

TEAC[®]



SERVICE MANUAL

C-2X

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 unless otherwise specified.
- All the electrical numeral values are for STANDARD speed unless otherwise specified.

SPECIFICATIONS

Track System 4-track, 2-channel stereo

Heads 3: Erase, record and playback

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

Tape Speed 4.75 cm/s (1-7/8 ips), 9.5 cm/s (3-3/4 ips)

Input (level and impedance)

MIC: Specified input level: -57 dB (1.09 mV)/10k ohms
Minimum input level: -67 dB (346 μ V)

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

Output (level and impedance)

OUTPUT: Maximum output level: +1 dB (1.12 V)/50k ohms
Specified output level: -5 dB (436 mV)

PHONES: Specified output level: -15.8 dB (126 mV)/8 ohms

Equalization

	HIGH	STANDARD
METAL	3180 μ s + 35 μ s	3180 μ s + 70 μ s
Co(CrO ₂)	3180 μ s + 35 μ s	3180 μ s + 70 μ s
NORMAL	3180 μ s + 50 μ s	3180 μ s + 120 μ s

Head Configuration

1/2-track, 1-channel erase head

1/4-track, 2-channel record head and playback head in a single housing

Motors 1 DC servo capstan motor

1 DC reel motor

Bias Frequency 100 kHz \pm 5 kHz

Operation Position Horizontal

Power Requirements

100/117/220/240 V AC, 50/60 Hz, 36 W (General export model)

117 V AC, 60 Hz, 36 W (U.S.A./Canada model)

220 V AC, 50 Hz, 36 W (Europe model)

240 V AC, 50 Hz, 36 W (U.K./Australia model)

Weight 12 kg (26-7/16 lbs.) net

Dimensions See Fig. 3-3

*Noise Reduction System and Headroom Extension System manufactured under license from Dolby Laboratories Licensing Corporation.
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dbx noise reduction system made under license from dbx, Incorporated. The word dbx and the Symbol are trademarks of dbx, Incorporated.

SERVICE DATA

MECHANICAL

Tape Speed Deviation 3,000 Hz \pm 45 Hz

Tape Speed Drift 30 Hz

Wow and Flutter

	HIGH	STANDARD
Playback	0.05% (WRMS)	0.07% (WRMS)
Record/playback	0.12% (RMS)	0.16% (RMS)

Pinch Roller Pressure

Right: 400 g ~ 500 g (14.1 oz ~ 17.6 oz)

Left: 300 g ~ 380 g (10.6 oz ~ 13.4 oz)

Reel Torque (at STANDARD speed)

Take-up: 45 to 65 g-cm (0.625 to 0.903 oz-inch)

Supply: 9 to 11 g-cm (0.125 to 0.153 oz-inch)

F.F. & REW: 90 to 160 g-cm (1.25 to 2.22 oz-inch)

Fast Winding Time

85 seconds for MTT-501 (C-60)

ELECTRICAL

Frequency Response

See Figs. 5-6 to 5-10.

Signal-to-noise Ratio

Playback	Better than:	
	HIGH	STANDARD
METAL, Co(CrO ₂)	55 dB	52 dB
NORMAL	52 dB	48 dB

Overall	Better than:	
	HIGH	STANDARD
METAL, Co(CrO ₂)	49 dB	48 dB
NORMAL	46 dB	45 dB

S/N is improved by 5 dB at 1 kHz and 10 dB above 5 kHz when Dolby NR* is used.

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

Channel Separation 35 dB min. at 1 kHz

Adjacent Track Crosstalk 40 dB min. at 125 Hz

Total Harmonic Distortion 2.0% or less with NORMAL, Co(CrO₂) and METAL tapes

CAUTION

△Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the TEAC Parts List and ensure exact replacement.

2 PARTS LOCATION

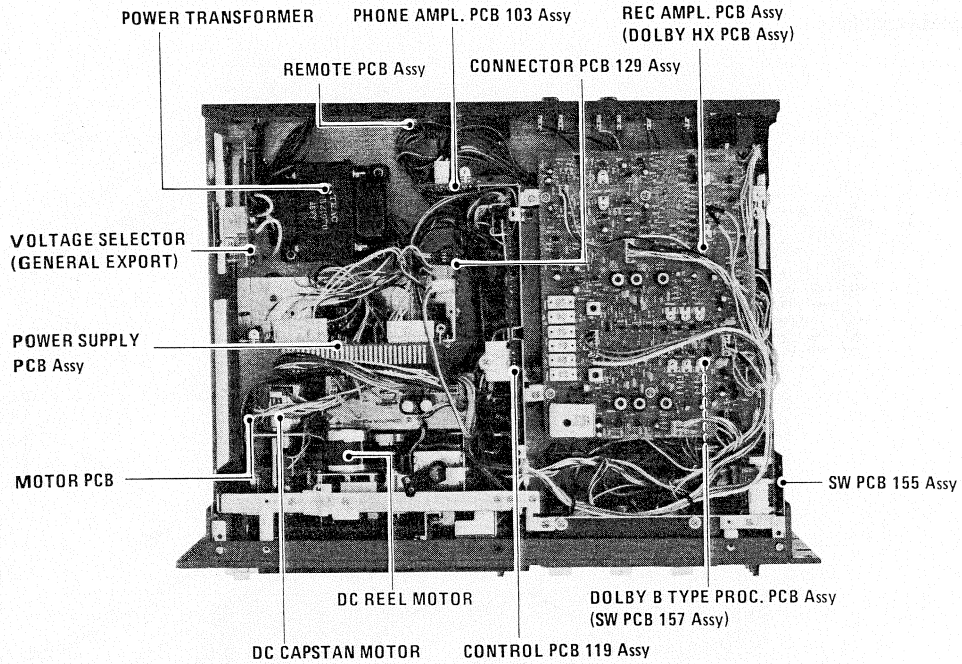


Fig. 2-1

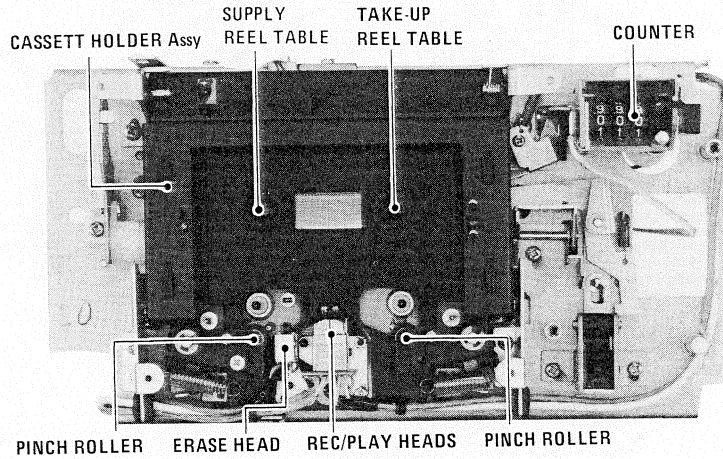


Fig. 2-2

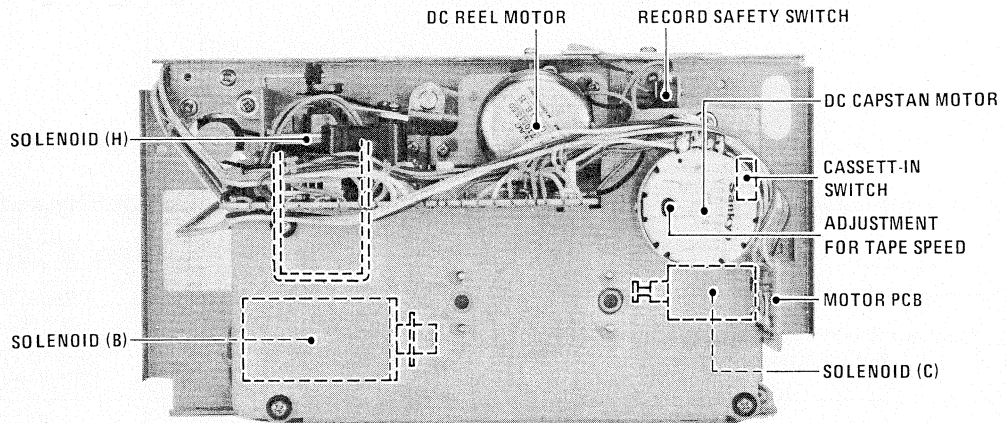


Fig. 2-3

3 CASE AND FRONT PANEL REMOVAL

Disassemble in number-order

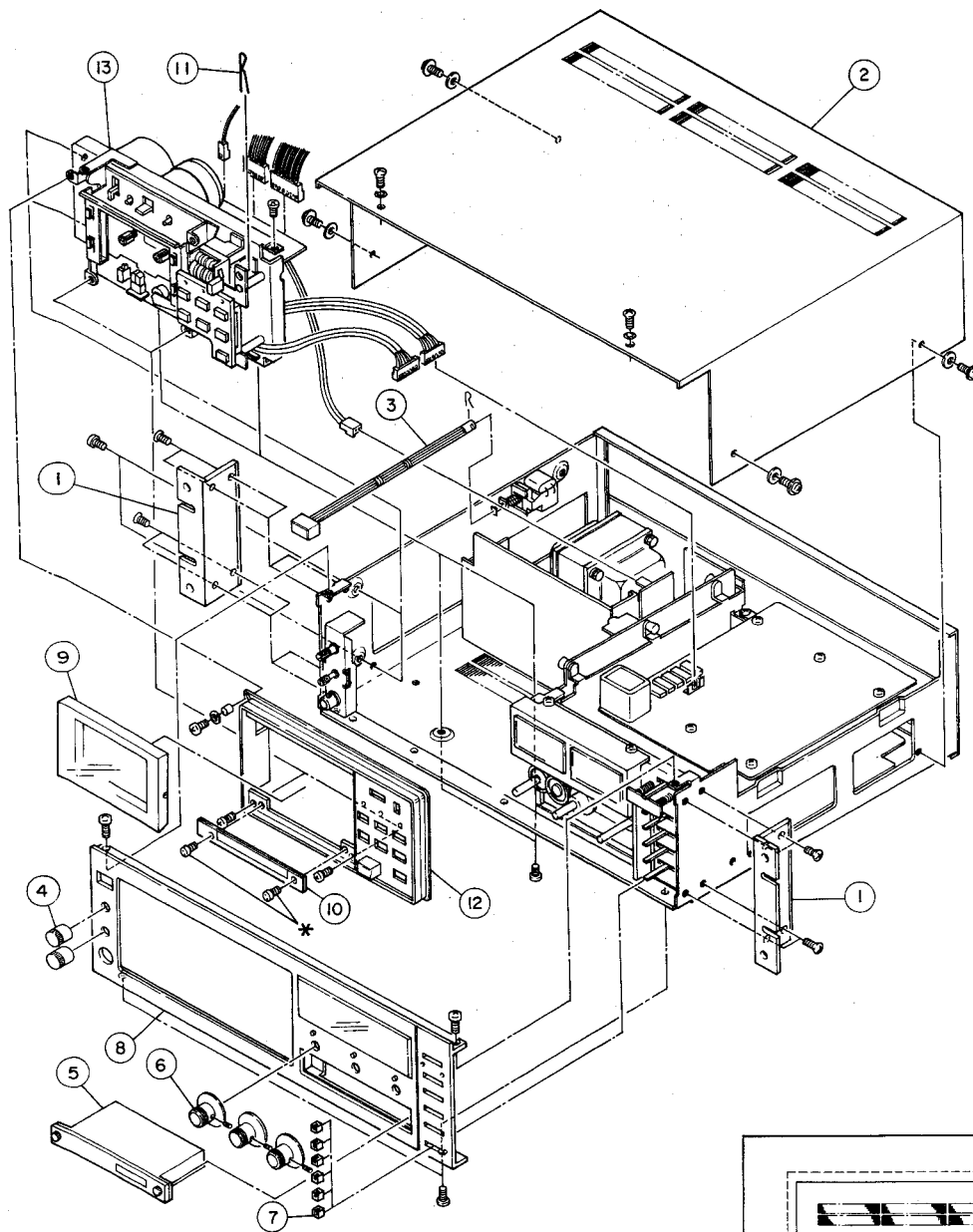


Fig. 3-1

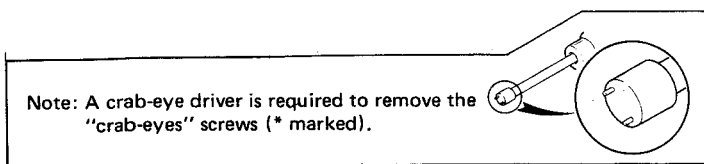


Fig. 3-2 Crab-eye driver

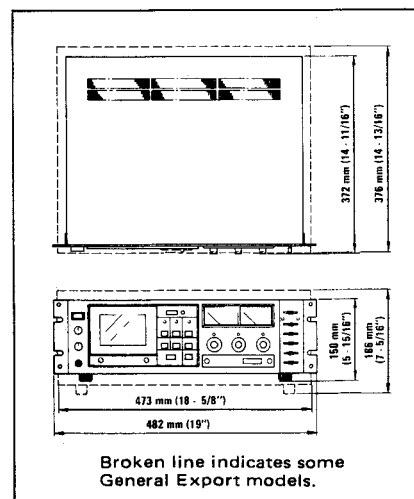


Fig. 3-3 Dimensions

4 MECHANICAL ADJUSTMENT AND CHECKS

Note: All checks and adjustments are made with the SPEED switch set to STANDARD, unless otherwise indicated.

4-1 ERASE HEAD POSITION

1. Load a mirror-type cassette*.
 2. Set the deck in the play mode to raise the erase head so that it is brought into the erase head opening of the cassette shell.
 3. Check that even though the tape is forced to move by hand both to the left and to the right, the head does not touch either edge of the erase head opening.
 4. If it touches, adjust with the two screws as shown.
- * Models made by TEAC are called "Compact Cassette Tape Path Checkers" and two types are available: MTT-901, a C-60, 30-meter tape, and MTT-902, a C-90, 45-meter tape.

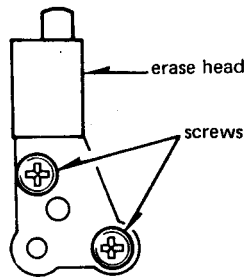


Fig. 4-1

4-2 TAPE PATH ALIGNMENT

1. Open the cassette holder.
2. Insert the check base plate jig very carefully with the two bosses installed outwards. When doing this, hold the jig in place until its bottom edge sits on the stopper at the bottom of the cassette holder.
3. Having closed the cassette holder, firmly press down the plate jig.
4. Set the deck in the play mode.
5. Position the guide height check jig in reference to the front surface of the record/play head as shown.
6. Adjust so that the tip of the jig just fits under the tape guide of the head by turning the height adjusting nut. When doing this, be sure that the final turn of the nut is in the clockwise direction. This is important and should be done whenever any screw or nut is adjusted.
7. Turn the azimuth adjusting nut the same amount as the height adjusting nut so that the head core is parallel to the head mounting plate assembly.
8. Move the jig and attach it under the pinch roller guide (S), keeping a reasonable distance from the capstan shaft to avoid scratching the shaft.
9. Using this jig, adjust the height of the guide by turning the height adjusting screw.
10. Load a C-90 mirror-type cassette (refer to #4-1).

11. Set the deck in the play mode and check that the tape travel is normal.
12. If curling is observed at the tape guide of the record/play head, correct the guide height by turning the height adjusting nut until the tape travel smooths out.
13. If, by carefully observing the tape travel between the capstan and pinch roller, curling is detected between the tape guide of the left pinch roller and the erase head, adjust the height of the pinch roller guide by turning the height adjusting screw within a quarter turn either clockwise or counterclockwise from the preset position until the tape travel smooths out.
14. Check that the tape travel is correct when the joint of the leader tape and the magnetic tape passes through the tape path.

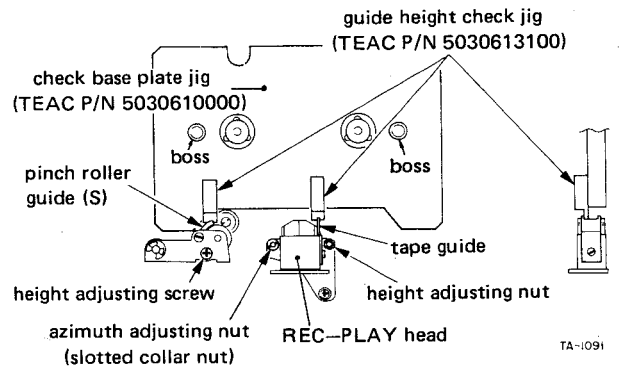


Fig. 4-2

4-3 SOLENOID (H) POSITION

Note: For solenoid location, refer to Fig. 2-3.

1. Manually push the head base plate ass'y upwards until it touches the base plate stopper.
2. In the above condition, adjust the solenoid position so that the plunger projects from the solenoid housing as shown.

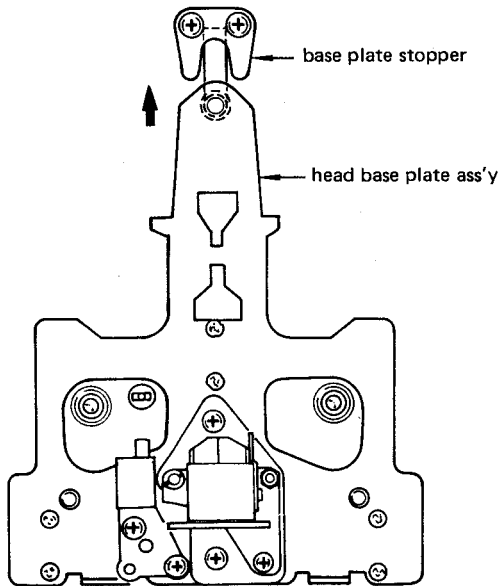


Fig. 4-3

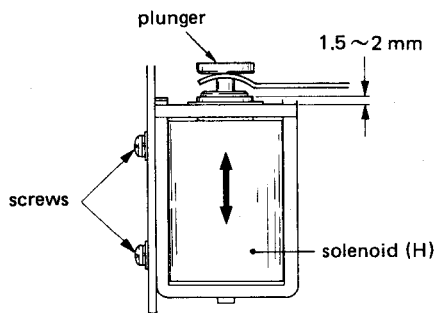


Fig. 4-4

4-4 SOLENOID (B) POSITION

Note: For solenoid location, refer to Fig. 2-3.

1. Adjust the solenoid position as follows:
 - a. When in the play mode, clearance (A) should be obtained at both the left and right pinch roller sides.
 - b. When in the pause mode, the clearance between the right pinch roller and right capstan shaft should be 0.3 mm ~ 0.5 mm.
2. Set the deck in the pause mode to check that the clearance between the capstan and the left pinch roller is wider than between the capstan and the right pinch roller.

Figure shows left pinch roller ass'y.

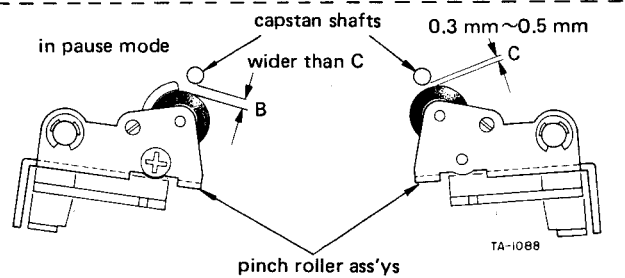
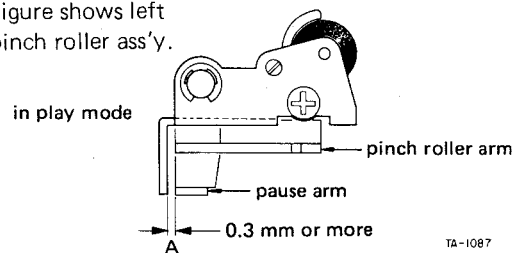


Fig. 4-5

4-5 SOLENOID (C) POSITION

Note: For solenoid location, refer to Fig. 2-3.

1. Manually push the brake shoe to make contact with the left reel table assembly. This partly depresses the plunger into the solenoid housing. In this condition, check that the plunger can be manually pushed in an additional 1 to 1.5 mm. If not, adjust the solenoid position accordingly. Refer to Fig. 4-6 (A) and (B).

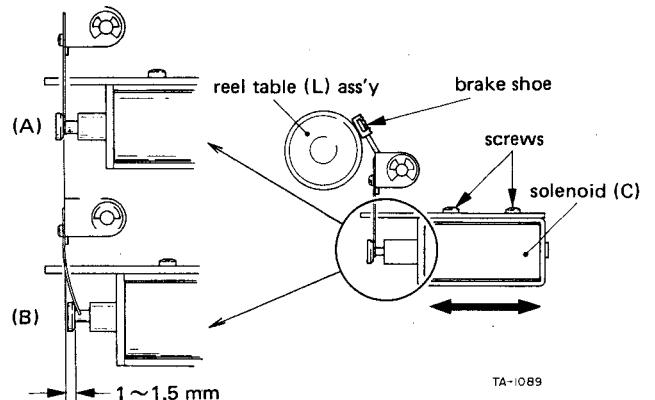


Fig. 4-6

4-6 CASSETTE-IN SWITCH POSITION

Note: For switch location, refer to Fig. 2-3.

1. Be sure that when inserting a cassette tape in the cassette holder and closing it, the cassette-in switch is engaged so that the capstan motor is enabled.
2. If the capstan motor does not turn, adjust the switch position as shown by the arrow until the proper operation is obtained.

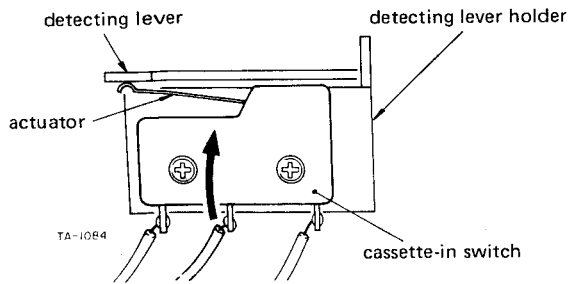


Fig. 4-7

4-7 RECORD SAFETY SWITCH POSITION

Note: For switch location, refer to Fig. 2-3.

1. Load a blank cassette tape.
2. Check that when depressing the RECORD button together with the play button, the deck is set in the record mode.
3. If not, adjust the record safety switch position for proper activation of the switch.
4. Remove the tape. Load a cassette tape with the appropriate record protect tab removed.
5. Check that the record preventing lever enters the tab hole of the cassette to inhibit recording.

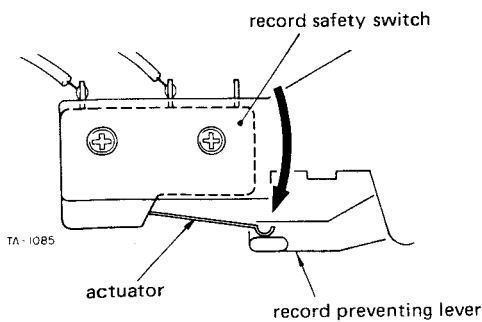


Fig. 4-8

4-8 PINCH ROLLER PRESSURE

Note: The explanation below applies to both left and right pinch rollers.

1. Press and hold in the cassette-load pin (shown in Fig. 4-9) and place the deck in play mode with no tape loaded.
2. Attach a spring scale to the pinch roller shaft.
3. Draw the pinch roller away from the capstan shaft in the direction shown by the arrow until the capstan shaft and the pinch roller are separated.
4. Ease pressure on the scale until the pinch roller just begins to rotate. The scale should read as follows:
 Right side: 400 g ~ 500 g (14.1 oz ~ 17.6 oz)
 Left side: 300 g ~ 380 g (10.6 oz ~ 13.4 oz)
5. If the reading is not within specification, replace the pinch roller ass'y or the pinch roller spring.

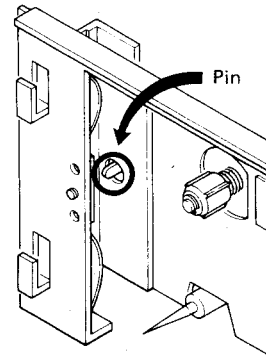


Fig. 4-9

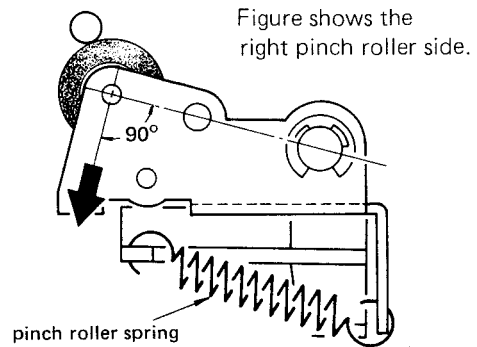


Fig. 4-10

4-9 REEL TORQUE

1. Load a cassette torque meter and read the pointer indication on the dial scale for each tape transport operation.

Specifications:

Take up: 45 ~ 65 g.cm (0.625 ~ 0.903 oz.inch)

Supply: 9 ~ 11 g.cm (0.125 ~ 0.153 oz.inch)
(adjustable)

Fast Forward: 90 ~ 160 g.cm (1.25 ~ 2.22 oz.inch)

Rewind: 90 ~ 160 g.cm (1.25 ~ 2.22 oz.inch)

2. If supply torque adjustment is required, adjust by positioning the B.T. plate bracket while in play mode.

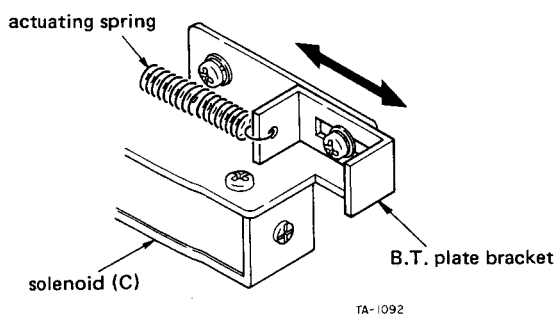


Fig. 4-11

4-10 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 flywheels, then insert the shafts into the capstan housings.
2. Apply a suitable amount of light grease to the well of the flywheel bearings.

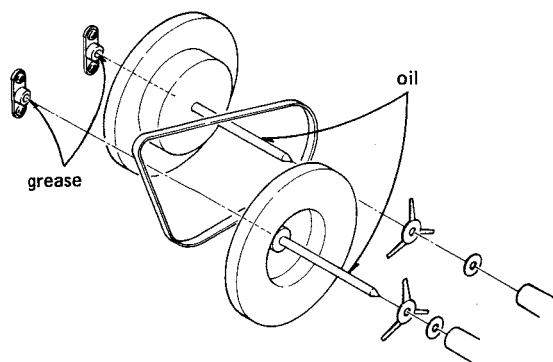


Fig. 4-12

4-11 VOLTAGE CONVERSION (FOR GENERAL EXPORT MODELS)

1. Always disconnect the power line cord before making these adjustments.
2. Remove the top and side cover panel by removing the two screws on each side and the two screws on the top.
3. Locate the voltage selector, shown in the illustration, to the left of the power transformer.
4. Loosen the two screws in the jumper bar and move the bar so that it jumpers the terminals marked with the required voltage (100, 117, 220 or 240).
5. Retighten the screws.
6. Replace the top and side cover panel.

Note: For cassette deck models with DC capstan and reel motors, no modification is required to change the power line frequency from 60 Hz to 50 Hz and vice versa.

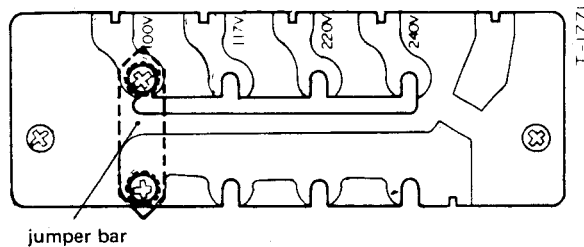


Fig. 4-13

4-12 TAPE SPEED

STANDARD Speed

1. Connect a frequency counter to the deck as shown in Fig. 4-14.
2. Play a tape for about 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 from the beginning.
3. While the tape is playing, use a common slotted screwdriver with the handle completely insulated from the blade, and adjust the control on the MOTOR PCB (as far as possible) for a reading of 3000 Hz (± 5 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 ± 45 Hz from 3000 Hz, nor drifts more than 30 Hz at any given time.

HIGH Speed

5. Set the deck to HIGH speed and follow all the procedures described above. Since the speed is doubled, all the values described in the preceding steps are also doubled to be compatible.
6. If the tape speed is not within the prescribed specifications, check the pinch roller pressure and the tape transport mechanism for any abnormality, and make sure the tape path is clean.

