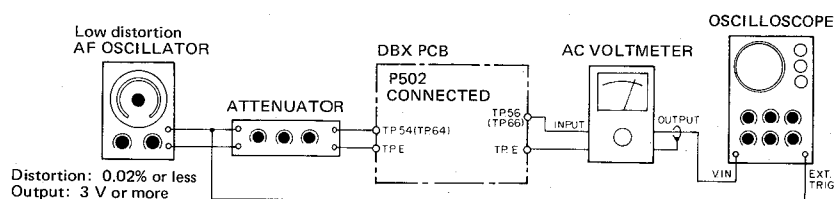


Fig. 5-16

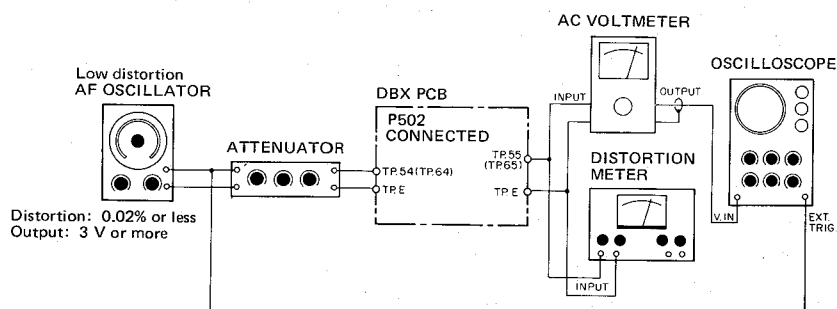


Fig. 5-17

5-7 ADJUSTMENT AND TEST POINT LOCATIONS (V-2RX)

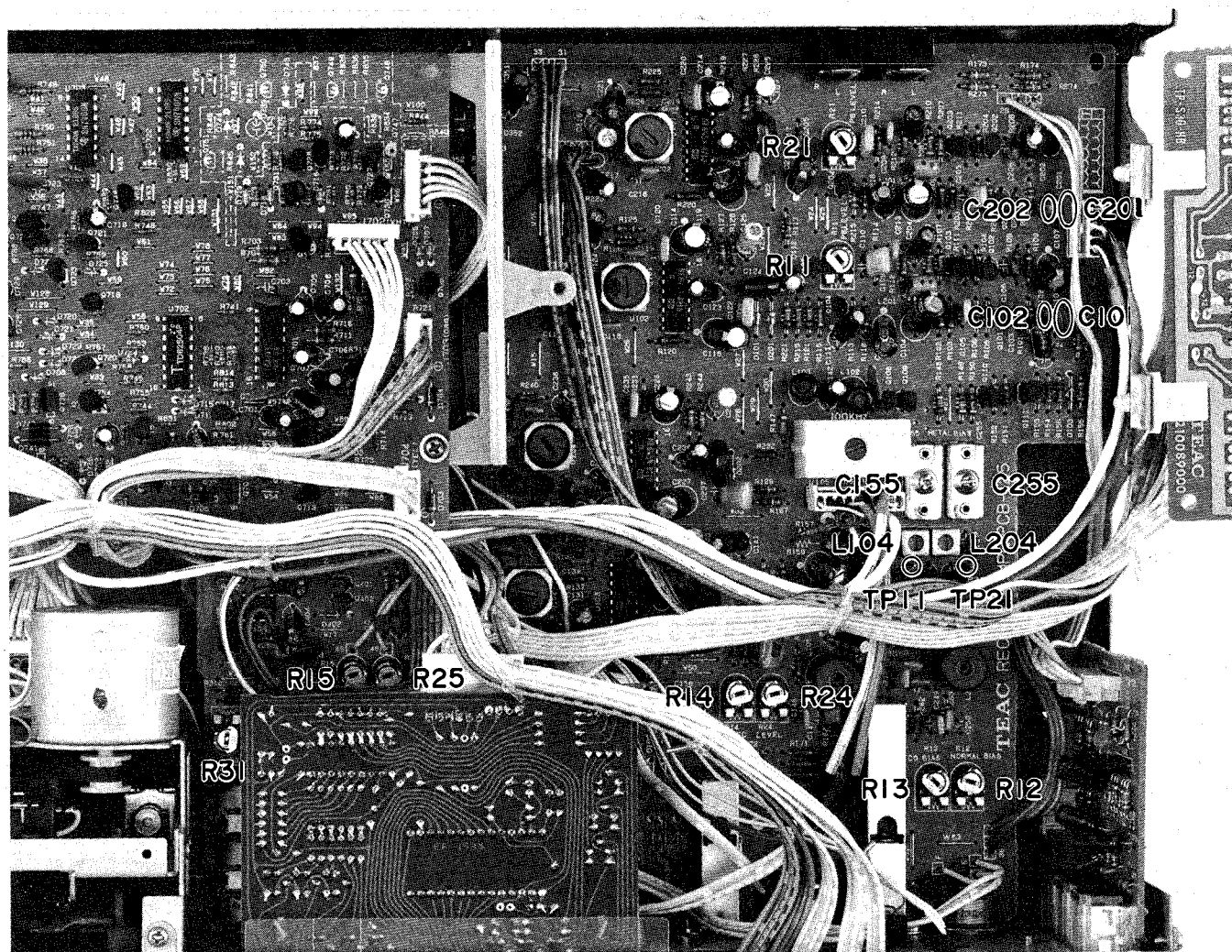


Fig. 5-18

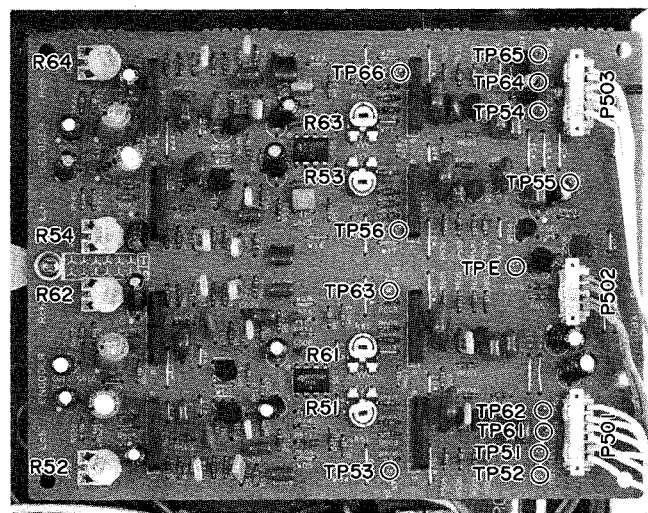


Fig. 5-19

REC/PLAY AMPL. PCB

C101/C201	Frequency response [PLAYBACK], fixed capacitors
C102/C202	Frequency response [PLAYBACK], fixed capacitors
C155/C255	Record bias [METAL]
L104/L204	Bias trap
R11/R21	Output level
R12	Record bias [NORMAL]
R13	Record bias [Co(CrO ₂)]
R14/R24	Record level
R15/R25	Peak program level meter
R31	PARAM-EQ frequency indicator

DBX PCB

R51/R61	VCA SYM [Encoding]
R52/R62	Encoding level
R53/R63	VCA SYM [Decoding]
R54/R64	Decoding level

5-8 ADJUSTMENT AND TEST POINT LOCATIONS (V-4RX)

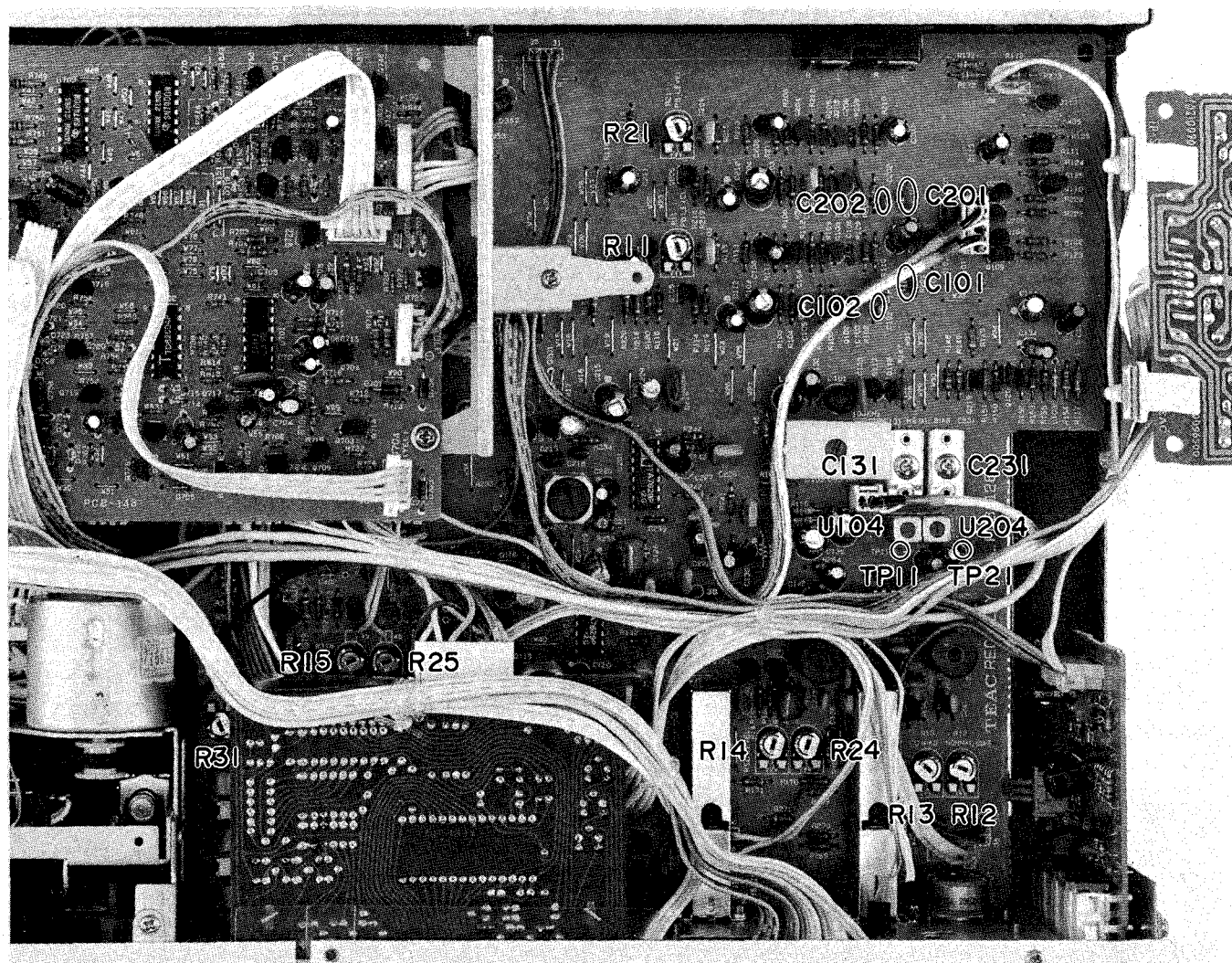


Fig. 5-20

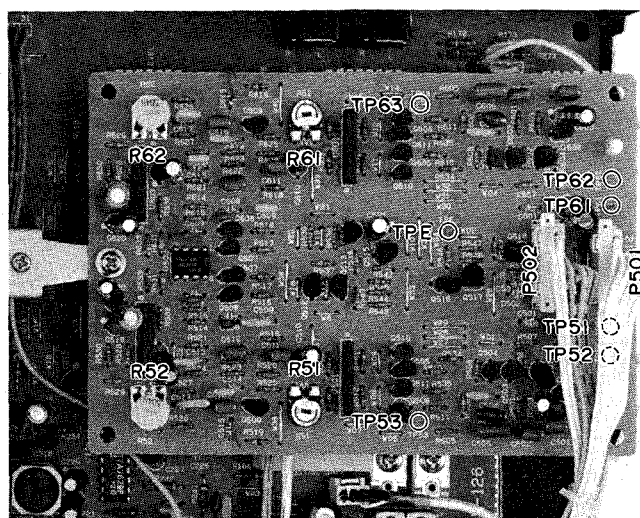


Fig. 5-21

REC/PLAY AMPL. PCB

C101/C201	Frequency response [PLAYBACK], fixed capacitors
C102/C202	Frequency response [PLAYBACK], fixed capacitors
C131/C231	Record bias [METAL]
R11/R21	Output level
R12	Record bias [NORMAL]
R13	Record bias [Co(CrO ₂)]
R14/R24	Record level
R15/R25	Peak program level meter
R31	PARAM-EQ frequency indicator
U104/U204	Bias trap

DBX PCB

R51/R61	VCA SYM [Encoding]
R52/R62	Encoding level

- 注意 1. 基板図はパターン面が示されています。
2. *印の部品は納期が若干かかります。あらかじめご了承ください。
3. △印は安全重要部品です。交換する時は必ずティアック指定の部品を使用してください。

※ノイズリダクションシステムは、ドルビー研究所からの実施権に基づき製造されています。

※ドルビー及び  は、ドルビー研究所の登録商標です。

※dbxおよびdbxマークはdbxインコーポレーテッドの登録商標です。

※dbxシステムはdbxインコーポレーテッドの実施権に基づいて製造されています。

部品配置図

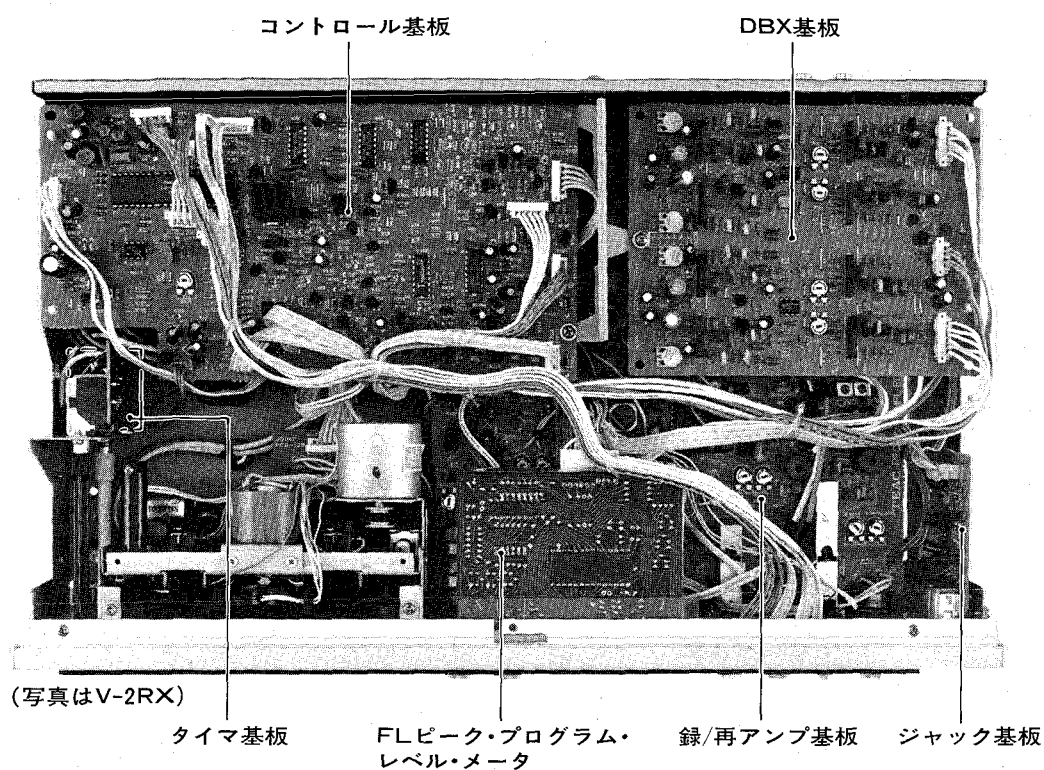


図1. デッキ上面

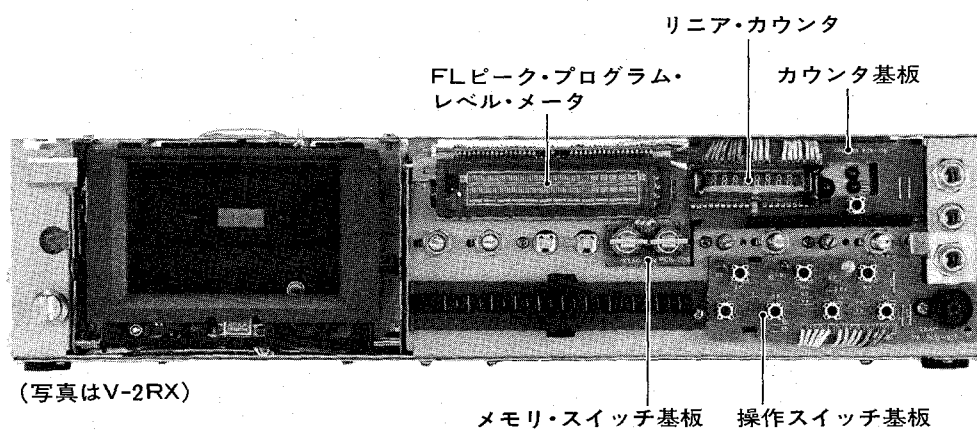


図2. デッキ正面

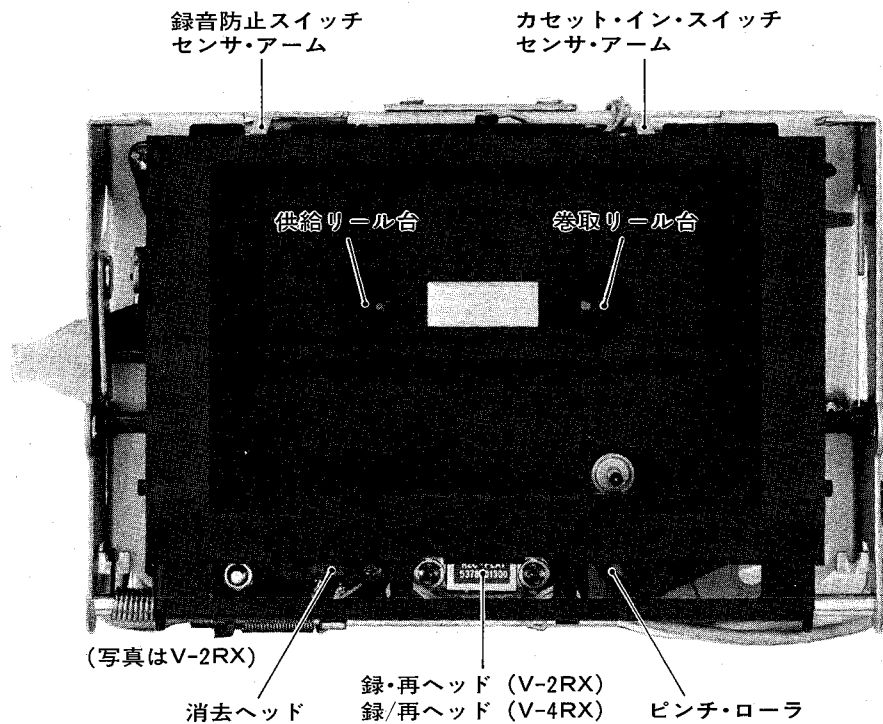


図3. トランスポート前面

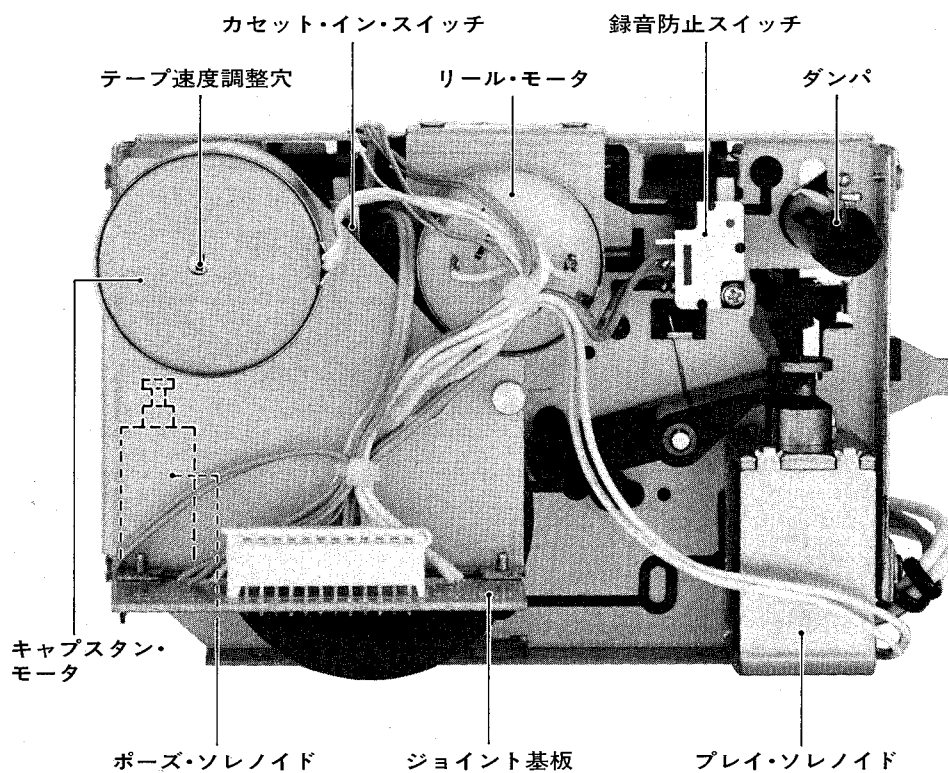
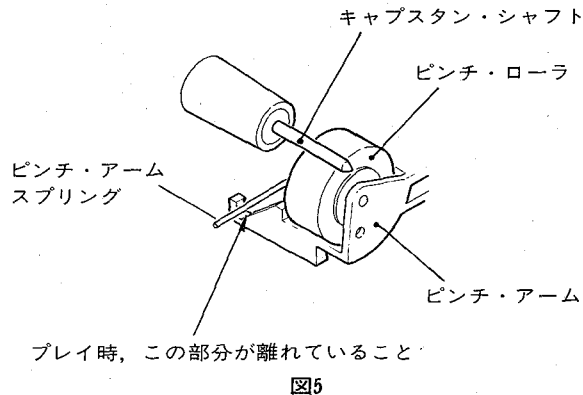


図4. トランスポート後面

機構部の調整

1. プレイ・ソレノイド位置チェック

- プレイ・ソレノイドが動作したとき、ピンチ・アーム・スプリングがピンチ・アームから離れ、ピンチ・ローラがキャプスタン・シャフトに圧着されている事を確認する。(図5参照)



2. ポーズ・ソレノイド位置調整

- ポーズ・モード時に、ピンチ・ローラとキャプスタン・シャフトとの間隔が0.3~0.5mmあることを確認する。
- 間隔が上記範囲外の場合は、ソレノイドの取付位置を動かして調整する。

3. テープ走行調整 (V-2RXのみ)

- ミラー・テープを走行させ、録・再ヘッドのガイドでテープがカールしないことを確認する。
カールする場合は消去ヘッドの高さを調整する。
- 再生時、消去ヘッド取付板とヘッド・ストップとのスキ間は0.3~0.5mmであること。