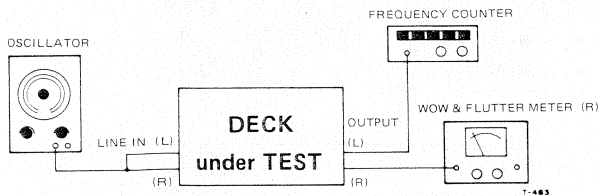


Fig. 4-14

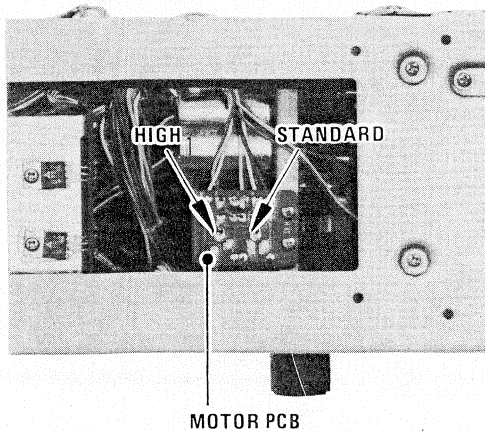


Fig. 4-15 Tape speed adjustment location

4-13 WOW AND FLUTTER

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

1) PLAYBACK

STANDARD Speed

1. Connect a wow-and-flutter meter to the deck as shown in Fig. 4-14.
2. Load and play a TEAC MTT-111 test tape.
3. Check that the reading on the wow-and-flutter meter is within 0.07% (WRMS).

2) SIMULTANEOUS RECORD/PLAYBACK METHOD

STANDARD Speed

4. Load a TEAC MTT-501 test tape (blank) and record a 3000 Hz signal.
5. With the MONITOR switch in the TAPE OUTPUT position, note the reading on the wow-and-flutter meter, it should not be more than 0.16% (RMS).

HIGH Speed

6. Repeat the above procedures with the deck set to HIGH speed. The wow and flutter should not be more than 0.12% (RMS).

3) NON-SIMULTANEOUS RECORD/PLAYBACK METHOD

STANDARD Speed

7. Rewind the tape to the beginning of the recorded section previously made in step 4, and play it at STANDARD speed.
8. The wow and flutter should not be more than 0.16% (RMS).

HIGH Speed

9. Rewind the tape to the beginning of the portion previously recorded in step 6 and play it at HIGH speed. The wow and flutter should not be more than 0.12% (RMS).

5 ELECTRICAL ADJUSTMENT AND CHECKS

PRECAUTIONS

1. Before beginning any checks or adjustments, clean and demagnetize the entire tape path.
2. Make sure the deck is properly set for the voltage in your locality.
3. In general, adjustments and checks are done in the order of L-ch then R-ch. Double REF. NOs. and test point designations indicate L-ch/R-ch.
(Example: R11/R21)
4. For this deck, 0 dB is referenced to 0.775 V. If you are using an AC voltmeter which references 0 dB to 1 V, appropriate compensation should be made.
5. The AC voltmeter used in the procedures must have an input impedance of 1M ohms or more.
6. Note the "Deck settings" at the top of each chart. These settings must be used for all the checks in each chart unless explicitly stated otherwise.
7. All the checks in the charts are described assuming that the BIAS/EQ card (REFERENCE) is plugged into the front panel.

-70 dB or more . . . What does it mean?

In reference to some specifications, you may come across an expression like: "-70 dB or more". This means that the lower the value of this specification, the greater the absolute value of the specification and the better the performance of the deck. For instance, a noise floor of -76 dB is better than -70 dB, because this means that the level of noise is lower. So in this case, "-70 dB or more" means at least as good a value as -70 dB and maybe even better, i.e., -71 dB.

5-1 POWER SUPPLY PCB ADJUSTMENT

1. Connect a DC voltmeter to terminal 4 or 5 (ground) of connector P32 on the power supply PC board, and at the same time, alternately connect the voltmeter to terminals 7, 8, and 9 of connector P32. Adjust R82 so that +23 V \pm 0.5 VDC is obtained at each of the terminals.
2. With a voltmeter connected to a ground position on the deck and to TP15 on the REC AMPL PC board, adjust R81 so that +25 V \pm 0.5 VDC is obtained at TP15.

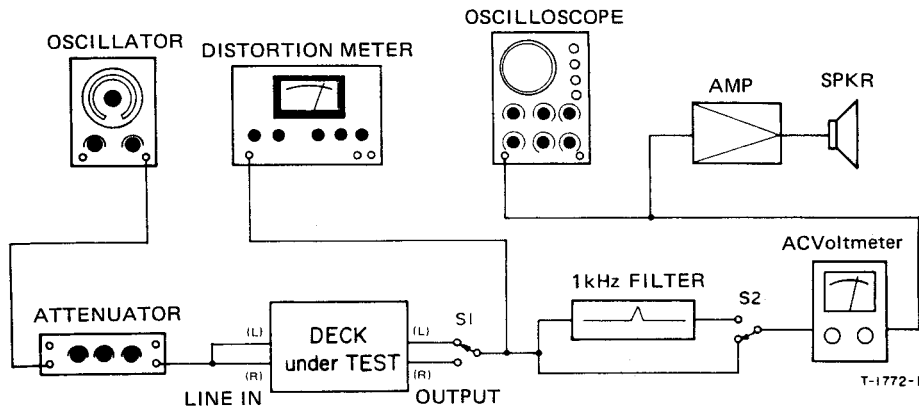


Fig. 5-1 Basic test setup

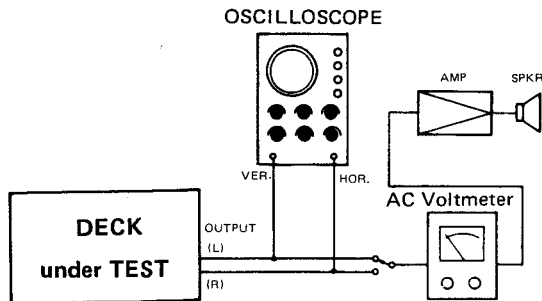


Fig. 5-2 Test setup for azimuth check

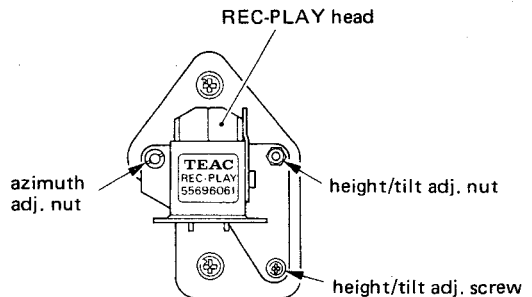


Fig. 5-3 Azimuth adj. nut location

Deck settings:
 MONITOR sw.: TAPE OUTPUT
 NR SYSTEM sw.: OUT
 SPEED sw.: STANDARD
 EQ sw.: METAL

TEAC test tapes:
 MTT-150: For Dolby level calibration
 MTT-316: For playback frequency response check for METAL, Co(CrO₂)
 MTT-216: For playback response check for NORMAL
 MTT-5072: For S/N ratio check for METAL
 MTT-5061: For S/N ratio check for Co(CrO₂)
 MTT-501: For S/N ratio check for NORMAL

5-2 PLAYBACK PERFORMANCE

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS
1. REC/PLAY head azimuth	Conn.: Fig. 5-2 OUTPUT cont.: convenient output level position	MTT-316 (12.5 kHz)	Azimuth nut of R-P heads (Fig. 5-3)	OUTPUT: ● Phase: about 0° on 'scope (Fig. 5-4) ● Max. output on VTVM	
2. Phase shift	Same as above	MTT-316	Check	OUTPUT: Phase: 45° min. (315 Hz) 90° min. (12.5 kHz)	
3. Specified output level	(1) —	MTT-150	R11/R21	Between TP10/TP20 and TP-E: -2.5 dB (581 mV)	
	(2) —	MTT-150	OUTPUT cont.	OUTPUT, L-ch: -5 dB (436 mV)	● Spec. output level
	(3) —	MTT-150	R28 (on PHONE AMP. L.)	OUTPUT, R-ch: -5 dB (436 mV)	● Spec. setting of OUTPUT cont.
	(4) OUTPUT Cont.: Max.	MTT-150	Check	OUTPUT: +1 dB ±2 dB (690 mV to 1.09V)	Max. output level
IMPORTANT: After step (4), proceed to step (2) then do not change the OUTPUT cont. setting after establishing the proper settings as above.					
4. PEAK LEVEL meter	—	MTT-150	R17/R27	PEAK LEVEL meter: 0 dB	
	MONITOR sw.: TAPE CAL	MTT-150	R16/R26	PEAK LEVEL meter: 0 dB	
5. Frequency response	EQ: METAL Adjust so 10 kHz signal is same level as ref. signal (315 Hz)	MTT-316	R10/R20	OUTPUT: Fig. 5-6	
	EQ: NORMAL	MTT-316	Check	OUTPUT: At 10 kHz, should be 4 dB to 6 dB higher than measured in above step.	
6. Signal-to-noise ratio	SPEED: STANDARD and HIGH EQ: METAL Co(CrO ₂) NORMAL	Fully-erased tape: (Use bulk tape eraser) .. MTT-5072 MTT-5061 MTT-501	Check	OUTPUT: } 52 dB min. (STD) } 55 dB min. (HI) } 48 dB min. (STD) } 52 dB min. (HI)	Ratio of spec. output of -5 dB to noise

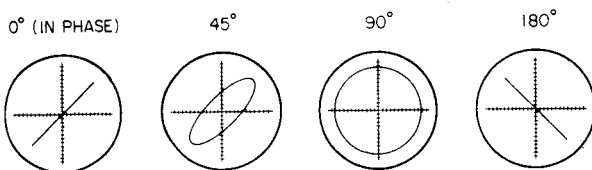


Fig. 5-4 Confirming phase relationship

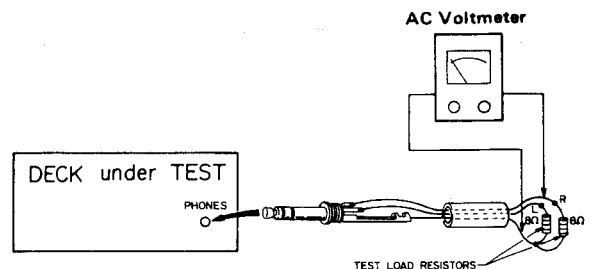


Fig. 5-5 Test setup for headphones check

Deck setting:
 REC-PAUSE mode
 MONITOR sw.: SOURCE
 NR SYSTEM sw.: OUT
 INPUT sw.: LINE
 OUTPUT cont.: Specified position (item 3)

5-3 MONITOR PERFORMANCE

ITEM	SETTING		INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT:	REMARKS
					RESULT	
7. Min input level	RECORD cont.: Max	INPUT sw.: MIC	MIC: 400 Hz / -67 dB (346 μV)	Check	OUTPUT: -5 dB ± 3 dB (308 mV to 615 mV)	MIC min. input level
		INPUT sw.: LINE	LINE IN: 400 Hz / -19 dB (86.9 mV)	Check	OUTPUT: -5 dB ± 3 dB (308 mV to 615 mV)	LINE min. input level
8. Specified LINE input level	-		LINE IN: 400 Hz / -9 dB (275 mV)	RECORD cont. (L/R)	Terminal 67/68 on REC AMPL. PCB -2.5 dB (581 mV)	Specified set- ting of RE- CORD cont.
	-		LINE IN: 400 Hz / -9 dB (275 mV)	Check	OUTPUT: -5 dB (436 mV)	
	NR SYSTEM sw.: NR		LINE IN: 400 Hz / -9 dB	R12/R22	Terminal 67/68 on REC. AMPL. PCB -2.5 dB (581 mV)	-
	Return NR SYSTEM switch to OUT, then do not change the setting of the RECORD or OUTPUT controls after establishing their setting as above.					
9. PEAK LEVEL meter	-		LINE IN: 400 Hz / -9 dB (275 mV)	Check	PEAK LEVEL meter: 0 dB ± 1 dB	
10. "TEST" check	INPUT sw.: TEST		LINE IN: 400 Hz / -29 dB (27.5 mV)	Check	OUTPUT: -25 dB ± 1 dB (38.8 mV to 48.9 mV)	
			LINE IN: 400 Hz / -29 dB (27.5 mV)	Check	PEAK LEVEL meter: 0 dB ± 2 dB	
11. Headphones output level	Conn.: Fig. 5-5		LINE IN: 400 Hz / -9 dB (275 mV)	Check	PHONES: -15.8 dB ± 3 dB (89.0 mV to 178 mV)	8-ohm load

Deck settings:
 MONITOR sw.: TAPE OUTPUT
 NR SYSTEM sw.: OUT
 INPUT sw.: LINE
 SPEED sw.: STANDARD
 OUTPUT cont.: Specified position (item 3)
 RECORD cont. (L/R): Specified position (item 8)

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

5-4 RECORDING PERFORMANCE

ITEM	SETTING	INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT:	REMARKS
				RESULT	
12. Bias oscillator frequency	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: No signal	U103 (BIAS OSC)	Between TP3 and TP4: min. reading	

ITEM	SETTING		INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT: RESULT	REMARKS	
13. BIAS trap	Record-pause mode		LINE IN: No signal	L304/L404	Between TP11/TP21 and TP-E: min. reading		
	RECORD mode BIAS, EQ: METAL Tape: MTT-5072 (Completely erased)		LINE IN: No signal	L104/L204	OUTPUT: min. reading		
14. Record bias	(1)	BIAS, EQ: METAL Tape: MTT-5072	LINE IN: 1 kHz/-42 dB (6.15 mV)	C30/C40 (*)	OUTPUT: Peak bias		
	(2)	BIAS, EQ: METAL Tape: MTT-5072	LINE IN: 400 Hz & 10 kHz alternately/-42 dB	C30/C40 (*)	OUTPUT: Nearly equal level at both freq.		
	(3)	BIAS, EQ: METAL Tape: MTT-5072	LINE IN: 18 kHz/-42 dB	L301/L401 (**)	18 kHz to be within frequency response. See "17. Frequency response".		
	(4)	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	Repeat (1) to (3) process by replacing C31/C41 as *, and L302/L402 as **.				
	(5)	BIAS, EQ: NORMAL Tape: MTT-501	Repeat (1) to (3) process by replacing C32/C42 as *, and L303/L403 as **.				
15. Record level	BIAS, EQ: METAL Tape: MTT-5072		LINE IN: 400 Hz/-12 dB (195 mV)	R13/R23	OUTPUT: -8 dB (308 mV)		
	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061		LINE IN: 400 Hz/-12 dB (195 mV)	R14/R24	OUTPUT: -8 dB (308 mV)		
	BIAS, EQ: NORMAL Tape: MTT-501		LINE IN: 400 Hz/-12 dB (195 mV)	R15/R25	OUTPUT: -8 dB (308 mV)		
16. Total harmonic distortion	Same as above		LINE IN: 400 Hz/-12 dB (195 mV)	Check	OUTPUT: 2% or less distortion	With NORMAL Co(CrO ₂), METAL tapes	
17. Frequency response	SPEED: STANDARD and HIGH	BIAS, EQ: METAL Tape: MTT-5072	LINE IN: Required signal/ -42 dB (6.15 mV)	L761/L861 (HIGH) Check (STANDARD)	OUTPUT: Fig. 5-7		
		BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: Required signal/ -42 dB (6.15 mV)	L762/L862 (HIGH) Check (STANDARD)	OUTPUT: Fig. 5-7		
		BIAS, EQ: NORMAL Tape: MTT-501	LINE IN: Required signal/ -42 dB (6.15 mV)	L763/L863 (HIGH) Check (STANDARD)	OUTPUT: Fig. 5-8		
	If frequency response is out of specification, recheck steps 14 and 16.						
18. Signal-to-noise ratio	SPEED: STANDARD and HIGH	BIAS, EQ: METAL Tape: MTT-5072	LINE IN: 1 kHz/-9 dB (275 mV) ↓ no signal	Check	OUTPUT: 48 dB min. (STD) 49 dB min. (HI)	Ratio of speci- fied output of -5 dB to noise	
		BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: 1 kHz/-9 dB (275 mV) ↓ no signal	Check	OUTPUT: 48 dB min. (STD) 49 dB min. (HI)		
		BIAS, EQ: NORMAL Tape: MTT-501	LINE IN: 1 kHz/-9 dB (275 mV) ↓ no signal	Check	OUTPUT: 45 dB min. (STD) 46 dB min. (HI)		

ITEM	SETTING		INPUT SIGNAL	ADJUST (or CHECK)	MEASURING POINT:	REMARKS
					RESULT	
19. Erase efficiency	<ul style="list-style-type: none"> • 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. 					
	{ BIAS, EQ: METAL Tape: MTT-5072 { BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal	Check	OUTPUT: 65 dB min. ratio	Ref. output level: +5 dB (1.38 V)	
20. REC MUTE function	<ul style="list-style-type: none"> • Connection: Fig. 5-1, but engage 1-kHz filter. • Record a 1-kHz signal. Push REC MUTE button for several seconds. Rewind and play the tape. Find the difference between the 1-kHz portion and the "no-signal" portion. 					
	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: 1 kHz/+1 dB (0.869 V) ↓ no signal	Check	OUTPUT: 65 dB min. ratio	Ref. output level: +5 dB (1.38 V)	
21. Channel separation	<ul style="list-style-type: none"> • 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). 					
	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: L-ch 1 kHz/-9 dB (275 mV) R-ch No signal	Check	OUTPUT: 35 dB min. ratio		
22. Adjacent track crosstalk	<ul style="list-style-type: none"> • 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. 					
	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: L-ch No signal R-ch 125 Hz/-9 dB (275 mV)	Check	OUTPUT: 40 dB min. ratio		
23. DOLBY NR effect	<ul style="list-style-type: none"> • Record a 1-kHz signal with NR SYSTEM switch OUT. Play this portion with NR SYSTEM switch set to OUT and then set to NR. Obtain the difference in output level between OUT and NR positions. Repeat the above process using a 10-kHz signal. 					
	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: 1 kHz/-29 dB (27.5 mV)	Check	OUTPUT: Variation of 3 dB to 8 dB		
	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	LINE IN: 10 kHz/-39 dB (8.69 mV)	Check	OUTPUT: Variation of 8 dB to 12 dB		
24. Dolby HX effect	(1)	NR SYSTEM: NR	LINE IN: Required signal/ -39 dB (8.69 mV)	Check	OUTPUT: Fig. 5-9	
	(2)	BIAS, EQ: NORMAL Tape: MTT-501	NR SYSTEM: NR + HX	LINE IN: Required signal/ -39 dB (8.69 mV)	R73 (for L- and R-channels)	OUTPUT: Fig. 5-9
	(3)	NR SYSTEM: NR + HX	LINE IN: Required signal/ -12 dB (195 mV)	Check	OUTPUT: Fig. 5-10	
	(4)	BIAS, EQ: Co(CrO ₂) Tape: MTT-5061	Repeat steps (1) to (3), but substitute R72 for R73.			

SPEED: STANDARD
 (EQ: METAL, Co(CrO₂) (EQ: NORMAL
 Tape: MTT-316 (Tape: MTT-216)

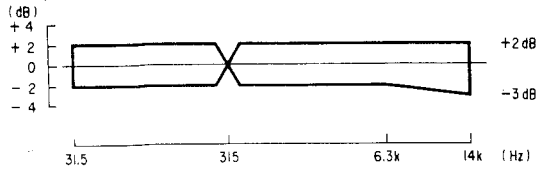


Fig. 5-6 Playback frequency response

(NR SYSTEM: NR (NR SYSTEM: NR+HX
 SPEED: STANDARD (SPEED: STANDARD using Co(CrO₂)
 HIGH or NORMAL tape
 (EQ, BIAS: METAL (EQ, BIAS: Co(CrO₂) (EQ, BIAS: NORMAL
 Tape: MTT-5072 (Tape: MTT-5061 (Tape: MTT-501)

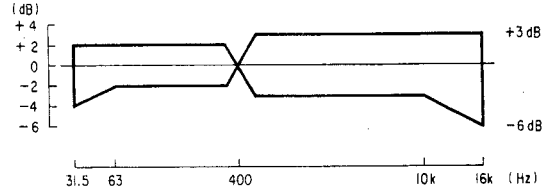


Fig. 5-9 Overall frequency response (Dolby IN)

SPEED: HIGH (———)
 STANDARD (-----)
 (EQ, BIAS: METAL (EQ, BIAS: Co(CrO₂)
 Tape: MTT-5072 (Tape: MTT-5061)

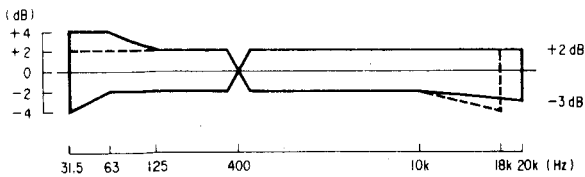


Fig. 5-7 Overall frequency response [METAL, Co(CrO₂)]

NR SYSTEM: NR + HX
 SPEED: STANDARD
 (EQ, BIAS: Co(CrO₂) (EQ, BIAS: NORMAL
 Tape: MTT-5061 (Tape: MTT-501
 Input level: -12 dB (3 dB lower than specified level of -9 dB)

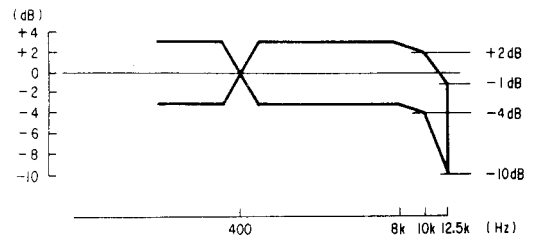


Fig. 5-10 Dolby HX effect

SPEED: HIGH (———)
 STANDARD (-----)
 (EQ, BIAS: NORMAL
 Tape: MTT-501

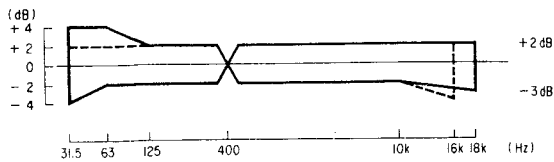


Fig. 5-8 Overall frequency response [NORMAL]

5-5 ADJUSTMENT AND TEST POINT LOCATIONS

DOLBY B TYPE PROCESSOR PCB 104

R10/R20	Playback EQ
R11/R21	Playback level
R12/R22	Dolby encoder input level
L104/L204	Playback bias trap
L107/L207	MPX filter

REC AMPL PCB 105

R13/R23	Record level	METAL	
R14/R24	Record level	Co(CrO ₂)	
R15/R25	Record level	NORMAL	
R16/R26	PEAK LEVEL meter	TAPE CAL	
R17/R27	PEAK LEVEL meter	TAPE OUTPUT	
L301/L401	Record EQ	METAL	SPEED: STANDARD
L302/L402	Record EQ	Co(CrO ₂)	SPEED: STANDARD
L303/L403	Record EQ	NORMAL	SPEED: STANDARD
L304/L404	Record bias trap		
C30/C40	Record bias	METAL	
C31/C41	Record bias	Co(CrO ₂)	
C32/C42	Record bias	NORMAL	
U103	Bias oscillator frequency		

HX PCB 101

R72	Dolby HX effect	Co(CrO ₂)	
R73	Dolby HX effect	NORMAL	
L761/L861	Record EQ	METAL	SPEED: HIGH
L762/L862	Record EQ	Co(CrO ₂)	SPEED: HIGH
L763/L863	Record EQ	NORMAL	SPEED: HIGH

PHONE AMPL PCB 103

R28	Left/right output level difference compensation (provided on R-ch only)
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POWER SUPPLY PCB

R81	+25 V OSC power supply
R82	+23 V amplifier power supply

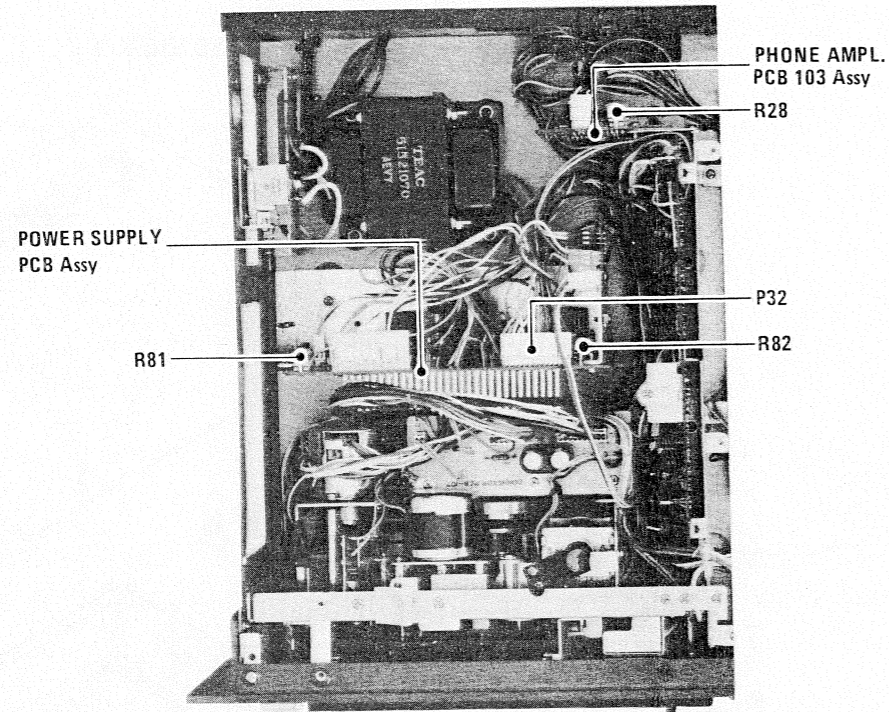


Fig. 5-11

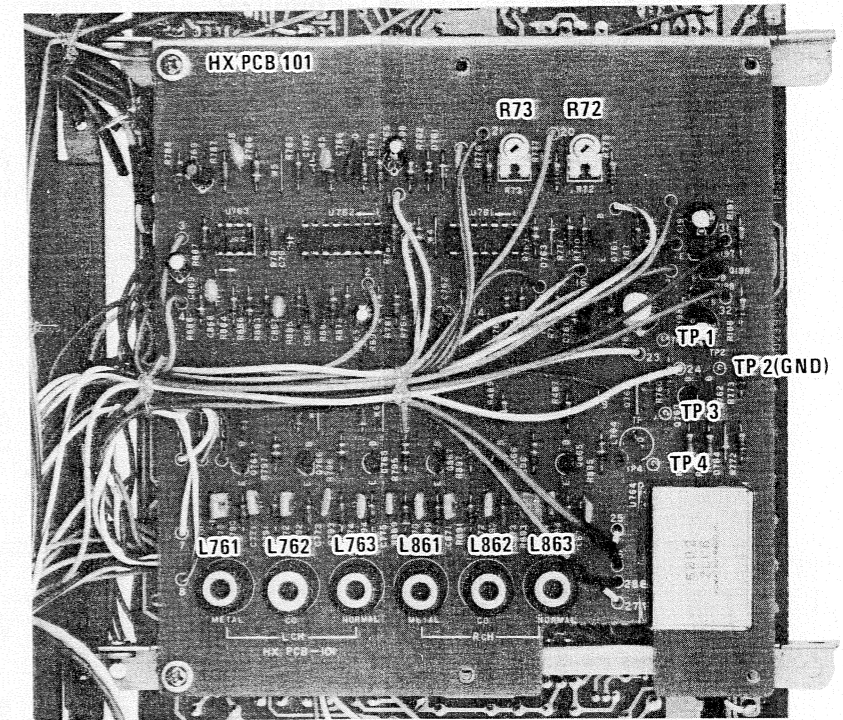


Fig. 5-13

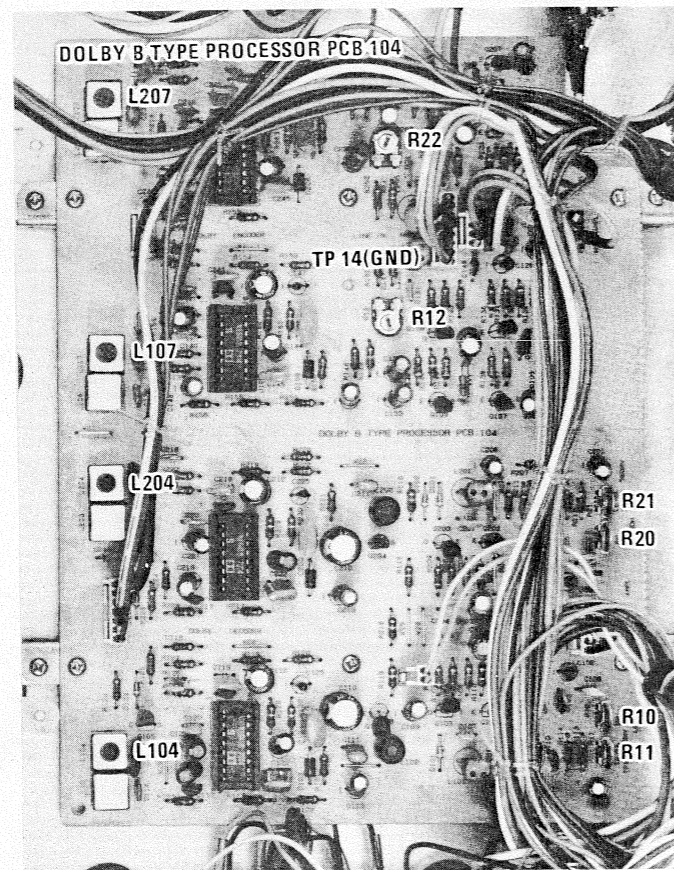


Fig. 5-12

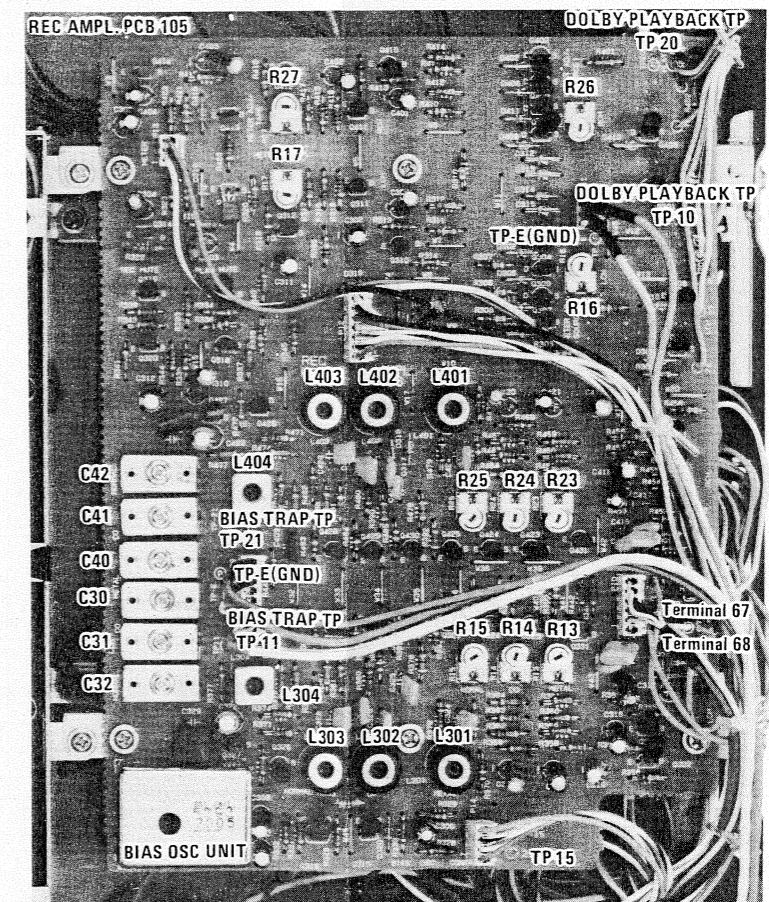
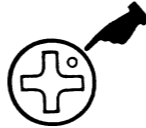


Fig. 5-14

6 EXPLODED VIEWS AND PARTS LIST

ASSEMBLING HARDWARE CODING LIST

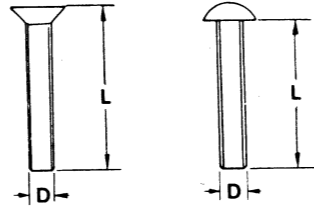
All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted. ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

B M 3 x 6

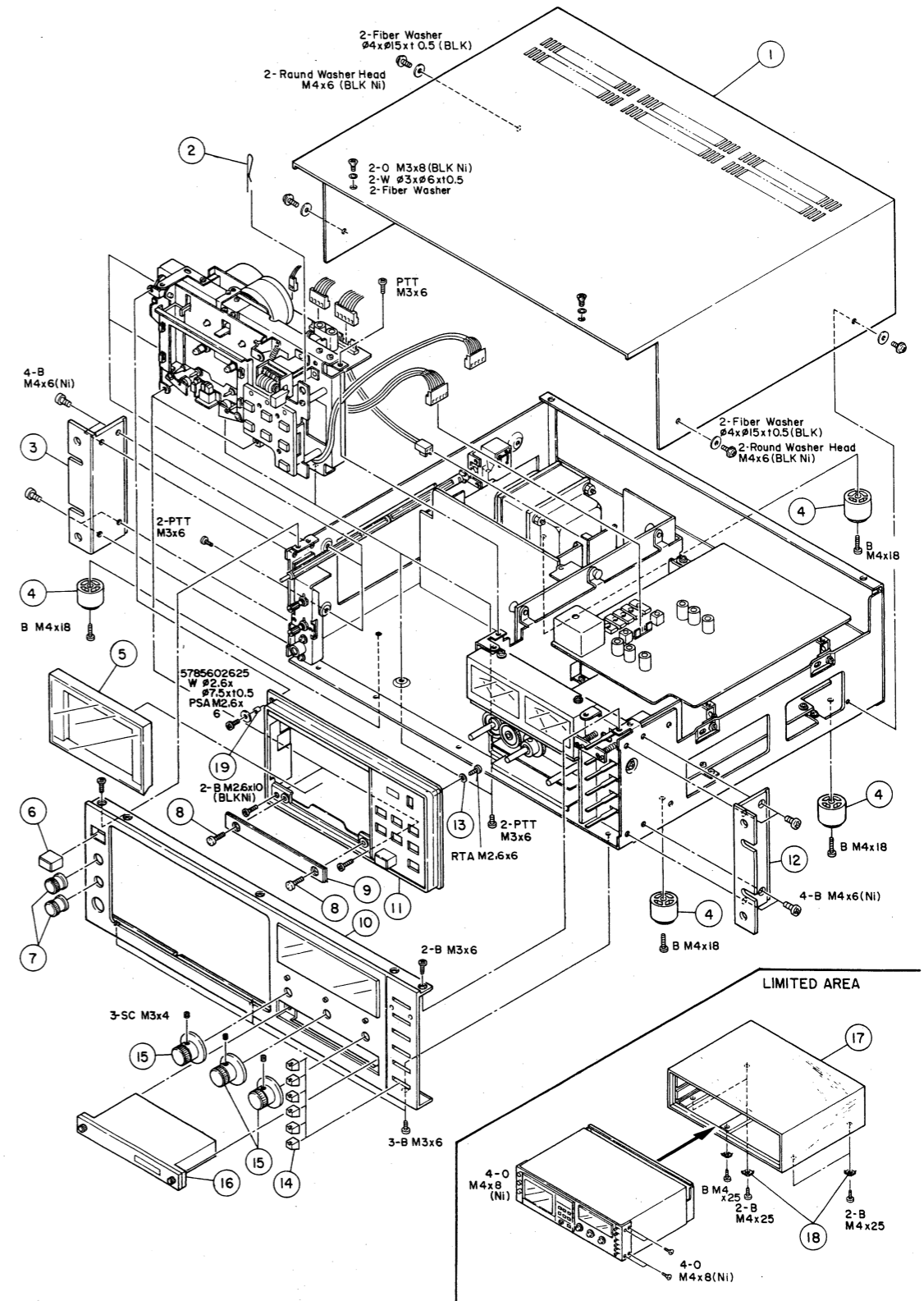
- Length in mm (L)
- Diameter in mm (D) *
- Metric System
- Nomenclature



* 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)		
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	

EXPLODED VIEW - 1



EXPLODED VIEW - 1

Parts marked with *require longer delivery time.

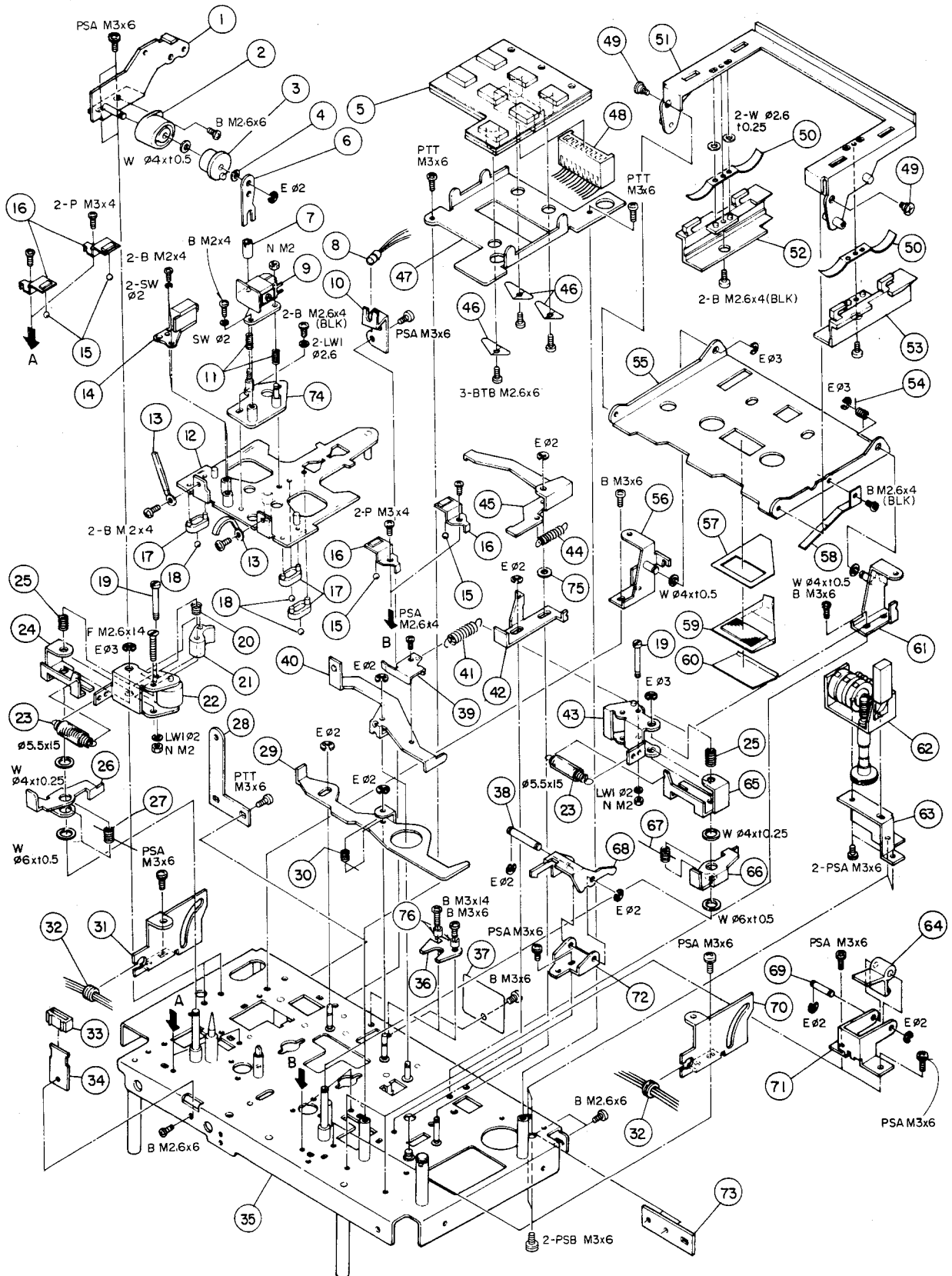
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	*5552282100	Cover, Top; A [All except L]	C-1
	*5800091500	Shield Cover [L]	C-2
1 - 2	5524163000	Retainer, Escutcheon	C-1
1 - 3	*5553235002	Bracket, Handle; L [All except L]	C-1
	*5800002200	Cover, Side; C [L]	C-2
1 - 4	*5504029000	Foot [All except L]	A-7300
1 - 5	5503148000	Cover Assy, Cassette	C-1
1 - 6	*5534431000	Button, B	C-1
1 - 7	*5504712000	Knob Assy, TIMER	C-1
1 - 8	5544729000	Screw, Trim	
1 - 9	*5800091300	Cover, Head	
1 - 10	5800091200	Panel Assy, Front; B	
1 - 11	*5502249000	Escatcheon Assy, A	C-2
1 - 12	*5553236002	Bracket, Handle; R [All except L]	C-1
	*5800002300	Cover, Side; C [L]	C-2
1 - 13	*5555500000	Washer	C-1
1 - 14	*5534521000	Knob, Lever Switch	C-1
1 - 15	*5543027100	Knob, VR	C-1
1 - 16	*5740000600	CX-8X	
1 - 17	*5800060000	Cabinet Assy [L]	
1 - 18	*5555526000	Washer [L]	A-601R

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	5700010100	C-2X Owner's Manual [U]	
	5700010200	C-2X Owner's Manual [All except U]	
	5740000010	Cover, Side [All except L]	C-2
	5504567000	Handle Assy [E, UK]	C-1
	5780214010	Screw, O M 4x10 (Ni) x 4 [E, UK]	
	5544995000	Washer, TW [All except L]	C-1
	5780215015	Screw, O M 5 x 15 (Ni) x 4 [All except L]	
	5101345000	Information Supplement, Cassette [U]	
	5101495000	Information Supplement, Cassette [All except U]	
	5128065000	Cord, Input-Output Connection	

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

EXPLODED VIEW - 2



EXPLODED VIEW - 2

Parts marked with *require longer delivery time

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	*5504823000	Bracket Assy, Damper	C-2
2 - 2	*5534839000	Damper, 1	C-2
2 - 3	*5534840000	Damper, 2	C-2
2 - 4	*5555352000	Washer, Wave	
2 - 5	5138005000	Key Board Unit	
2 - 6	*5555905000	Arm, Damper	C-2
2 - 7	*5545168000	Nut, Azimuth	C-2
2 - 8	5142039000	Lamp, DC 6V	C-2
2 - 9	5569606100	Head, REC/PLAY; Dual Gap	C-2
2 - 10	*5555901000	Bracket, Lamp	C-2
2 - 11	5520002100	Spring, Head Adj.	A-450
2 - 12	*5504795000	Plate Assy, Head Base	C-2
2 - 13	*5786710100	Clamper, Cord	
2 - 14	5378600300	Head, ERASE	
2 - 15	5540055000	Ball, Steel; φ 2	A450
2 - 16	*5555850000	Plate, Head Base Pressure	C-2
2 - 17	*5534524000	Guide, Steel Ball	A-601R
2 - 18	5540056000	Ball, Steel; φ 3	A-450
2 - 19	*5545151000	Pin, Pinch Roller Guide	
2 - 20	*5524277000	Spring, Tape Guide	
2 - 21	*5800085200	Guide, Pinch Roller; S	
2 - 22	5504797000	Pinch Roller Assy, L	C-2
2 - 23	*5524267000	Spring, Pinch Roller	C-2
2 - 24	*5555854000	Arm, Pinch Roller; L	C-2
2 - 25	*5524266000	Spring, Pinch Roller	C-2
2 - 26	*5555865000	Arm, Pause; L-B	C-2
2 - 27	*5524271000	Spring, Pause Arm; L	C-2
2 - 28	*5555345000	Bracket, Top Cover; A	C-1
2 - 29	*5555892000	Arm, Actuating	C-2
2 - 30	*5524280000	Spring, Actuating Arm	C-2
2 - 31	*5555899001	Plate, Cassette Holder Guide; 1	
2 - 32	*5534525000	Bushing, Rubber	A-601R
2 - 33	*5534259000	Cushion, Rubber	A-650
2 - 34	*5555851000	Plate, Head Base Stopper; B	C-2
2 - 35	*5800099300	Chassis Assy, Mechanism	
2 - 36	*5800098600	Plate, Base Plate Stopper; C	
2 - 37	*5800098800	Spring, Base Plate Stopper C	
2 - 38	*5545160000	Shaft, Lock Lever	C-2
2 - 39	*5800003700	Spring, Cassette Pressure	C-2
2 - 40	*5555893000	Lever, Cassette Pressure	C-2
2 - 41	*5524199000	Spring, Eject	
2 - 42	*5555890000	Slide Plate, Eject; 1	C-2
2 - 43	5504798000	Pinch Roller Assy, R	C-2
2 - 44	*5524279000	Spring, Eject Preventing Lever	C-2
2 - 45	*5555894000	Lever, Eject Preventing	C-2
2 - 46	*5555271000	Spring, Key Board Unit	
2 - 47	*5555343000	Bracket, Key Board Unit	C-1
2 - 48	*5122174000	Connector, Socket; 12 p	
2 - 49	*5545159000	Screw, Shoulder (2-1)	C-2
2 - 50	5555305000	Spring, Cassette Pressure	C-1
2 - 51	*5504820000	Holder Assy, Cassette; 1	C-2
2 - 52	5533132000	Guide, Cassette; R	C-1
2 - 53	5533133000	Guide, Cassette; L	C-1
2 - 54	*5524282000	Spring, Holder	C-2
2 - 55	*5553356000	Holder, Cassette; 2	C-2
2 - 56	*5504821000	Bracket Assy, Holder; L	C-2
2 - 57	*5555902000	Tape, Adhesive	C-2
2 - 58	*5524281000	Spring, Plate; Stopper	C-2
2 - 59	*5534838000	Lens, Lamp	C-2
2 - 60	*5800002900	Plate, Refractive	C-2
2 - 61	*5504822000	Bracket Assy, Holder; R	C-2
2 - 62	5503232000	Counter Assy, Index	C-2
2 - 63	*5555303000	Bracket Counter	C-1

(Continued on page 45)

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

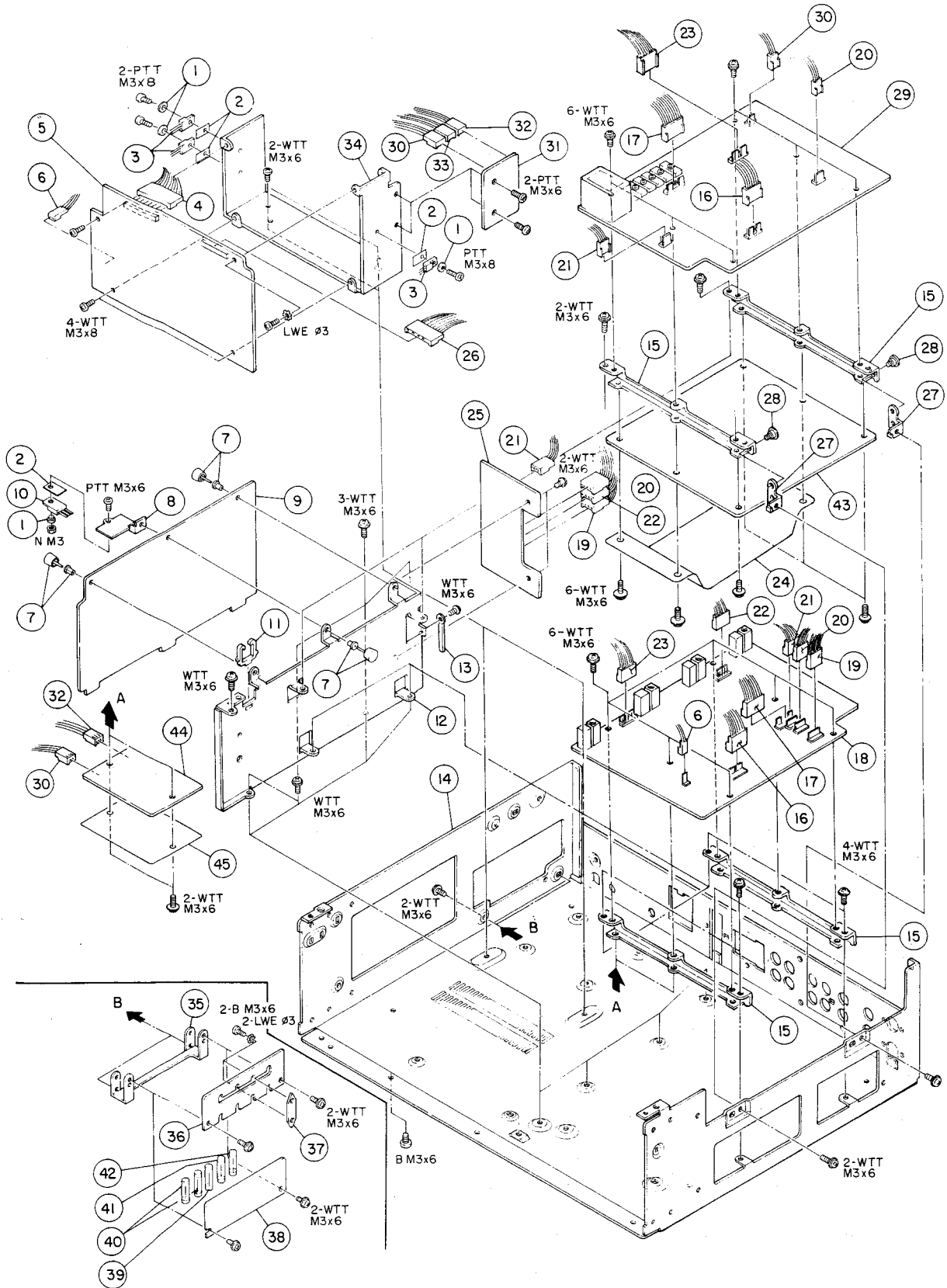
EXPLODED VIEW - 3

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3 - 1	5143105000	Magnetic Resistance Element, DM-101	
3 - 2	*5157073000	PCB, MRE 104	C-2
3 - 3	*5504807001	Plate Assy, Motor	C-2
3 - 4	*5524274000	Spring, Pulley Assy	C-2
3 - 5	5504808000	Pulley Assy, Fast Wind	C-2
3 - 6	5163046000	Solenoid, B	
3 - 7	*5534844000	Cushion	A-430
3 - 8	*5555861000	Arm, Pause	C-2
3 - 9	*5534116000	Shoe, Brake	A-400
3 - 10	*5524151000	Spring, Brake; L	
3 - 11	*5555871000	Arm, Brake; L	C-2
3 - 12	*5555860000	Bracket, Solenoid B	C-2
3 - 13	*5555872000	Arm, Brake; R	C-2
3 - 14	*5555891000	Slide Plate, Eject; 2	C-1
3 - 15	5534573000	Belt, Counter; 1	
3 - 16	5504802000	Table Assy, Reel; R	C-2
3 - 17	*5524150000	Spring, Brake; R	
3 - 18	*5555862000	Arm, Pause; R-A	C-2
3 - 19	5504805000	Table Assy, Reel; L	C-2
3 - 20	*5553352000	Lever, Pause	C-2
3 - 21	*5524265000	Spring, Head Base Plate	C-2
3 - 22	*5534841000	Lever, Record Preventing	C-2
3 - 23	*5524284000	Spring, Record Preventing Lever	C-2
3 - 24	*5554447000	Plate, Micro Switch	A-400
3 - 25	5301455500	Switch, Micro; SS-SGL13-F	
3 - 26	*5555863000	Arm, Pause; L-A	C-2
3 - 27	*5555875000	Spring, Leaf	C-2
3 - 28	*5555874000	Arm, Brake; S	C-2
3 - 29	7105135000	Motor Assy, Reel	C-2
3 - 30	*5122170000	Connector, Socket; 8P (White)	
3 - 31	*5122172000	Connector, Socket; 10P (White)	
3 - 32	*5524275000	Spring, Return	C-2
3 - 33	*5581038000	Clamper, Cord; A	
3 - 34	*5534537000	Cushion, Rubber	A-206
3 - 35	*5534811000	Bearing, Flywheel	C-2
3 - 36	*5524299000	Spring, Ejectslider	
3 - 37	*5504825000	Holder Assy, Rec. SW	
3 - 38	*5504854000	Plate Assy, Back Tension	C-2
3 - 39	*5555629000	Shoe, Back Tension	A-601R
3 - 40	*5524283000	Spring, Detecting Lever	C-2
3 - 41	*5555906000	Lever, Detecting	C-2
3 - 42	*5504824000	Holder Assy, Detecting Lever	C-2
3 - 43	*5555958000	Bracket, Back Tension Plate	C-2
3 - 44	5163047000	Solenoid C	
3 - 45	*5555873000	Bracket, Solenoid C	C-2
3 - 46	*5555857000	Spring, Thrust	C-2
3 - 47	5800089400	Housing Assy, Capstan	C-2
3 - 48	*5555413000	Washer, Oil Retaining	C-1
3 - 49	5163051000	Solenoid, H	
3 - 50	*5800099100	Bracket, Solenoid A	
3 - 51	*5554611000	Spring, Pressure	A-650
3 - 52	*5800099000	Spacer, Pressure Spring	
3 - 53	*5555858000	Arm, Base Plate Actuating	C-2
3 - 54	5504801000	Flywheel Assy, L	C-2
3 - 55	5534810000	Belt, Capstan	C-2
3 - 56	5504800000	Flywheel Assy, R	C-2
3 - 57	*5800099200	Plate, Flywheel	
3 - 58		Not used	
3 - 59	5370000800	Motor Assy, Capstan	
3 - 60	*5786700400	Leg, GND; ϕ 3.2	
3 - 61	*5122164000	Connector, Socket; 2P (White)	
3 - 62	*5158129001	PCB Assy, CONNECTOR	
3 - 63	*5785603050	Spacer, Rubber Cushion	