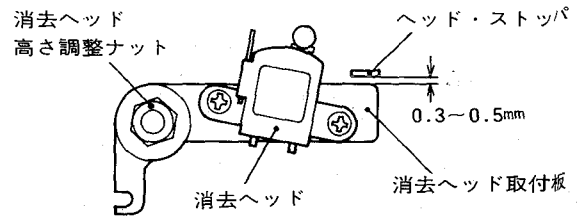


図6. テープ走行調整

4. ピンチ・ローラ圧着カチェック

戻し法による測定値: 350~450g

5. リール・トルク・チェック

テイク・アップ・トルク (右リール台)	35~ 65g・cm
バックテンション・トルク (左リール台)	2~ 4g・cm
F.FWD, REWトルク	80~150g・cm

6. テープ速度調整

MTT-111テープを再生し、テープ速度が3000Hz±70Hzの範囲内であることを確認する。

調整箇所 キャプスタン・モータ内の半固定抵抗(図4参照)

調整値 モータ・スタート後約1分のとき 3000Hz⁺¹⁸Hz

モータ・スタート後5分以上経過している時は、
3015~3025Hzにセットする。

7. ワウ・フラッタ・チェック

再生法	WRMS	0.06%以下	MTT-111使用
録再法	RMS	0.25%以下	MTT-502使用

8. 早巻き時間チェック

F.FWD, REW共 MTT-501 (C-60) を使用し、約90秒。

アンプ部の調整

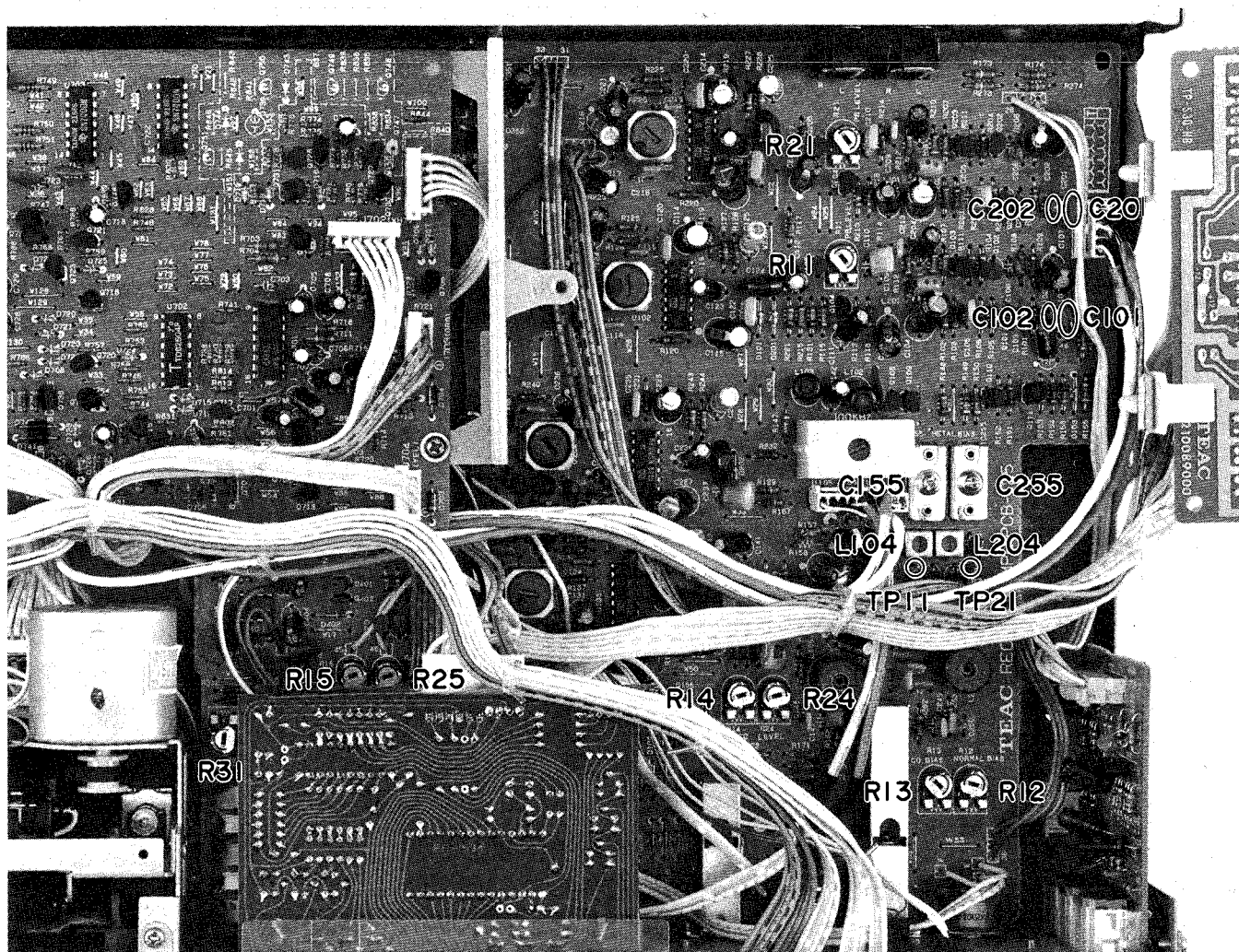
注1. アンプの調整のまえに、消去ヘッド、録/再ヘッド、テープ走行部分それぞれを充分消磁し、クリーナ液で清掃する。

- 調整は左チャンネル、右チャンネルの順に行なう。
- 0 dB = 0.775V。
- OUTPUT ピンの負荷は50kΩ。
- ドルビーNR回路及びDBX NR回路の測定に使用するレベル計の入カインピーダンスは1MΩ以上。
- 特に指示のない限り各スイッチの位置は表のように設定する。

スイッチ	位置	備考
TIMER	OUT	
PARAMETRIC EQUALIZER LEVEL	OFF	
MONITOR	TAPE	V-2RXのみ
NR SYSTEM	OUT	
TAPE	METAL	

表1. スイッチの設定

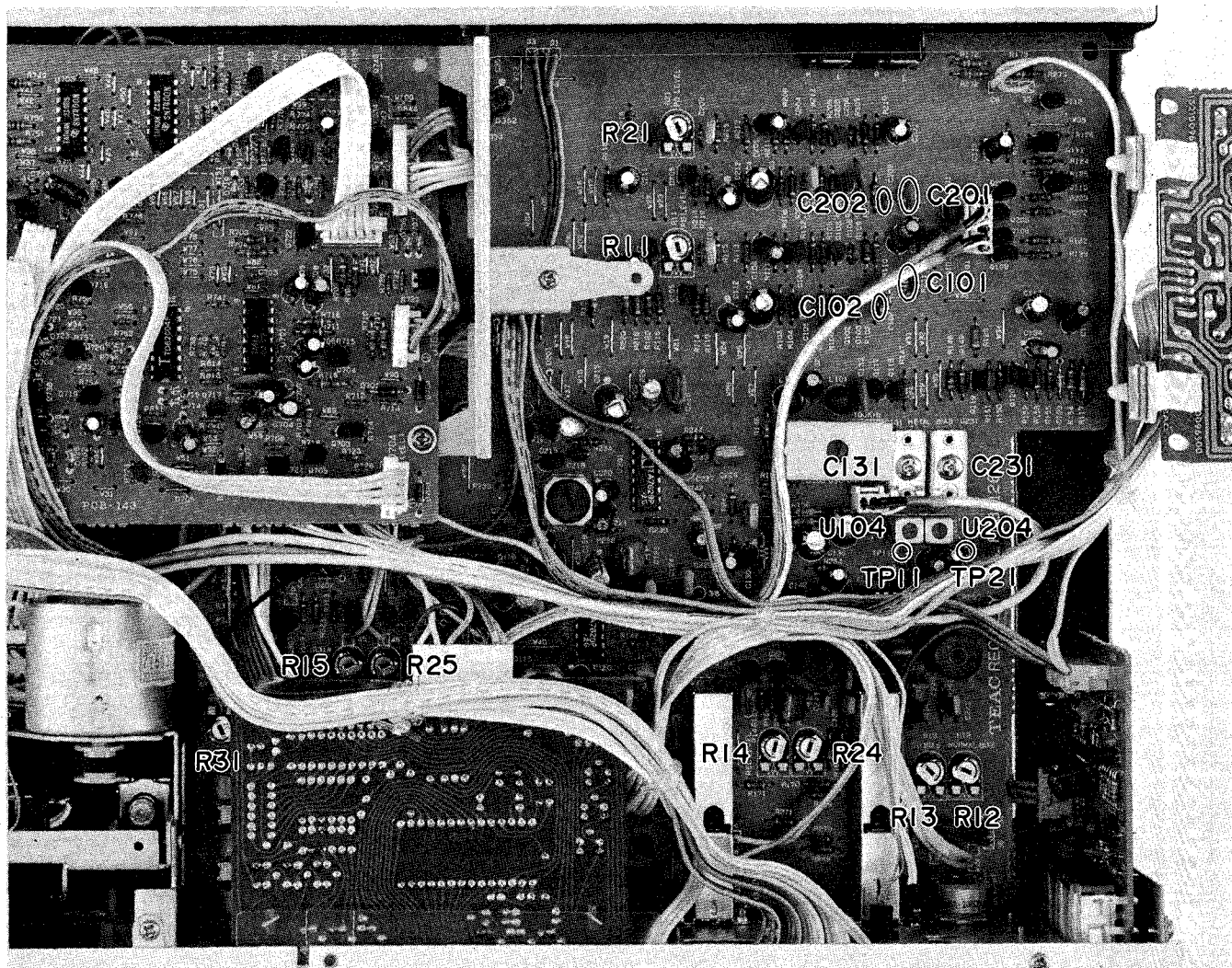
V-2RX



C101/C201	再生イコライザ(固定)
C102/C202	再生イコライザ調整(C101/C201に並列接続)
C155/C255	録音バイアス調整(METAL)
L104/L204	録音バイアス・トラップ
R11/R21	再生レベル調整
R12	録音バイアス調整(NORMAL)
R13	録音バイアス調整(Co(CrO ₂))
R14/R24	録音レベル調整
R15/R25	ピーク・プログラム・レベル・メータ指示調整
R31	パラメトリック・イコライザ 周波数表示調整

図7. 録/再アンプ基板調整箇所(V-2RX)

V-4RX



C101/C201	再生イコライザ(固定)
C102/C202	再生イコライザ調整(C101/C201に接続)
C131/C231	録音バイアス調整(METAL)
U104/U204	録音バイアス・トラップ
R11/R21	再生レベル調整
R12	録音バイアス調整(NORMAL)
R13	録音バイアス調整(Co(CrO ₂))
R14/R24	録音レベル調整
R15/R25	ピーク・プログラム・レベル・メータ指示調整
R31	パラメトリック・イコライザ 周波数表示調整

図8. 録/再アンプ基板調整個所(V-4RX)

再生系 (モード: PLAY)

第3項以外の測定箇所: OUTPUT端子

調整項目	準備・設定	入力信号	調整箇所	測定箇所・調整値	備考
1. ヘッド・アジマス調整	設定 表1 (21ページ)参照 OUTPUT つまみ MAX	MTT-150	チェック	位相 45° 以内	図1 参照
		MTT-356 (12.5kHz区分)	ヘッドのアジマス調整ねじ	L,R共 最大出力	V-2RX 図9 V-4RX 図10
2. 再生レベル・セット	同 上	MTT-150	R11/R21	-3.5dB	規定再生状態
3. メータ・レベル・セット	同 上	MTT-150	R15/R25	FL ピーク・プログラム・レベルメータ指示 0 dB	
4. 再生周波数特性チェック	TAPE スイッチ METAL	MTT-356	チェック	規格・図12参照	
	TAPE スイッチ NORMAL	MTT-356	チェック	スイッチをMETAL→NORMALに切換ると10kHzの出力は4dB高くなること。	
5. 再生S/Nチェック	TAPE スイッチ NORMAL	十分に消磁したテープを再生する	チェック	S/N 47dB以上	基準レベルは -3.5dB

モニタ系 (モード: REC/PAUSE……V-4RXのみ)

MONITORスイッチ: SOURCE (V-2RXのみ)

第6項以外の信号入力箇所: LINE IN

調整項目	準備・設定	入力信号	調整箇所	測定箇所・調整値	備考
6. MICROPHONE最小入力レベル・チェック	RECORD つまみ MAX	MICROPHONE 400Hz/-67dB	チェック	OUTPUT -3.5dB±3dB	
7. LINE最小入力レベル・チェック	RECORD つまみ MAX	400Hz/-19dB	チェック	OUTPUT -3.5dB±3dB	
8. LINE入力レベル・セット	同 上	400Hz/-9dB	RECORDつまみ	OUTPUT -3.5dB	LINE 規定入力状態
9. メータ・レベル・チェック	LINE規定入力状態	400Hz/-9dB	チェック	FLピーク・プログラム・レベル・メータ指示 0dB±1dB	
10. PHONES出力レベル・チェック	同 上	400Hz/-9dB	チェック	PHONES -15dB±3dB	8Ω 負荷

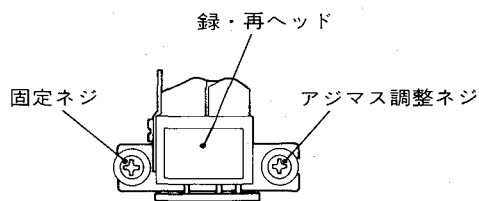


図9. 録・再ヘッド・アジマス調整 (V-2RX)

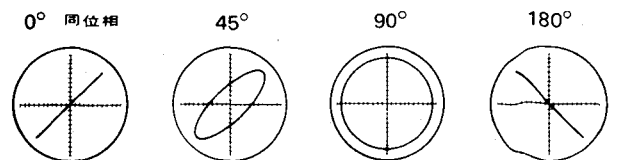


図11. 位相の確認

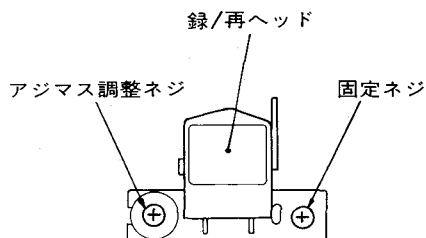


図10. 録/再ヘッド・アジマス調整 (V-4RX)

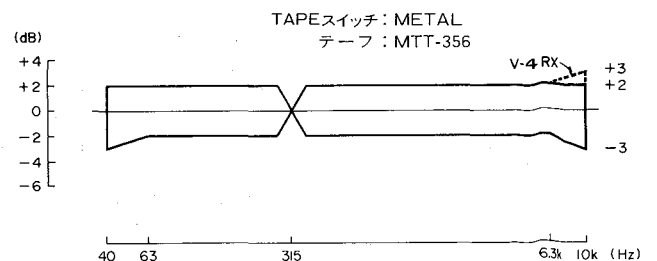


図12. 再生周波数特性

録音系

BIAS FINE つまみ：0 (センタ・クリック位置) — V-2RXのみ
第11項を除き 信号入力個所：LINE IN, 測定個所：OUTPUT

調整項目	準備・設定	入力信号	調整個所	測定個所・調整値	備考
11. バイアス・トラップ調整	無信号録音状態	無信号	L104/L204	TP.11/TP.21	V-2RX
			U104/U204	バイアス漏れ 最小	V-4RX
12. バイアス・セット	TAPE SW テープ METAL MTT-5072 Co(CrO ₂) MTT-5061 NORMAL MTT-501	400Hz, 6.3kHz/−42dB	400Hzと6.3kHzの録再出力が等しくなるよう下記の順序で調整		
			METAL	C155/C255	V-2RX
				C131/C231	V-4RX
				R13	
				R12	
13. 録音レベル・セット	METAL MTT-5072 Co(CrO ₂) MTT-5061 NORMAL MTT-501	400Hz/−12dB	R14/R24	録再出力 −6.5dB	規定録音状態
			チェック	録再出力 −6.5dB±1.5dB	
14. 総合周波数特性	METAL MTT-5072 Co(CrO ₂) MTT-5061 NORMAL MTT-501	−42dB	チェック	規格 METAL 図13参照 Co(CrO ₂) 図14参照 NORMAL 図15参照	27ページに記載
15. 総合歪率チェック	同 上	400Hz/−12dB	チェック	METAL 1.8%以下 Co(CrO ₂) 1.8%以下 NORMAL 2.0%以下	
16. 総合S/Nチェック	同 上	400Hz/−9dB	チェック	METAL 46dB以上 Co(CrO ₂) 46dB以上 NORMAL 45dB以上	基準レベルは −3.5dB
17. 消去率チェック	METAL MTT-5072	1kHz/+1dB	チェック	録音部分を再生した時のレベルを基準レベルとし、録音部分を消去した時の出力レベルとの差 65dB以上	1kHz B.P.F.使用
18. チャンネル間セパレーション・チェック	同 上	Lch 1kHz/−9dB Rch 無信号	チェック	Lch再生レベルを基準とし、Rchとの出力レベルの差 30dB以上	1kHz B.P.F.使用
			LchとRchの信号を入れかえた場合についてもチェックすること		
19. トラック間クロストーク・チェック	同 上	Lch 無信号 Rch 125Hz/−9dB	チェック	録音されたトラックを再生したときの出力レベルを基準レベルとし、テープを反転して再生したときのRch出力レベルとの差 40dB以上	
20. REC MUTE効果チェック	同 上	1kHz/+1dB	チェック	1kHzを録音し、途中でREC MUTE鈕を押して無信号録音部分を作る。(このとき REC MUTE LEDが点灯することを確認する。)このテープを再生したときの、信号部分と無信号部分との出力レベル差 65dB以上 (1kHz B.P.F.使用)	
21. DOLBY NR効果チェック	同 上	1kHz/−32dB	チェック	NR SYSTEM スイッチはOUT位置にして信号を録音する。次にこれを再生し、スイッチを ☒ ↔ OUTと切換えたときの出力レベル変化 3dB〜8dB	
		10kHz/−42dB	チェック	同 上	8dB〜12dB

DBX系 (調整及び測定箇所は図17, 図18参照)

NR SYSTEMスイッチ: NR-dbx 位置

調 整 項 目		準 備 ・ 設 定		入 力 信 号	調 整 個 所	測 定 個 所 ・ 調 整 値		備 考		
22. エンコーダ・レベル・セット		モード REC/PAUSE		LINE IN 400Hz/ -14.5dB	チェック	TP.51/TP.61	-8.2dB			
					R52/R62	TP.52/TP.62	-8.2dB			
23. エンコーダ単一周波数 応答チェック		同 上		LINE IN 100Hz/ -14.5dB	チェック	TP.52/TP.62(レベル変化) +0.5dB±1dB		400Hzの出力 (-8.2dB)を基 準レベルとする。		
				LINE IN 10kHz/ -14.5dB	チェック	TP.52/TP.62(レベル変化) -2.8dB±1dB				
24. エンコーダ 動作レベル・チェック		同 上		LINE IN 400Hz/ -74.5dB	チェック	TP.52/TP.62(レベル変化) -30dB±0.5dB		400Hzの出力 (-8.2dB)を基 準レベルとする。		
				LINE IN 400Hz/ +5.5dB	チェック	TP.52/TP.62(レベル変化) +10dB±0.5dB				
25. デコーダ レベル・セット	TAPE SW METAL テープ MTT-5072		NRSYSTEMスイッ チ OUTで録再		—	OUTPUT 録再出力を基準レベルとする。				
			NRSYSTEMスイッ チ NR・ dbx で録再			LINE IN 400Hz/ -14.5dB	R54/R64		基準レベルとの差 ±1dB以内	V-2RX
							チェック		基準レベルとの差 ±1.5dB以内	V-4RX
26. 録再歪率		TAPE SW METAL Co(CrO ₂) NORMAL	テープ MTT-5072 MTT-5061 MTT-501	LINE IN 400Hz/ -12dB	チェック	OUTPUT 全テープ	1.0%以下			
27. 録再S/N		同 上		無信号録音後再生する	チェック	OUTPUT 全テープ	65dB以上	基準レベルは -3.5dB		

PARAMETRIC EQUALIZER

PULL ON スイッチ: ON

FREQ つまみ : 500Hz(時計方向一杯)

LEVEL つまみ : センタ・クリック位置

PRE/POSTスイッチ: PRE

MONITOR スイッチ: SOURCE (V-2RXのみ)

モード: REC/PAUSE

パラメトリック・イコライザ系

調整項目	準備・設定	入力信号	調整箇所	測定箇所・調整値	備考
28. PARAM-EQ 周波数インジケータ 表示調整	FREQ つまみ 500Hz	無 信 号	R31	PARAM-EQ 周波数インジケータ 500Hzセグメント点灯	
	FREQ つまみ 60Hz	無 信 号	チェック	同上 60Hzセグメント点灯	
29. 周波数特性チェック	FREQ つまみ センタ・クリック位置	LINE IN 400Hz/-19dB	RECORDつまみ	OUTPUT -13.5dB	周波数特性 基準レベル
		LINE IN 40Hz~16kHz/-19dB	チェック	OUTPUT 偏差±2dB以内	
30. 周波数特性チェック (500Hz)	FREQ つまみ 500Hz LEVEL つまみ +10(時計方向一杯)	LINE IN -19dB	チェック	OUTPUT 出力のセンタ周波数 500Hz±50Hz 出力変化 +15dB±1dB 出力変化 -15dB±1dB	
	FREQ つまみ 500Hz LEVEL つまみ -10(反時計方向一杯)				
31. 周波数特性チェック (60Hz)	FREQ つまみ 60Hz LEVEL つまみ +10(時計方向一杯)	LINE IN -19dB	チェック	OUTPUT 出力のセンタ周波数 60Hz±10Hz 出力変化 +15dB±2dB 出力変化 -15dB±2dB	
	FREQ つまみ 60Hz LEVEL つまみ -10(反時計方向一杯)				

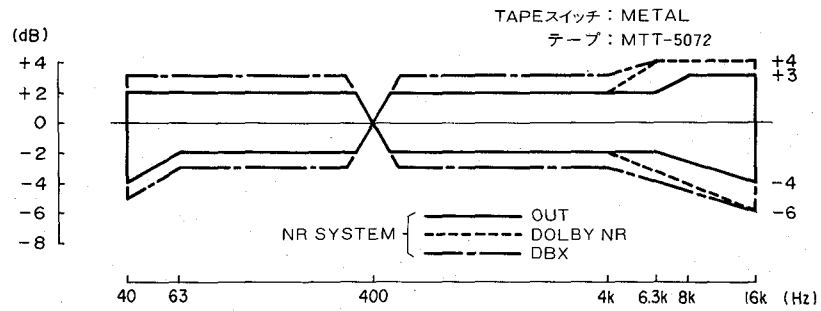


図13. 総合周波数特性(METAL)

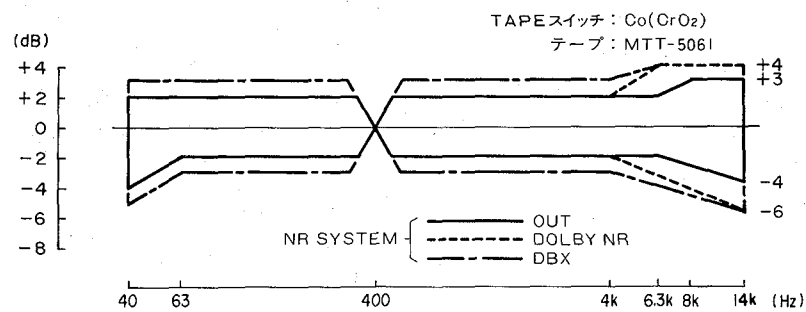


図14. 総合周波数特性(Co(CrO₂))