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

EXPLODED VIEW - 4



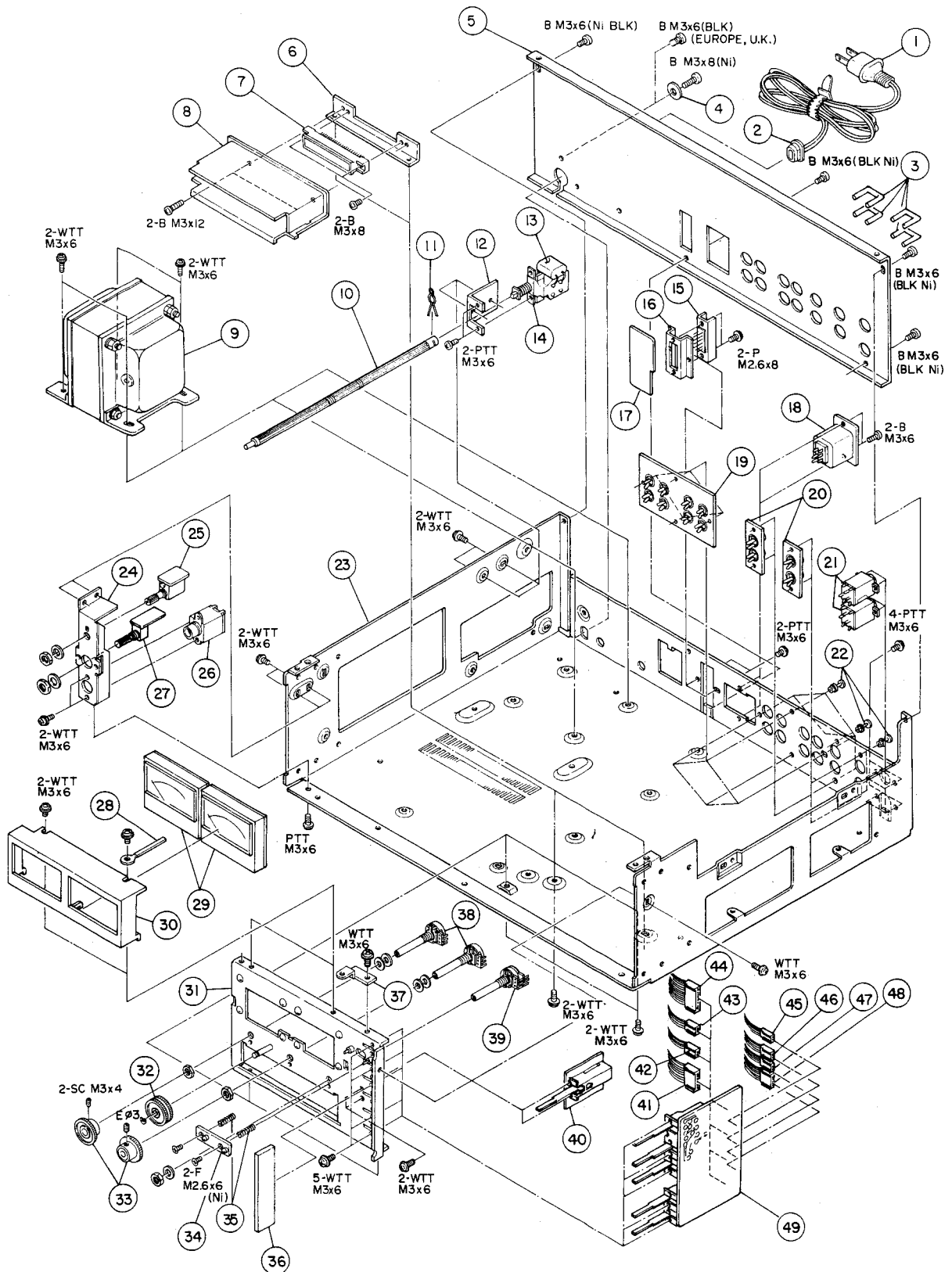
EXPLODED VIEW - 4

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 1	*5033295000	Tube, Insulating	
4 - 2	*5033291000	Plate, Insulating	
4 - 3	*5145108000	Transistor, 2SD762 (P)	
4 - 4	*5122347000	Connector, Socket; 10P	
4 - 5	*5200020400	PCB Assy, POWER SUPPLY; 125 [U]	
	*5200020410	PCB Assy, POWER SUPPLY; 125 [C, GE, L]	
	*5200020420	PCB Assy, POWER SUPPLY; 125 [E, UK, A]	
4 - 6	*5122164000	Connector, Socket;	
4 - 7	*5534473000	Rivet, T-type	
4 - 8	*5555949000	Heat Sink	
4 - 9	*5200024100	PCB Assy, CONTROL [U]	
	*5200024110	PCB Assy, CONTROL [All Except U]	
4 - 10	*5042527000	Transistor, 2SD288 (K)	
4 - 11	*5534494000	Clamper, Cord; J	
4 - 12	*5552454000	Angle, PCB	C-2
4 - 13	*5581038000	Clamper, Cord; A	
4 - 14	*5551043001	Chassis, Amplifier	C-2
4 - 15	*5553368000	Bracket, PCB; A	C-2
4 - 16	*5122168000	Connector, Socket; 6P (White)	
4 - 17	*5122170000	Connector, Socket; 8P (White)	
4 - 18	*5200023600	PCB Assy, DOLBY B TYPE PROCESSOR [U]	
	*5200023610	PCB Assy, DOLBY B TYPE PROCESSOR [All except U]	
4 - 19	*5122223000	Connector, Socket; 4P (Black)	
4 - 20	*5122282000	Connector, Socket; 4P (Red)	
4 - 21	*5122166000	Connector, Socket; 4P (White)	
4 - 22	*5122167000	Connector, Socket; 5P (White)	
4 - 23	*5122169000	Connector, Socket; 7P (White)	
4 - 24	*5800098900	Plate, Insulating; B	
4 - 25	*5200024200	PCB Assy, PHONE AMPL; 103 [U]	
	*5200024210	PCB Assy, PHONE AMPLE; 103 [All except U]	
4 - 26	*5122176000	Connector, Socket; 14P (White)	
4 - 27	*5555793000	Bracket, PCB	C-2
4 - 28	*5581056000	Screw, Shoulder; A	A-304
4 - 29	*5200023800	PCB Assy, RECORD AMPL. [U]	
	*5200023810	PCB Assy, RECORD AMPL. [All except U]	
4 - 30	*5122165000	Connector, Socket; 3P (White)	
4 - 31	*5200023000	PCB Assy, CONTROL; 129 [U]	
	*5200023010	PCB Assy, CONTROL; 129 [All except U]	
4 - 32	*5122222000	Connector, Socket; 3P (Black)	
4 - 33	*5122281000	Connector, Socket; 3P (Red)	
4 - 34	*5555328101	Heat Sink	C-1
4 - 35	*5555794000	Bracket, PCB; D	C-2
4 - 36	*5167548101	PCB Assy, VOLTAGE SELECTOR [GE, L]	
4 - 37	*5555062000	Plate, Shorting; A [GE, L]	
	*5167754100	PCB Assy, FUSE; 115 [U.C]	A-800
4 - 39	*5167755200	PCB Assy, FUSE; 116 [E, UK, A]	
4 - 39	*5307004300	Fuse, 3A [U, C]	
	*5041140000	Fuse, 1AT [E, UK, A]	
4 - 40	*5307004400	Fuse, 4AF [U, C]	
	*5041156000	Fuse, 4AF [E, UK, A]	
4 - 41	*5307004100	Fuse, 2A [U, C]	
	*5142187000	Fuse, 1.25A [E, UK, A]	
4 - 42	*5307003600	Fuse, 1A [U, C]	
	*5041141000	Fuse, 1AF [E, UK, A]	
4 - 43	*5200023201	PCB Assy, HX 101 [U]	
	*5200023211	PCB Assy, HX 101 [All except U]	
4 - 44	*5200022800	PCB Assy, SW [U]	
	*5200022810	PCB Assy, SW [All except U]	
4 - 45	*5800085000	Plate, Insulating	

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

EXPLODED VIEW - 5



EXPLODED VIEW - 5

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5 - 1	△5350008100 △5128034000 △5128075000 △5128018000 △5128047000 △5350008300	Cord, AC Power [C] Cord, AC Power [GE, L] Cord, AC Power [U] Cord, AC Power [E] Cord, AC Power [UK] Cord, AC Power [A]	
5 - 2	*5534661000 *5534660000 *5534663000	Strain Relief, AC Power Cord [UK] Strain Relief, AC Power Cord [All except UK, C] Strain Relief, AC Power Cord [C]	
5 - 3	*5330505000	Plug, Short Pin	
5 - 4	*5555063000	Washer, GND	
5 - 5	*5552458001	Chassis, Rear; B	C-2
5 - 6	*5555336000	Bracket, Connector	C-1
5 - 7	*5122337000	Connector, 14P	
5 - 8	*5503146000	Cover Assy, CX - 8	C-1
5 - 9	△5152105000 △5152106000 △5152107000 △5152108100	Transformer, Power [U] Transformer, Power [C] Transformer, Power [GE, L] Transformer, Power [E, UK, A]	A-640 A-640 A-640 A-640
5 - 10	*5534516000	Rod, Power Switch	C-1
5 - 11	*5786360500	Pin, R; 45	
5 - 12	*5555339000	Bracket, Power Switch	C-1
5 - 13	△5052906000 △5052911000 △5052907000 △5267702500	Spark Killer, 0.33μF + 120Ω 250V [U] Spark Killer, 0.33μF + 300Ω 250V [C] Spark Killer, 0.01μF + 300Ω 300V [GE, L] Spark Killer, 0.0047μF 250V [E, UK, A]	
5 - 14	△5134046000 △5134011000	Switch, Power [All except E, UK, A] Switch, Power [E, UK, A]	
5 - 15	*5122336000	Connector, Socket; 12P	
5 - 16	*5554099100	Bracket, Connector	A-6300
5 - 17	*5157102000 *5210024300	PCB Assy, REMOTE [U] PCB Assy, REMOTE [All except U]	C-2
5 - 18	*5122339000	Connector, Socket; 6P	
5 - 19	*5126028000	Jack Assy, 8P	
5 - 20	*5043463200	Jack Assy, 2P	
5 - 21	*5124023000	Jack, MIC	
5 - 22	*5534878000	Rivet, Push; B	C-2
5 - 23	*5551043001	Chasis, Amplifier	C-2
5 - 24	*5800085100	Bracket, Jack	
5 - 25	*5200024000 *5200024010	PCB Assy, TIMER [U] PCB Assy, TIMER [All except U]	
5 - 26	*5124022000	Jack, PHONES	
5 - 27	*5200023400 *5200023400	PCB Assy, SW 158 [U] PCB Assy, SW [All except U]	
5 - 28	*5581038000	Clamper, Cord; A	
5 - 29	*5165053100	Meter, Peak	
5 - 30	*5533137000	Escutcheon, Meter	C-1
5 - 31	*5503145001	Chassis, Front	C-1
5 - 32	5504569200	Gear Assy, Friction	C-1
5 - 33	5504568000	Gear Assy, A	C-1
5 - 34	*5168701000	PCB Assy, LED	C-1
5 - 35	*5524082000	Spring, LED; B	A-700
5 - 36	*5555490000	Mask	C-1
5 - 37	*5282008602	Bracket, Top Cover; B	C-1
5 - 38	5282405302	Var. Res., 100kΩ (A)	
5 - 39	5150253000	Var. Res., 50kΩ (A) x 2	
5 - 40	*5200022600 *5200022610	PCB Assy, SW 156 [U] PCB Assy, SW 156 [All except U]	
5 - 41	*5336040900	Connector, Socket; 9P (White)	
5 - 42	*5122222000	Connector, Socket; 3P (Black)	
5 - 43	*5122165000	Connector, Socket; 3P (White)	
5 - 44	*5122174000	Connector, Socket; 12P (White)	
5 - 45	*5122221000	Connector, Socket; 2P (Black)	

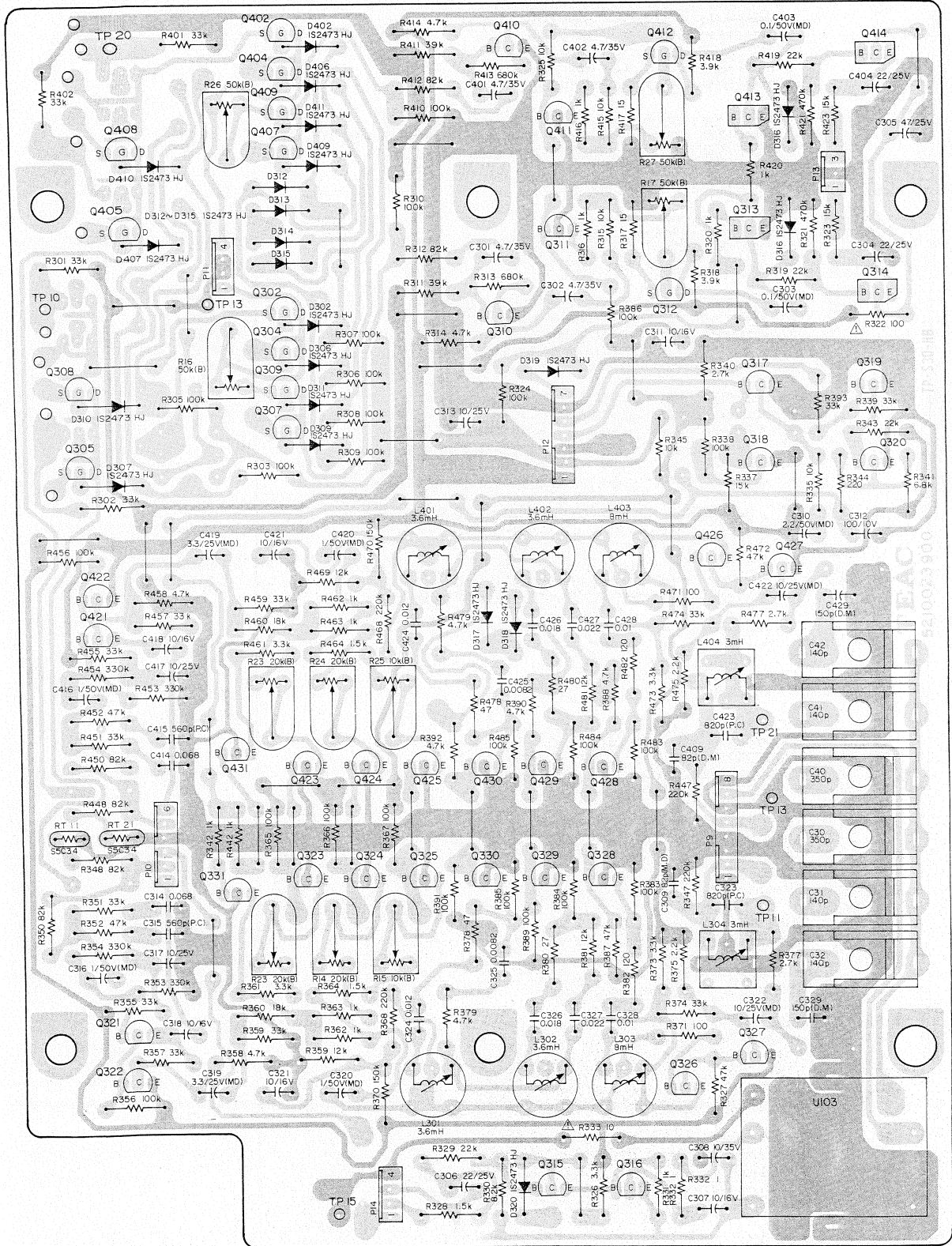
(Continued on page 45)

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

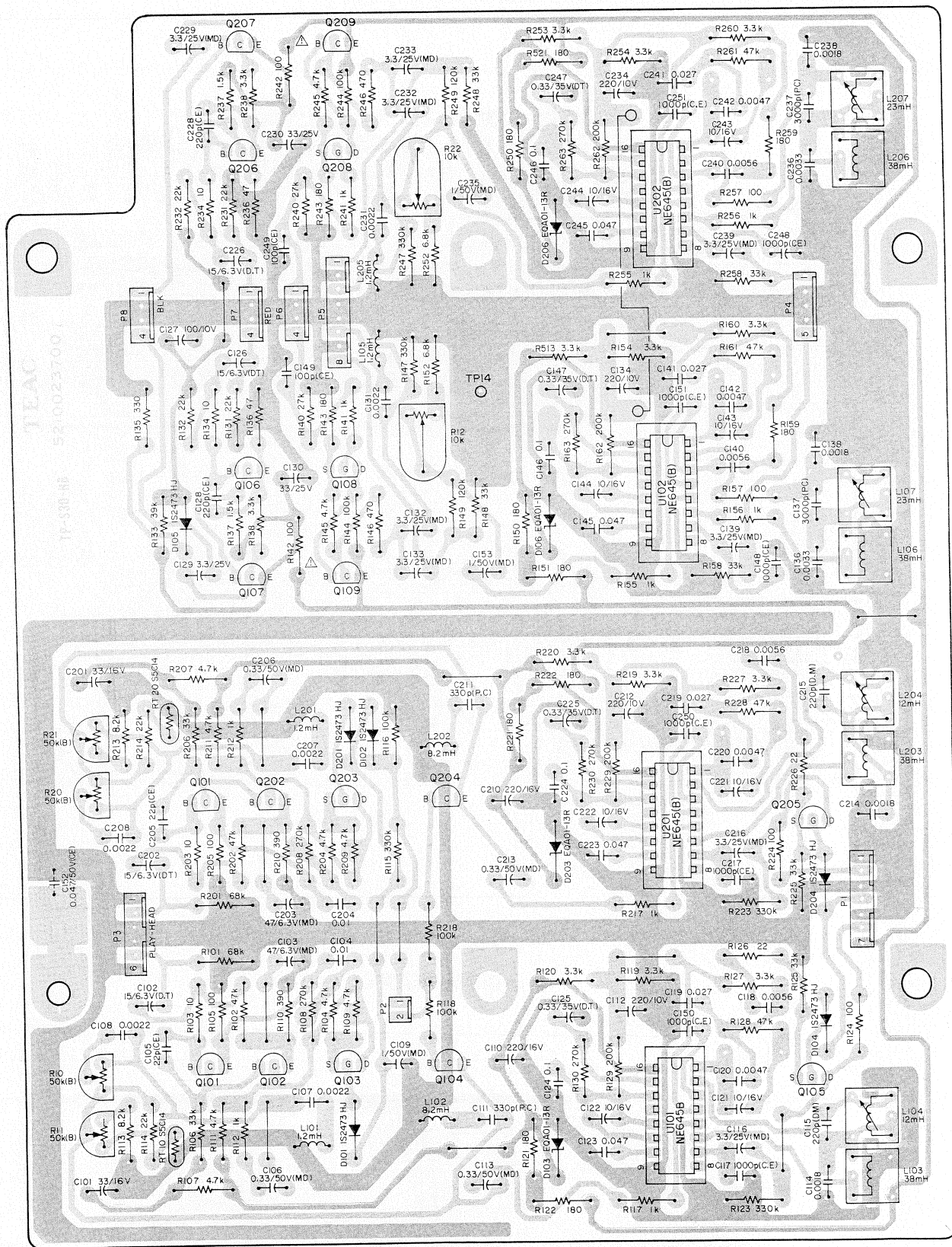
7 PC BOARDS AND PARTS LIST

PC Boards shown viewed from foil side

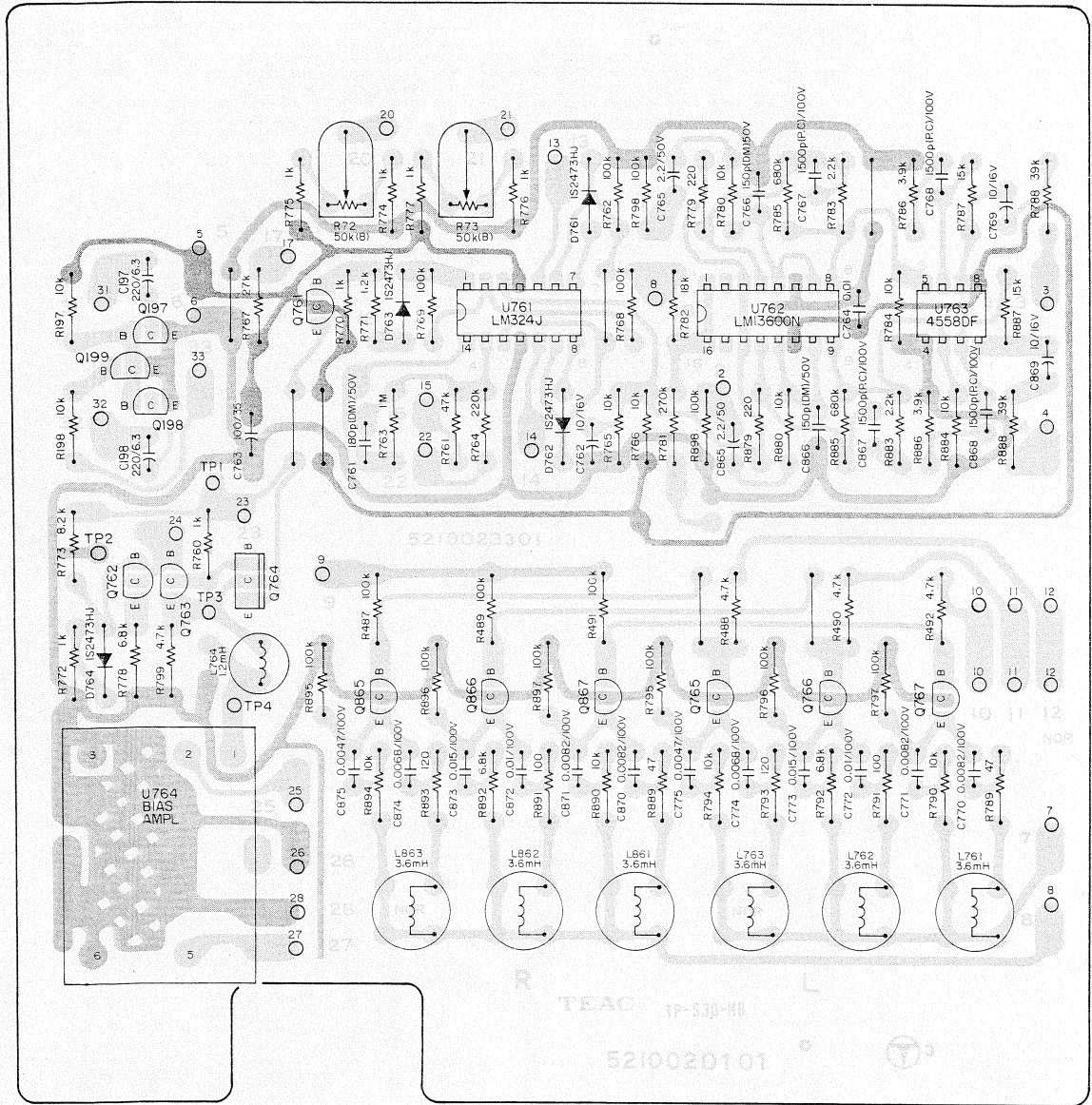
REC/PLAY AMPL PCB ASSY



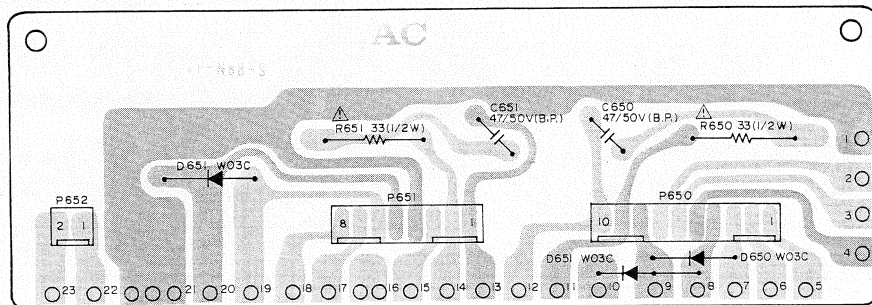
DOLBY B TYPE PROCESSOR PCB ASSY



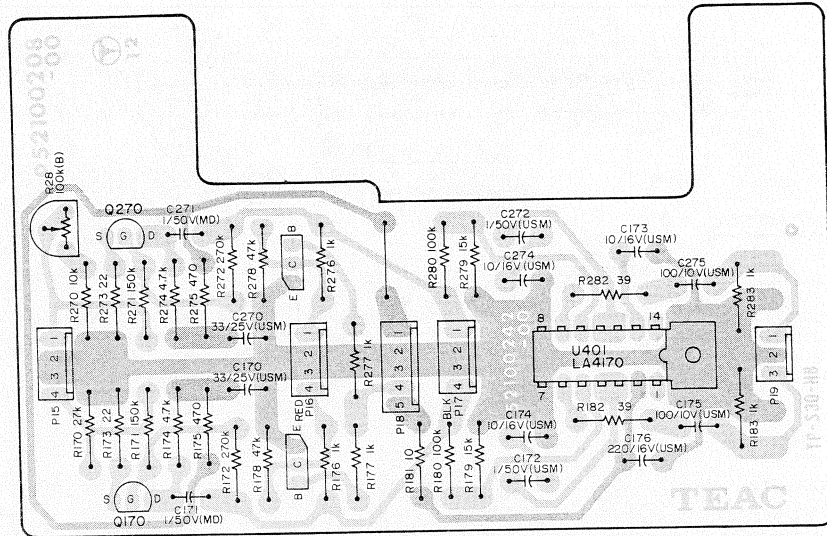
HX PCB 101 ASSY



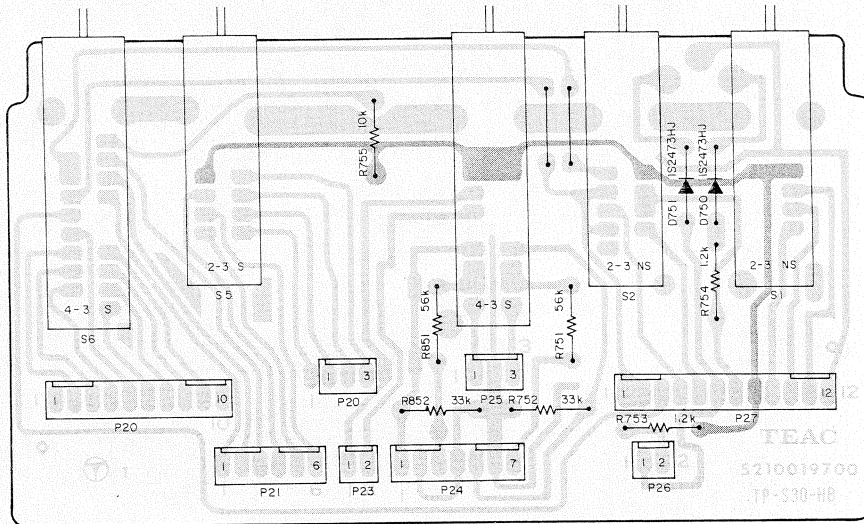
JOINT PCB ASSY



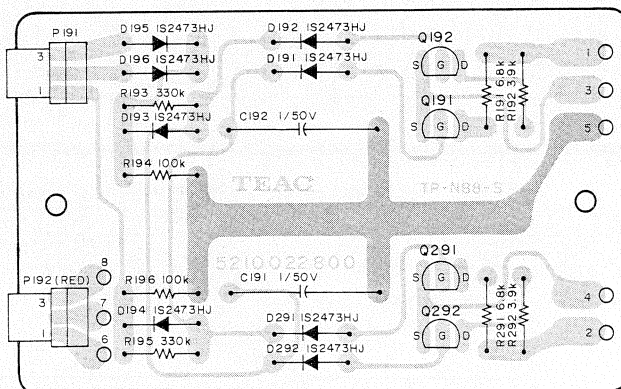
PHONE AMPL PCB ASSY



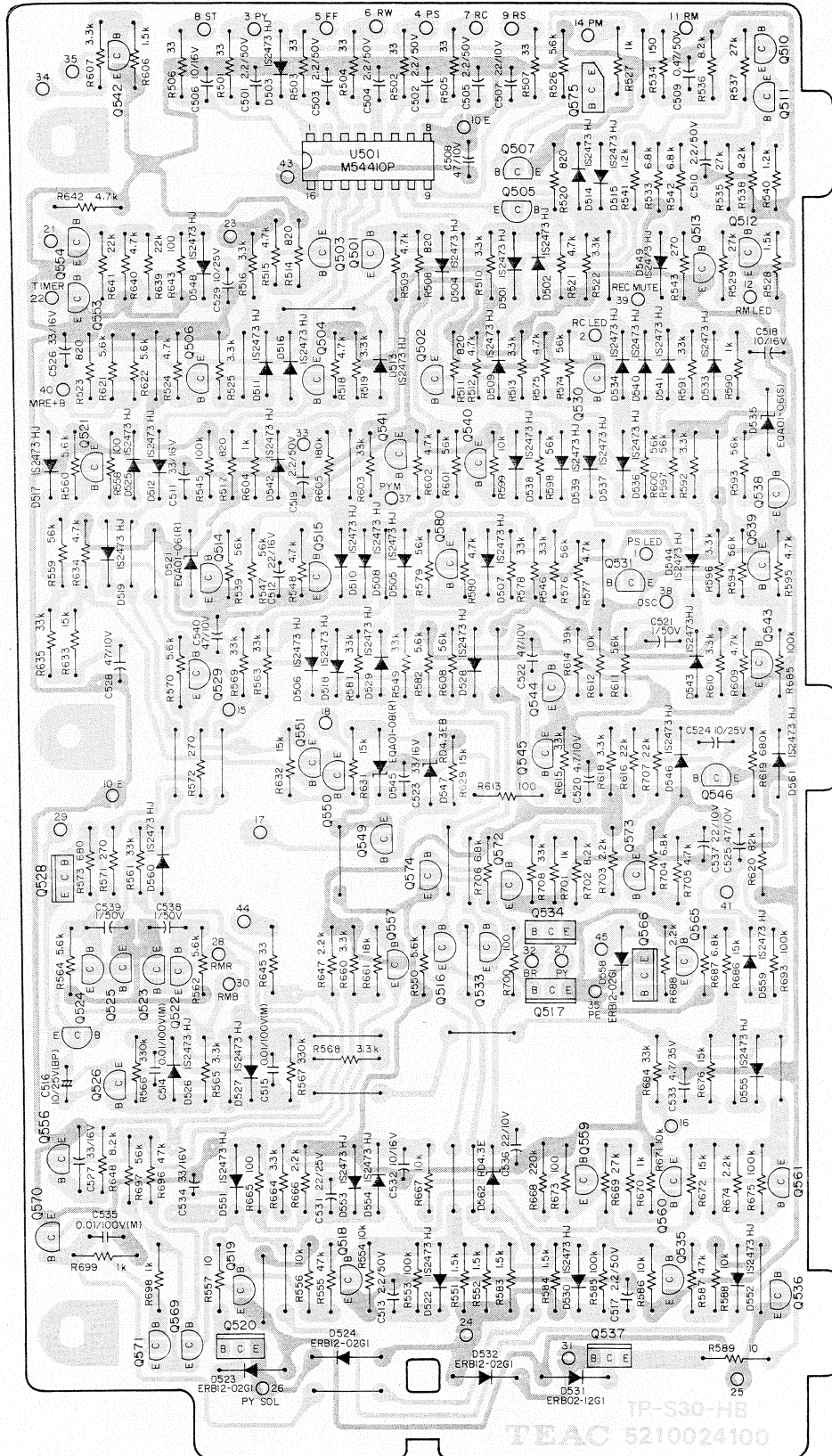
SW PCB 155 ASSY



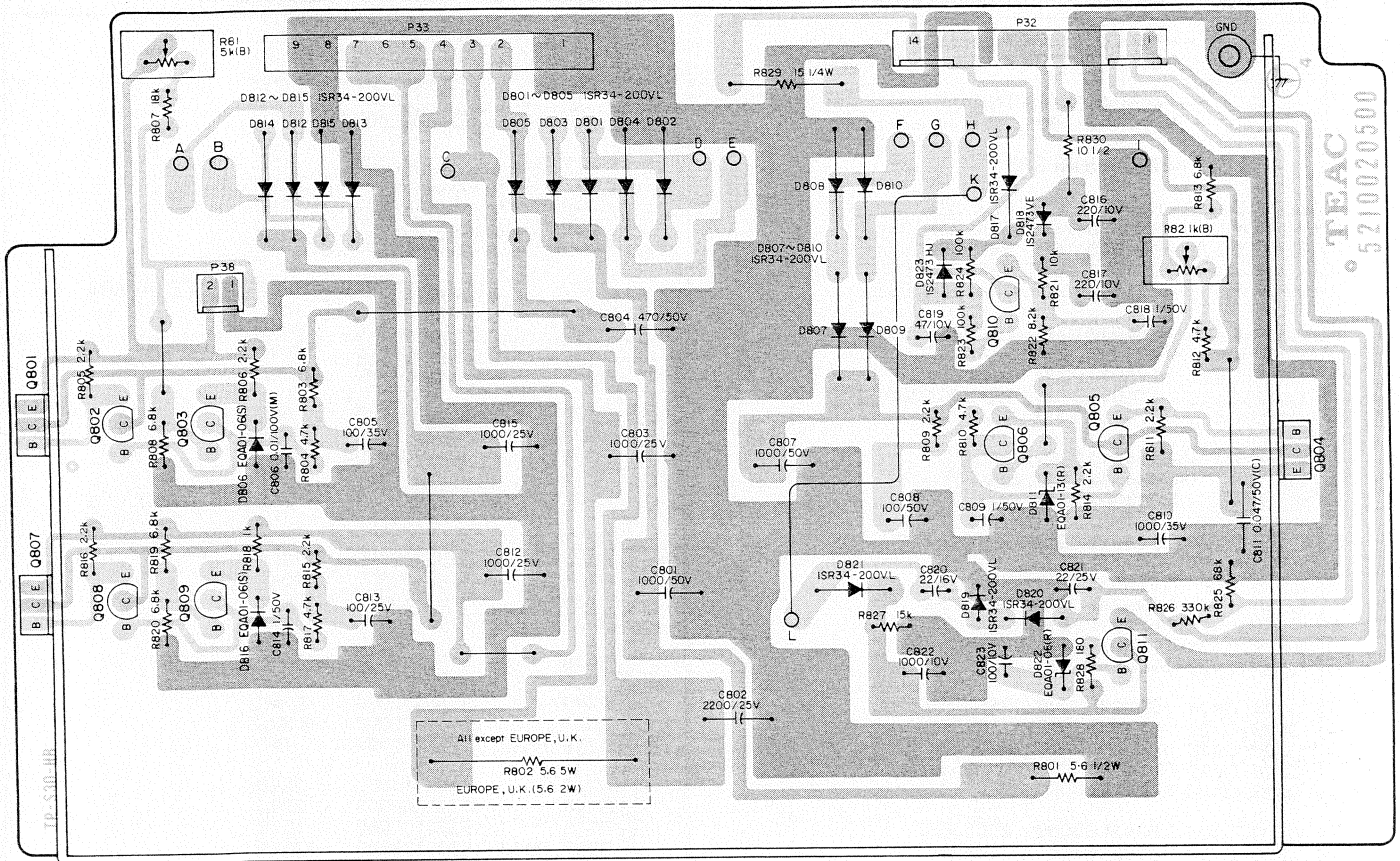
SW PCB 157 ASSY



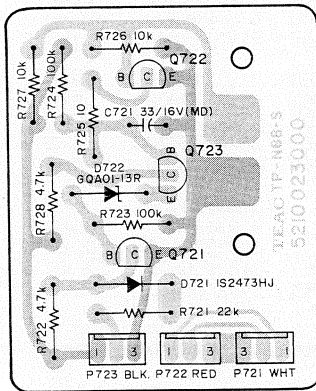
CONTROL PCB 119 ASSY



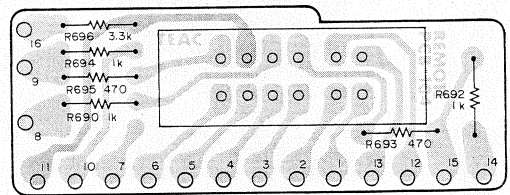
POWER SUPPLY PCB 125 ASSY



CONTROL PCB 129 ASSY



REMOTE PCB ASSY



NOTES

- The colors used on the PCB illustrations have the following significance:
 - : +B power supply circuit
 - : -B power supply circuit
 - : GND
 - : Other
- Resistor values are in ohms (k = 1,000 ohms).
- All capacitor values are in microfarads (p = picofarads)..

REC/PLAY AMPL. PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200023800	PCB Assy [U]
	5200023810	PCB Assy [All except U]
	5210023800	PCB [U]
	5210023900	PCB [All except U]
TRANSISTORS		
Q302, Q402	5145181000	FET, 2SK105H
Q304, Q404	5145181000	FET, 2SK105H
Q305, Q405	5145181000	FET, 2SK205H
Q307, Q407	5145181000	FET, 2SK105H
Q308, Q408	5145181000	FET, 2SK105H
Q309, Q409	5145181000	FET, 2SK105H
Q310, Q410	5042461000	2SC1327T
Q311, Q411	5145178000	2SC1684S
Q312, Q412	5145183000	FET 2SK68AMI
Q313, Q413	5145110000	2SC16371
Q314, Q414	5145110000	2SC16371
Q315	5042485000	2SC536G
Q316	5145082000	2SC2060R
Q317	5145178000	2SC1684S
Q318	5145132000	2SA933LNS
Q319	5145178000	2SC1684S
Q320	5042486000	2SC536G
Q321, Q421	5145178000	2SC1684S
Q322, Q422	5145132000	2SA933LNS
Q323, Q423	5042486000	2SC536G
Q324, Q424	5042486000	2SC536G
Q325, Q425	5042486000	2SC536G
Q326, Q426	5145178000	2SC1684S
Q327, Q427	5145132000	2SA933LNS
Q328, Q428	5042486000	2SC536G
Q329, Q429	5042486000	2SC536G
Q330, Q430	5042486000	2SC536G
Q331, Q431	5145185000	2SD655E
DIODES		
D302, D402	5143118000	IS2473HJ
D306, D406	5143118000	IS2473HJ
D307, D407	5143118000	IS2473HJ
D309, D409	5143118000	IS2473HJ
D310, D410	5143118000	IS2473HJ
D311, D411	5143118000	IS2473HJ
D312	5143118000	IS2473HJ
D313	5143118000	IS2473HJ
D314	5143118000	IS2473HJ
D315	5143118000	IS2473HJ
D316, D416	5143118000	IS2473HJ
D317	5143118000	IS2473HJ
D318	5143118000	IS2473HJ
D319	5143118000	IS2473HJ
D320	5143118000	IS2473HJ
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R301, R401	5184118000	33k Ω
R302, R402	5183118000	33k Ω
R303	5183130000	100k Ω
R305	5183130000	100k Ω
R306	5183130000	100k Ω
R307	5183130000	100k Ω
R308	5183130000	100k Ω
R309	5183130000	100k Ω
R310, R410	5183130000	100k Ω
R311, R411	5183120000	39K Ω

REF. NO.	PARTS NO.	DESCRIPTION
R312, R412	5183128000	82k Ω
R313, R413	5183150000	680k Ω
R314, R414	5183098000	4.7k Ω
R315, R415	5183106000	10k Ω
R316, R416	5183082000	1k Ω
R317, R417	5183038000	15 Ω
R318, R418	5183096000	3.9k Ω
R319, R419	5183114000	22k Ω
R320, R420	5183082000	1k Ω
R321, R421	5183146000	470k Ω
R322	△ 5184249000	100 Ω Non Flammable
R323, R423	5183110000	15k Ω
R324	5183130000	100k Ω
R325	5183106000	10k Ω
R326	5183094000	3.3k Ω
R328	5183086000	1.5k Ω
R329	5183114000	22k Ω
R330	5183104000	8.2k Ω
R331	5183082000	1k Ω
R332	5183010000	1 Ω
R333	△ 5184225000	10 Ω Non Flammable
R334	5183118000	33k Ω
R335	5183106000	10k Ω
R336	5183130000	100k Ω
R337	5183110000	15k Ω
R338	5183130000	100k Ω
R339	5183118000	33k Ω
R340	5183092000	2.7k Ω
R341	5183102000	6.8k Ω
R342, R442	5183082000	1k Ω
R343	5183114000	22k Ω
R344	5183066000	220 Ω
R345	5183106000	10k Ω
R347, R447	5183138000	220k Ω
R348, R448	5183128000	82k Ω
R350, R450	5183128000	82k Ω
R351, R451	5183118000	33k Ω
R352, R452	5183122000	47k Ω
R353, R453	5183142000	330k Ω
R354, R454	5183142000	330k Ω
R355, R455	5183118000	33k Ω
R356, R456	5183130000	100k Ω
R357, R457	5183118000	33k Ω
R358, R458	5183098000	4.7k Ω
R359, R459	5183118000	33k Ω
R360, R460	5183112000	18k Ω
R361, R461	5183094000	3.3k Ω
R362, R462	5183082000	1k Ω
R363, R463	5183082000	1k Ω
R364, R464	5183086000	1.5k Ω
R365	5183130000	100k Ω
R366	5183130000	100k Ω
R367	5183130000	100k Ω
R368, R468	5183138000	220k Ω
R369, R469	5183108000	12k Ω
R370, R470	5183134000	150k Ω
R371, R471	5183058000	100 Ω
R372, R472	5183122000	47k Ω
R373, R473	5183094000	3.3k Ω
R374, R474	5183118000	33k Ω
R375, R475	5183090000	2.2k Ω
R377, R477	5183092000	2.7k Ω
R378, R478	5183050000	47 Ω
R379, R479	5183098000	4.7k Ω

[U]: U.S.A.
[A]: AUSTRALIA
[L]: LIMITED AREA

[C]: CANADA
[E]: EUROPE

[GE]: GENERAL EXPORT
[UK]: U.K.

REF. NO.	PARTS NO.	DESCRIPTION
R380, R480	5183044000	27Ω
R381, R481	5183108000	12kΩ
R382, R482	5183060000	120Ω
R383, R483	5183130000	100kΩ
R384, R484	5183130000	100kΩ
R385, R485	5183130000	100kΩ
R386	5183130000	100kΩ
R387	5183130000	100kΩ
R388	5183098000	4.7kΩ
R389	5183130000	100kΩ
R390	5183098000	4.7kΩ
R391	5183130000	100kΩ
R392	5183098000	4.7kΩ
R393	5183118000	33kΩ
R394	5183130000	100kΩ
CAPACITORS		
C301, C401	5173005800	Elec. 4.7μF 35V
C302, C402	5173005800	Elec. 4.7μF 35V
C303, C403	5173550800	Elec. 0.1μF 50V
C304, C404	5173019800	Elec. 22μF 25V
C305	5173037800	Elec. 47μF 25V
C306	5173019800	Elec. 22μF 25V
C307	5173010800	Elec. 10μF 16V
C308	5173012800	Elec. 10μF 35V
C309, C409	5054758000	Dip.Mica. 82pF 50V 10%
C310	5173560800	Elec. 2.2μF 50V
C311	5173010800	Elec. 10μF 16V
C312	5173044800	Elec. 100μF 10V
C313	5173011800	Elec. 10μF 25V
C314, C414	5170445800	Mylar 0.068μF 100V 5%
C315, C415	5173729000	Polyst. 560pF 100V 5%
C316, C416	5173556800	Elec. 1μF 50V
C317, C417	5173011800	Elec. 10μF 25V
C318, C418	5173010800	Elec. 10μF 25V
C319, C419	5173561800	Elec. 3.3μF 25V
C320, C420	5173556800	Elec. 1μF 50V
C321, C421	5173010800	Elec. 10μF 16V
C322, C422	5173572800	Elec. 10μF 25V
C323, C423	5173731000	Polyst. 820pF 100V 5%
C324, C424	5170427800	Mylar 0.012μF 100V 5%
C325, C425	5170423800	Mylar 0.0082μF 100V 5%
C326, C426	5170431800	Mylar 0.018μF 100V 5%
C327, C427	5170433800	Mylar 0.022μF 100V 5%
C328, C428	5170425800	Mylar 0.01μF 100V 5%
C329, C429	5054330000	Dip. Mica. 150pF 50V 10%
VARIABLE RESISTORS		
R13, R23	5280003602	Semi-fixed 20kΩ (B)
R14, R24	5280003602	Semi-fixed 20kΩ (B)
R15, R25	5280003502	Semi-fixed 10kΩ (B)
R16, R26	5280004002	Semi-fixed 50kΩ (B)
R17, R27	5280004002	Semi-fixed 50kΩ (B)
TRIMMER CAPACITORS		
C30, C40	5267205500	350pF Max.
C31, C41	5267205200	140pF Max.
C32, C42	5267205200	140pF Max.
COILS		
L301, L401	5160042000	Rec. EQ, 3.6mH 20%
L302, L402	5160042000	Rec. EQ, 3.6mH 20%
L303, L403	5056635000	Rec. EQ, 8mH 20%
L304, L404	5056659000	Trap, 3mH 20%

REF.NO.	PARTS NO.	DESCRIPTION
MISCELLANEOUS		
U103	5292200500	OSC UNIT, 100kHz
RT11, RT21	5143128000	Thermistor, SSC-34
P9	5122132000	Connector, Plug; 8P (White)
P10	5122130000	Connector, Plug; 6P (White)
P11	5122301000	Connector, Plug; 4P (Red)
P12	5122131000	Connector, Plug; 7P (White)
P13	5122127000	Connector, Plug; 3P (White)
P14	5122750000	Connector, Plug; 4P (White)
	5544750000	Pin, Combination (7used)

DLOBY B TYPE PROCESSOR PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200023600	PCB Assy [U]
	5200023610	PCB Assy [All except U]
	5210023600	PCB [U]
	5210023700	PCB [All except U]
IC's		
U101, U201	5147040000	NE645B
U102, U202	5147040000	NE645B
TRANSISTORS		
Q101, Q201	5145119000	2SC1844F
Q102, Q202	5042461000	2SC1327T
Q103, Q203	5145181000	FET, 2SK105H
Q104, Q204	5145185000	2SD655E
Q105, Q205	5145181000	FET, 2SK105H
Q106, Q206	5145119000	2SC1844F
Q107, Q207	5145132000	2SA933LN(S)
Q108, Q208	5145183000	FET, 2SK68AMI
Q109, Q209	5145132000	2SA933LN(S)
DIODES		
D101, D201	5143118000	IS2473HJ
D102	5143118000	IS2473HJ
D103, D203	5143198000	Zener, EQA0113R
D104, D204	5143118000	IS2473HJ
D105	5143118000	IS2473HJ
D106, D206	5143198000	Zener, EQA0113R
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt.		
R101, R201	5183126000	68kΩ
R102, R202	5183122000	47kΩ
R103, R203	5183034000	10Ω
R104, R204	5183098000	4.7kΩ
R105, R205	5183058000	100Ω
R106, R206	5183118000	33kΩ
R107, R207	5183098000	4.7kΩ
R108, R208	5183140000	270kΩ
R109, R209	5183098000	4.7kΩ
R110, R210	5183072000	390Ω
R111, R211	5183098000	4.7kΩ
R112, R212	5183072000	1kΩ
R113, R213	5183104000	8.2kΩ
R114, R214	5183114000	22kΩ
R115	5183142000	330kΩ

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

REF. NO.	PARTS NO.	DESCRIPTION
R116	5183130000	100kΩ
R117, R217	5183082000	1kΩ
R118, R218	5183130000	100kΩ
R119, R219	5183094000	3.3kΩ
R120, R220	5183094000	3.3kΩ
R121, R221	5183064000	180Ω
R122, R222	5183064000	180Ω
R123, R223	5183142000	330kΩ
R124, R224	5193058000	100Ω
R125, R225	5183118000	33kΩ
R126, R226	5183042000	22Ω
R127, R227	5183094000	3.3kΩ
R128, R228	5183122000	47kΩ
R129, R229	5183137000	200kΩ
R130, R230	5183140000	270kΩ
R131, R231	5183114000	22kΩ
R132, R232	5183114000	22kΩ
R133	5183120000	39kΩ
R134, R234	5183034000	10Ω
R135	5183070000	330Ω
R136, R236	5183050000	47Ω
R137, R237	5183086000	1.5kΩ
R138, R238	5183094000	3.3kΩ
R140, R249	5183116000	27kΩ
R141, R241	5183082000	1kΩ
R142, R242	△ 5184249000	100Ω Non Flammable
R143, R243	5183064000	180Ω
R144, R244	5183130000	100kΩ
R145, R245	5183098000	4.7kΩ
R146, R245	5183074000	470Ω
R147, R247	5183142000	330kΩ
R148, R248	5183118000	33kΩ
R149, R249	5183132000	120kΩ
R150, R250	5183064000	180Ω
R151, R251	5183064000	180Ω
R152, R252	5183102000	6.8kΩ
R153, R253	5183094000	3.3kΩ
R154, R254	5183094000	3.3kΩ
R155, R255	5183082000	1kΩ
R156, R256	5183082000	1kΩ
R157, R257	5183058000	100Ω
R158, R258	5183118000	33kΩ
R159, R259	5183064000	180Ω
R160, R260	5183094000	3.3kΩ
R161, R261	5183122000	47kΩ
R162, R262	5183137000	200kΩ
R163, R263	5183140000	270kΩ
CAPACITORS		
C101, C201	5173027800	Elec. 33μF 16V
C102, C202	5054643100	Dip. Tant. 15μF 6.3V
C103, C203	5173587800	Elec. 47μF 6.3V
C104, C204	5170425800	Mylar 0.01μF 100V 5%
C105, C205	5172304000	Ceramic 22pF 100V 10%
C106, C206	5173553800	Elec. 0.33μF 50V
C107, C207	5170409800	Mylar 0.0022μF 100V 5%
C108, C208	5170409800	Mylar 0.0022μF 100V 5%
C109	5173556800	Elec. 1μF 50V
C110, C210	5173053800	Elec. 220μF 16V
C111, C211	5173726000	Polyst. 330pF 100V 5%
C112, C212	5173053800	Elec. 220μF 10V
C113, C213	5173553800	Elec. 0.33μF 50V
C114, C214	5170407800	Mylar 0.0018μF 100V 5%
C115, C215	5054745000	Dip. Mica. 220pF 50V 10%

REF. NO.	PARTS NO.	DESCRIPTION
C116, C216	5173561800	Elec. 3.3μF 25V
C117, C217	5172324000	Ceramic 0.001μF 50V 10%
C118, C218	5170419800	Mylar 0.0056μF 100V 5%
C119, C219	5170435800	Mylar 0.027μF 100V 5%
C120, C220	5170417800	Mylar 0.0047μF 100V 5%
C121, C221	5173010800	Elec. 10μF 16V
C122, C222	5173010800	Elec. 10μF 16V
C123, C223	5170441800	Mylar 0.047μF 100V 5%
C124, C224	5170449800	Mylar 0.1μF 100V 5%
C125, C225	5170300100	Dip. Tant. 0.33μF 35V 10%
C126, C226	5054643000	Dip. Tant. 15μF 6.3V
C127	5173044800	Elec. 100μF 10V
C128, C228	5172316000	Ceramic 220pF 50V 10%
C129, C229	5173561800	Elec. 3.3μF 25V
C130, C230	5173028800	Elec. 33μF 25V
C131, C231	5170409800	Mylar 0.0022μF 100V 5%
C132, C232	5173561800	Elec. 3.3μF 25V
C133, C233	5173561800	Elec. 3.3μF 25V
C134, C234	5173053800	Elec. 220μF 10V
C135, C235	5173556800	Elec. 1μF 50V
C136, C236	5170413800	Mylar 0.0033μF 100V 5%
C137, C237	5173753000	Polyst. 0.003μF 100V 5%
C138, C238	5170407800	Mylar 0.0018μF 100V 5%
C139, C239	5173561800	Elec. 3.3μF 25V
C140, C240	5170419800	Mylar 0.0056μF 100V 5%
C141, C241	5170435800	Mylar 0.027μF 100V 5%
C142, C242	5170418800	Mylar 0.0047μF 100V 5%
C143, C243	5173010800	Elec. 10μF 16V
C144, C244	5173010800	Elec. 10μF 16V
C145, C245	5170441800	Mylar 0.047μF 100V 5%
C146, C246	5170449800	Mylar 0.1μF 100V 5%
C147, C247	5180300100	Dip. Tant. 0.33μF 35V 10%
C148, C248	5172324000	Ceramic 0.001μF 50V 10%
C149, C249	5172312000	Ceramic 100pF 50V 10%
C150, C250	5172324000	Ceramic 0.001μF 50V 10%
C151, C251	5172324000	Ceramic 0.001μF 50V 10%
VARIABLE RESISTORS		
R10, R20	5280001502	Semi-fixed 50kΩ(B)
R11, R21	5280001502	Semi-fixed 50kΩ(B)
R12, R22	5280003502	Semi-fixed 10kΩ(B)
COILS		
L101, L201	5160107000	Choke 1.2mH 5%
L102, L202	5160161000	Choke 8.2mH 5%
L103, L203	5056666000	CHoke 38mH 5%
L104, L204	5056655000	Trap. 12mH 20%
L105, L205	5160107000	Choke 1.2mH 5%
L106, L206	5056666000	Choke 38mH 5%
L107, L207	5056665000	Choke 23mH 10%
MISCELLANEOUS		
RT10, RT20	5143127000	Thermistor, S5C-14
TP14	5544750000	Pin, T. P. (1 used)
P1	5122131000	Connector Plug; 7P
P2	5122126000	Connector Plug; 2P
P3	5122130000	Connector Plug; 6P
P4	5122129000	Connector Plug; 5P
P5	5122132000	Connector Plug; 8P
P6	5122128000	Connector Plug; 4P
P7	5122301000	Connector Plug; 4P
P8	5122185000	Connector Plug; 4P

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 [L]: LIMITED AREA

HX PCB 101 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200023200	PCB Assy [U]
	5200023210	PCB Assy [All except U]
	5210023200	PCB [U]
	5210023300	PCB [All except U]
IC's		
U761	5220405300	LM324J
U762	5220405200	LM13600
U763	5147024000	4558DF
TRANSISTORS		
Q197 ~ Q199	5145091000	2SC945AK
Q761	5145082000	2SC2060Q
Q762, Q763	5145091000	2SC945AK
Q764	5145079000	2SB631KE
Q765, Q865	5042486000	2SC536G
Q766, Q866	5042486000	2SC536G
Q767, Q867	5042486000	2SC536G
DIODES		
D761 ~ D764	5143118000	1S2473HJ
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R197, R198	5183106000	10k Ω
R487	5183130000	100k Ω
R488	5183098000	4.7k Ω
R489	5183130000	100k Ω
R490	5183098000	4.7k Ω
R491	5183130000	100k Ω
R492	5183098000	4.7k Ω
R760	5183082000	1k Ω
R761	5183122000	47k Ω
R762	5183130000	100k Ω
R763	5183154000	1M Ω
R764	5183138000	220k Ω
R765, R766	5183106000	10k Ω
R767	5183116000	27k Ω
R768, R769	5183130000	100k Ω
R770	5183082000	1k Ω
R771	5183084000	1.2k Ω
R772	5183082000	1k Ω
R773	5183104000	8.2k Ω
R774 ~ R777	5183082000	1k Ω
R778	5183102000	6.8k Ω
R779, R879	5183066000	220 Ω
R780, R880	5183106000	10k Ω
R781	5183140000	270k Ω
R782	5183112000	18k Ω
R783, R883	5183090000	2.2k Ω
R784, R884	5183106000	10k Ω
R785, R885	5183150000	680k Ω
R786, R886	5183096000	3.9k Ω
R787, R887	5183110000	15k Ω
R788, R888	5183120000	39k Ω
R789, R889	5183050000	47 Ω
R790, R890	5183106000	10k Ω
R791, R891	5183058000	100 Ω
R792, R892	5183102000	6.8k Ω
R793, R893	5183060000	120 Ω
R794, R894	5183106000	10k Ω
R795, R895	5183130000	100k Ω
R796, R896	5183130000	100k Ω

REF. NO.	PARTS NO.	DESCRIPTION
R797, R897	5183130000	100k Ω
R798, R898	5183130000	100k Ω
R799	5183098000	4.7k Ω
CAPACITORS		
C197, C198	5173052800	Elec. 220 μ F 6.3V
C761	5054260000	Dip. Mica 180pF 50V
C762	5173010800	Elec. 10 μ F 16V
C763	5173047800	Elec. 100 μ F 35V
C764	5172336000	Ceramic 0.01 μ F 50V 10%
C765, C865	5172996800	Elec. 2.2 μ F 50V
C766, C866	5054330000	Dip. Mica 150pF 50V 10%
C767, C867	5173734000	Polypro. 0.0015 μ F 100V 5%
C768, C868	5173734000	Polypro. 0.0015 μ F 100V 5%
C769, C869	5173010800	Elec. 10 μ F 16V
C770, C870	5170423800	Mylar 0.0082 μ F 100V 5%
C771, C871	5170423800	Mylar 0.0082 μ F 100V 5%
C772, C872	5170425800	Mylar 0.01 μ F 100V 5%
C773, C873	5170429800	Mylar 0.015 μ F 100V 5%
C774, C874	5170421800	Mylar 0.0068 μ F 100V 5%
C775, C875	5170417800	Mylar 0.0047 μ F 100V 5%
C776	5172312000	Ceramic 100pF 50V 10%
COILS		
L761, L861	5160042000	Record EQ, 3.6mH
L762, L862	5160042000	Record EQ, 3.6mH
L763, L863	5160042000	Record EQ, 3.6mH
L764	5056661100	Choke, 1.2mH
MISCELLANEOUS		
U764	5292200600	OSC Unit, 100kHz
R72, R73	5280004002	Var. Res., Semi-fixed; 50k Ω (B)
	5544750000	Pin, T.P. (4 used)

JOINT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5158129001	PCB Assy
	5167730100	PCB
D650, D651	5143089000	Diode, W03C
D652	5143089000	Diode, W03C
R650, R651	Δ 5181986000	Res., Carbon 33 Ω $\frac{1}{2}$ W 5% Non Flammable
C650, C651	5055949000	Capacitor, Elec. 47 μ F 50V
P650	5122134000	Connector Plug, 10P (WHT)
P651	5122132000	Connector Plug, 8P (WHT)
P652	5122126000	Connector Plug, 2P (WHT)
	5788101800	Tube, UL (2 used)

[U]: U.S.A.
[A]: AUSTRALIA
[L]: LIMITED AREA

[C]: CANADA
[E]: EUROPE

[GE]: GENERAL EXPORT
[UK]: U.K.