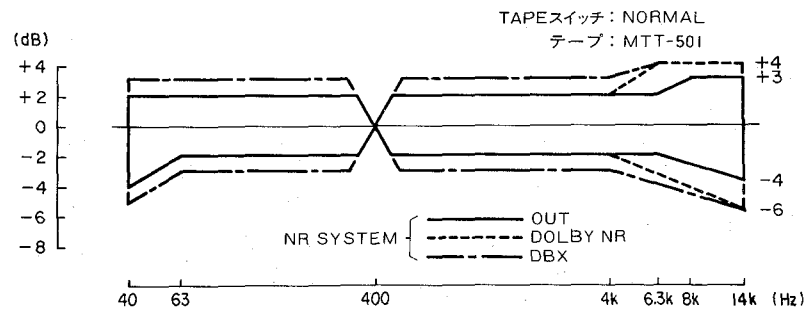


図15. 総合周波数特性(NORMAL)

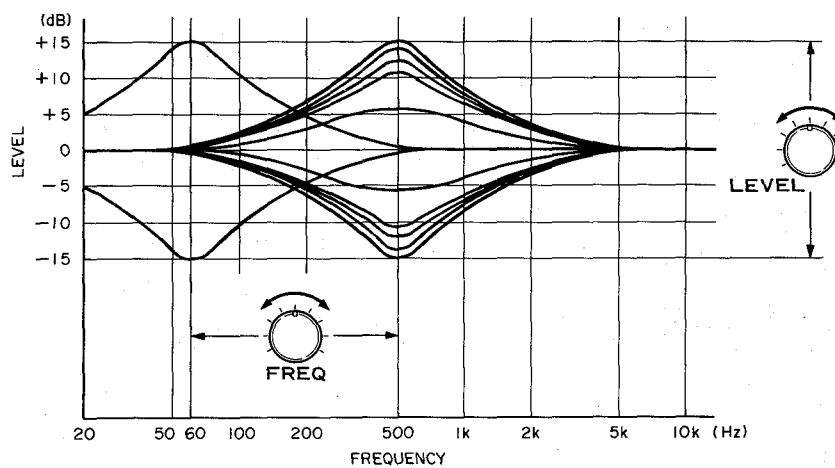
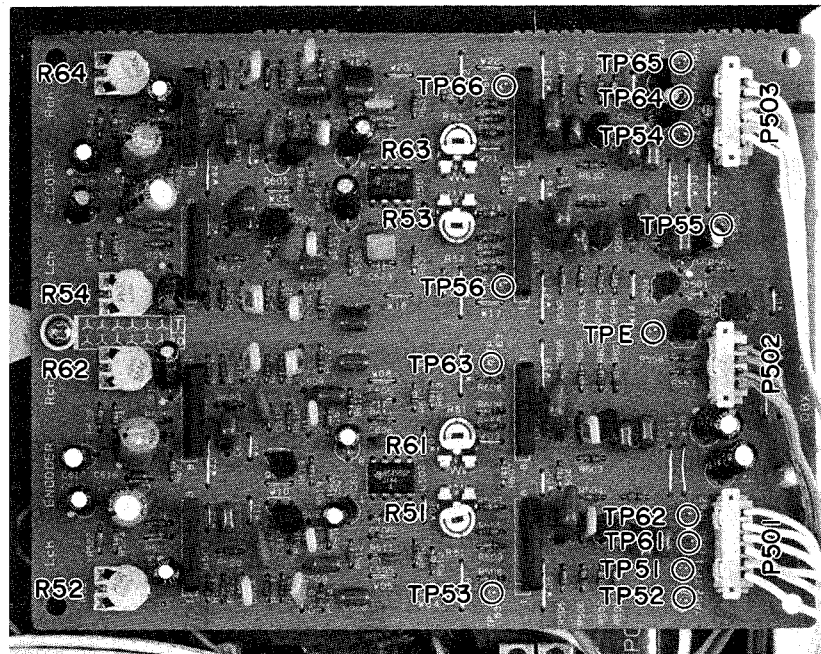


図16. パラメトリック・イコライザの特性(参考)

DBX基板単体調整

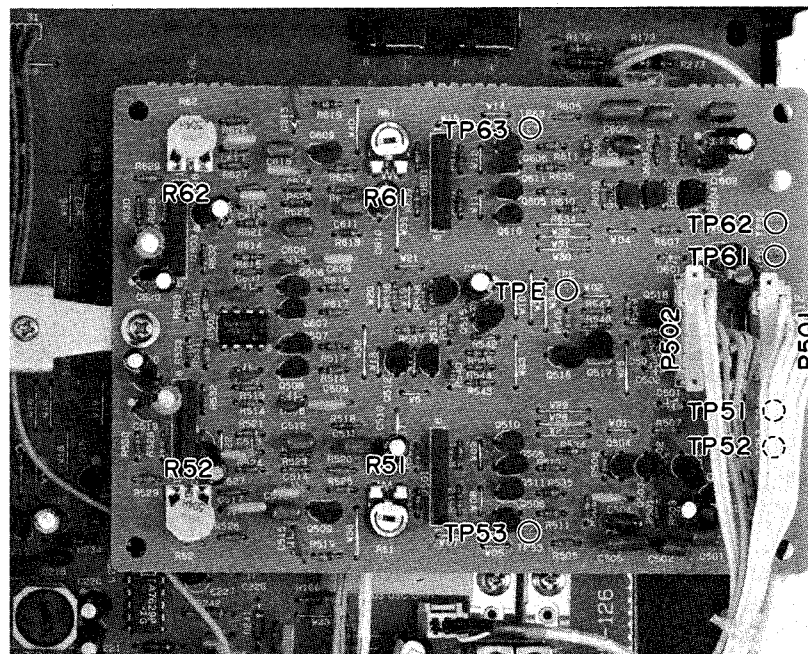
V-2RX



R51/R61	VCA SYM調整(エンコーダ)	R53/R63	VCA SYM調整(デコーダ)
R52/R62	エンコード・レベル調整	R54/R64	デコード・レベル調整

図17. DBX基板調整箇所(V-2RX)

V-4RX



R51/R61	VCA SYM調整(エンコーダ)	R52/R62	エンコード・レベル調整
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図18. DBX基板調整箇所(V-4RX)

準備

1. DBX基板のP 501及びP 503の線材を外す(P 503はV-2RXのみ)。
2. 基板の各半固定抵抗は、ほぼ中央位置にする。
3. 指定の無い限りNR SYSTEMスイッチはOUT位置。

エンコーダ調整

V-4RX:REC/PAUSE モード

調整項目	準備・設定	入力信号	調整箇所	測定箇所・調整値	備考
1. RMS SYMチェック	図19	TP.51/TP.61 100Hz/300mV	チェック	TP.53/TP.63出力波形 200Hzの正弦波であること	図23, 図24参照
2. エンコーダ 基準レベル調整	図20	TP.51/TP.61 400Hz/300mV	R52/R62	TP.52/TP.62 300mV	
3. VCA SYM調整	図20	TP.51/TP.61 400Hz/300mV	R51/R61	TP.52/TP.62 歪率最小(0.16%以下)	
4. 周波数特性チェック	図20	TP.51/TP.61 100Hz/300mV	チェック	TP.52/TP.62 290mV~325mV	
		TP.51/TP.61 10kHz/300mV	チェック	TP.52/TP.62 194mV~217mV	
5. エンコード効果チェック	図20	TP.51/TP.61 400Hz/300μV	チェック	TP.52/TP.62 8.96mV~10.1mV	
		TP.51/TP.61 400Hz/3.0V	チェック	TP.52/TP.62 0.896V~1.01V 歪率 0.3%以下	

デコーダ調整

調整項目	準備・設定	入力信号	調整箇所	測定箇所・調整値	備考
7. RMS SYM調整	図21 (V-2RX) 図19 (V-4RX)	TP.54/TP.64 (V-2RX) TP.51/TP.61 (V-4RX) 100Hz/300mV	チェック	TP.56/TP.66 (V-2RX) TP.53/TP.63 (V-4RX) 200Hzの正弦波であること	図23, 図24参照
8. デコーダ 基準レベル調整	図22	TP.54/TP.64 400Hz/300mV	R54/R64	TP.55/TP.65 300mV	V-2RX
	図20	TP.51/TP.61 400Hz/300mV	チェック	TP.52/TP.62 283mV~318mV	V-4RX
9. VCA SYM調整	図22	TP.54/TP.64 400Hz/300mV	R53/R63	TP.55/TP.65 歪率最小(0.12%以下)	V-2RX
	図20	TP.51/TP.61 400Hz/300mV	チェック	TP.52/TP.62 歪率0.12%以下	V-4RX
10. 周波数特性チェック	図22 (V-2RX) 図20 (V-4RX)	TP.54/TP.64 (V-2RX) TP.51/TP.61 (V-4RX) 100Hz/300mV	チェック	TP.55/TP.65 (V-2RX) TP.52/TP.62 (V-4RX) 261mV~329mV	
	同 上	同 上 10kHz/300mV	チェック	同 上 504mV~634mV	
11. デコード効果チェック	同 上	同 上 400Hz/9.49V	チェック	同 上 267μV~337μV	
	同 上	同 上 400Hz/0.949V	チェック	同 上 2.67V~3.37V	
12. DISC-[dbx] 周波数特性チェック	同 上	NR SYSTEM OUT 同 上 20Hz/300mV	チェック	同 上 40.0mV~56.5mV	
		NR SYSTEM DISC-[dbx] 同 上 20Hz/300mV	チェック	同 上 15.9mV~22.5mV	

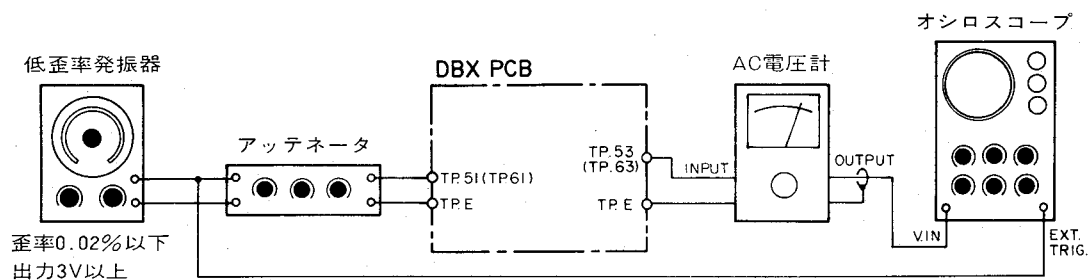


図19

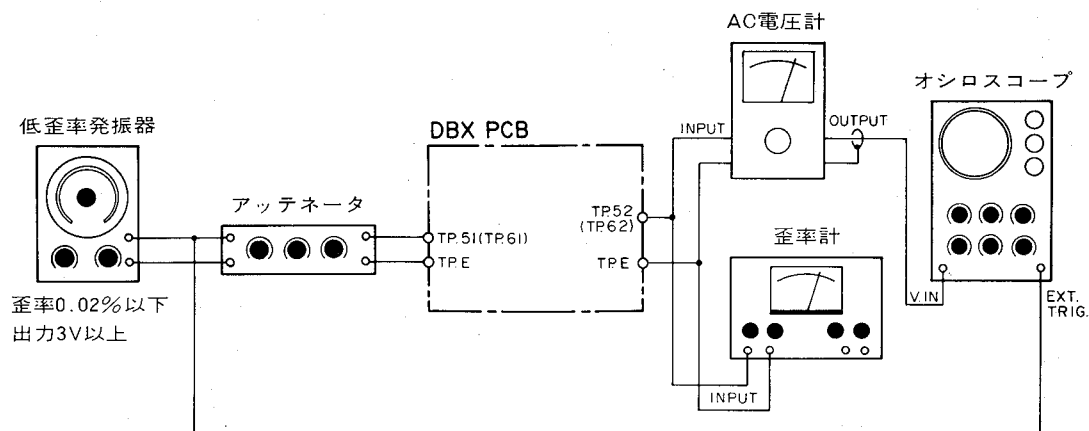


図20

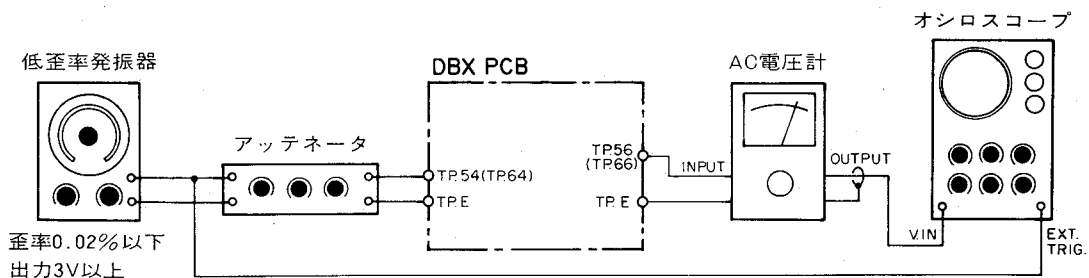


図21

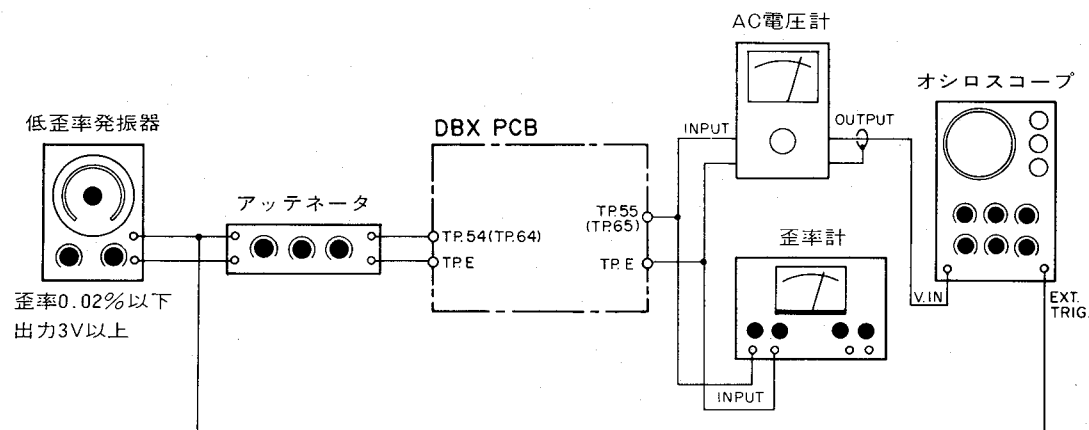


図22

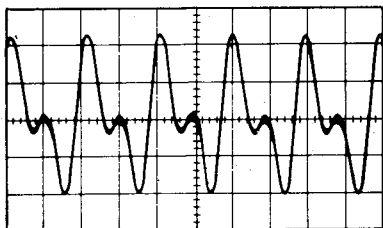


図23. RMS SYM(不良)

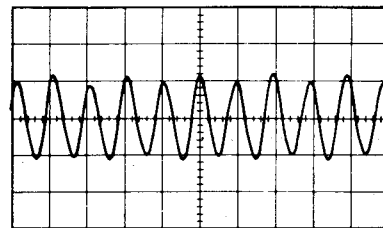


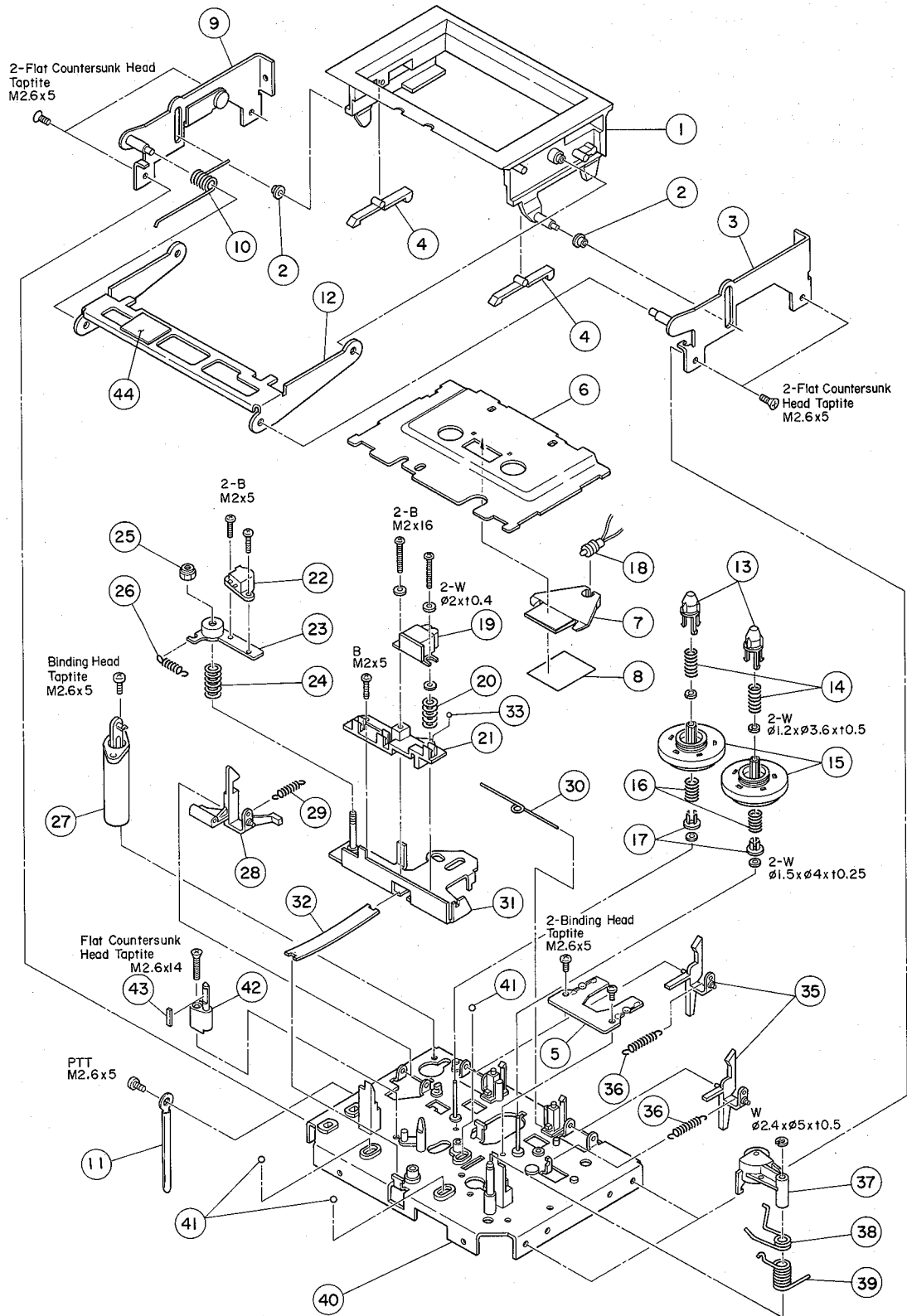
図24. RMS SYM(良)

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	*5800377401	Cover, Top	
1 - 2	*5783084008	Screw, M4 x 8 (BLK Ni)	
1 - 3	*5640036500	Panel Assy, Front	V-2RX
	*5640038700	Panel Assy, Front	V-4RX
1 - 4	*5800327900	Spring	
1 - 5	*5800375100	Button, Eject	
1 - 6	5800377303	Cover, Cassette	V-2RX
	5800383603	Cover, Cassette	V-4RX
1 - 7	*5800378800	Cover, Bottom	
1 - 8	*5800381600	Cabinet Assy [L]	
1 - 9	*5555526000	Washer [L]	

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EXPLODED VIEW-2 (V-2RX)

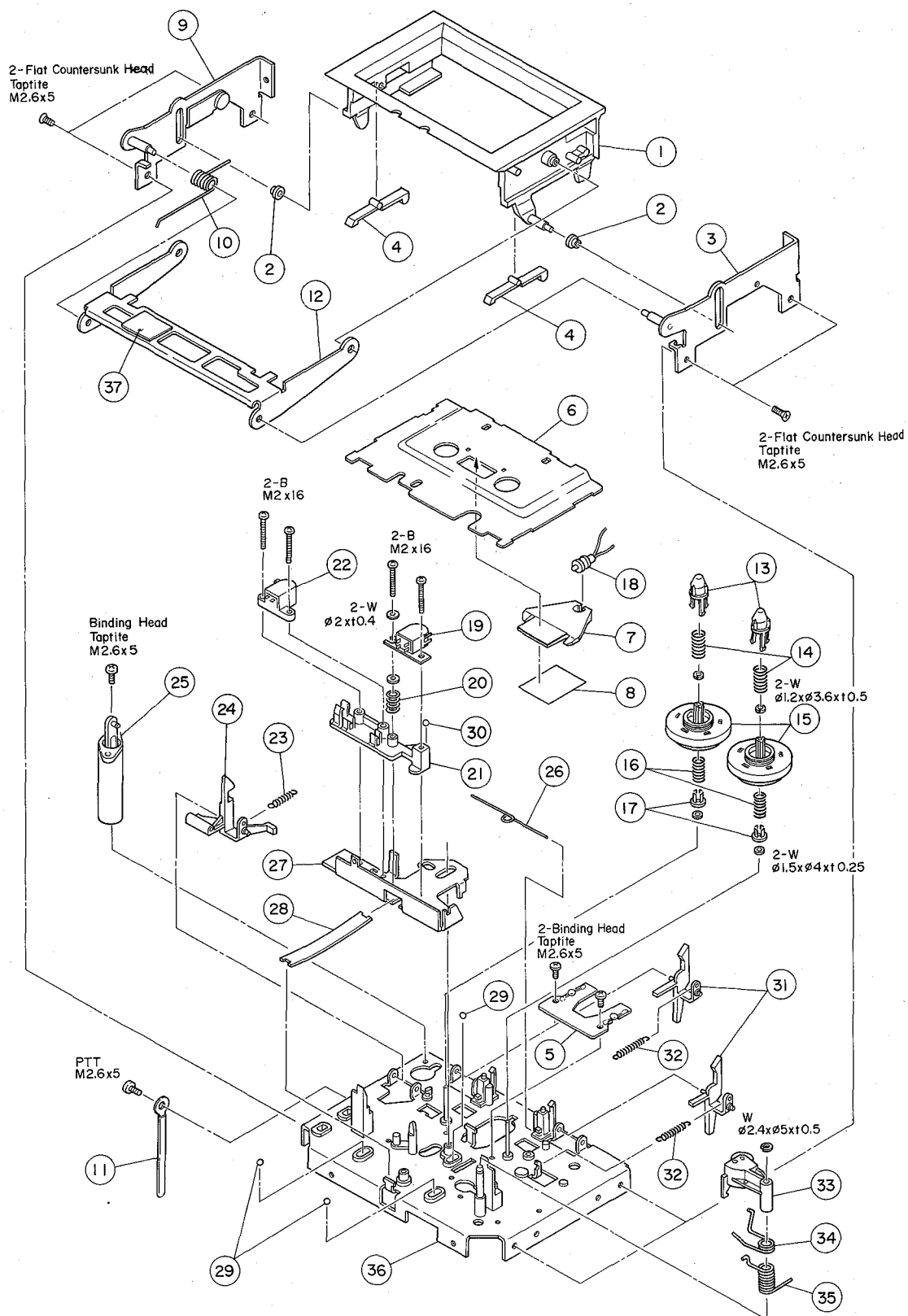


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	*5800379801	Holder, Cassette	
2 - 2	*5800233600	Roller, Guide	
2 - 3	*5800233700	Bracket Assy, Holder; R	
2 - 4	*5800233500	Lever, Cassette Pressure	
2 - 5	*5200088700	PCB Assy, SENSOR; B	
2 - 6	*5800405300	Panel, Cassette; B	
2 - 7	*5800404200	Lens Assy, Cassette; B	
2 - 8	*5800234300	Plate, Reflector	
2 - 9	*5800233900	Bracket Assy, Holder; L	
2 - 10	*5800234201	Spring, Holder	
2 - 11	*5581038000	Clamper, Cord; A	
2 - 12	*5800237100	Arm, Holder	
2 - 13	5800236500	Ring, Drive	
2 - 14	*5800231300	Spring, Reel	
2 - 15	5800379600	Table Assy, Reel; B	
2 - 16	*5800231400	Spring, B. T.	
2 - 17	*5800231500	Holder, Spring	
2 - 18	5310006500	Lamp, DC12V 60mA	
2 - 19	5378901300	Head, REC-PLAY	
2 - 20	*5800114700	Spring, Head	
2 - 21	*5800238302	Holder, Head; B	
2 - 22	5378900300	Head, Erase	
2 - 23	*5800234601	Bracket Assy, Erase Head	
2 - 24	*5800234900	Spring, Head; B	
2 - 25	*5781953000	Nut, Nylon; M3	
2 - 26	*5800235000	Spring, Erase Head	
2 - 27	*5800294600	Damper Assy, Air	
2 - 28	*5800238100	Arm, Lock	
2 - 29	*5800232000	Spring, Lock	
2 - 30	*5800231700	Spring, Brake	
2 - 31	*5800234400	Plate Assy, Head Base; A	
2 - 32	*5800231800	Plate, Head Base Pressure	
2 - 33	*5540055000	Steel Ball, $\phi 2$	
2 - 34		(Not used)	
2 - 35	*5800236300	Arm, Sensor	
2 - 36	*5800232100	Spring, Sensor	
2 - 37	5800120402	Arm Assy, Pinch Roller	
2 - 38	*5800353000	Spring, Pinch Roller Arm	
2 - 39	*5800231901	Spring, Arm Return	
2 - 40	*5800238001	Sub-chassis Assy, Mechanism	
2 - 41	5540056000	Steel Ball, $\phi 3$	
2 - 42	*5800235100	Holder, Pad	
2 - 43	*5800235201	Pad, Head	
2 - 44	*5800446100	Cover, Head [C]	