PHONE AMPL. PCB 103 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200024200	PCB Assy [U]
	5200024210	PCB Assy [All except U]
	5157064000	PCB [U]
	5210024200	PCB [All except U]
IC		
U104	5147074000	LA4170
TRANSISTORS		
Q170, Q270	5145183000	FET, 2SK68AMI
Q171, Q271	5145086000	2SC16362
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R170	5183116000	27k Ω
R270	5183106000	10k Ω
R171, R271	5183134000	150k Ω
R172, R272	5183140000	270k Ω
R173, R273	5183042000	22 Ω
R174, R274	5183098000	4.7k Ω
R175, R275	5183074000	470 Ω
R176, R276	5183082000	1k Ω
R177, R277	5183082000	1k Ω
R178, R278	5183122000	47k Ω
R179, R279	5183110000	15k Ω
R180, R280	5183130000	100k Ω
R181	Δ 5184225000	10 Ω Non Flammable
R182, R282	5183048000	39 Ω
R183, R283	5183082000	1k Ω
CAPACITORS		
C170, C270	5173028800	Elec. 33 μ F 25V
C171, C271	5173556800	Elec. 1 μ F 50V
C172, C272	5172992800	Elec. 1 μ F 50V
C173	5173010800	Elec. 10 μ F 16V
C174, C274	5173010800	Elec. 10 μ F 16V
C175, C275	5173044800	Elec. 100 μ F 10V
C176	5173054800	Elec. 220 μ F 16V
MISCELLANEOUS		
R28	5280001702	Var. Res., Semi-fixed; 100k Ω (B)
P15	5122128000	Connector Plug, 4P (WHT)
P16	5122301000	Connector Plug, 4P (RED)
P17	5122185000	Connector Plug, 4P (BLK)
P18	5122129000	Connector Plug, 5P (WHT)
P19	5122127000	Connector Plug, 3P (WHT)

SW PCB 155 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200019600	PCB Assy [U]
	5200019610	PCB Assy [All except U]
	5210019600	PCB [U]
	5210019700	PCB [All except U]
DIODES		
D750, D751	5143118000	1S2473HJ

[U]: U.S.A.
[A]: AUSTRALIA
[L]: LIMITED AREA

[C]: CANADA
[E]: EUROPE

[GE]: GENERAL EXPORT
[UK]: U.K.

REF. NO.	PARTS NO.	DESCRIPTION
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R751, R851	5183124000	56k Ω
R752, R852	5183118000	33k Ω
R753	5183084000	1.2k Ω
R754	5183084000	1.2k Ω
R755	5183106000	10k Ω
SWITCHES		
S1	5300510400	Lever, 2-3
S2	5300510400	Lever, 2-3
S3	5300510600	Lever, 4-3
S5	5300510300	Lever, 2-3
S6	5300510600	Lever, 4-3
MISCELLANEOUS		
P20	5122134000	Connector Plug, 10P (WHT)
P21	5122130000	Connector Plug, 6P (WHT)
P22	5122184000	Connector Plug, 3P (BLK)
P23	5122126000	Connector Plug, 2P (WHT)
P24	5122131000	Connector Plug, 3P (WHT)
P25	5122127000	Connector Plug, 3P (WHT)
P26	5122183000	Connector Plug, 2P (BLK)
P27	5122136000	Connector Plug, 12P (WHT)

SW PCB 157 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200022800	PCB Assy [U]
	5200022810	PCB Assy [All except U]
	5210022800	PCB [U]
	5210022900	PCB [All except U]
TRANSISTORS		
Q191, Q291	5145181000	FET, 2SK105H
Q192, Q292	5145181000	FET, 2SK105H
DIODES		
D191, D291	5143118000	1S2473HJ
D192, D292	5143118000	1S2473HJ
D193 ~ D196	5143118000	1S2473HJ
CARBON RESISTORS		
All resistors are rated $\pm 5\%$ tolerance and $\frac{1}{4}$ watt.		
R191, R291	5183102000	6.8k Ω
R192, R292	5183096000	3.9k Ω
R193	5183142000	330k Ω
R194	5183130000	100k Ω
R195	5183142000	330k Ω
R196	5183130000	100k Ω
CAPACITORS		
C191	5055680800	Elec. 1 μ F 50V
C192	5055680800	Elec. 1 μ F 50V
MISCELLANEOUS		
P191	5122146000	Connector Plug, 3P (WHT)
P192	5122203000	Connector Plug, 3P (BLK)

CONTROL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200024100	PCB Assy [U]
	5200024110	PCB Assy [All except U]
	5157067300	PCB [U]
	5210024100	PCB [All except U]
IC		
U501	5147047000	μ54410P
TRANSISTORS		
Q501 ~ Q507	5145091000	2SC945AK
Q510 ~ Q512	5145091000	2SC945AK
Q513	5042553000	2SA733P
Q514, Q515	5145091000	2SC945AK
Q516	5042625000	2SC1318S
Q517	5042527000	2SD288K
Q518	5145091000	2SC945AK
Q519	5042553000	2SA733P
Q520	5042527000	2SD288K
Q521, Q522	5145091000	2SC954AK
Q523	5042491000	2SC1384R
Q524	5145091000	2SC954AK
Q525	5042491000	2SC1384R
Q526, Q527	5145085000	2SA934R
Q528	5042527000	2SD288K
Q529 ~ Q532	5145091000	2SC945AK
Q533	5042625000	2SC1318S
Q534	5042527000	2SD288K
Q535	5145091000	2SC945AK
Q536	5042553000	2SA733P
Q537	5042527000	2SD288K
Q538, Q539	5042625000	2SC1318S
Q540 ~ Q545	5145091000	2SC945AK
Q546	5145034000	2SC900U
Q549 ~ Q551	5145091000	2SC945AK
Q553, Q554	5145091000	2SC945AK
Q556	5145091000	2SC945AK
Q557	5145082000	2SC2060Q
Q559, Q560	5145091000	2SC945AK
Q561	5145098000	2SC1741Q
Q565	5145091000	2SC945AK
Q566	5042527000	2SD288K
Q569, Q570	5145091000	2SC945AK
Q571	5042553000	2SA733P
Q572 ~ Q574	5145091000	2SC945AK
Q575	5145086000	2SC16362
DIODES		
D501 ~ D519	5143118000	1S2473HJ
D521	5143183000	Zener, EQA0106R
D522	5143118000	1S2473HJ
D523, D524	5143243000	Zener, ERB1202G1
D525 ~ D530	5143118000	1S2473HJ
D531, D532	5143243000	Zener, ERB1202G1
D533, D534	5143118000	1S2473HJ
D535	5143184000	Zener, EQA0106S
D536 ~ D544	5143118000	1S2473HJ
D545	5143188000	Zener, EQA0108R
D546	5143118000	1S2473HJ
D547	5143143000	Zener, RD4.3E
D548, D549	5143118000	1S2473HJ
D551 ~ D555	5143118000	1S2473HJ
D558	5143243000	ERB1201G1
D559	5143118000	1S2473HJ
D561	5143118000	1S2473HJ
D562	5143143000	Zener, RD4.3E

REF. NO.	PARTS NO.	DESCRIPTION
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt.		
R501 ~ R507	5183046000	33Ω
R508	5183080000	820Ω
R509	5183098000	4.7kΩ
R510	5183094000	3.3kΩ
R511	5183080000	820Ω
R512	5183098000	4.7kΩ
R513	5183094000	3.3kΩ
R514	5183080000	820Ω
R515	5183098000	4.7kΩ
R516	5183094000	3.3kΩ
R517	5183080000	820Ω
R518	5183098000	4.7kΩ
R519	5183094000	3.3kΩ
R520	5183080000	820Ω
R521	5183098000	4.7kΩ
R522	5183094000	3.3kΩ
R523	5183080000	820Ω
R524	5183098000	4.7kΩ
R525	5183094000	3.3kΩ
R526	5183100000	5.6kΩ
R527	5183082000	1.0kΩ
R528	5183086000	1.5kΩ
R529	5183116000	27kΩ
R533	5183102000	6.8kΩ
R534	5183062000	150Ω
R535	5183116000	27kΩ
R536	5183104000	8.2kΩ
R537	5183116000	27kΩ
R538	5183104000	8.2kΩ
R539	5183124000	56kΩ
R540, R541	5183084000	1.2kΩ
R542	5183102000	6.8kΩ
R543	5183068000	270Ω
R545	5183130000	100kΩ
R546	5183094000	3.3kΩ
R547	5183124000	56kΩ
R548	5183098000	4.7kΩ
R549	5183118000	33kΩ
R550	5183100000	5.6kΩ
R551, R552	5183086000	1.5kΩ
R553	5183130000	100kΩ
R554	5183106000	10kΩ
R555	5183122000	47kΩ
R556	5183106000	10kΩ
R557	5183034000	10Ω
R558	5183058000	100Ω
R559	5183124000	56kΩ
R560	5183100000	5.6kΩ
R561	5183118000	33kΩ
R562	5183100000	5.6kΩ
R563	5183118000	33kΩ
R564	5183100000	5.6kΩ
R565	5183094000	3.3kΩ
R566, R567	5183142000	330kΩ
R568	5183094000	3.3kΩ
R569	5183118000	33kΩ
R570	5183100000	5.6kΩ
R571, R572	5183068000	270Ω
R573	5183078000	680Ω
R574	5183124000	56kΩ

[U]: U.S.A.
 [A]: AUSTRALIA
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[C]: CANADA
 [E]: EUROPE

[GE]: GENERAL EXPORT
 [UK]: U.K.

REF. NO.	PARTS NO.	DESCRIPTION
R575	5183098000	4.7kΩ
R576	5183124000	56kΩ
R577	5183098000	4.7kΩ
R578	5183118000	33kΩ
R579	5183124000	56kΩ
R580	5183098000	4.7kΩ
R581	5183118000	33kΩ
R582	5183100000	5.6kΩ
R583, R584	5183086000	1.5kΩ
R585	5183130000	100kΩ
R586	5183106000	10kΩ
R587	5183122000	47kΩ
R588	5183106000	10kΩ
R589	5183034000	10Ω
R590	5183082000	1kΩ
R591	5183118000	33kΩ
R592	5183094000	3.3kΩ
R593, R594	5183124000	56kΩ
R595	5183098000	4.7kΩ
R596	5183094000	3.3kΩ
R597, R598	5183124000	56kΩ
R599	5183106000	10kΩ
R600, R601	5183124000	56kΩ
R602	5183098000	4.7kΩ
R603	5183118000	33kΩ
R604	5183082000	1kΩ
R605	5183136000	180kΩ
R606	5183086000	1.5kΩ
R607	5183094000	3.3kΩ
R608	5183124000	56kΩ
R609	5183098000	4.7kΩ
R610	5183094000	3.3kΩ
R611	5183124000	56kΩ
R612	5183106000	10kΩ
R613	5183058000	100Ω
R614	5183120000	39kΩ
R615	5183118000	33kΩ
R616	5183114000	22kΩ
R618	5183094000	3.3kΩ
R619	5183150000	680kΩ
R620	5183128000	82kΩ
R621, R622	5183100000	5.6kΩ
R629	5183110000	15kΩ
R631	5183110000	15kΩ
R632	5183106000	10kΩ
R633	5183110000	15kΩ
R634	5183098000	4.7kΩ
R635	5183118000	33kΩ
R639	5183114000	22kΩ
R640	5183098000	4.7kΩ
R641	5183114000	22kΩ
R642	5183098000	4.7kΩ
R643	5183058000	100Ω
R645	5183046000	33Ω
R647	5183090000	2.2kΩ
R648	5183104000	8.2kΩ
R660	5183094000	3.3kΩ
R661	5183112000	18kΩ
R664	5183094000	3.3kΩ
R665	5183058000	100Ω
R666	5183090000	2.2kΩ
R667	5183106000	10kΩ
R668	5183138000	220kΩ
R669	5183116000	27kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R670	5183082000	1kΩ
R671	5183106000	10kΩ
R672	5183110000	15kΩ
R673	5183058000	100Ω
R674	5183090000	2.2kΩ
R675	5183130000	100kΩ
R676	5183110000	15kΩ
R684	5183118000	33kΩ
R685	5183130000	100kΩ
R686	5183110000	15kΩ
R687	5183102000	6.8kΩ
R688	5183090000	2.2kΩ
R693	5183130000	100kΩ
R696	5183122000	47kΩ
R697	5183124000	56kΩ
R698, R699	5183082000	1kΩ
R700	5183058000	100Ω
R701	5183082000	1.0kΩ
R702	5183104000	8.2kΩ
R703	5183090000	2.2kΩ
R704	5183102000	6.8kΩ
R705	5183098000	4.7kΩ
R706	5183102000	6.8kΩ
R707	5183114000	22kΩ
R708	5183118000	33kΩ
CAPACITORS		
C501 ~ C505	5172996800	Elec. 2.2μF 50V
C506	5173010800	Elec. 10μF 16V
C507	5173017800	Elec. 22μF 10V
C508	5173035800	Elec. 47μF 10V
C509	5172990800	Elec. 0.47μF 50V
C510	5172996800	Elec. 2.2μF 50V
C511	5173027800	Elec. 33μF 16V
C512	5173018800	Elec. 22μF 16V
C513	5172996800	Elec. 2.2μF 50V
C514, C515	5170425800	Mylar 0.01μF 100V 5%
C516	5055935000	Elec. 10μF 25V
C517	5172996800	Elec. 2.2μF 50V
C518	5173010800	Elec. 10μF 16V
C519	5172996800	Elec. 2.2μF 50V
C520	5173005800	Elec. 4.7μF 35V
C521	5172992800	Elec. 1μF 50V
C522	5173035800	Elec. 47μF 10V
C523	5173027800	Elec. 33μF 16V
C524	5173011800	Elec. 10μF 25V
C525	5173035800	Elec. 47μF 10V
C526	5173027800	Elec. 33μF 16V
C527	5172916800	Elec. 33μF 16V
C528	5173035800	Elec. 47μF 10V
C529	5173011800	Elec. 10μF 25V
C531	5173019800	Elec. 22μF 25V
C532	5173010800	Elec. 10μF 16V
C533	5173005800	Elec. 4.7μF 35V
C534	5172916800	Elec. 33μF 16V
C535	5170425800	Mylar 0.01μF 100V 5%
C536, C537	5173017800	Elec. 22μF 10V
C538, C539	5172992800	Elec. 1μF 50V
C540	5173035800	Elec. 47μF 10V
MISCELLANEOUS		
	5033295000	Tube, Insul.
	5033291000	Plate, Insul.

[U]: U.S.A.
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POWER SUPPLY PCB 125 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200020400	PCB Assy [U]
	5200020410	PCB Assy [C, GE, L]
	5200020420	PCB Assy [E, UK, A]
	5175072000	PCB [U]
	5210020500	PCB [All except U]
TRANSISTORS		
Q801	5145108000	2SD762P
Q802, Q803	5145091000	2SC945AK
Q804	5145108000	2SD762P
Q805, Q806	5145091000	2SC945AK
Q807	5145108000	2SD762P
Q808, Q809	5145091000	2SC945AK
Q810	5042553000	2SA733P
Q811	5145135000	2SD400MRE
DIODES		
D801 ~ D805	5143116000	1SR34 200VL
D806	5143154000	Zener, EQA01-06S
D807 ~ D810	5143116000	1SR34 200VL
D811	5143168000	Zener, EQA01-13R
D812 ~ D815	5143116000	1SR34 200VL
D816	5143154000	Zener, EQA01-06S
D817	5143116000	1SR34 200VL
D818	5042517000	1S2473VE
D819 ~ D821	5143116000	1SR34 200VL
D822	5143153000	Zener, EQA01-06R
D823	5042517000	1S2473VE
RESISTORS		
All resistors are rated $\pm 5\%$ tolerance, $\frac{1}{4}$ watt. and of carbon type unless otherwise noted.		
R801	5180100000	5.6k Ω $\frac{1}{2}$ W
R802	Δ 5184413000	5.6 Ω 5W 10% Cement [U, C, GE, L]
R802	Δ 5183910000	5.6 Ω 2W 10% Fuse [E, UK, A]
R803	5057102000	6.8k Ω
R804	5057098000	4.7k Ω
R805	5057090000	2.2k Ω
R806	5057090000	2.2k Ω
R807	5057112000	18k Ω
R808	5057102000	6.8k Ω
R809	5057090000	2.2k Ω
R810	5057098000	4.7k Ω
R811	5057090000	2.2k Ω
R812	5057098000	4.7k Ω
R813	5057102000	6.8k Ω
R814	5057090000	2.2k Ω
R815	5057090000	2.2k Ω
R816	5057090000	2.2k Ω
R817	5057098000	4.7k Ω
R818	5057082000	1k Ω
R819	5057102000	6.8k Ω
R820	5057102000	6.8k Ω
R821	5057106000	10k Ω
R822	5057104000	8.2k Ω
R823	5057130000	100k Ω
R824	5057130000	100k Ω
R825	5057126000	68k Ω
R826	5057142000	330k Ω
R827	5057110000	15k Ω
R828	5057064000	180 Ω

REF. NO.	PARTS NO.	DESCRIPTION
R829	Δ 5183558000	15 Ω Non Flammable
R830	Δ 5181974000	10 Ω Non Flammable
CAPACITORS		
C801	5172973800	Elec. 1000 μ F 50V
C802	5172988000	Elec. 2200 μ F 25V
C803	5172971800	Elec. 1000 μ F 25V
C804	5172964800	Elec. 470 μ F 50V
C805	5172936800	Elec. 100 μ F 35V
C806	5170425800	Mylar 0.01 μ F 100V 5%
C807	5172973800	Elec. 1000 μ F 50V
C808	5172937800	Elec. 100 μ F 50V
C809	5172882800	Elec. 1 μ F 50V
C810	5172972800	Elec. 1000 μ F 35V
C811	5054230000	Ceramic 0.047 μ F 50V 10%
C812	5172971800	Elec. 1000 μ F 25V
C813	5172935800	Elec. 100 μ F 25V
C814	5172882800	Elec. 1 μ F 50V
C815	5172971800	Elec. 1000 μ F 25V
C816	5172942800	Elec. 220 μ F 10V
C817	5172942800	Elec. 220 μ F 10V
C818	5172882800	Elec. 1 μ F 50V
C819	5172924800	Elec. 47 μ F 10V
C820	5172908800	Elec. 22 μ F 16V
C821	5172909800	Elec. 22 μ F 16V
C822	5172969800	Elec. 1000 μ F 10V
C823	5172933800	Elec. 100 μ F 10V
VARIABLE RESISTORS		
R81	5280000802	Semi-fixed 5k Ω (B)
R82	5280000302	Semi-fixed 1k Ω (B)
MISCELLANEOUS		
P32	5122138000	Connector Plug, 14P (WHT)
P33	5122324000	Connector Plug, 9P
P38	5122126000	Connector Plug, 2P (WHT)
	5033291000	Plate, Insul. (3 used)
	5033295000	Tube, Insul. (3 used)

[U]: U.S.A.
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CONTROL PCB 129 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200023000	PCB Assy [U]
	5200023010	PCB Assy [All except U]
	5210023000	PCB [U]
	5210023100	PCB [All except U]
TRANSISTORS		
Q721	5145091000	2SC945AK
Q722	5042491000	2SC1384R
Q723	5145091000	2SC945AK
DIODES		
D721	5143118000	1S2473HJ
D722	5143168000	Zener, EQA0113R
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt.		
R721	5183114000	22kΩ
R722	5183098000	4.7kΩ
R723, R724	5183130000	100kΩ
R725	5183034000	10Ω
R726, R727	5183106000	10kΩ
R728	5183098000	4.7kΩ
CAPACITOR		
C721	5173583800	Elec. 33μF 16V
MISCELLANEOUS		
P721	5122127000	Connector Plug, 3P (WHT)
P722	5122300000	Connector Plug, 3P (RED)
P723	5122184000	Connector Plug, 3P (BLK)

LED PCB 108 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5168701000	PCB Assy
	5167701000	PCB
D1, D2	5143047000	LED, SLP114B (RED)

TIMER PCB 137 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200024000	PCB Assy [U]
	5200024010	PCB Assy [All except U]
	5157069000	PCB [U]
	5210024000	PCB [All except U]
S11	5133017000	Switch, Rotary; 4-3

VOLTAGE SELECTOR PCB ASSY [GE, L]

REF. NO.	PARTS NO.	DESCRIPTION
	5168548100	PCB Assy
	5167548100	PCB
	5555062000	Plate, Voltage Selector

REMOTE PCB 104 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200024300	PCB Assy [U]
	5200024310	PCB Assy [All except U]
	5157102000	PCB [U]
	5210024300	PCB [All except U]
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt.		
R690	5183082000	1kΩ
R691	5183074000	470kΩ
R692	5183082000	1kΩ
R693	5183074000	470kΩ
R694	5183082000	1kΩ
R695	5183074000	470kΩ
R696	5183094000	3.3kΩ
MISCELLANEOUS		
J36	5122336000	Connector Socket, 12P

FUSE PCB [U, C, E, UK, A]

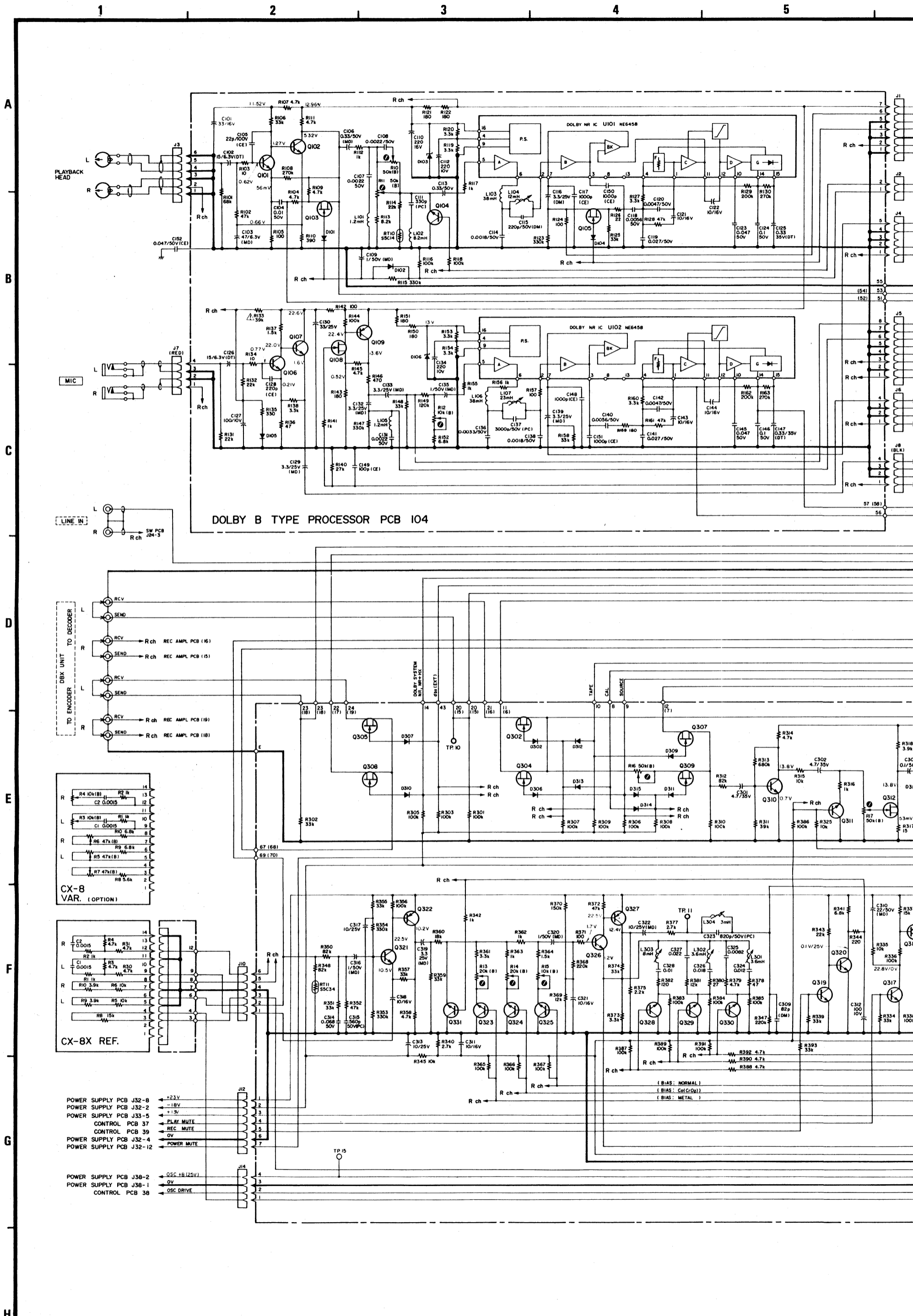
REF. NO.	PARTS NO.	DESCRIPTION
	5168754100	PCB Assy [U, C]
	5168755200	PCB Assy [E, UK, A]
	5167754100	PCB [U, C]
	5167755200	PCB [E, UK, A]
	5041237000	Holder, Fuse (10 used) [U, C]
	5142087000	Holder, Fuse (10 used) [E, UK, A]
F1, F2	△5307004400	Fuse, 4A 250V[U, C]
F1, F2	△5041156000	Fuse, 4A 250V[E, UK, A]
F3	△5307004300	Fuse, 3A 250V[U, C]
F3	△5041140000	Fuse, T1A 250V[E, UK, A]
F4	△5307004100	Fuse, 2A 250V[U, C]
F4	△5142187000	Fuse, T1.25A 250V[E, UK, A]
F5	△5307003600	Fuse, 1A 250V[U, C]
F5	△5041141000	Fuse, 1A 250V[E, UK, A]

[U]: U.S.A.
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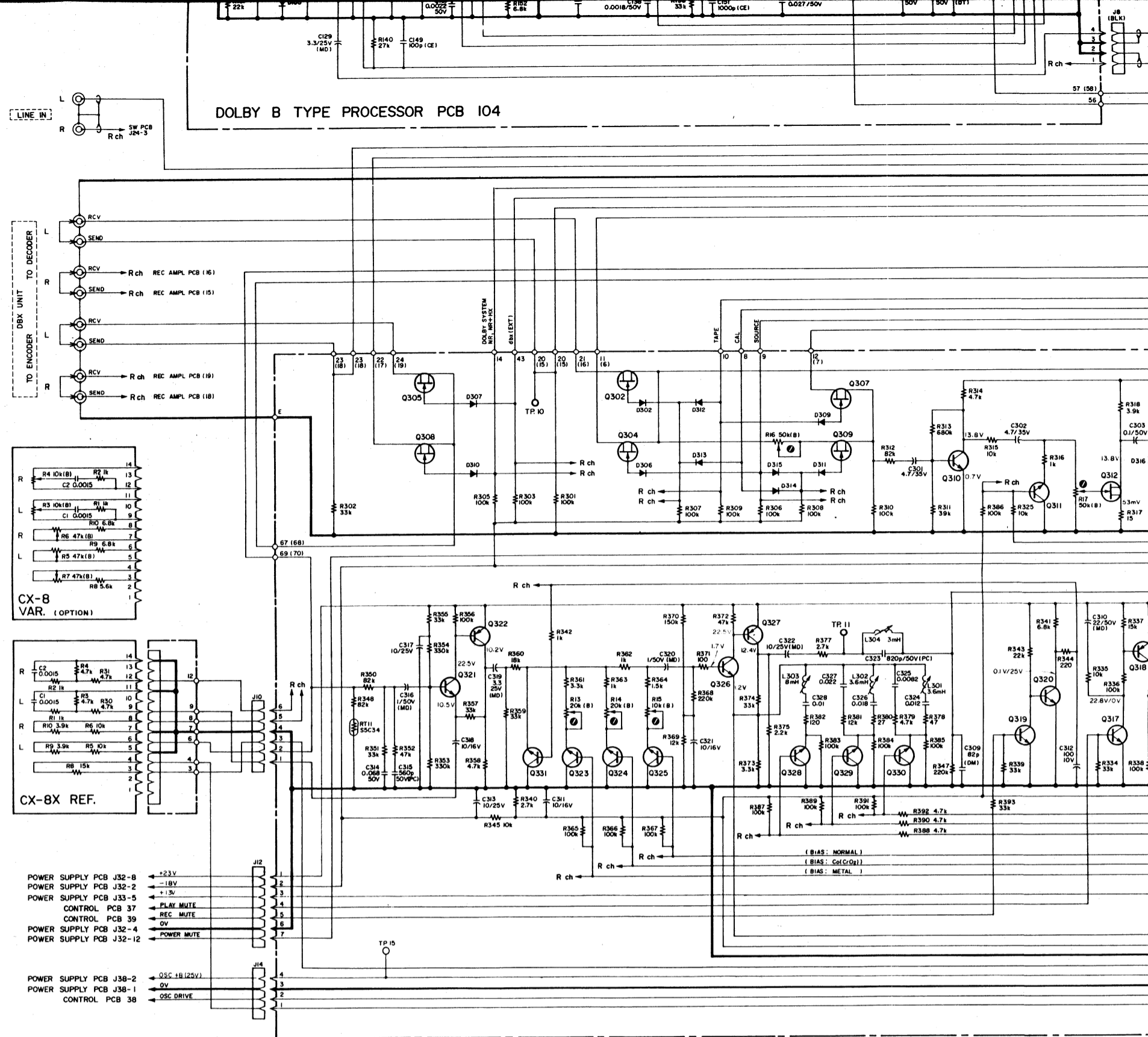
[C]: CANADA
[E]: EUROPE

[GE]: GENERAL EXPORT
[UK]: U.K.

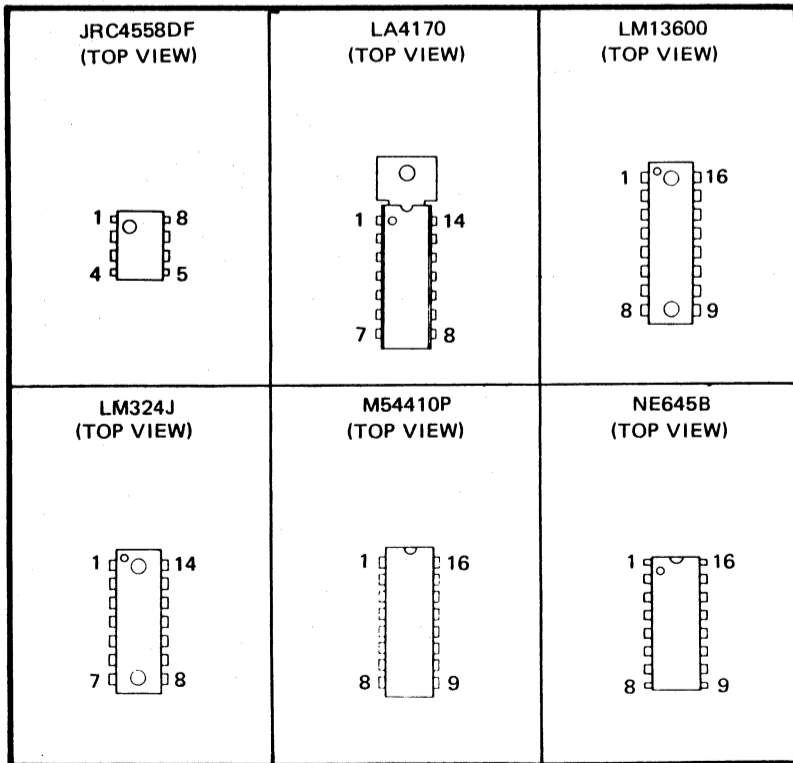
TEAC SCHEMATIC DIAGRAM (AMPLIFIER) C-2X



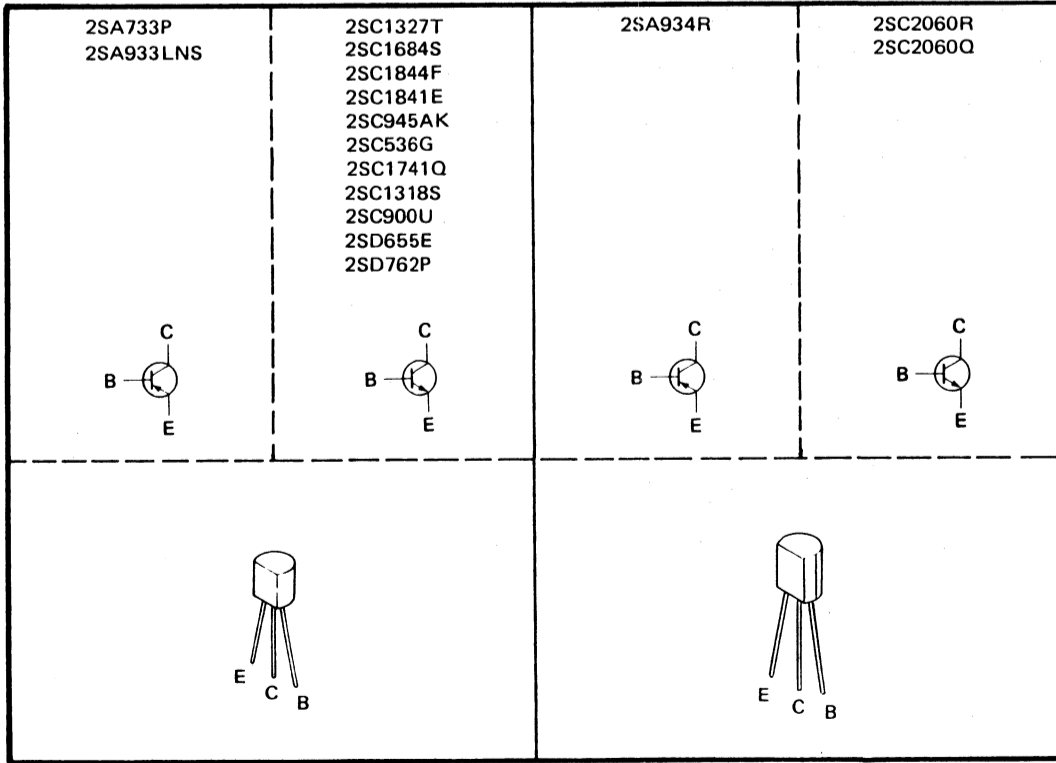
IC's			TRANSISTOR			
JRC4558DF (TOP VIEW)	LA4170 (TOP VIEW)	LM13600 (TOP VIEW)	2SA733P 2SA933LNS	2SC1327T 2SC1684S 2SC1844F	2SA934R	2SC2060R 2SC2060O

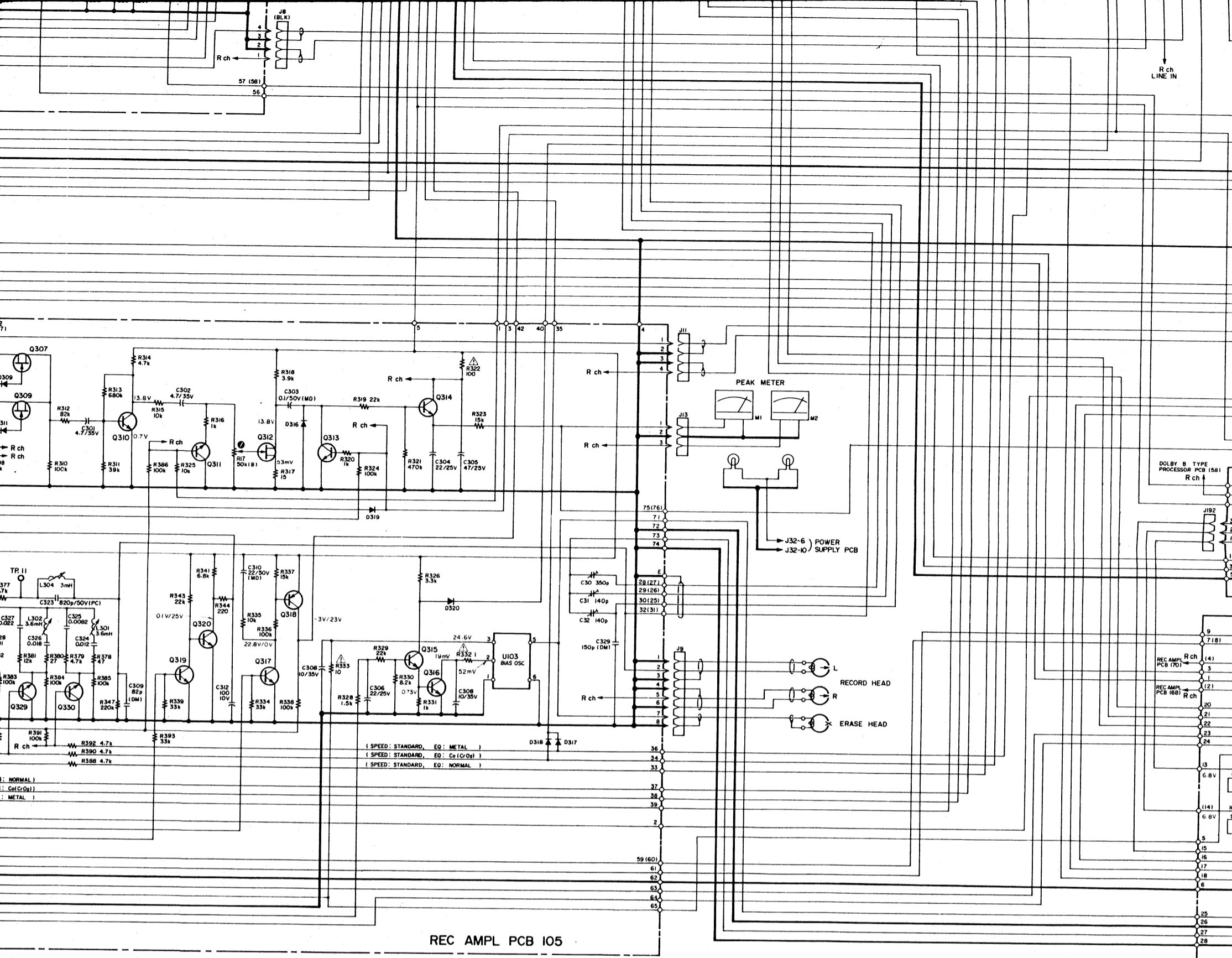


IC's



TRANSISTOR

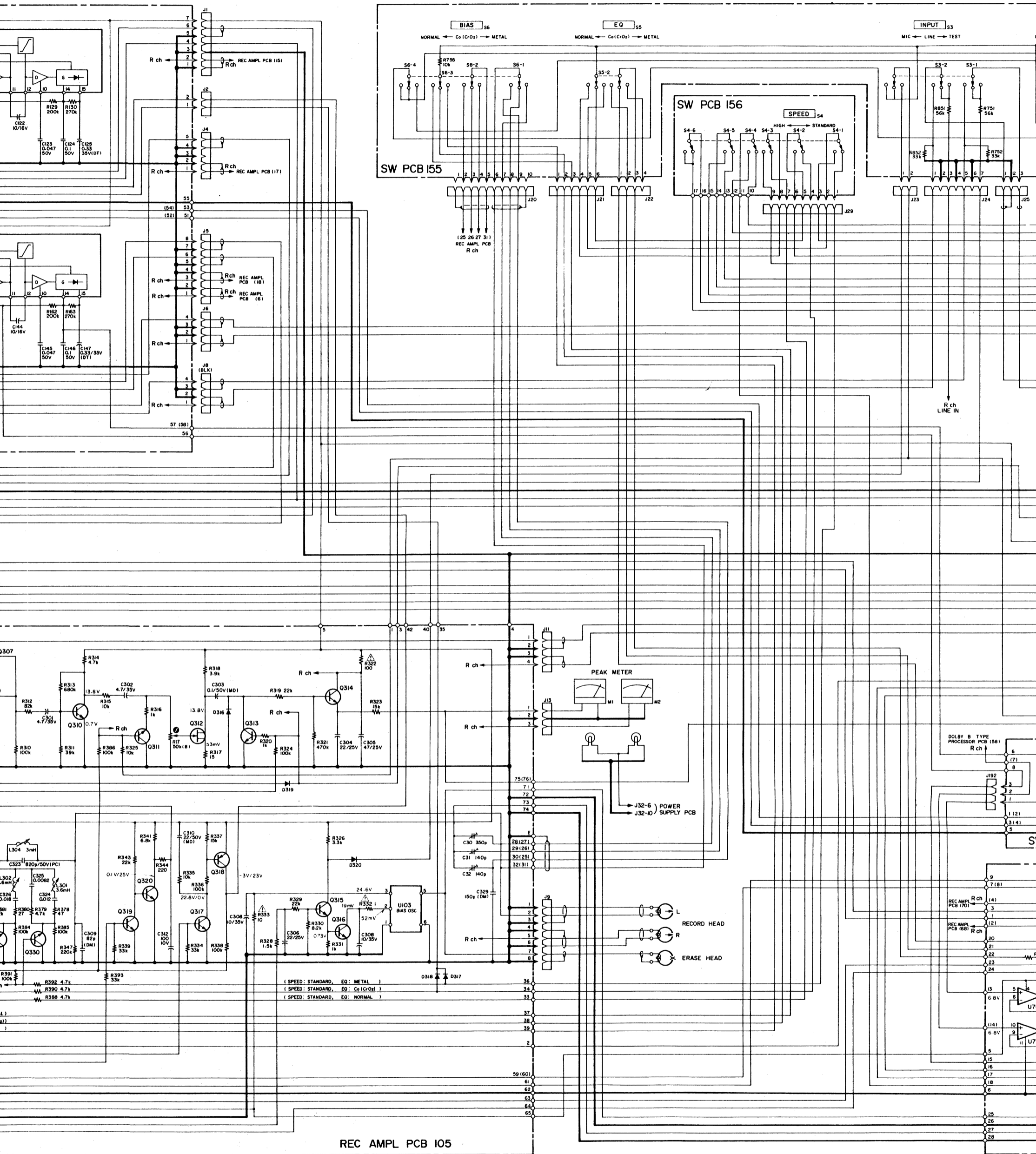




DIODE

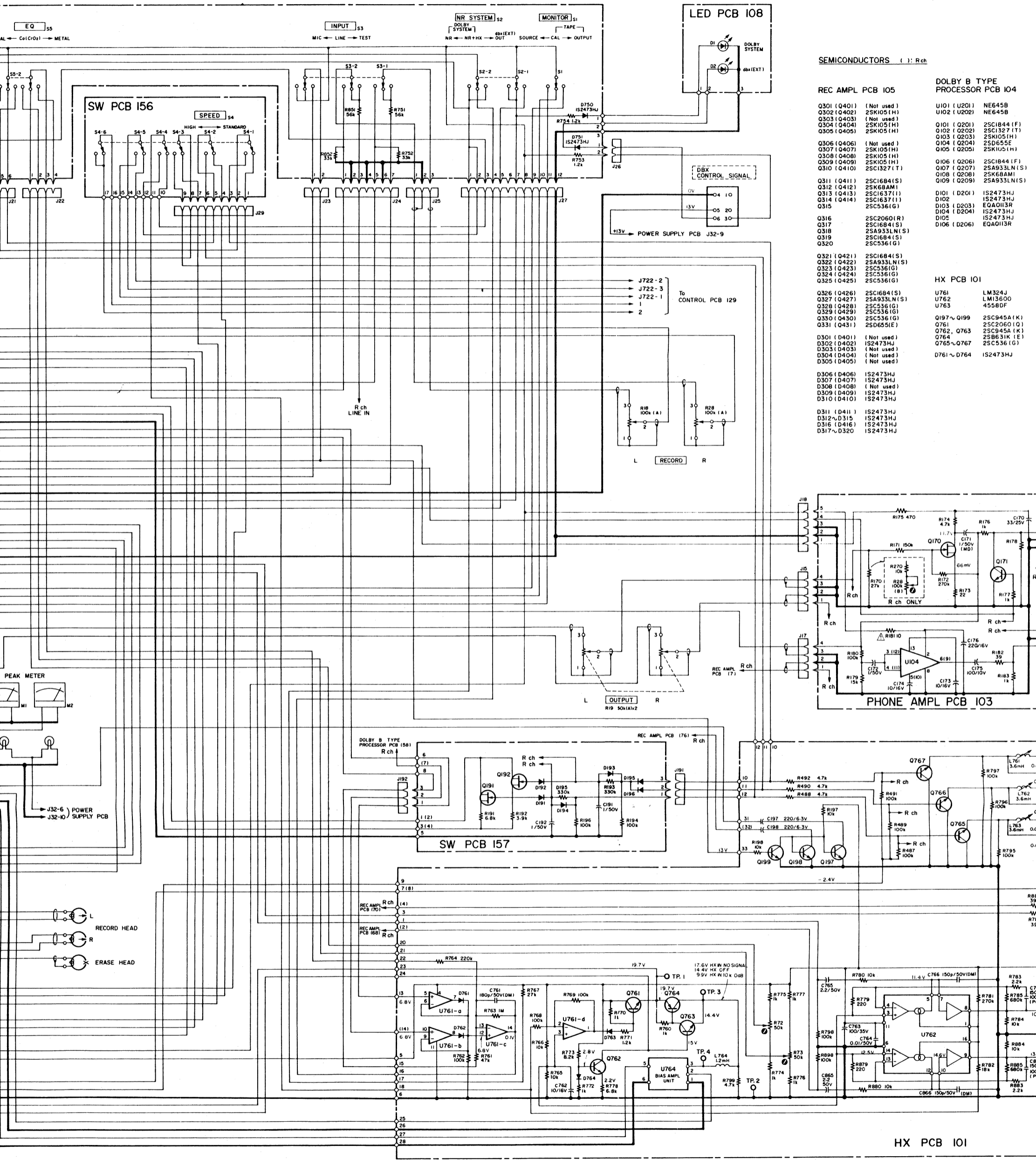
2SA934R	2SC2060R 2SC2060Q	2SD400MR 2SC1384R	2SC1636-2 2SC1637-1	2SB631KE	2SD288K	2SK68AM1 2SK105H

1S2473HJ 1S2473VE	EQA01-06R EQA01-06S EQA01-13R EQA01-08R



DIODE

2SA934R	2SC2060R 2SC2060Q	2SD400MRE 2SC1384R	2SC1636-2 2SC1637-1	2SB631KE	2SD288K	2SK68AMI 2SK105H	1S2473HJ 1S2473VE	ERB1
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SEMICONDUCTORS () : Rch

REC AMPL PCB 105

- Q301 (Q401) (Not used)
- Q302 (Q402) 2SK105(H)
- Q303 (Q403) (Not used)
- Q304 (Q404) 2SK105(H)
- Q305 (Q405) 2SK105(H)
- Q306 (Q406) (Not used)
- Q307 (Q407) 2SK105(H)
- Q308 (Q408) 2SK105(H)
- Q309 (Q409) 2SK105(H)
- Q310 (Q410) 2SC1327(T)
- Q311 (Q411) 2SC1684(S)
- Q312 (Q412) 2SK68AM1
- Q313 (Q413) 2SC1637(I)
- Q314 (Q414) 2SC1637(I)
- Q315 2SC536(G)
- Q316 2SC2060(R)
- Q317 2SC1684(S)
- Q318 2SA933L(N(S))
- Q319 2SC1684(S)
- Q320 2SC536(G)

DOLBY B TYPE PROCESSOR PCB 104

- U101 (U201) NE645B
- U102 (U202) NE645B
- Q101 (Q201) 2SC1844(F)
- Q102 (Q202) 2SC1327(T)
- Q103 (Q203) 2SK105(H)
- Q104 (Q204) 2SD655E
- Q105 (Q205) 2SK105(H)
- Q106 (Q206) 2SC1844(F)
- Q107 (Q207) 2SA933L(N(S))
- Q108 (Q208) 2SK68AM1
- Q109 (Q209) 2SA933L(N(S))
- D101 (D201) IS2473HJ
- D102 IS2473HJ
- D103 (D203) EQA013R
- D104 (D204) IS2473HJ
- D105 IS2473HJ
- D106 (D206) EQA013R

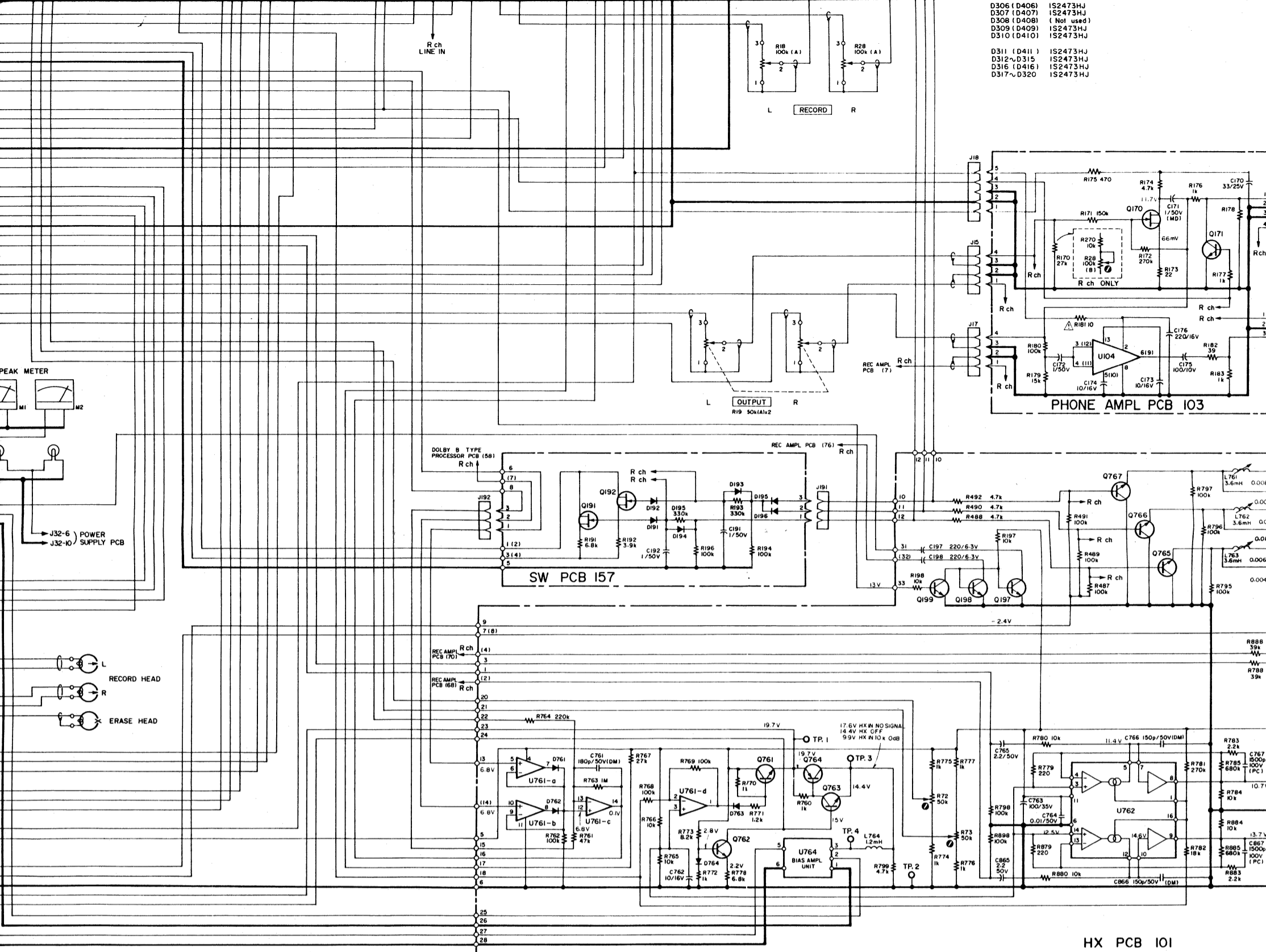
HX PCB 101

- U761 LM324J
- U762 LM13600
- U763 4558DF
- Q197~Q199 2SC945A(K)
- Q761 2SC2060(I)
- Q762, Q763 2SC945A(K)
- Q764 2SB631K(E)
- Q765~Q767 2SC536(G)
- D761~D764 IS2473HJ

DIODE

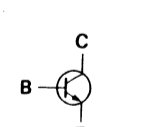
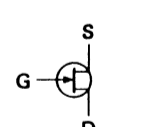
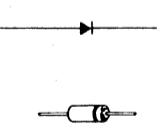
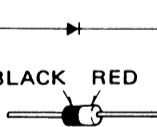
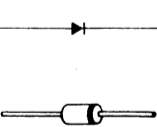
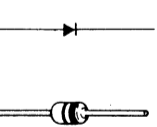
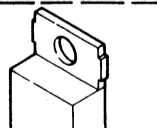
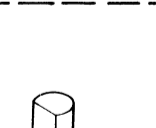


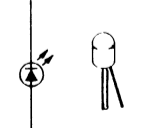
2SD288K	2SK68AM1 2SK105H	1S2473HJ 1S2473VE	ERB12-02G1	1SR34-200VL	W03C
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NOTES







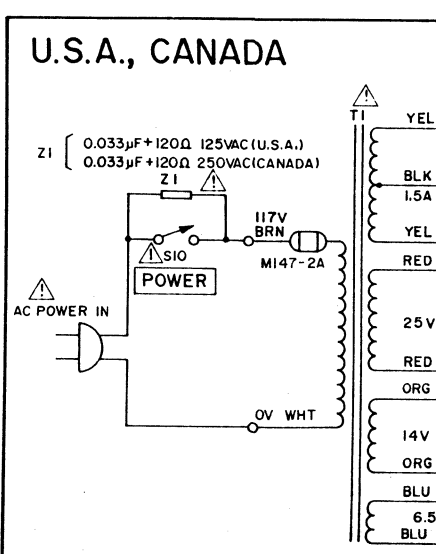
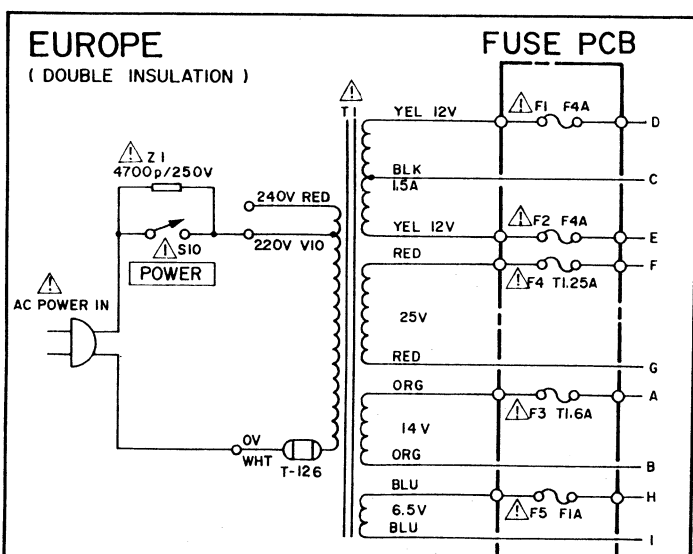
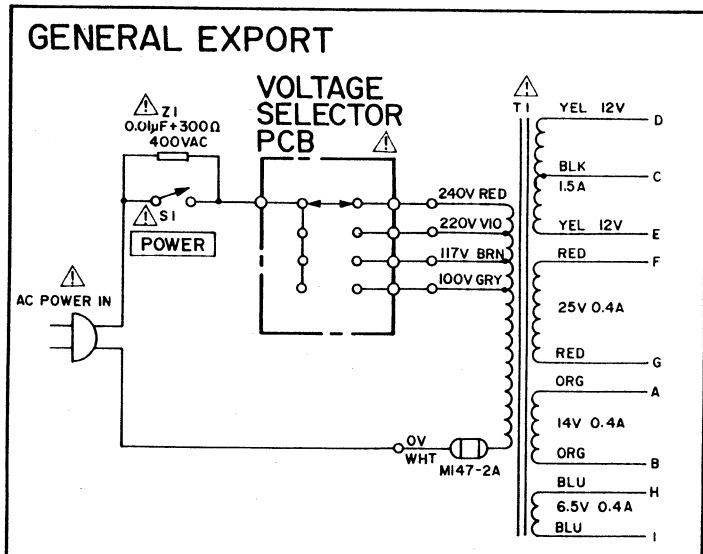
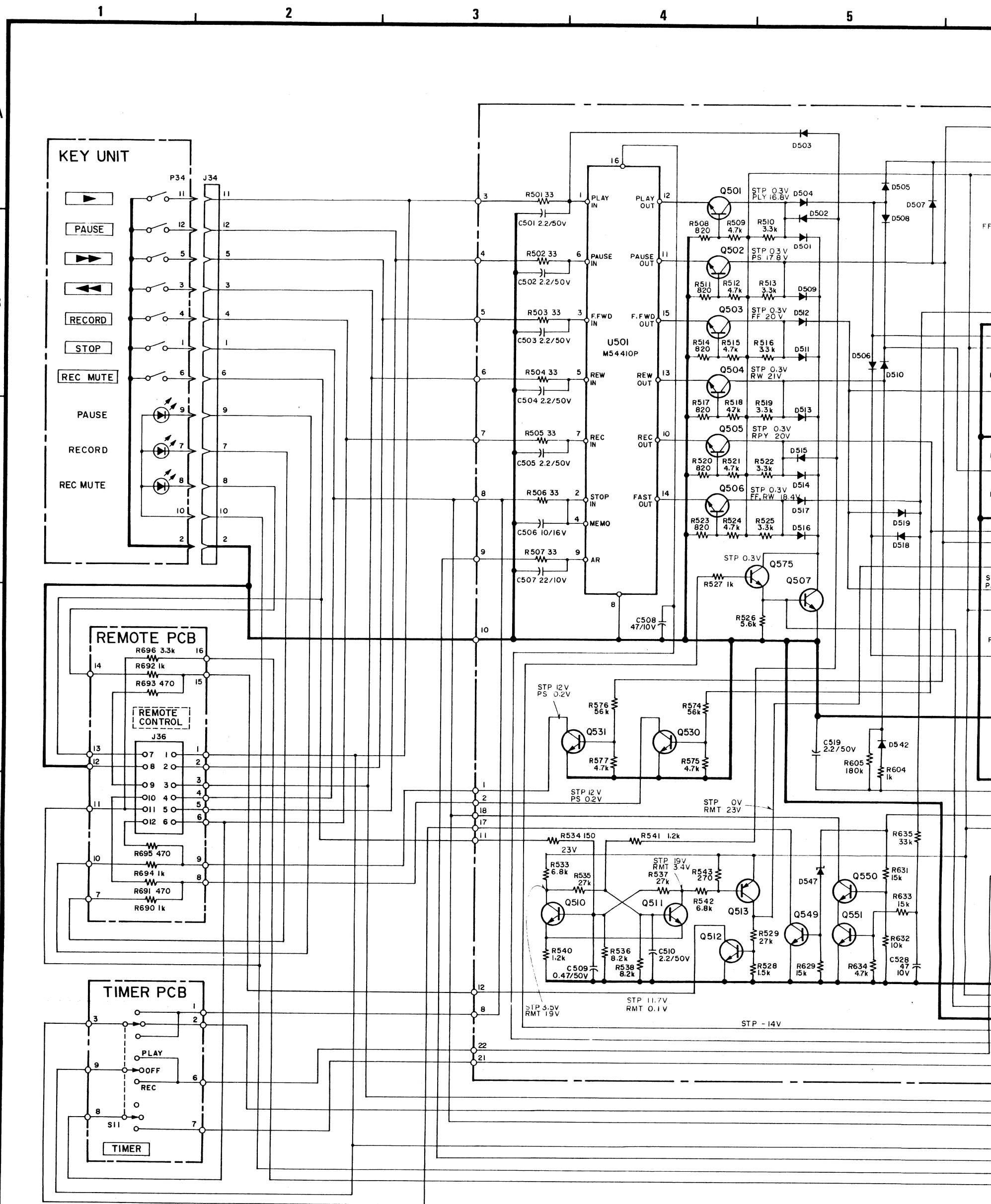
- D306 (D406) IS2473HJ
- D307 (D407) IS2473HJ
- D308 (D408) (Not used)
- D309 (D409) IS2473HJ
- D310 (D410) IS2473HJ
- D311 (D411) IS2473HJ
- D312~D315 IS2473HJ
- D316 (D416) IS2473HJ
- D317~D320 IS2473HJ