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EXPLODED VIEW-3 (V-4RX)

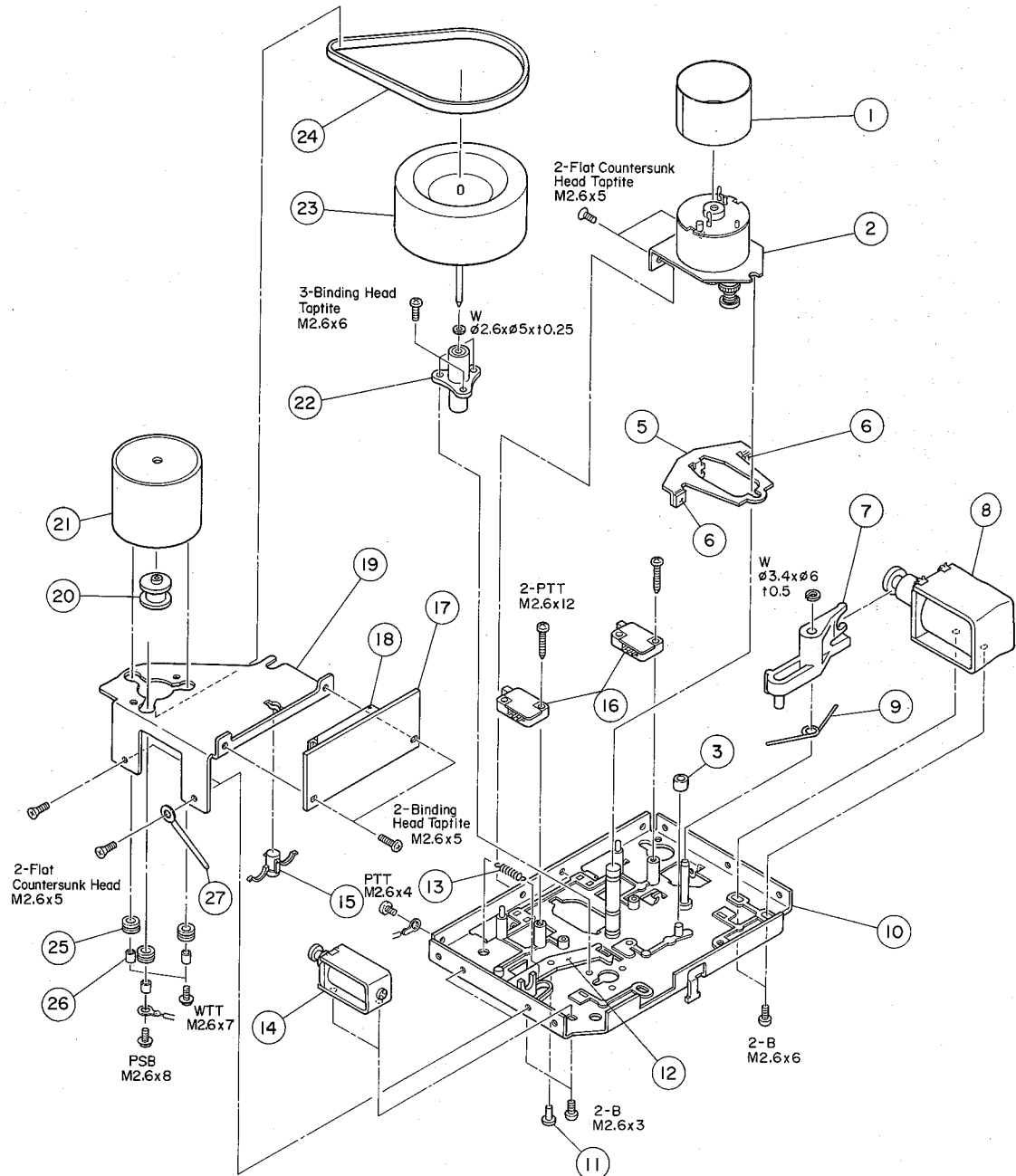


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3 - 1	*5800379801	Holder, Cassette	
3 - 2	*5800233600	Roller, Guide	
3 - 3	*5800233700	Bracket Assy, Holder; R	
3 - 4	*5800233500	Lever, Cassette Pressure	
3 - 5	*5200088700	PCB Assy, SENSOR; B	
3 - 6	*5800405300	Panel, Cassette; B	
3 - 7	*5800404200	Lens Assy, Cassette; B	
3 - 8	*5800234300	Plate, Reflector	
3 - 9	*5800233900	Bracket Assy, Holder; L	
3 - 10	*5800234201	Spring, Holder	
3 - 11	*5581038000	Clamper, Cord; A	
3 - 12	*5800237100	Arm, Holder	
3 - 13	5800236500	Ring, Drive	
3 - 14	*5800231300	Spring, Reel	
3 - 15	5800379600	Table Assy, Reel; B	
3 - 16	*5800231400	Spring, B. T.	
3 - 17	*5800231500	Holder, Spring	
3 - 18	5310006500	Lamp, DC12V 60mA	
3 - 19	5378901800	Head, REC/PLAY	
3 - 20	*5800114700	Spring, Head	
3 - 21	*5800238200	Holder, Head; A	
3 - 22	5378900300	Head, Erase	
3 - 23	*5800232000	Spring, Lock	
3 - 24	*5800238100	Arm, Lock	
3 - 25	*5800294600	Damper Assy, Air	
3 - 26	*5800231700	Spring, Brake	
3 - 27	*5800236700	Plate, Head Base; A	
3 - 28	*5800231800	Plate, Head Base Pressure	
3 - 29	5540056000	Steel Ball, $\phi 3$	
3 - 30	*5540055000	Steel Ball, $\phi 2$	
3 - 31	*5800236300	Arm, Sensor	
3 - 32	*5800232100	Spring, Sensor	
3 - 33	5800120402	Arm Assy, Pinch Roller	
3 - 34	*5800353000	Spring, Pinch Roller Arm	
3 - 35	*5800231901	Spring, Arm Return	
3 - 36	*5800238001	Sub-chassis Assy, Mechanism	
3 - 37	*5800446100	Cover, Head [C]	

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 [A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

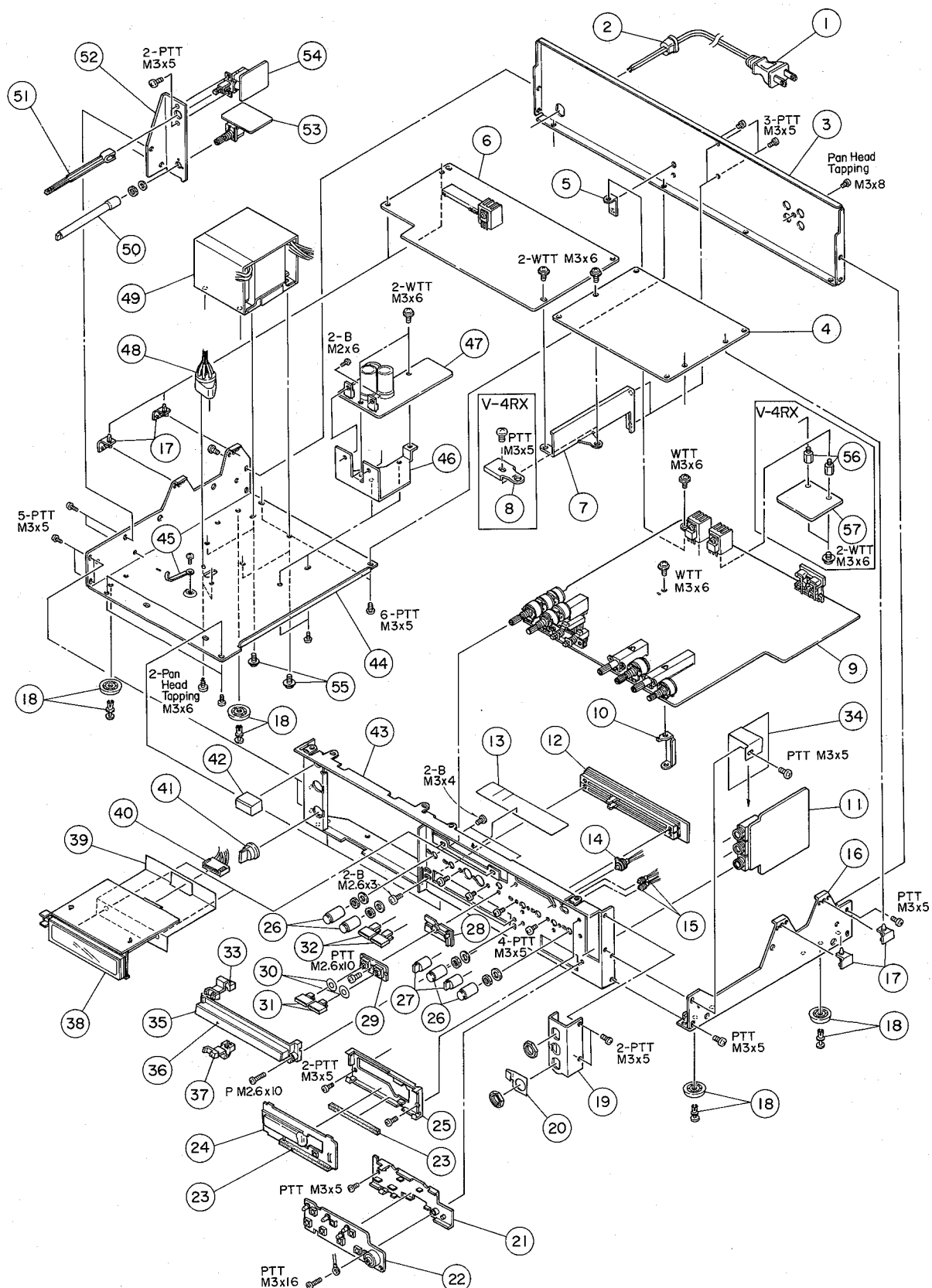
EXPLODED VIEW-4



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 1	*5800235900	Plate, Shield	
4 - 2	5800430500	Motor Assy, Reel; DC	
4 - 3	*5800230901	Cushion	
4 - 4		(Not used)	
4 - 5	*5800236600	Plate, Brake	
4 - 6	*5800231600	Shoe, Brake	
4 - 7	*5800236100	Arm, Play	
4 - 8	5313001300	Solenoid, A	
4 - 9	*5800230801	Spring, Base Return	
4 - 10	*5800238001	Sub-chassis Assy, Mechanism	
4 - 11	*5800231000	Pin	
4 - 12	*5800236200	Arm, Pause	
4 - 13	*5800324801	Spring, Pause Arm	
4 - 14	5313001400	Solenoid, B	
4 - 15	*5800236900	Bearing, Thrust	
4 - 16	5300908500	Switch, Slide; 1-2 (N)	
4 - 17	*5200088800	PCB Assy, JOINT; B	
4 - 18	*5336089200	Connector Socket, 12P	
4 - 19	*5800236800	Bracket, Capstan Motor	
4 - 20	5800232200	Pulley, Motor	
4 - 21	5600058300	Motor Assy, Capstan	
4 - 22	5800238800	Housing Assy, Capstan	
4 - 23	5800238600	Flywheel Assy, Capstan	
4 - 24	5800106900	Belt, Capstan Drive	
4 - 25	*5534537000	Cushion, Rubber	
4 - 26	*5785603050	Spacer	
4 - 27	*5581038000	Clamper, Cord; A	

EXPLODED VIEW-5



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5 - 1	*5128027000 *5128075000 *5350008200 *5128047000 *5350008300	Cord, AC Power [J] Cord, AC Power [US, C, GE, L] Cord, AC Power [E] Cord, AC Power [UK] Cord, AC Power [A]	
5 - 2	*5534660000 *5534661000	Bushing, Cord; 4N-4 [All except UK] Bushing, Cord; 4K-1 [UK]	
5 - 3	*5800378701	Panel, Rear	V-2RX
5 - 4	*5200089000 *5200096500	PCB Assy, DBX PCB Assy, DBX	V-4RX
5 - 5	*5800249701	Bracket, PCB	
5 - 6	*5200089601 *5200089611 *5200096601 *5200096611	PCB Assy, CONTROL [All except US, C] PCB Assy, CONTROL [US, C] PCB Assy, CONTROL [All except US, C] PCB Assy, CONTROL [US, C]	V-2RX V-2RX V-4RX V-4RX
5 - 7	*5800377800	Bracket, PCB; A	
5 - 8	*5800377900	Bracket, PCB	V-4RX
5 - 9	*5200089200 *5200089210 *5200096400 *5200096410	PCB Assy, REC/PLAY AMPL [All except E, UK] PCB Assy, REC/PLAY AMPL [E, UK] PCB Assy, REC/PLAY AMPL [All except E, UK] PCB Assy, REC/PLAY AMPL [E, UK]	V-2RX V-2RX V-4RX V-4RX
5 - 10	*5800376700	Bracket, PCB	
5 - 11	*5200088901	PCB Assy, JACK	
5 - 12	*5200089300	PCB Assy, VR	
5 - 13	*5800382600	Plate, Insulating; Meter	
5 - 14	5310006200	Lamp, 14V 80mA	
5 - 15	5310006400	Lamp, 12V	
5 - 16	*5800377500	Chassis, R	
5 - 17	*5800273000	Hinge, PCB	
5 - 18	*5800268600	Foot	
5 - 19	*5800378000	Bracket, Jack	
5 - 20	*5800376400	Plate, Earth	
5 - 21	*5800377602	Bracket, PCB; B	
5 - 22	*5200089700 *5200089710	PCB Assy, SW [All except US, C] PCB Assy, SW [US, C]	
5 - 23	*5800387901	Cushion	
5 - 24	*5200090800 *5200090810	PCB Assy, COUNTER [All except US, C] PCB Assy, COUNTER [US, C]	
5 - 25	*5800377701	Bracket, PCB	
5 - 26	5800374600	Knob, B	
5 - 27	5800374500	Knob, A	
5 - 28	*5800376900	Holder, Switch; A	
5 - 29	*5200089800 *5200089810	PCB Assy, MEMORY SW [All except US, C] PCB Assy, MEMORY SW [US, C]	
5 - 30	*5785415000	Washer, Mylar; $\phi 5 \times \phi 13 \times t0.1$	
5 - 31	5800374701	Knob, Selector; A	
5 - 32	5800374800	Knob, Selector; B	
5 - 33	5800449801	Knob Assy, Slide VR; B	
5 - 34	*5800452300	Cover, Shield; A	
5 - 35	*5800377200	Escutcheon, Slide VR	
5 - 36	*5800376300	Plate, VR Scale	
5 - 37	5800449701	Knob Assy, Slide VR; A	
5 - 38	5296005901	Meter Assy	
5 - 39	*5800382600	Plate, Meter Insulating	
5 - 40	*5122172000	Connector Socket, 10P	
5 - 41	5800044300	Knob, Timer	

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5 - 42	5800375000	Button, Power	
5 - 43	*5800378501	Chassis, Front	
5 - 44	*5800378602	Chassis, L	
5 - 45	*5581038000	Clamper, Cord; A	
5 - 46	*5800382700	Bracket, POWER SUPPLY PCB	
5 - 47	*5200089900 *5200089910 *5200089911	PCB Assy, POWER SUPPLY [J, GE, A, L] PCB Assy, POWER SUPPLY [US, C] PCB Assy, POWER SUPPLY [E, UK]	
5 - 48	*5302101700	Switch, Voltage Selector [GE, L]	
5 - 49	*5320017400 *5320017500 *5320017600 *5320017700	Transformer, Power [J] Transformer, Power [US, C] Transformer, Power [GE, L] Transformer, Power [E, UK, A]	
5 - 50	*5800046900	Rod, Joint; B	
5 - 51	*5800253700	Rod, Joint	
5 - 52	*5800378300	Bracket, Switch	
5 - 53	*5200105500	PCB Assy, TIMER	
5 - 54	*5200090900 *5200090910 *5200090920 *5200090930 *5200090940	PCB Assy, POWER SWITCH [J] PCB Assy, POWER SWITCH [US] PCB Assy, POWER SWITCH [C] PCB Assy, POWER SWITCH [GE, L] PCB Assy, POWER SWITCH [E, UK, A]	
5 - 55	*5783084008	Screw, M4 x 8 (BLK Ni)	
5 - 56	*5785623010	Spacer, PCB	V-4RX
5 - 57	*5200108300	PCB Assy, MUTING	V-4RX

INCLUDED ACCESSORIES

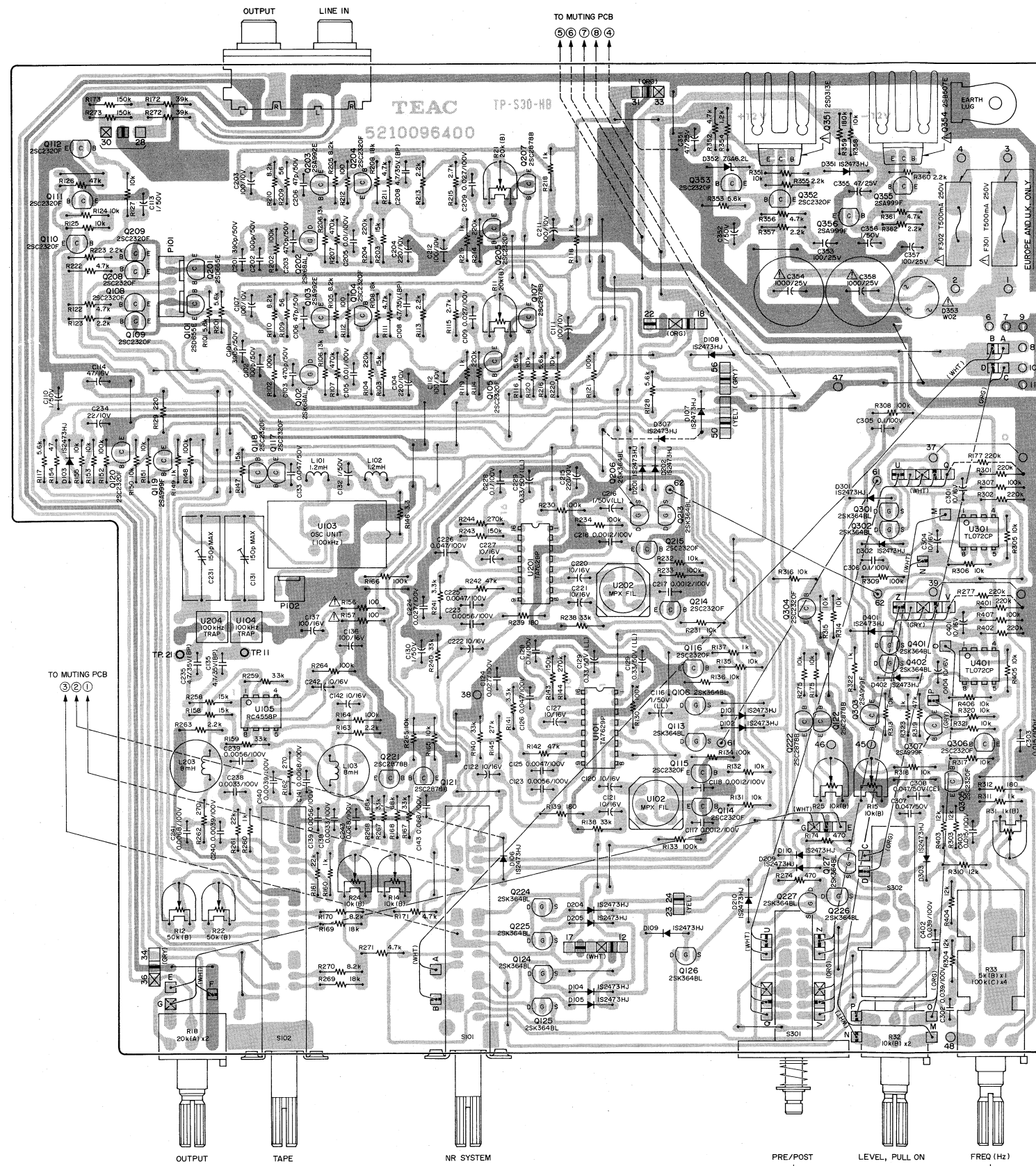
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	5128107000	Cord Assy, In-output	
	5700035500 5700035600 5700035701 5700035900 5101345000 5101495000	V-2RX/V-4RX Owner's Manual [J] V-2RX Owner's Manual [US] V-2RX/V-4RX Owner's Manual [All except J, US] V-4RX Owner's Manual [US] Information Supplement [US] Information Supplement [All except J, US]	V-2RX V-4RX

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

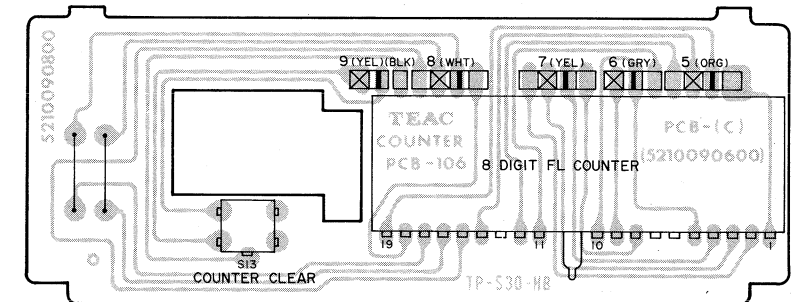
REC/PLAY AMPL PCB ASSY (V-2RX)



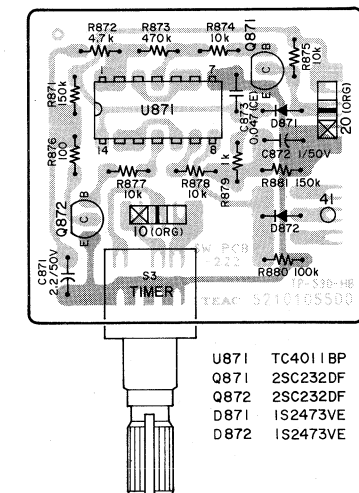
REC/PLAY AMPL PCB ASSY (V-4RX)



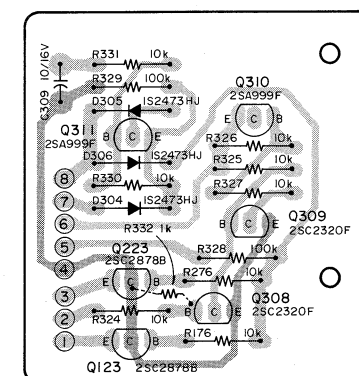
COUNTER PCB ASSY



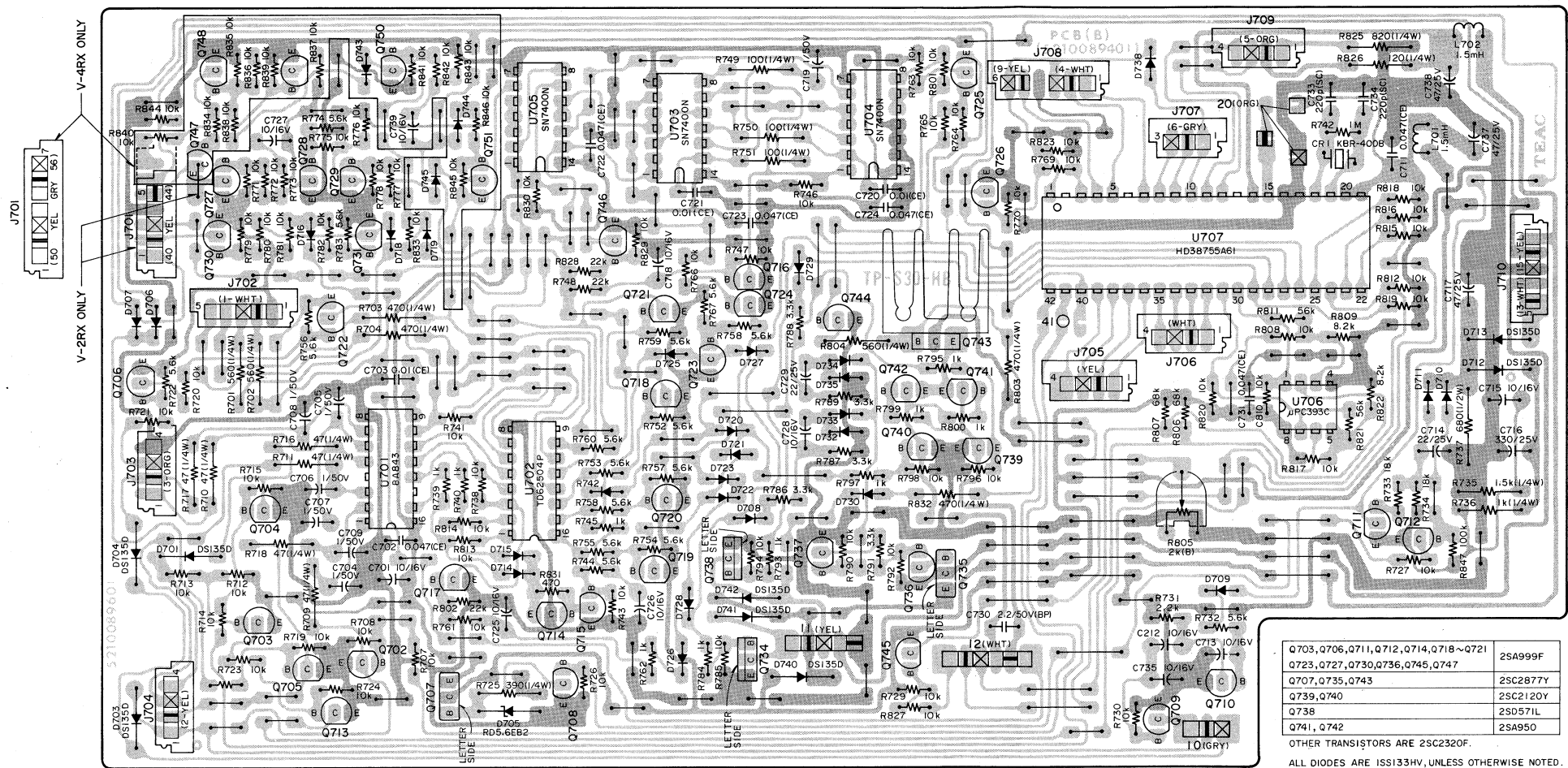
TIMER PCB ASSY



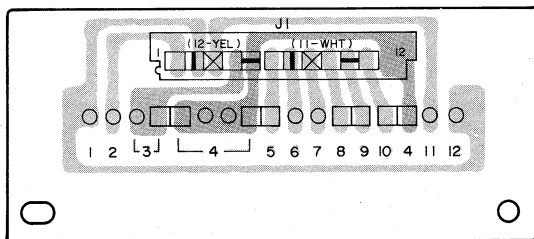
MUTING PCB ASSY (V-4RX)



CONTROL PCB ASSY



JOINT PCB ASSY



NOTES

1. PC boards are shown viewed from foil side.
2. The colors on the PC board illustrations have the following significance:

	: +B power supply circuit
	: -B power supply circuit
	: GND
	: other
3. Resistors:
 - Resistor values are in ohms (k=kilo-ohms M=megohms).
 - CONTROL PCB, DBX PCB, POWER SUPPLY PCB:
All resistors are rated $\pm 5\%$ tolerance, 1/8 watt and of carbon type, unless otherwise noted.
 - All other PCB's:
All resistors are rated $\pm 5\%$ tolerance, 1/4 watt and of carbon type, unless otherwise noted.
4. ● All capacitor values are in microfarads (p=picofarads).
● All non-polarized capacitors are $\pm 5\%$ Mylar, unless otherwise noted.
5. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components.
Refer to the appropriate parts list to ensure exact replacement.

注

1. 基板図はパターン面が示されています。
2. プリント・パターンは次のように色別されています。
 : +B電源回路
 : -B電源回路
 : GND
 : その他の回路
3. 抵抗の単位は Ω ($k=k\Omega$, $M=M\Omega$)です。
特に指定のない抵抗の種類は次のとおりです。

コントロール基板	{	カーボン抵抗
DBX基板		偏差 $\pm 5\%$, 1/8W型
電源基板		

その他の基板 カーボン抵抗, 偏差 $\pm 5\%$, 1/4W型
4. コンデンサの単位は μF ($p=pF$)です。
特に指定のない無極性コンデンサは, 偏差 $\pm 5\%$ のマイラコンデンサです。
5. $\dagger$ マークのある部品は安全重要部品です。
交換するときは必ずティアック指定の部品を使用してください。

REC/PLAY AMPL PCB ASSY (V-2RX)

REF. NO.	PARTS NO.	DESCRIPTION
	5200089200	PCB Assy [All except E, UK]
	5200089210	PCB Assy [E, UK]
	5210089202	PCB
	IC's	
U101, U201	5147040000	NE645B
U103, U203	5147040000	NE645B
U106	5220406700	RC4558P
U301, U401	5220407000	TL072C
	TRANSISTORS	
Q101, Q201	5145102000	FET 2SK68AL
Q102, Q202	5230016200	2SA992E
Q103, Q203	5230778300	2SC2320F
Q104, Q204	5230778300	2SC2320F
Q105, Q205	5230775000	2SC2878B
Q106, Q206	5230778300	2SC2320F
Q107, Q207	5230778300	2SC2320F
Q108	5230778300	2SC2320F
Q109	5230778300	2SC2320F
Q110	5230016600	2SA999F
Q111	5230778300	2SC2320F
Q112, Q212	5230775000	2SC2878B
Q113, Q213	5232007200	FET 2SK364BL
Q114, Q214	5232007200	FET 2SK364BL
Q115, Q215	5232007200	FET 2SK364BL
Q116, Q216	5232007200	FET 2SK364BL
Q117, Q217	5232007200	FET 2SK364BL
Q118, Q218	5232007200	FET 2SK364BL
Q119, Q219	5230775000	2SC2878B
Q120, Q220	5230775000	2SC2878B
Q301, Q401	5232007200	FET 2SK364BL
Q302, Q402	5232007200	FET 2SK364BL
Q303	5230016600	2SA999F
Q304	5230778300	2SC2320F
Q305	5230016600	2SA999F
Q306	5230778300	2SC2320F
Q351	5145087000	2SD313E
Q352	5230778300	2SC2320F
Q353	5230778300	2SC2320F
Q354	5145129000	2SB507E
Q355	5230016600	2SA999F
Q356	5230016600	2SA999F
	DIODES	
D101, D201	5143118000	1S2473HJ
D102, D202	5143118000	1S2473HJ
D103~D114	5143118000	1S2473HJ
D115, D215	5143118000	1S2473HJ
D116, D216	5143118000	1S2473HJ
D117, D217	5143118000	1S2473HJ
D118, D218	5143118000	1S2473HJ
D119, D219	5143118000	1S2473HJ
D120, D220	5143118000	1S2473HJ
D301, D401	5143118000	1S2473HJ
D302, D402	5143118000	1S2473HJ
D303	5143118000	1S2473HJ
D304	5143118000	1S2473HJ
D351	5143118000	1S2473HJ
D352	5224519700	Zener GZA6.2L
D353	5228005000	W02

REF. NO.	PARTS NO.	DESCRIPTION
	CARBON RESISTORS	
	All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt unless otherwise noted.	
R101, R201	5181530000	100k Ω
R102, R202	5181510000	15k Ω
R103, R203	5181466000	220 Ω
R104, R204	5181504000	8.2k Ω
R105, R205	5181509000	13k Ω
R106, R206	5181546000	470k Ω
R107, R207	5181512000	18k Ω
R108, R208	5181452000	56 Ω
R109, R209	5181504000	8.2k Ω
R110, R210	5181498000	4.7k Ω
R111, R211	5181458000	100 Ω
R112, R212	5181490000	2.2k Ω
R113, R213	5181538000	220k Ω
R114, R214	5181492000	2.7k Ω
R115, R215	5181500000	5.6k Ω
R116	5181500000	5.6k Ω
R117, R217	5181482000	1k Ω
R118, R218	5181482000	1k Ω
R119, R219	5181466000	220 Ω
R120, R220	5181466000	220 Ω
R121, R221	5181506000	10k Ω
R122	5181530000	100k Ω
R123, R223	5181518000	33k Ω
R124, R224	5181464000	180 Ω
R125, R225	5181522000	47k Ω
R126, R226	5181494000	3.3k Ω
R127, R227	5181536000	180k Ω
R128, R228	5181540000	270k Ω
R129	5181530000	100k Ω
R130	5181514000	22k Ω
R131, R231	5181466000	220 Ω
R132, R232	5181466000	220 Ω
R133, R233	5181506000	10k Ω
R134, R234	5181506000	10k Ω
R135, R235	5181530000	100k Ω
R136, R236	5181530000	100k Ω
R137, R237	5181486000	1.5k Ω
R138, R238	5181518000	33k Ω
R139, R239	5181518000	33k Ω
R140, R240	5181464000	180 Ω
R141, R241	5181522000	47k Ω
R142, R242	5181494000	3.3k Ω
R143, R243	5181536000	180k Ω
R144, R244	5181540000	270k Ω
R145, R245	5181518000	33k Ω
R147	5181422000	3.3 Ω
R148	5181510000	15k Ω
R149	5181530000	100k Ω
R150	5181482000	1k Ω
R151	5181506000	10k Ω
R152	5181506000	10k Ω
R153	5181530000	100k Ω
R154	5181506000	10k Ω
R155	5181450000	47 Ω
R156	5181506000	10k Ω
R157	5184249000	100 Ω
R158	5184249000	100 Ω
		Nonflammable
		Nonflammable

REF. NO.	PARTS NO.	DESCRIPTION
R159, R259	5181494000	3.3k Ω
R160, R260	5181518000	33k Ω
R161, R261	5181482000	1k Ω
R162, R262	5181498000	4.7k Ω
R163, R263	5181462000	150 Ω
R164, R264	5181494000	3.3k Ω
R165, R265	5181530000	100k Ω
R166, R266	5181506000	10k Ω
R167	5181530000	100k Ω
R168, R268	5181518000	33k Ω
R169, R269	5181526000	68k Ω
R170, R270	5181508000	12k Ω
R171, R271	5181502000	6.8k Ω
R172, R272	5181498000	4.7k Ω
R173, R273	5181520000	39k Ω
R174, R274	5181534000	150k Ω
R175, R275	5181474000	470 Ω
R176, R276	5181474000	470 Ω
R177	5181530000	100k Ω
R178	5181530000	100k Ω
R179	5181530000	100k Ω
R180	5181530000	100k Ω
R181, R281	5181506000	10k Ω
R182	5181530000	100k Ω
R183, R284	5181506000	10k Ω
R301, R401	5181538000	220k Ω
R302, R402	5181538000	220k Ω
R303, R403	5181508000	12k Ω
R304, R404	5181508000	12k Ω
R305, R405	5181506000	10k Ω
R306, R406	5181506000	10k Ω
R307, R407	5181530000	100k Ω
R308	5181530000	100k Ω
R309	5181530000	100k Ω
R310	5181508000	12k Ω
R311	5181482000	1k Ω
R312	5181462000	180 Ω
R313	5181506000	10k Ω
R314	5181506000	10k Ω
R315	5181506000	10k Ω
R316	5181506000	10k Ω
R317	5181482000	1k Ω
R318	5181506000	10k Ω
R319	5181506000	10k Ω
R320	5181506000	10k Ω
R321	5181506000	10k Ω
R322	5181482000	1k Ω
R351	5181506000	10k Ω
R352	5181498000	4.7k Ω
R353	5181500000	5.6k Ω
R354	5181484000	1.2k Ω
R355	5181490000	2.2k Ω
R356	5181498000	4.7k Ω
R357	5181490000	2.2k Ω
R358	5181506000	10k Ω
R359	5181536000	180k Ω
R360	5181490000	2.2k Ω
R361	5181498000	4.7k Ω
R362	5181490000	2.2k Ω

REF. NO.	PARTS NO.	DESCRIPTION
	CAPACITORS	
C101, C201	5172318000	Ceramic 330pF 50V 10%
C102, C202	5172312000	Ceramic 100pF 50V 10%
C103, C203	5172320000	Ceramic 470pF 50V 10%
C104, C204	5260166852	Elec. 220 μ F 10V
C105, C205	5170425000	Mylar 0.01 μ F 100V 5%
C106, C206	5172308000	Ceramic 47pF 50V 10%
C107, C207	5260165952	Elec. 100 μ F 10V
C108, C208	5260066550	Elec. 4.7 μ F 35V (BP)
C109, C209	5170409000	Mylar 0.0022 μ F 100V 5%
C110, C210	5170435000	Mylar 0.027 μ F 100V 5%
C111	5260160750	Elec. 1 μ F 50V
C112, C212	5260165952	Elec. 100 μ F 10V
C113, C213	5260165952	Elec. 100 μ F 10V
C114, C214	5260166852	Elec. 220 μ F 10V
C115, C215	5260166852	Elec. 220 μ F 10V
C116, C216	5260221150	Elec. 1 μ F 50V (LL)
C117, C217	5260162550	Elec. 10 μ F 16V
C118, C218	5170419000	Mylar 0.0056 μ F 100V 5%
C119, C219	5170417000	Mylar 0.0047 μ F 100V 5%
C120, C220	5170435000	Mylar 0.027 μ F 100V 5%
C121, C221	5260162550	Elec. 10 μ F 16V
C122, C222	5170441000	Mylar 0.047 μ F 100V 5%
C123, C223	5260162550	Elec. 10 μ F 16V
C124, C224	5170519000	Mylar 0.1 μ F 100V 5%
C125, C225	5260220850	Elec. 0.33 μ F 50V (LL)
C126, C226	5260166852	Elec. 220 μ F 10V
C127, C227	5260166852	Elec. 220 μ F 10V
C128, C228	5260221150	Elec. 1 μ F 50V (LL)
C129, C229	5263100710	Polypro. 0.0012 μ F 100V 5%
C130, C230	5263101110	Polypro. 0.0018 μ F 100V 5%
C131, C231	5260162550	Elec. 10 μ F 16V
C132, C232	5260162550	Elec. 10 μ F 16V
C133, C233	5170419000	Mylar 0.0056 μ F 100V 5%
C134, C234	5170417000	Mylar 0.0047 μ F 100V 5%
C135, C235	5170435000	Mylar 0.027 μ F 100V 5%
C136, C236	5260162550	Elec. 10 μ F 16V
C137, C237	5170441000	Mylar 0.047 μ F 100V 5%
C138, C238	5260162550	Elec. 10 μ F 16V
C139, C239	5170519000	Mylar 0.1 μ F 100V 10%
C140, C240	5260220850	Elec. 0.33 μ F 50V (LL)
C141	5260160750	Elec. 1 μ F 50V
C142	5260160750	Elec. 1 μ F 50V
C143	5173395000	Ceramic 0.047 μ F 50V 10%
C144	5260163252	Elec. 22 μ F 10V
C145, C245	5263107610	Polypro. 820pF 100V 5%
C146, C246	5260066550	Elec. 4.7 μ F 35V (BP)
C147, C247	5170417000	Mylar 0.0047 μ F 100V 5%
C148, C248	5170419000	Mylar 0.0056 μ F 100V 5%
C149, C249	5170411000	Mylar 0.0027 μ F 100V 5%
C150, C250	5170421000	Mylar 0.0068 μ F 100V 5%
C151, C251	5260162550	Elec. 10 μ F 16V
C152, C252	5170445000	Mylar 0.068 μ F 100V 5%
C153	5260166052	Elec. 100 μ F 16V
C154	5260166052	Elec. 100 μ F 16V
C156	5173395000	Ceramic 0.047 μ F 50V 10%
C157	5173395000	Ceramic 0.047 μ F 50V 10%
C158	5173395000	Ceramic 0.047 μ F 50V 10%
C159	5173395000	Ceramic 0.047 μ F 50V 10%

JACK PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
C301, C401	5260162550	Elec. 10 μ F 16V
C302, C402	5170439000	Mylar 0.039 μ F 100V 5%
C303, C403	5170429000	Mylar 0.015 μ F 100V 5%
C304, C404	5260162550	Elec. 10 μ F 16V
C305	5170519000	Mylar 0.1 μ F 100V 10%
C306	5170519000	Mylar 0.1 μ F 100V 10%
C307	5173950000	Ceramic 0.047 μ F 50V 10%
C308	5173950000	Ceramic 0.047 μ F 50V 10%
C351	5260165252	Elec. 47 μ F 25V
C352	5260160750	Elec. 1 μ F 50V
C353	5260166152	Elec. 100 μ F 25V
C354	5173082000	Elec. 1000 μ F 25V
C355	5260165252	Elec. 47 μ F 25V
C356	5260160750	Elec. 1 μ F 50V
C357	5260166152	Elec. 100 μ F 25V
C358	5173082000	Elec. 1000 μ F 25V
VARIABLE RESISTORS		
R11, R21	5280003602	Semi-fixed, 20k Ω (B)
R12	5280004002	Semi-fixed, 50k Ω (B)
R13	5280004002	Semi-fixed, 50k Ω (B)
R14, R24	5280003502	Semi-fixed, 10k Ω (B)
R15, R25	5280003502	Semi-fixed, 10k Ω (B)
R16	5282407802	100k Ω (B) x 2
R18	5282406002	20k Ω (A) x 2
R31	5280002802	Semi-fixed, 1k Ω (B)
R32 (S302)	5283504700	10k Ω (B) x 2
R33	5283504800	5k Ω (B) x 1, 100k Ω (C) x 4
TRIMMER CAPACITORS		
C155, C255	5267205300	30~210pF
COILS		
L101, L201	5160107000	Choke 1.2mH (fixed)
L102	5160151000	Choke 1.2mH (fixed)
L103	5160151000	Choke 1.2mH (fixed)
L104, L204	5286011600	Choke 3.1mH (Variable)
L105, L205	5286000400	Choke 8mH (Variable)
MISCELLANEOUS		
U102, U202	5292802500	Filter, Low-pass
U104, U204	5292802600	Filter, Low-pass
U105	5292201700	OSC Unit
S101	5301204100	Switch, Rotary; 4-4
S102	5301204000	Switch, Rotary; 6-3
S103, S301	5300031100	Switch, Push; 2-gang 6-2, 2-2
P101, P102	5122130000	Connector Plug, 6P
P103	5122127000	Connector Plug, 3P
	5330506600	Pin Jack, 4P
	5553132000	Heatsink, IC1625-ST
	5555590000	Plate, GND; A
F301, F302	5041138000	Fuse, 500mA 250V [E, UK]
	5142087000	Holder, Fuse x4 [E, UK]
	5544750000	Pin, TP x2

REF. NO.	PARTS NO.	DESCRIPTION
	5200088901	PCB Assy
	5210088901	PCB
IC's		
U371	5220416200	M5218L
U372	5220417300	M5219L
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R371, R471	5181506000	10k Ω
R372, R472	5181458000	100 Ω
R373, R473	5181458000	100 Ω
R374, R474	5181510000	15k Ω
R375, R475	5181482000	1k Ω
R376, R476	5181530000	100k Ω
R377	5181482000	1k Ω
R378	5181482000	1k Ω
R379, R479	5181530000	100k Ω
R380, R480	5181482000	1k Ω
R381, R481	5181506000	10k Ω
R382, R482	5181514000	22k Ω
R383, R483	5181458000	100 Ω
CAPACITORS		
C371, C471	5172312000	Ceramic 100pF 50V 10%
C372, C472	5172312000	Ceramic 100pF 50V 10%
C373, C473	5260066550	Elec. 4.7 μ F 35V (BP)
C374	5260165252	Elec. 47 μ F 25V
C375	5260165252	Elec. 47 μ F 25V
C376, C476	5260160750	Elec. 1 μ F 50V
C377	5260160750	Elec. 1 μ F 50V
C378	5260160750	Elec. 1 μ F 50V
MISCELLANEOUS		
5330008600	Jack, MIC x2	
5330008700	Jack, PHONES	
5336120300	Connector Socket, W-D1603	
5336120900	Connector Socket, W-D1609	

POWER SUPPLY PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200089900	PCB Assy [J, GE, A, L]
	5200089910	PCB Assy [US, C]
	5200089920	PCB Assy [E, UK]
	5210089900	PCB [All except US, C]
	5210090400	PCB [US, C]
TRANSISTORS		
Q901	△5231759100	2SD1265O
Q902	5230778300	2SC2320F
Q903	△5230506600	2SB941P
Q904	5230016600	2SA999F
Q905	△5230777900	2SC2877Y
DIODES		
D901	△5228005000	W02
D902	5224542801	Zener RD11EB2
D903	△5224013210	DS135
D904	5224013210	DS135
D905	5224543501	Zener RD13EB3
D906	5224544401	Zener RD18EB3
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt unless otherwise noted.		
R901	△5181470000	330Ω
R902	5240029020	2.2kΩ 1/8W
R903	△5181470000	330Ω
R904	5240029020	2.2kΩ 1/8W
R905	5180044000	27Ω 1/2W
R907	5180044000	27Ω 1/2W
R908	△5185686000	82Ω 1/2W Nonflammable
R910	5181482000	1kΩ
CAPACITORS		
C901	△5173089000	Elec. 2200μF 25V
C902	5260166052	Elec. 100μF 16V
C903	△5173084000	Elec. 1000μF 50V
C904	△5173082000	Elec. 1000μF 25V
C905	△5260166052	Elec. 100μF 16V
C906	5173048800	Elec. 100μF 50V
C907	△5260165252	Elec. 47μF 25V
C908	5260166152	Elec. 100μF 25V
C909	5173054800	Elec. 220μF 16V
C910	5173054800	Elec. 220μF 16V
FUSES		
F901	△5142188000	1.6A 250V [E, UK]
F902	△5142179000	100mA 250V [E, UK]
F903	△5142183000	315mA 250V [E, UK]
	5142087000	Holder, Fuse x6

REC/PLAY AMPL PCB ASSY (V-4RX)

REF. NO.	PARTS NO.	DESCRIPTION
	5200096400	PCB Assy [All except E, UK]
	5200096410	PCB Assy [E, UK]
	5210096400	PCB
IC's		
U101, U201	5220412600	TA7629P
U105	5220406700	RC4558P
U301, U401	5220407000	TL072CP
TRANSISTORS		
Q101, Q201	5145185000	2SD655E
Q102, Q202	5145102000	FET 2SK68AL
Q103, Q203	5230016200	2SA992E
Q104, Q204	5230778300	2SC2320F
Q105, Q205	5230778300	2SC2320F
Q106, Q206	5232007200	FET 2SK364BL
Q107, Q207	5230775000	2SC2878B
Q108, Q208	5230778300	2SC2320F
Q109, Q209	5230778300	2SC2320F
Q110	5230016600	2SD999F
Q111	5230778300	2SC2320F
Q112	5230778300	2SC2320F
Q113, Q213	5232007200	FET 2SK364BL
Q114, Q214	5230778300	2SC2320F
Q115, Q215	5230778300	2SC2320F
Q116	5230778300	2SC2320F
Q117	5230778300	2SC2320F
Q118	5230778300	2SC2320F
Q119	5230016600	2SA999A
Q120	5230778300	2SC2320F
Q121, Q221	5230775000	2SC2878B
Q122, Q222	5230775000	2SC2878B
Q124, Q224	5232007200	FET 2SK364BL
Q125, Q225	5232007200	FET 2SK364BL
Q126, Q226	5232007200	FET 2SK364BL
Q127, Q227	5232007200	FET 2SK364BL
Q301, Q401	5232007200	FET 2SK364BL
Q302, Q402	5232007200	FET 2SK364BL
Q303	5230016600	2SA999F
Q304	5230778300	2SC2320F
Q305	5230778300	2SC2320F
Q306	5230778300	2SC2320F
Q307	5230016600	2SA999F
Q351	△5145087000	2SD313E
Q352	5230778300	2SC2320F
Q353	5230778300	2SC2320F
Q354	△5145129000	2SB507E
Q355	5230016600	2SA999F
Q356	5230016600	2SA999F
DIODES		
D101, D201	5143118000	1S2473HJ
D102, D202	5143118000	1S2473HJ
D103	5143118000	1S2473HJ
D104, D204	5143118000	1S2473HJ
D105, D205	5143118000	1S2473HJ
D107	5143118000	1S2473HJ
D108	5143118000	1S2473HJ
D109, D209	5143118000	1S2473HJ
D110, D210	5143118000	1S2473HJ

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
 [A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

REF. NO.	PARTS NO.	DESCRIPTION
D301, D401	5143118000	1S2473HJ
D302, D402	5143118000	1S2473HJ
D303	5143118000	1S2473HJ
D304	5042550000	1S2473
D351	5143118000	1S2473HJ
D352	5224519700	Zener GZA6.2L
D353	△ 5228005000	W02
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt unless otherwise noted.		
R101, R201	5181500000	5.6kΩ
R102, R202	5181530000	100kΩ
R103, R203	5181466000	15kΩ
R104, R204	5181466000	220Ω
R105, R205	5181504000	8.2kΩ
R106, R206	5181509000	13kΩ
R107, R207	5181546000	470kΩ
R108, R208	5181512000	18kΩ
R109, R209	5181452000	56Ω
R110, R210	5181504000	8.2kΩ
R111, R211	5181498000	4.7kΩ
R112, R212	5181458000	100Ω
R113, R213	5181490000	2.2kΩ
R114, R214	5181538000	220kΩ
R115, R215	5181492000	2.7kΩ
R116, R216	5181500000	5.6kΩ
R117	5181500000	5.6kΩ
R118, R218	5181482000	1kΩ
R119, R219	5181482000	1kΩ
R120, R220	5181506000	10kΩ
R121	5181530000	100kΩ
R122, R222	5181498000	4.7kΩ
R123, R223	5181490000	2.2kΩ
R124	5181506000	10kΩ
R125	5181506000	10kΩ
R126	5181522000	47kΩ
R127	5181506000	10kΩ
R128	5181500000	5.6kΩ
R129	5181466000	220Ω
R130, R230	5181530000	100kΩ
R131, R231	5181506000	10kΩ
R132, R232	5181506000	10kΩ
R133, R233	5181530000	100kΩ
R134, R234	5181530000	100kΩ
R135	5181506000	10kΩ
R136	5181506000	10kΩ
R137	5181482000	1kΩ
R138, R238	5181518000	33kΩ
R139, R239	5181464000	180Ω
R140, R240	5181518000	33kΩ
R141, R241	5181494000	3.3kΩ
R142, R242	5181522000	47kΩ
R143, R243	5181534000	150kΩ
R144, R244	5181540000	270kΩ
R145	5181516000	27kΩ
R146	5181422000	3.3Ω
R147	5181510000	15kΩ
R148	5181530000	100kΩ
R149	5181482000	1kΩ
R150	5181506000	10kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R151	5181506000	10kΩ
R152	5181530000	100kΩ
R153	5181506000	10kΩ
R154	5181450000	47Ω
R155	5181506000	10kΩ
R156	△ 5184249000	100Ω
R157	△ 5184249000	100Ω
R158, R258	5181510000	15kΩ
R159, R259	5181518000	33kΩ
R160, R260	5181482000	1kΩ
R161, R261	5181514000	22kΩ
R162, R262	5181468000	270Ω
R163, R263	5181490000	2.2kΩ
R164, R264	5181530000	100kΩ
R165, R265	5181506000	10kΩ
R166	5181530000	100kΩ
R167, R267	5181518000	33kΩ
R168, R268	5181526000	68kΩ
R169, R269	5181512000	18kΩ
R170, R270	5181504000	8.2kΩ
R171, R271	5181498000	4.7kΩ
R172, R272	5181520000	39kΩ
R173, R273	5181534000	150kΩ
R174, R274	5181474000	470Ω
R175, R275	5181506000	10kΩ
R177, R277	5181338000	220kΩ
R301, R401	5181538000	220kΩ
R302, R402	5181538000	220kΩ
R303, R403	5181508000	12kΩ
R304, R404	5181508000	12kΩ
R305, R405	5181506000	10kΩ
R306, R406	5181506000	10kΩ
R307, R407	5181530000	100kΩ
R308	5181530000	100kΩ
R309	5181530000	100kΩ
R310	5181508000	12kΩ
R311	5181482000	1kΩ
R312	5181462000	180Ω
R313	5181506000	10kΩ
R314	5181506000	10kΩ
R315	5181506000	10kΩ
R316	5181506000	10kΩ
R317	5181506000	10kΩ
R318	5181506000	10kΩ
R319	5181522000	47kΩ
R320	5181506000	10kΩ
R321	5181506000	10kΩ
R322	5181482000	1kΩ
R323	5181482000	1kΩ
R351	5181506000	10kΩ
R352	5181498000	4.7kΩ
R353	5181500000	5.6kΩ
R354	5181484000	1.2kΩ
R355	5181490000	2.2kΩ
R356	5181498000	4.7kΩ
R357	5181490000	2.2kΩ
R358	5181506000	10kΩ
R359	5181536000	180kΩ
R360	5181490000	2.2kΩ
R361	5181498000	4.7kΩ
R362	5181490000	2.2kΩ

REF. NO.	PARTS NO.	DESCRIPTION			
CAPACITORS					
C101, C201	5172219000	Ceramic	390pF	50V	10%
C102, C202	5172212000	Ceramic	100pF	50V	10%
C103, C203	5172220000	Ceramic	470pF	50V	10%
C104, C204	5260166852	Elec.	220μF	10V	
C105, C205	5171856000	Mylar	0.01μF	100V	5%
C106, C206	5172208000	Ceramic	47pF	50V	10%
C107, C207	5260165952	Elec.	100μF	10V	
C108, C208	5260066550	Elec.	4.7μF	35V	(BP)
C109, C209	5171866000	Mylar	0.027μF	100V	5%
C110	5260160750	Elec.	1μF	50V	
C111, C211	5260165952	Elec.	100μF	10V	
C112, C212	5260165952	Elec.	100μF	10V	
C113	5260160750	Elec.	1μF	50V	
C114	5260165152	Elec.	47μF	16V	
C115, C215	5260166852	Elec.	220μF	10V	
C116, C216	5260221150	Elec.	1μF	50V	
C117, C217	5263100710	Polypro.	0.0012μF	100V	5%
C118, C218	5263100710	Polypro.	0.0012μF	100V	5%
C120, C220	5260162550	Elec.	10μF	16V	
C121, C221	5260162550	Elec.	10μF	16V	
C122, C222	5260162550	Elec.	10μF	16V	
C123, C223	5170370000	Mylar	0.0056μF	100V	5%
C124, C224	5171866000	Mylar	0.027μF	100V	5%
C125, C225	5170368000	Mylar	0.0047μF	100V	5%
C126, C226	5171872000	Mylar	0.047μF	100V	5%
C127, C227	5260162550	Elec.	10μF	16V	
C128, C228	5171902000	Mylar	0.1μF	100V	10%
C129, C229	5260220850	Elec.	0.33μF	50V	(LL)
C130	5260160750	Elec.	1μF	50V	
C132	5260160750	Elec.	1μF	50V	
C133	5173435000	Ceramic	0.047μF	50V	10%
C134	5260163252	Elec.	4.7μF	35V	(BP)
C135, C235	5260066550	Elec.	22μF	10V	
C136	5260166052	Elec.	100μF	16V	
C137	5260166052	Elec.	100μF	16V	
C138, C238	5170364000	Mylar	0.0033μF	100V	5%
C139, C239	5170370000	Mylar	0.0056μF	100V	5%
C140, C240	5170366000	Mylar	0.0039μF	100V	5%
C141, C241	5170372000	Mylar	0.0068μF	100V	5%
C142, C242	5260162550	Elec.	10μF	16V	
C143, C243	5171876000	Mylar	0.068μF	100V	5%
C301, C401	5260162550	Elec.	10μF	16V	
C302, C402	5170439000	Mylar	0.039μF	100V	5%
C303, C403	5170429000	Mylar	0.015μF	100V	5%
C304, C404	5260162550	Elec.	10μF	16V	
C305	5170519000	Mylar	0.1μF	100V	10%
C306	5170519000	Mylar	0.1μF	100V	10%
C307	5173395000	Ceramic	0.047μF	50V	10%
C308	5173395000	Ceramic	0.047μF	50V	10%
C351	5260165250	Elec.	47μF	25V	
C352	5260160750	Elec.	1μF	50V	
C353	5260166152	Elec.	100μF	25V	
C354	5173082000	Elec.	1000μF	25V	
C355	5260165250	Elec.	47μF	25V	
C356	5260160750	Elec.	1μF	50V	
C357	5260166152	Elec.	100μF	25V	
C358	5173082000	Elec.	1000μF	25V	

REF. NO.	PARTS NO.	DESCRIPTION			
VARIABLE RESISTORS					
R11, R21	5280003602	Semi-fixed	20kΩ(B)		
R12	5280004002	Semi-fixed	50kΩ(B)		
R13	5280004002	Semi-fixed	50kΩ(B)		
R14, R24	5280003502	Semi-fixed	10kΩ(B)		
R15, R25	5280003502	Semi-fixed	10kΩ(B)		
R18	5282406002	20kΩ(A) x 2			
R31	5280002802	Semi-fixed	1kΩ(B)		
R32 (S302)	5283504700	10kΩ(B) x 2			
R33	5283504800	5kΩ(B) x 1, 100kΩ(C) x 4			
TRIMMER CAPACITORS					
C131, C231	5267205200	10 – 140pF			
COILS					
L101	5160151000	Choke	1.2mH (Fixed)		
L102	5160151000	Choke	1.2mH (Fixed)		
L103, L203	5286000400	Choke	8mH (Variable)		
MISCELLANEOUS					
U102, U202	5292803300	Filter, Low-pass	19kHz		
U103	5292201700	OSC Unit			
U104, U204	5286011700	Trap, 100kHz			
S101	5301204300	Switch, Rotary; 6–4			
S102	5301204000	Switch, Rotary; 6–3			
S301	5300031000	Switch, Push; 6–2			
P101	5122130000	Connector Plug, 6P			
P102	5122127000	Connector Plug, 3P			
	5544750000	Pin, TP			
	5555590000	Plate, GND ; A			
	5553132000	Heatsink, IC1625-ST			
F301	▲ 5041138000	Fuse, T500mA 250V [E, UK]			
F302	▲ 5041138000	Fuse, T500mA 250V [E, UK]			
	5142087000	Holder, Fuse x 4			

COUNTER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION			
	5200090800	PCB Assy [All except US, C]			
	5200090810	PCB Assy [US, C]			
	5210090800	PCB [All except US, C]			
	5210091000	PCB [US, C]			
S13	5312000400	Counter, FL			
	5302101600	Switch, Tact			

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

TIMER PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200105500	PCB Assy
	5210105500	PCB
	IC	
U871	5220019100	TC4011BP
	TRANSISTORS	
Q871, Q872	5230778300	2SC2320F
	DIODES	
D871, D872	5042517000	1S2473VE
	CARBON RESISTORS	
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R871	5240173400	150k Ω
R872	5240169800	4.7k Ω
R873	5240174600	470k Ω
R874, R875	5240170600	10k Ω
R876	5240165800	100 Ω
R877, R878	5240170600	10k Ω
R879	5240168200	1k Ω
R880	5240173000	100k Ω
R881	5240173400	150k Ω
	CAPACITORS	
C871	5260161150	Elec. 2.2 μ F 50V
C872	5260160750	Elec. 1 μ F 50V
C873	5172344000	Ceramic 0.047 μ F 50V

MUTING PCB ASSY (V-4RX)

REF. NO.	PARTS NO.	DESCRIPTION
	5200108300	PCB Assy
	5210108300	PCB
	TRANSISTORS	
Q123, Q223	5230775000	2SC2878B
Q308	5230778300	2SC2320F
Q309	5230778300	2SC2320F
Q310	5230016600	2SA999F
Q311	5230016600	2SA999F
	DIODES	
D304~D306	5143118000	1S2473HJ
	CARBON RESISTORS	
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R176, R276	5181506000	10k Ω
R324~R327	5181506000	10k Ω
R328, R329	5181530000	100k Ω
R330, R331	5181506000	10k Ω
R332	5181482000	1k Ω
	CAPACITOR	
C309	5260162550	Elec. 10 μ F 16V

DBX PCB ASSY (V-2RX)

REF. NO.	PARTS NO.	DESCRIPTION
	5200089000	PCB Assy
	5210089000	PCB
	IC's	
U501, U601	5220414501	μ PC1252H2
U502	5220406700	RC4558P
U503, U603	5220414601	μ PC1253H2
U504, U604	5220414501	μ PC1252H2
U505	5220406700	RC4558P
U506, U606	5220414601	μ PC1253H2
	TRANSISTORS	
Q501, Q601	5230778300	2SC2320F
Q502, Q602	5230778300	2SC2320F
Q503, Q603	5230778300	2SC2320F
Q504, Q604	5232007200	FET 2SK364BL
Q505, Q605	5230778300	2SC2320F
Q506	5230016600	2SA999F
Q507	5230778300	2SC2320F
	DIODES	
D501, D601	5224015010	1SS133HV
	CARBON RESISTORS	
All resistors are rated $\pm 5\%$ tolerance and 1/8 watt unless others noted.		
R501, R601	5240033220	120k Ω
R502, R602	5240025820	100 Ω
R503, R603	5240031720	30k Ω
R504, R604	5240030020	5.6k Ω
R505, R605	5240031820	33k Ω
R506, R606	5240030620	10k Ω
R507, R607	5240029620	3.9k Ω
R508, R608	5240025020	47 Ω
R509, R609	5240033020	100k Ω
R510, R610	5240036020	10k Ω
R511, R611	5240031820	33k Ω
R512, R612	5240025820	100 Ω
R513, R613	5240033020	100k Ω
R514, R614	5240032920	91k Ω
R515, R615	5240029820	4.7k Ω
R516, R616	5240031820	33k Ω
R517, R617	5240031820	33k Ω
R518, R618	5240030220	6.8k Ω
R519, R619	5240029820	4.7k Ω
R520, R620	5240029420	3.3k Ω
R521, R621	5240031820	33k Ω
R522, R622	5240033420	150k Ω
R523, R623	5240024220	22 Ω
R524, R624	5240023420	10 Ω
R525, R625	5240035120	750k Ω
R526, R626	5240035420	1M Ω
R527, R627	5240028220	1k Ω
R528, R628	5240033220	120k Ω
R529, R629	5240025820	100 Ω
R530, R630	5240031720	30k Ω
R531, R631	5240030020	5.6k Ω
R532, R632	5240031820	33k Ω
R533, R633	5240030620	10k Ω
R534, R634	5240029620	3.9k Ω
R535, R635	5240025020	47 Ω

REF. NO.	PARTS NO.	DESCRIPTION
R536, R636	5240033020	100kΩ
R537, R637	5240030620	10kΩ
R538, R638	5240031820	33kΩ
R539, R639	5240025820	100Ω
R540, R640	5240033020	100kΩ
R541, R641	5240032920	91kΩ
R542, R642	5240029820	4.7kΩ
R543, R643	5240031820	33kΩ
R544, R644	5240031820	33kΩ
R545, R645	5240030220	6.8kΩ
R546, R646	5240029820	4.7kΩ
R547, R647	5240029420	3.3kΩ
R548, R648	5240031820	33kΩ
R549, R649	5240033420	150kΩ
R550, R650	5240024220	22Ω
R551, R651	5240023420	10Ω
R552, R652	5240035120	750kΩ
R553, R653	5240035420	1MΩ
R554, R654	5240028220	1kΩ
R555, R655	5240030620	10kΩ
R556, R656	5240030620	10kΩ
R557	5240030620	10kΩ
R558	5240030620	10kΩ
R559	5240030620	10kΩ
R560	5240030620	10kΩ
R561	5240029820	4.7kΩ
R562, R662	5240319000	22MΩ ½W
R563, R663	5240319000	22MΩ ½W
CAPACITORS		
C501, C601	5263162213	Meta. 0.1μF 50V 5%
C502, C602	5263162213	Meta. 0.1μF 50V 5%
C503, C603	5263163513	Meta. 0.3μF 50V 5%
C504, C604	5170425000	Mylar. 0.01μF 100V 5%
C505, C605	5172312000	Ceramic 100pF 50V 10%
C506, C606	5172312000	Ceramic 100pF 50V 10%
C507, C607	5260066550	Elec. 4.7μF 35V (BP)
C508, C608	5263162213	Meta. 0.1μF 50V 5%
C509, C609	5263162213	Meta. 0.1μF 50V 5%
C510, C610	5170413000	Mylar 0.0033μF 100V 5%
C511, C611	5170413000	Mylar 0.0033μF 100V 5%
C512, C612	5172318000	Ceramic 330pF 50V 10%
C513, C613	5263162213	Meta. 0.1μF 50V 5%
C514, C614	5170425000	Mylar 0.01μF 100V 5%
C515, C615	5260160750	Elec. 1μF 50V
C516, C616	5260227010	Elec. 10μF 35V (LL)
C517, C617	5260162550	Elec. 10μF 16V
C518, C618	5263162213	Meta. 0.1μF 50V 5%
C519, C619	5263162213	Meta. 0.1μF 50V 5%
C520, C620	5260160750	Elec. 1μF 50V
C521, C621	5263163513	Meta. 0.3μF 50V 5%
C522, C622	5263106110	Polypro. 200pF 100V 5%
C523, C623	5170425000	Mylar 0.01μF 100V 5%
C524, C624	5172312000	Ceramic 100pF 50V 10%
C525, C625	5260066550	Elec. 4.7μF 35V (BP)
C526, C626	5263162213	Meta. 0.1μF 50V 5%
C527, C627	5263162213	Meta. 0.1μF 50V 5%
C528, C628	5170413000	Mylar 0.0033μF 100V 5%
C529, C629	5170413000	Mylar 0.0033μF 100V 5%
C530, C630	5172318000	Ceramic 330pF 50V 10%

REF. NO.	PARTS NO.	DESCRIPTION
C531, C631	5263162213	Meta. 0.1μF 50V 5%
C532, C632	5170425000	Mylar 0.01μF 100V 10%
C533, C633	5260160750	Elec. 1μF 50V
C534, C634	5260227010	Elec. 10μF 35V (LL)
C535, C635	5260162550	Elec. 10μF 16V
C536	5260165252	Elec. 47μF 25V
C537	5260165252	Elec. 47μF 25V
VARIABLE RESISTORS		
R51, R61	5280004002	Semi-fixed 50kΩ(B)
R52, R62	5150286000	Semi-fixed 500kΩ(B)
R53, R63	5280004002	Semi-fixed 50kΩ(B)
R54, R64	5150286000	Semi-fixed 500kΩ(B)
MISCELLANEOUS		
P501	5336120600	Connector Socket, W-D 1606
P502	5336120400	Connector Socket, W-D 1604
P503	5336120600	Connector Socket, W-D 1606
	5544750000	Pin, Combination x13

DBX PCB ASSY (V-4RX)

REF. NO.	PARTS NO.	DESCRIPTION
	5200096500	PCB Assy
	5210096500	PCB
IC's		
U501, U601	5220414501	μPC1252H2
U502	5220406700	RC4558P
U503, U603	5220414601	μPC1253H2
TRANSISTORS		
Q501, Q601	5230778300	2SC2320F
Q502, Q602	5232007200	FET 2SK364BL
Q503, Q603	5230775000	2SC2878B
Q504, Q604	5230775000	2SC2878B
Q505, Q605	5230775000	2SC2878B
Q506, Q606	5230775000	2SC2878B
Q507, Q607	5230775000	2SC2878B
Q508, Q608	5230775000	2SC2878B
Q509, Q609	5230778300	2SC2320F
Q510, Q610	5230775000	2SC2878B
Q511, Q611	5230775000	2SC2878B
Q512	5230016600	2SA999F
Q513	5230016600	2SA999F
Q514	5230778300	2SC2320F
Q515	5230778300	2SC2320F
Q516	5230016600	2SA999F
Q517	5230016600	2SA999F
Q518	5230778300	2SC2320F
DIODES		
D501, D601	5224015010	1SS133HV
D502	5224015010	1SS133HV
D503	5224015010	1SS133HV

REF. NO.	PARTS NO.	DESCRIPTION
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and 1/8 watt unless otherwise noted.		
R501, R601	5240033220	120k Ω
R502, R602	5240025820	100 Ω
R503, R603	5240031720	30k Ω
R504, R604	5240030020	5.6k Ω
R505, R605	5240031820	33k Ω
R506, R606	5240030620	10k Ω
R507, R607	5240032220	47k Ω
R508, R608	5240032220	47k Ω
R509, R609	5240029620	3.9k Ω
R510, R610	5240032220	47k Ω
R511, R611	5240032220	47k Ω
R512, R612	5240025020	47 Ω
R513, R613	5240033020	100k Ω
R514, R614	5240030620	10k Ω
R515, R615	5240031820	33k Ω
R516, R616	5240032220	47k Ω
R517, R617	5240032220	47k Ω
R518, R618	5240025820	100 Ω
R519, R619	5240033020	100k Ω
R520, R620	5240031820	33k Ω
R521, R621	5240032920	91k Ω
R522, R622	5240029820	4.7k Ω
R523, R623	5240031820	33k Ω
R524, R624	5240030220	6.8k Ω
R524, R625	5240029820	4.7k Ω
R526, R626	5240029420	3.3k Ω
R527, R627	5240031820	33k Ω
R528, R628	5240024220	22 Ω
R529, R629	5240033420	150k Ω
R530, R630	5240023420	10 Ω
R531, R631	5240035120	750k Ω
R532, R632	5240035420	1M Ω
R533, R633	5240028220	1k Ω
R534, R634	5240033020	100k Ω
R535, R635	5240033020	100k Ω
R536	5240029820	4.7k Ω
R537	5240033020	100k Ω
R538	5240029820	4.7k Ω
R539	5240030620	10k Ω
R540	5240030620	10k Ω
R541	5240030620	10k Ω
R542	5240030620	10k Ω
R543	5240030620	10k Ω
R544	5240030620	10k Ω
R545	5240025020	47 Ω
R546	5240029820	4.7k Ω
R547	5240029820	4.7k Ω
R548	5240033020	100k Ω
R549	5240030620	10k Ω
R550	5240030620	10k Ω
R551	5240030620	10k Ω
R552	5240030620	10k Ω
R553, R653	5240319000	22M Ω
R554, R654	5240030620	10k Ω

1/2W

REF. NO.	PARTS NO.	DESCRIPTION
CAPACITORS		
C501, C601	5263162213	Meta. 0.1 μ F 50V 5%
C502, C602	5263162213	Meta. 0.1 μ F 50V 5%
C503, C603	5260160750	Elec. 1 μ F 50V
C504, C604	5171856000	Mylar 0.01 μ F 100V 5%
C505, C605	5263163513	Meta. 0.3 μ F 50V 5%
C506, C606	5263106110	Plypro. 200pF 100V 5%
C507, C607	5172212000	Ceramic 100pF 50V 10%
C508, C608	5172212000	Ceramic 100pF 50V 10%
C509, C609	5171856000	Mylar 0.01 μ F 100V 5%
C510, C610	5260066550	Elec. 4.7 μ F 35V (BP)
C511, C611	5263162213	Meta. 0.1 μ F 50V 5%
C512, C612	5263162213	Meta. 0.1 μ F 50V 5%
C513, C613	5170364000	Mylar 0.0033 μ F 100V 5%
C514, C614	5170364000	Mylar 0.0033 μ F 100V 5%
C515, C615	5172218000	Ceramic 330pF 50V 10%
C517, C617	5171856000	Mylar 0.01 μ F 100V 5%
C518, C618	5260160750	Elec. 10 μ F 16V
C519, C619	5260162550	Elec. 10 μ F 35V
C521	5260163252	Elec. 22 μ F 10V
C522	5260165252	Elec. 47 μ F 25V
C523	5260165252	Elec. 47 μ F 25V
VARIABLE RESISTORS		
R51, R61	5280004002	Semi-fixed 50k Ω (B)
R52, R62	5150286000	Semi-fixed 500k Ω (B)
MISCELLANEOUS		
P501	5336120600	Connector Socket, W-D1606
P502	5336120700	Connector Socket, W-D1607
	5544750000	Pin, Combination x7

OPERATION SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200089700	PCB Assy [All except US, C]
	5200089710	PCB Assy [US, C]
	5210089700	PCB [All except US, C]
	5210090200	PCB [US, C]
D1, D2	5225007300	LED SLP-160C
D3	5225009100	LED SLP-460C
D4	5225009000	LED SLP-260C
S4~S10	5302101600	Switch, Tact; J-M0452
	5334021900	Connector Socket, 8P
	5800376800	Holder, Jack

VR PCB ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200089300	PCB Assy
	5210089300	PCB
	5284006500	Var. Res., Slide; 100k Ω (A)x2

CONTROL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200089601	PCB Assy (V-2RX) [All except US, C]
	5200089611	PCB Assy (V-2RX) [US, C]
	5200096601	PCB Assy (V-4RX) [All except US, C]
	5200096611	PCB Assy (V-4RX) [US, C]
	5210089601	PCB [All except US, C]
	5210090101	PCB [US, C]
	IC's	
U701	5220020400	BA843
U702	5293000900	TD62504P
U703~U705	5042712000	SN7400N
U706	5220012500	μPC393C
U707	5220803800	HD38755A61
	TRANSISTORS	
Q702	5230778300	2SC2320F
Q703	5230016600	2SA999F
Q704, Q705	5230778300	2SC2320F
Q706	5230016600	2SA999F
Q707	5230777900	2SC2877Y
Q708~Q710	5230778300	2SC2320F
Q711, Q712	5230016600	2SA999F
Q713	5230778300	2SC2320F
Q714	5230016600	2SA999F
Q715~Q717	5230778300	2SC2320F
Q718~Q721	5230016600	2SA999F
Q722	5230778300	2SC2320F
Q723	5230016600	2SA999F
Q724~Q726	5230778300	2SC2320F
Q727	5230016600	2SA999F
Q728, Q729	5230778300	2SC2320F
Q730	5230016600	2SA999F
Q731	5230778300	2SC2320F
Q734	5145059000	2SD571LA
Q735	5230777900	2SC2877Y
Q736	5230016600	2SA999F
Q737	5230778300	2SC2320F
Q738	5145059000	2SD571LA
Q739, Q740	5230777700	2SC2120Y
Q741, Q742	5230016100	2SA950Y
Q743	5230777900	2SC2877Y
Q744	5230778300	2SC2320F
Q745	5230016600	2SA999F
Q746	5230778300	2SC2320F
Q747	5230016600	2SA999F (V-4RX)
Q748~Q751	5230778300	2SC2320F (V-4RX)
	DIODES	
D701	5224013210	DS135D
D703, D704	5224013210	DS135D
D705	5224540601	Zener RD5.6EB2
D706~D711	5224015010	1SS133HV
D712, D713	5224013210	DS135D
D714~D716	5224015010	1SS133HV
D718~D730	5224015010	1SS133HV
D732~D735	5224015010	1SS133HV
D738	5224015010	1SS133HV
D740~D742	5224013210	DS135D
D743~D745	5224015010	1SS133HV (V-4RX)

REF. NO.	PARTS NO.	DESCRIPTION
CARBON RESISTORS All resistors are rated $\pm 5\%$ tolerance and 1/8 watt unless otherwise noted.		
R701, R702	5181476000	560Ω 1/8W
R703, R704	5181474000	470Ω 1/8W
R707, R708	5240030620	10kΩ
R709~R711	5181450000	47Ω 1/8W
R712~R715	5240030620	10kΩ
R716~R718	5181450000	47Ω 1/8W
R719~R721	5240030620	10kΩ
R722	5240030020	5.6kΩ
R723, R724	5240030620	10kΩ
R725	5181472000	290Ω 1/8W
R726~R730	5240030620	10kΩ
R731	5240029020	2.2kΩ
R732	5240030020	5.6kΩ
R733, R734	5240031220	18kΩ
R735	5181486000	1.5kΩ 1/8W
R736	5181482000	1kΩ 1/8W
R737	5180078000	680Ω 1/8W
R738	5240030620	10kΩ
R739, R740	5240028220	1kΩ
R741	5240030620	10kΩ
R742	5240035420	1MΩ
R743	5240030620	10kΩ
R744	5240031420	22kΩ
R745	5240028220	1kΩ
R746, R747	5240030620	10kΩ
R748	5240031420	22kΩ
R749~R751	5181458000	100Ω 1/8W
R752~R760	5240030020	5.6kΩ
R761	5240030620	10kΩ
R762	5240028220	1kΩ
R763~R766	5240030620	10kΩ
R767, R768	5240030020	5.6kΩ
R769~R773	5240030620	10kΩ
R774	5240030020	5.6kΩ
R775~R782	5240030620	10kΩ
R783	5240030020	5.6kΩ
R784	5240028220	1kΩ
R785	5240030620	10kΩ
R786~R789	5240029420	3.3kΩ
R790	5240030620	10kΩ
R791	5240029420	3.3kΩ
R792	5240030620	10kΩ
R793	5240028220	1kΩ
R794	5240030620	10kΩ
R795	5240028220	1kΩ
R796	5240030620	10kΩ
R797	5240028220	1kΩ
R798	5240030620	10kΩ
R799, R800	5240028220	1kΩ
R801	5240030620	10kΩ
R802	5240031420	22kΩ
R803	5181474000	470Ω 1/8W
R804	5181476000	560Ω 1/8W
R806, R807	5240032620	68kΩ
R808	5240030620	10kΩ

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

REF. NO.	PARTS NO.	DESCRIPTION
R809	5240030420	8.2k Ω
R810	5240030620	10k Ω
R811	5240032420	56k Ω
R812~R820	5240030620	10k Ω
R821	5240032420	56k Ω
R822	5240030420	8.2k Ω
R823	5240030620	10k Ω
R825	5181480000	820 Ω 1/4W
R826	5181460000	120 Ω 1/4W
R827	5240030620	10k Ω
R828	5240031420	22k Ω
R829, R830	5240030620	10k Ω
R831	5240027420	470 Ω
R832	5181474000	470 Ω 1/4W
R833	5240030620	10k Ω
R834~R843	5240030620	10k Ω (V-4RX)
R844	5240030620	10k Ω
R845, R846	5240030620	10k Ω (V-4RX)
R847	5240033020	100k Ω
CAPACITORS		
C701	5173010000	Elec. 10 μ F 16V (V-2RX)
C701	5260162550	Elec. 10 μ F 16V (V-4RX)
C702	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C702	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C703	5172336000	Ceramic 0.01 μ F 50V (V-2RX)
C703	5173433000	Ceramic 0.01 μ F 50V (V-4RX) 10%
C704~C709	5260160750	Elec. 1 μ F 50V
C711	5172344000	Ceramic 0.047 μ F 50V (V-2RX) 10%
C711	5173435000	Ceramic 0.047 μ F 50V (V-4RX)
C712	5173010000	Elec. 10 μ F 16V (V-2RX)
C712	5260162550	Elec. 10 μ F 16V (V-4RX)
C713	5260162550	Elec. 10 μ F 16V
C714	5260163452	Elec. 22 μ F 25V
C715	5260162550	Elec. 10 μ F 16V
C716	5173064000	Elec. 330 μ F 25V
C717	5260165252	Elec. 47 μ F 25V
C718	5260162550	Elec. 10 μ F 16V
C719	5260160750	Elec. 1 μ F 50V
C720~C724	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C720~C724	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C725~C728	5260162550	Elec. 10 μ F 16V
C729	5260163452	Elec. 22 μ F 25V
C730	5260065850	Elec. 2.2 μ F 50V (BP)
C731	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C731	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C733, C734	5172812000	Polyst. 220pF 50V
C735	5260162550	Elec. 10 μ F 16V
C737, C738	5260165252	Elec. 47 μ F 25V
C739	5260162552	Elec. 10 μ F 16V (V-4RX)

REF. NO.	PARTS NO.	DESCRIPTION
MISCELLANEOUS		
R805	5280002902	Var. Res., Semi-fixed; 2k Ω (B)
L701, L702	5286002100	Coil, Choke 1.5mH
CR1	5347001100	Resonator, Ceramic; KBR-400B
J701	5336088500	Connector Socket, 5P (V-2RX)
	5336088700	Connector Socket, 7P (V-4RX)
J702	5336088500	Connector Socket, 5P
J703~J706	5336088400	Connector Socket, 4P
J707	5336088300	Connector Socket, 3P
J708	5336088600	Connector Socket, 6P
J709	5336088400	Connector Socket, 4P
J710	5336088500	Connector Socket, 5P
	5553132000	Heatsink, IC1625-ST
	5033291000	Plate, Insulating

JOINT PCB B ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200088800	PCB Assy
	5210088800	PCB
J1	5336089200	Connector Socket, 12P

SENSOR PCB B ASSY (PC Board Omitted)

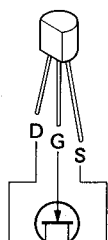
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	5200088700	PCB Assy
	5210088700	PCB
Q1, Q2	5228008300	Photo Transistor PH-102K

POWER SW PCB ASSY (PC Board Omitted)

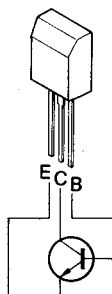
REF. NO.	PARTS NO.	DESCRIPTION
	5200090900	PCB Assy [J]
	5200090910	PCB Assy [US]
	5200090920	PCB Assy [C]
	5200090930	PCB Assy [GE, L]
	5200090940	PCB Assy [E, UK, A]
	5210090900	PCB [All except US, C]
	5210091100	PCB [US, C]
S1	Δ5300027000	Switch, Push [J]
	Δ5300027100	Switch, Push [US, C]
	Δ5300027200	Switch, Push [GE, E, UK, A, L]
Z1	Δ5052905000	Spark Killer, 0.1 μ F+120 Ω /300 Ω [J]
	Δ5052910000	Spark Killer, 0.033 μ F+120 Ω /125V [US]
	Δ5267702500	Spark Killer, 0.0047 μ F/250V [E, UK, A]
	Δ5292002500	Spark Killer, 0.01 μ F 300 Ω [GE, L]
	Δ5292002600	Spark Killer, 0.033 μ F+120 Ω /125V [C]

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

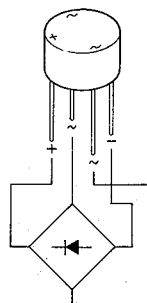
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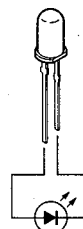
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W02



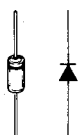
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SLP260C
SLP460C



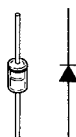
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RD11EB2
RD13EB3
RD18EB3
RD5.6EB2



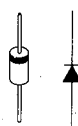
1S2473
1S2473HJ
1S2473VE



1SS133HV



DS135D



REF. NO.	PARTS NO.	DESCRIPTION
R809	5240030420	8.2k Ω
R810	5240030620	10k Ω
R811	5240032420	56k Ω
R812~R820	5240030620	10k Ω
R821	5240032420	56k Ω
R822	5240030420	8.2k Ω
R823	5240030620	10k Ω
R825	5181480000	820 Ω $\frac{1}{4}W$
R826	5181460000	120 Ω $\frac{1}{4}W$
R827	5240030620	10k Ω
R828	5240031420	22k Ω
R829, R830	5240030620	10k Ω
R831	5240027420	470 Ω
R832	5181474000	470 Ω $\frac{1}{4}W$
R833	5240030620	10k Ω
R834~R843	5240030620	10k Ω (V-4RX)
R844	5240030620	10k Ω
R845, R846	5240030620	10k Ω (V-4RX)
R847	5240033020	100k Ω
CAPACITORS		
C701	5173010000	Elec. 10 μ F 16V (V-2RX)
C701	5260162550	Elec. 10 μ F 16V (V-4RX)
C702	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C702	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C703	5172336000	Ceramic 0.01 μ F 50V (V-2RX)
C703	5173433000	Ceramic 0.01 μ F 50V (V-4RX) 10%
C704~C709	5260160750	Elec. 1 μ F 50V
C711	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C711	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C712	5173010000	Elec. 10 μ F 16V (V-2RX)
C712	5260162550	Elec. 10 μ F 16V (V-4RX)
C713	5260162550	Elec. 10 μ F 16V
C714	5260163452	Elec. 22 μ F 25V
C715	5260162550	Elec. 10 μ F 16V
C716	5173064000	Elec. 330 μ F 25V
C717	5260165252	Elec. 47 μ F 25V
C718	5260162550	Elec. 10 μ F 16V
C719	5260160750	Elec. 1 μ F 50V
C720~C724	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C720~C724	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C725~C728	5260162550	Elec. 10 μ F 16V
C729	5260163452	Elec. 22 μ F 25V
C730	5260065850	Elec. 2.2 μ F 50V (BP)
C731	5172344000	Ceramic 0.047 μ F 50V (V-2RX)
C731	5173435000	Ceramic 0.047 μ F 50V (V-4RX) 10%
C733, C734	5172812000	Polyst. 220pF 50V
C735	5260162550	Elec. 10 μ F 16V
C737, C738	5260165252	Elec. 47 μ F 25V
C739	5260162552	Elec. 10 μ F 16V (V-4RX)

REF. NO.	PARTS NO.	DESCRIPTION
MISCELLANEOUS		
R805	5280002902	Var. Res., Semi-fixed; 2k Ω (B)
L701, L702	5286002100	Coil, Choke 1.5mH
CR1	5347001100	Resonator, Ceramic; KBR-400B
J701	5336088500	Connector Socket, 5P (V-2RX)
	5336088700	Connector Socket, 7P (V-4RX)
J702	5336088500	Connector Socket, 5P
J703~J706	5336088400	Connector Socket, 4P
J707	5336088300	Connector Socket, 3P
J708	5336088600	Connector Socket, 6P
J709	5336088400	Connector Socket, 4P
J710	5336088500	Connector Socket, 5P
	5553132000	Heatsink, IC1625-ST
	5033291000	Plate, Insulating

JOINT PCB B ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200088800	PCB Assy
	5210088800	PCB
J1	5336089200	Connector Socket, 12P

SENSOR PCB B ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200088700	PCB Assy
	5210088700	PCB
Q1, Q2	5228008300	Photo Transistor PH-102K

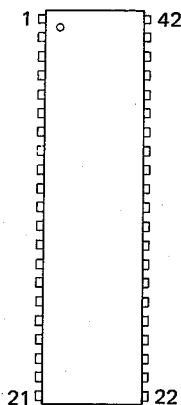
POWER SW PCB ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200090900	PCB Assy [J]
	5200090910	PCB Assy [US]
	5200090920	PCB Assy [C]
	5200090930	PCB Assy [GE, L]
	5200090940	PCB Assy [E, UK, A]
	5210090900	PCB [All except US, C]
	5210091100	PCB [US, C]
S1	△5300027000	Switch, Push [J]
	△5300027100	Switch, Push [US, C]
	△5300027200	Switch, Push [GE, E, UK, A, L]
Z1	△5052905000	Spark Killer, 0.1 μ F+120 Ω /300 Ω [J]
	△5052910000	Spark Killer, 0.033 μ F+120 Ω /125V [US]
	△5267702500	Spark Killer, 0.0047 μ F/250V [E, UK, A]
	△5292002500	Spark Killer, 0.01 μ F 300 Ω [GE, L]
	△5292002600	Spark Killer, 0.033 μ F+120 Ω /125V [C]

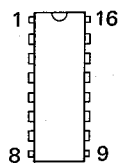
[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN [L]: LIMITED AREA

SEMICONDUCTOR ELECTRODES

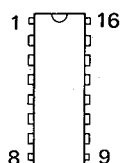
HD38755A61
(TOP VIEW)



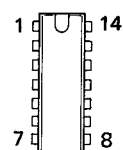
BA843
(TOP VIEW)



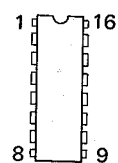
NE645B
(TOP VIEW)



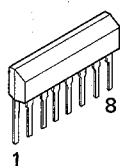
SN7400N
(TOP VIEW)



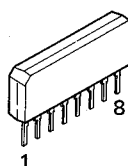
TA7629P
TD62504P
(TOP VIEW)



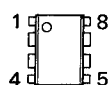
M5218L
M5219L



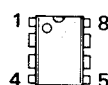
μ PC1252H2
 μ PC1253H2



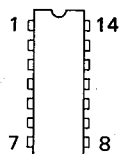
TL072CP
RC4558P
(TOP VIEW)



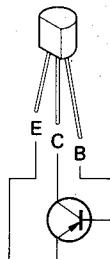
μ PC393C
(TOP VIEW)



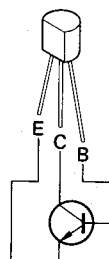
TC4011BP
(TOP VIEW)



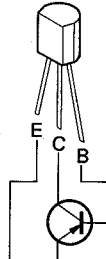
2SA950Y
2SA992E



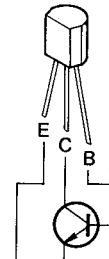
2SC2120Y
2SC2878B
2SD655E



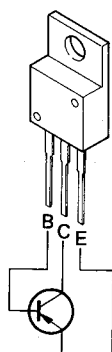
2SA999F



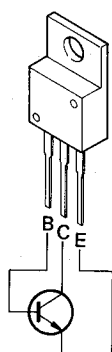
2SC2320F



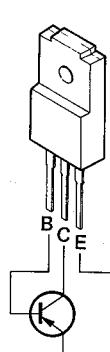
2SB507E



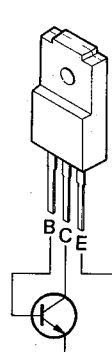
2SD313E



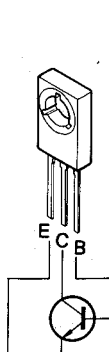
2SB941P



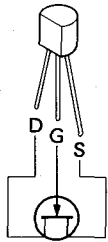
2SD1265O



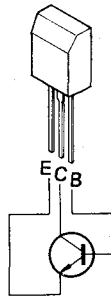
2SC2877Y



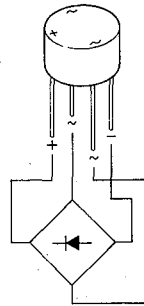
2SK364BL
2SK68AL



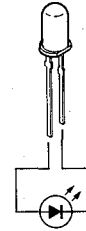
2SD571LA



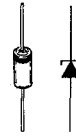
W02



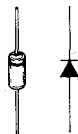
SLP160C
SLP260C
SLP460C



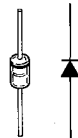
GZA6.2L
RD11EB2
RD13EB3
RD18EB3
RD5.6EB2



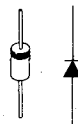
1S2473
1S2473HJ
1S2473VE



1SS133HV

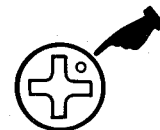


DS135D



ASSEMBLING HARDWARE CODING LIST

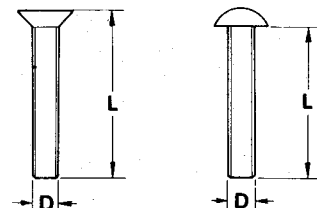
All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted. ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

B M 3 x 6

----- Length in mm (L)
 ----- Diameter in mm (D) *
 ----- Metric System
 ----- Nomenclature



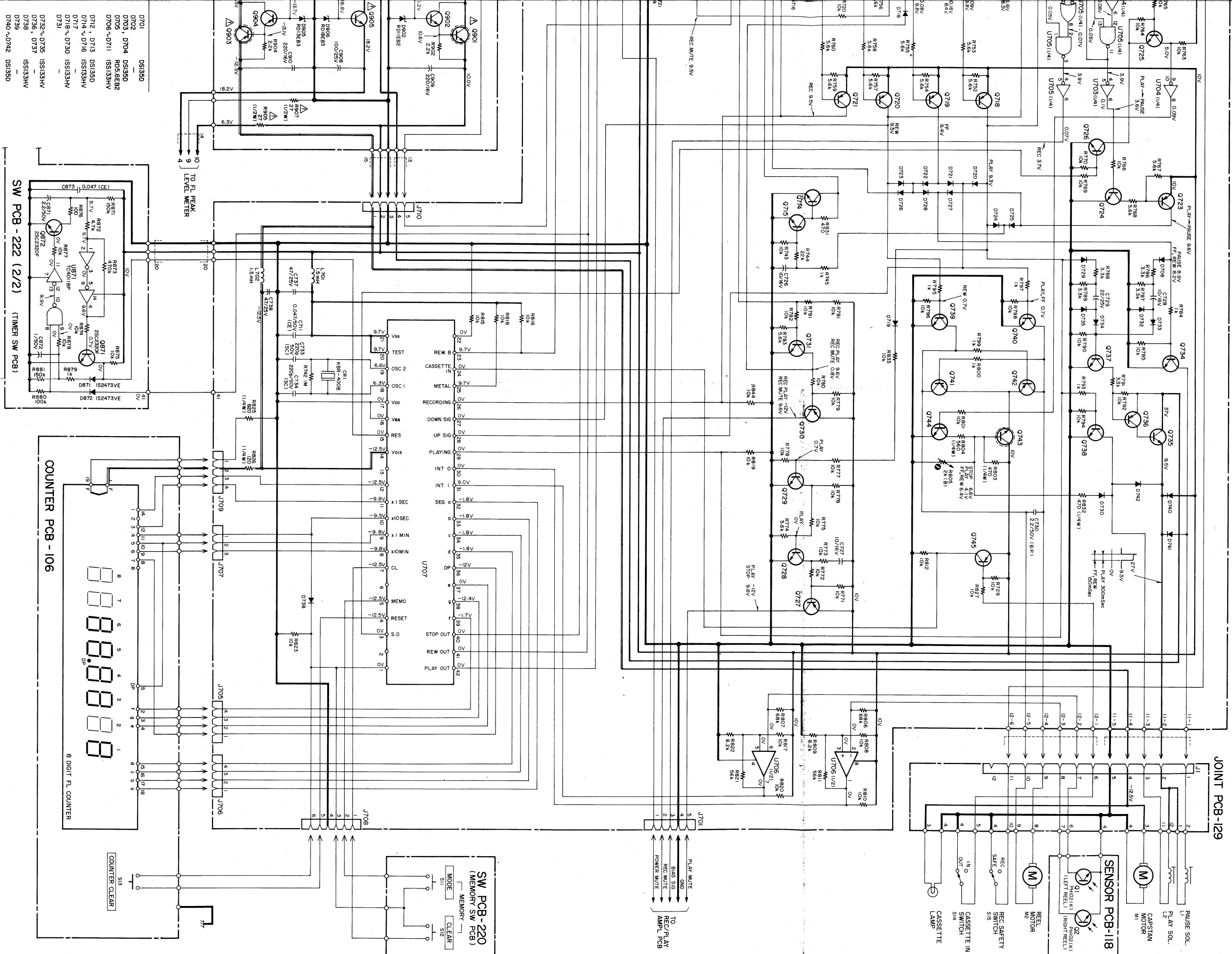
* Inner dia. for washers and nuts

	Code	Name	Type		Code	Name	Type
MACHINE SCREW	R	Round Head Screw		TAPPING SCREW	BTA	Binding Head Tapping Screw(A Type)	
	P	Pan Head Screw			BTB	Binding Head Tapping Screw(B Type)	
	T	Stove Head Screw (Truss)			RTA	Round Head Tapping Screw(A Type)	
	B	Binding Head Screw			RTB	Round Head Tapping Screw(B Type)	
	F	Flat Countersunk Head Screw		SETSCREW	SF	Hex Socket Setscrew(Flat Point)	
	O	Oval Countersunk Head Screw			SC	Hex Socket Setscrew(Cup Point)	
WOOD SCREW	RW	Round Head Wood Screw			SS	Slotted Socket Setscrew(Flat Point)	
TAPTITE SCREW	PTT	Pan Head Taptite Screw		WASHER	E	E-Ring (Retaining Washer)	
	WTT	Washer Head Taptite Screw			W	Flat Washer(Plain)	
SEMS SCREW	BSA	Binding Head SEMS Screw(A Type)			SW	Lock Washer (Spring)	
	BSB	Binding Head SEMS Screw(B Type)			LWI	Lock Washer (Internal Teeth)	
	BSF	Binding Head SEMS Screw(F Type)			LWE	Lock Washer (External Teeth)	
	PSA	Pan Head SEMS Screw(A Type)			TW	Trim Washer (Countersunk)	
	PSB	Pan Head SEMS Screw(B Type)					
				NUT	N	Hex Nut	



注

1. プンプ回路は一部を除きLothのみが示されています
2. 抵抗の単位は Ω ($k = k\Omega$, $M = M\Omega$) です。
特に指定のない抵抗の種類は次のとおりです。
DBX 基板 : カーボン抵抗, 偏差 $\pm 5\%$, $1/8W$
その他の基板: カーボン抵抗, 偏差 $\pm 5\%$, $1/4W$
3. コンデンサの単位は μF ($p = pF$) です。
特に指定のない無極性コンデンサは, 偏差 $\pm 5\%$ の



注
1. 抵抗の単位はΩ (k = kΩ, M = MΩ) です。
特に指定のない抵抗の種類は次のとおりです。

コントローラ基板, 電源基板

：カーボン抵抗, 偏差±5%, 1/8W型

タイマースワ基板：カーボン抵抗, 偏差±5%, 1/4W型

2. コンデンサの単位はμF (p = pF) です。

3. 特に指示のない電圧はSTOPモード時の測定値です。

4. ：フロントパネル上の表示

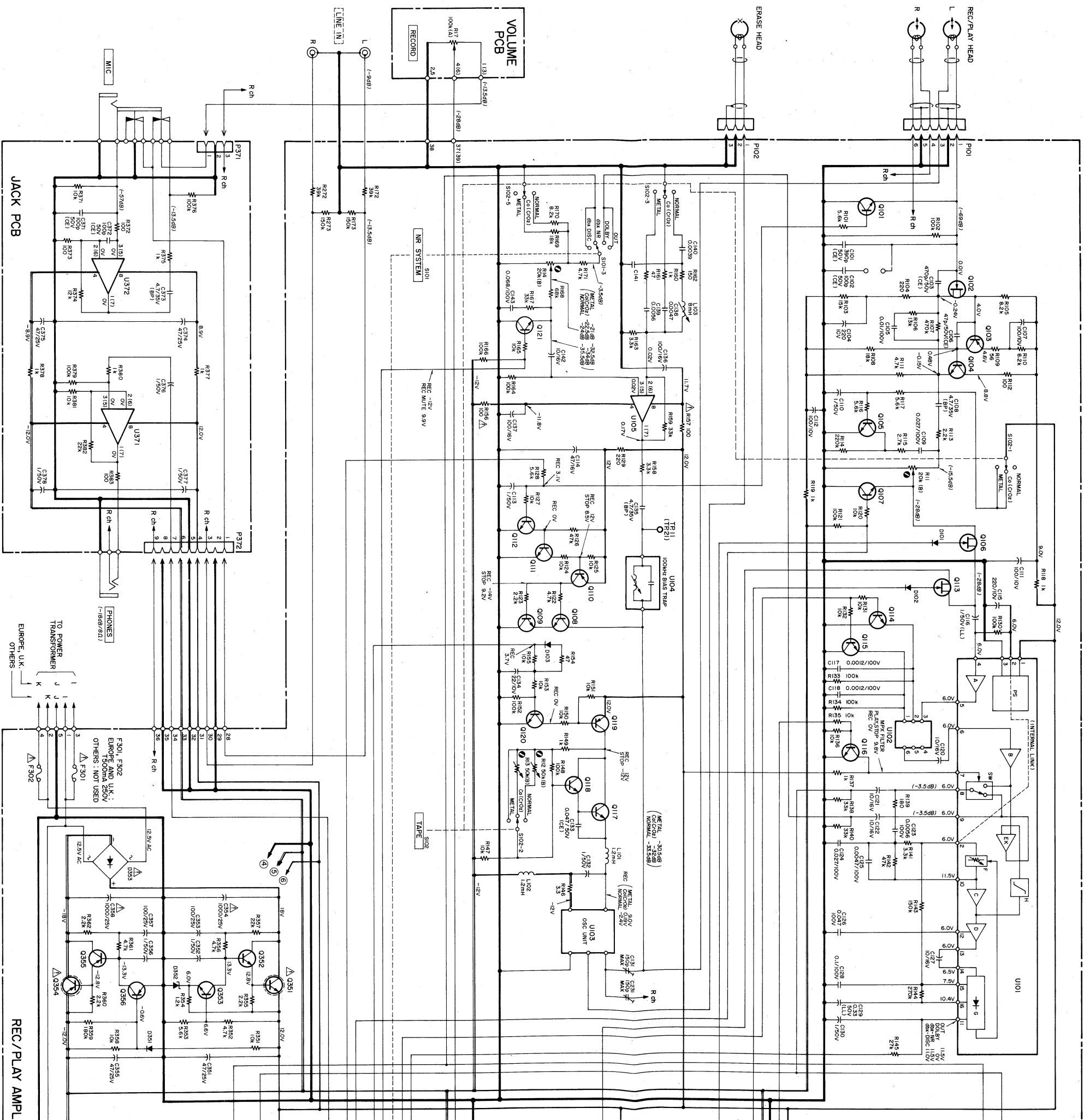
5. ：+B電源回路

6. ：-B電源回路

7. Δマークのある部品は安全重要部品です。

交換するときは必ずタイマースワ指定の部品を使用してください。

V-2RX
Stereo Cassette Deck



REC/PLAY AMPL PCB

U101 (U201)	TA7629P	Q101 (Q201)	2SC2320F	Q111	2SC2320F	Q121 (Q221)	2SC2878B	Q301 (Q401)	2SK3648L	D101 (D201)	IS2473HU	D301 (D401)	IS2473HU	U501 (U601)	JPC2320F	Q501 (Q601)	2SC2320F
U102 (U202)	MPX FILTER	Q102 (Q202)	2SK696L	Q112	2SC2320F	Q122 (Q222)	2SC2878B	Q302 (Q402)	2SK3648L	D102 (D202)	IS2473HU	D302 (D402)	IS2473HU	U502 (U602)	JPC2320F	Q502 (Q602)	2SK648L
U103 (U203)	OSC. UNIT	Q103 (Q203)	2SK696L	Q113 (Q213)	2SK3648L	Q123 (Q223)	—	Q303 (Q403)	2SK696L	D103 (D203)	IS2473HU	D303 (D403)	IS2473HU	U503 (U603)	JPC2320F	Q503 (Q603)	2SK696L
U104 (U204)	Bias TRAP	Q104 (Q204)	2SC2320F	Q114 (Q214)	2SC2320F	Q124 (Q224)	2SK3648L	Q304 (Q404)	2SK3648L	D104 (D204)	IS2473HU	D304 (D404)	IS2473HU	U504 (U604)	JPC2320F	Q504 (Q604)	2SK3648L
U105	TL072CP	Q105 (Q205)	2SC2320F	Q115 (Q215)	2SC2320F	Q125 (Q225)	2SK3648L	Q305 (Q405)	2SK3648L	D105 (D205)	IS2473HU	D305 (D405)	IS2473HU	U505 (U605)	JPC2320F	Q505 (Q605)	2SK3648L
U301 (U401)	TL072CP	Q106 (Q206)	2SK3648L	Q116	2SC2320F	Q126 (Q226)	2SK3648L	Q306 (Q406)	2SK3648L	D106 (D206)	IS2473HU	D306 (D406)	IS2473HU	U506 (U606)	JPC2320F	Q506 (Q606)	2SK3648L
		Q107 (Q207)	2SC2878B	Q117	2SC2320F	Q127 (Q227)	2SK3648L	Q307 (Q407)	2SK3648L	D107 (D207)	IS2473HU	D307 (D407)	IS2473HU	U507 (U607)	JPC2320F	Q507 (Q607)	2SK3648L
		Q108 (Q208)	2SC2320F	Q118	2SC2320F	Q128 (Q228)	2SK3648L	Q308 (Q408)	2SK3648L	D108 (D208)	IS2473HU	D308 (D408)	IS2473HU	U508 (U608)	JPC2320F	Q508 (Q608)	2SK3648L
		Q109 (Q209)	2SC2320F	Q119	2SC2320F	Q129 (Q229)	2SK3648L	Q309 (Q409)	2SK3648L	D109 (D209)	IS2473HU	D309 (D409)	IS2473HU	U509 (U609)	JPC2320F	Q509 (Q609)	2SK3648L
		Q110	2SC2320F	Q120	2SC2320F	Q130	2SK3648L	Q310 (Q410)	2SK3648L	D110 (D210)	IS2473HU	D310 (D410)	IS2473HU	U510 (U610)	JPC2320F	Q510 (Q610)	2SK3648L

NOTES

1. Schematic diagram is shown for left channel, unless otherwise noted.
2. Resistors:
 - Resistor values are in ohms (K=kilo-ohms M=megohms).
 - DBX PCB:
 - All resistors are rated $\pm 5\%$ tolerance, 1/8 watt and of carbon type, unless otherwise noted.
 - REC/PLAY AMPL PCB, JACK PCB:
 - All resistors are rated $\pm 5\%$ tolerance, 1/4 watt and of carbon type, unless otherwise noted.
 - All capacitor values are in microfarads (μ =pico-farads).
 - All non-polarized capacitors are $\pm 5\%$ Mylar, unless otherwise noted.

4. • Voltage and level values are values of actual measurement.

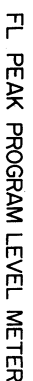
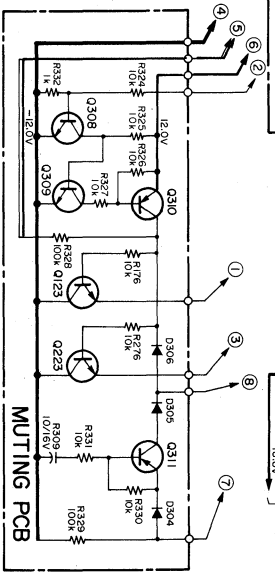
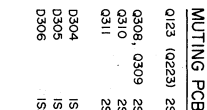
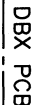
Signal frequency: 400 Hz
0 dB=0.775V

Each voltage is measured value in STOP mode, unless otherwise noted.

5. : Front panel indication
6. : Rear panel indication
7. : +B power supply circuit
8. : -B power supply circuit
9. : Parts marked with this sign are safety critical components. They must always be replaced with identical components. Refer to the appropriate parts list to ensure exact replacement.

注

1. アンプ回路は一部を除きLchのみが示されています。
2. 抵抗の単位は Ω (K=k Ω , M=M Ω)です。
特に指定のない抵抗の種類は次のとおりです
DBX基板 : カーボン抵抗, 偏差 $\pm 5\%$,
その他の基板: カーボン抵抗, 偏差 $\pm 5\%$,
コンデンサの単位は μF ($p=pF$)です。
特に指定のない無極性コンデンサは, 偏差 $\pm$



4. 電圧及びレベルは参考値です。
信号周波数：400Hz
0 dB = 0.775V

 $0 \text{ dB} = 0.775 \text{ V}$

信号周波数: 4

5. : フロント・パネル上の表示

フロント・パネル上の表示

7. ———: +B電源回路

——: +B 電源回路

8. ————: —B 電源回路

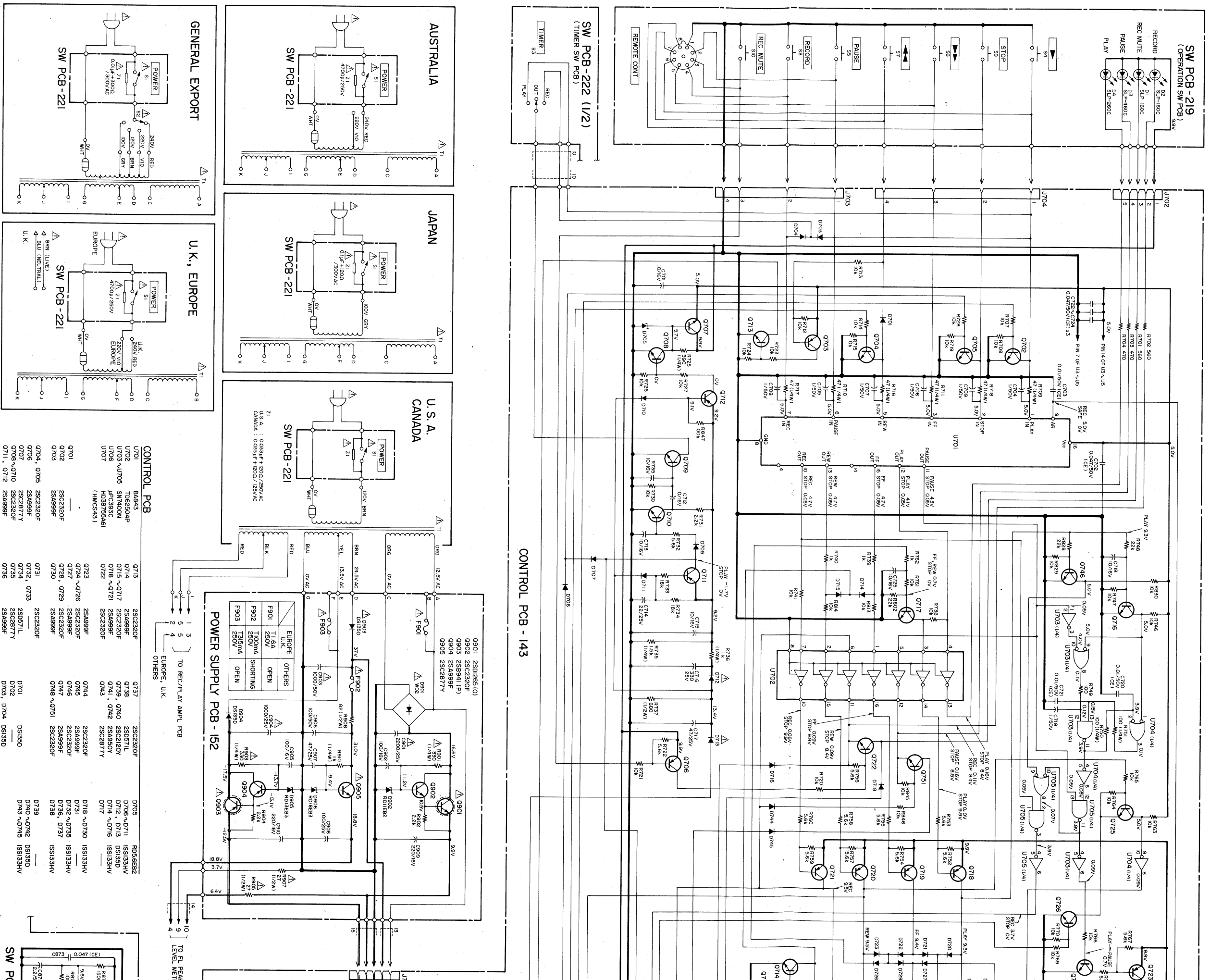
——：—B電源回路

交換するときは必ずティアップ指定の部品を使用してください。

に換えるときは必ずアイアック指定の部品を使用してください。

V-4RX

Stereo Cassette Deck

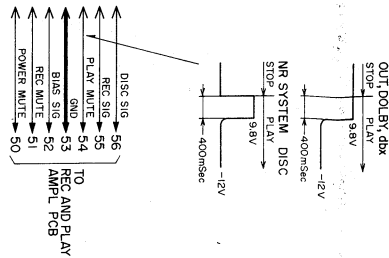


NOTES

- Resistors:
 - Resistor values are in ohms (K=kilo-ohms M=megohms).
 - CONTROL PCB, POWER SUPPLY PCB: All resistors are rated $\pm 5\%$ tolerance, 1/8 watt and of carbon type, unless otherwise noted.
 - TIMER SW PCB: All resistors are rated $\pm 5\%$ tolerance, 1/4 watt and of carbon type, unless otherwise noted.
- All capacitor values are in microfarads (p=picofarads).

注

- 抵抗の単位は Ω ($K=k\Omega$, $M=M\Omega$). 特に指定のない抵抗の種類はコントロール基板、電源基板、タイマSW基板: カーボン抵抗
- コンデンサの単位は μF ($p=pF$)



V-4RX

Stereo Cassette Deck

V-2RX/V-4RX

TEAC®

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本社営業部 180・東京都武蔵野市中町3-7-3

電話 武蔵野 (0422) 53-1111代

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サービスに関するお問い合わせ

札幌営業所	064・札幌市中央区南7条西2-2くぼたビル	電話 札幌 (011) 521-4101代
仙台営業所	980・仙台市1番町2-5-5中央ビル	電話 仙台 (0222) 27-1501代
大宮営業所	330・大宮市桜木町4-2ローズベイ大宮ビル	電話 大宮 (0486) 42-4551代
東京営業所	100・東京都千代田区永田町2-10-7星ガ岡会館	電話 東京 (03) 592-1831代
千代田営業所	100・東京都千代田区永田町2-10-7星ガ岡会館	電話 東京 (03) 592-1836代
千葉出張所	280・千葉市松波1-11-3石橋松波ビル	電話 千葉 (0472) 55-1281代
立川営業所	190・東京都立川市栄町4-13-2	電話 立川 (0425) 25-4721代
横浜営業所	221・横浜市神奈川区沢渡1-1高島台第一ビル	電話 横浜 (045) 312-3270代
名古屋営業所	464・名古屋市千種区東山通り3-2-3	電話 名古屋 (052) 782-4581代
静岡出張所	420・静岡市中島大割2-8-61-1	電話 静岡 (0542) 81-6561代
大阪営業所	564・大阪府吹田市垂水町3-34-10	電話 大阪 (06) 384-5201代
京都出張所	600・京都市下京区大宮通四条下ル四条大宮町21番地三虎ビル	電話 京都 (075) 842-0751代
神戸出張所	650・神戸市中央区山本通り3-1-3谷ロマンション内	電話 神戸 (078) 242-2458代
岡山出張所	700・岡山市十日市中町1番40号	電話 岡山 (0862) 25-8601代
広島営業所	733・広島市中区中島町10-24	電話 広島 (082) 243-3581代
福岡営業所	812・福岡市博多区博多駅東2-17-5モリメンビル	電話 福岡 (092) 431-5781代
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