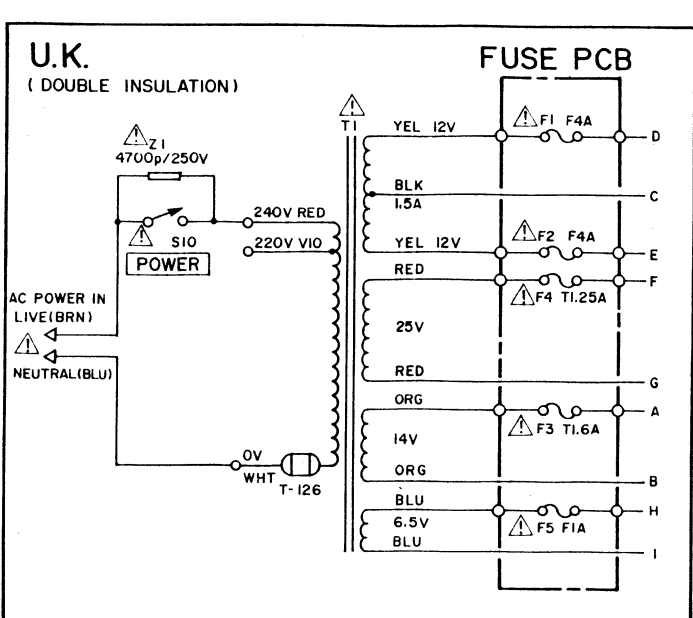
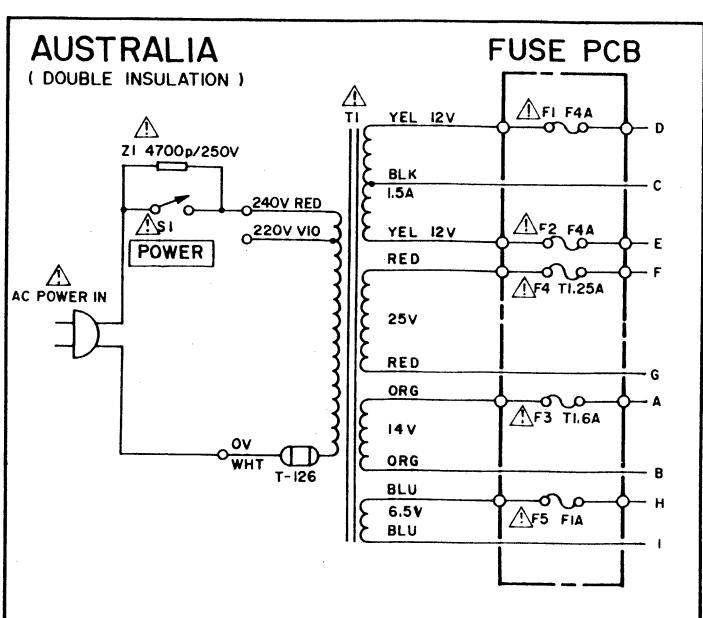
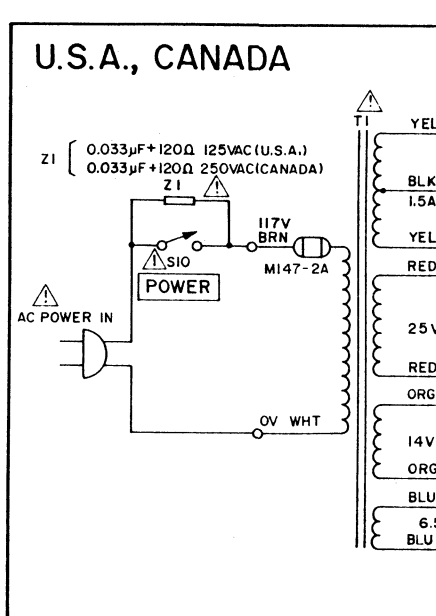
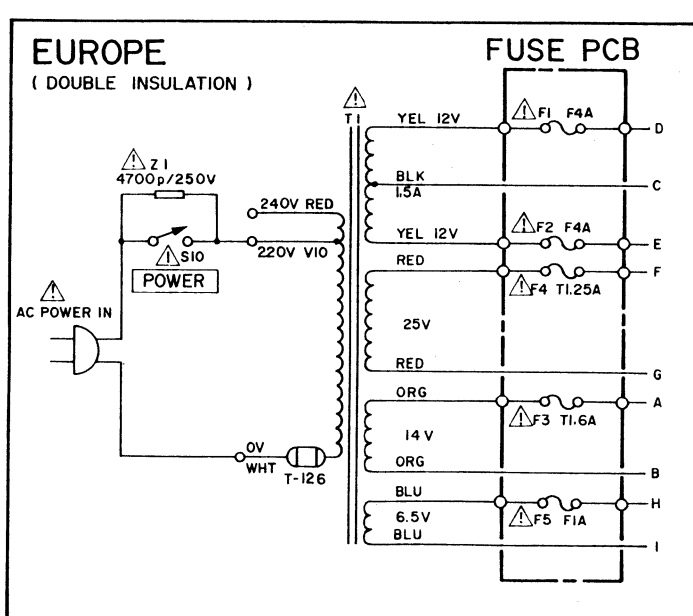
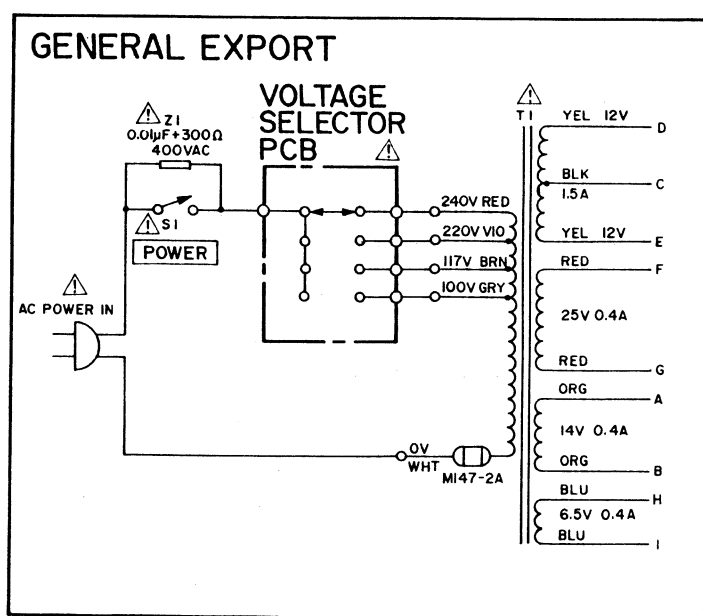
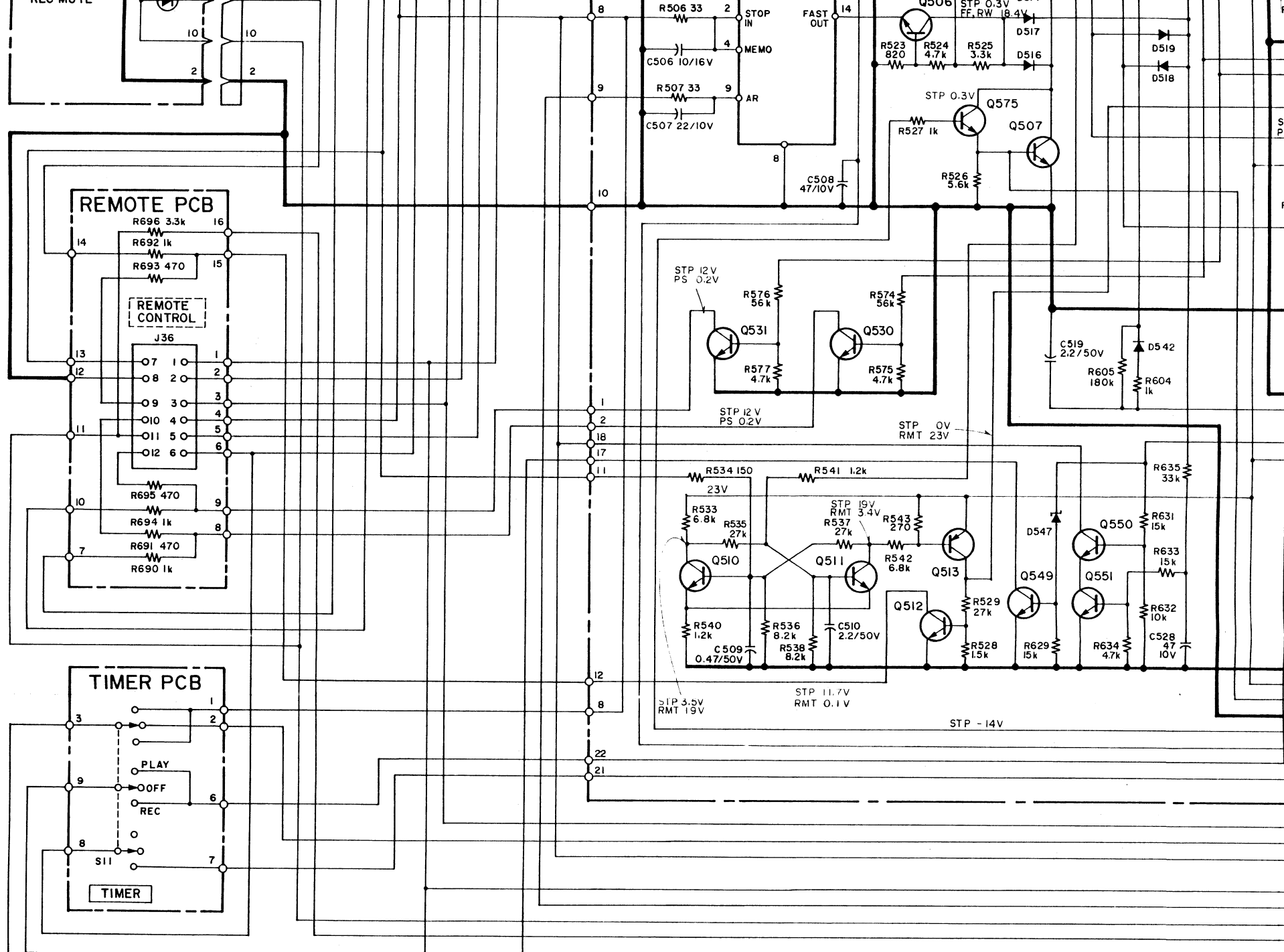
DIODE

<p>2SD288K</p> 	<p>2SK68AM1 2SK105H</p> 	<p>1S2473HJ 1S2473VE</p> 	<p>ERB12-02G1</p> <p>BLACK RED</p> 	<p>1SR34-200VL</p> 	<p>W03C</p> 
		<p>EQA01-06R EQA01-06S EQA01-13R EQA01-08R</p> 	<p>RD4.3EB</p> 	<p>SPL-114B (RED)</p> 	

NOTES

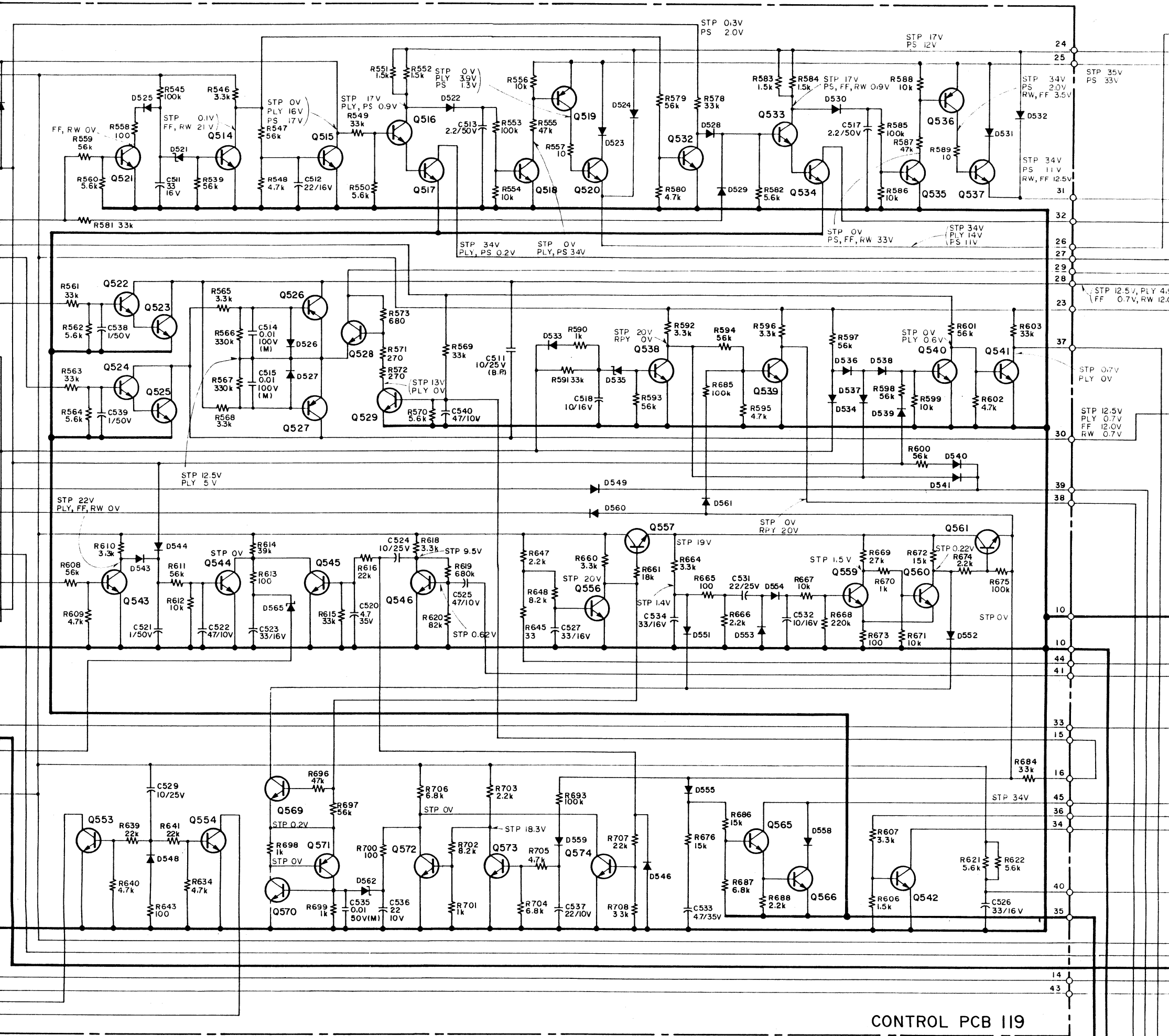
1. Schematic diagram shown for left channel except for components. Numbers in parentheses indicate right channel terminal.
2. Resistor values are in ohms (k = 1,000 ohms).
3. All capacitor values are in microfarads (p = picofarads). (MD) = Electrolytic capacitor MD series (DM) = Dip. Mica (CE) = Ceramic (PC) = Polystyrene. All non-polarized capacitors are ±5% mylar unless otherwise indicated.
4. ! Parts marked with this sign are safety critical components. They must always be replaced with identical components from the TEAC parts list and ensure exact replacement.
5. Voltage and level values are for reference only. 0dB = 0.775V. Indicated values are those existing when the peak level is 0 dB.
6.  : front panel indication
7.  : rear panel indication
8.  + B power supply circuit
-  - B power supply circuit



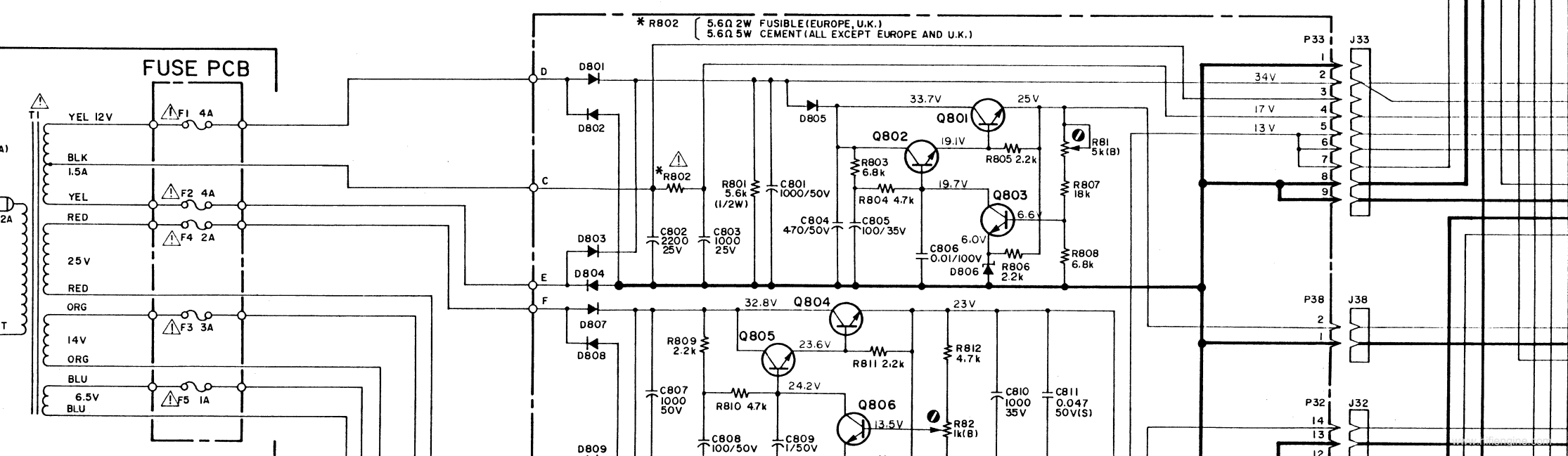


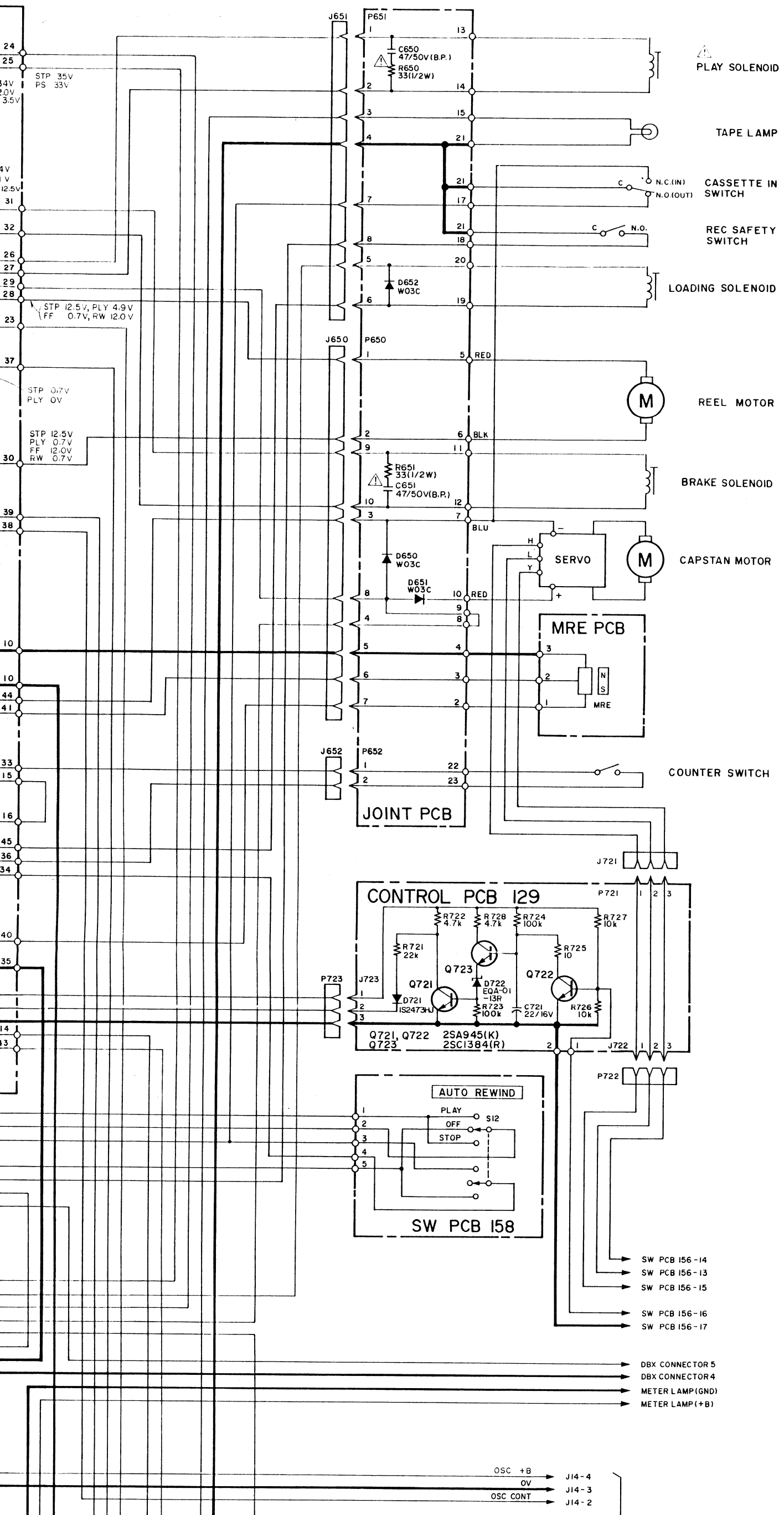
POWER SUPPLY PCB

Q801	2SD762 (P)
Q802, Q803	2SC945 A(K)
Q804	2SD762 (P)
Q805, Q806	2SC945 A(K)
Q807	2SD762 (P)
Q808, Q809	2SC945 A(K)
Q810	2SA733 (P)
Q811	2SD400MR (E)
D801 ~ D805	ISR34-200VL
D806	EQA01-06(S)
D807 ~ D810	ISR34-200VI
D811	EQA01-13(R)
D812 ~ D815	ISR34-200VL
D816	EQA01-06(S)
D817	ISR34-200VL
D818	IS2473VE
D819 ~ D821	ISR34-200VL
D822	EQA01-06(R)
D823	IS2473VE



CONTROL PCB 119





PLAY SOLENOID

TAPE LAMP

CASSETTE IN SWITCH

REC SAFETY SWITCH

LOADING SOLENOID

REEL MOTOR

BRAKE SOLENOID

CAPSTAN MOTOR

COUNTER SWITCH

CONTROL PCB 129

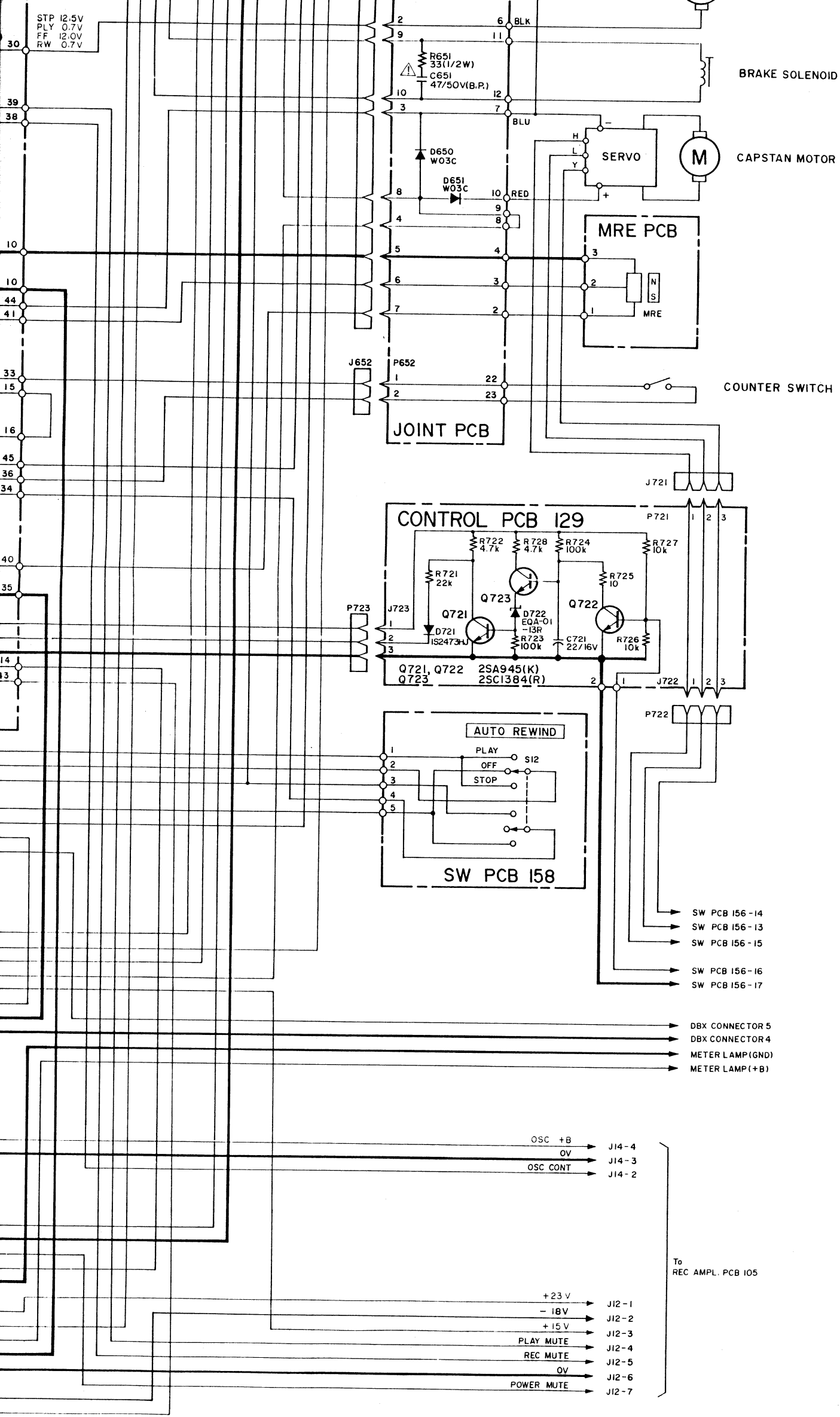
AUTO REWIND

SW PCB 158

- SW PCB 156-14
- SW PCB 156-13
- SW PCB 156-15
- SW PCB 156-16
- SW PCB 156-17

- DBX CONNECTOR 5
- DBX CONNECTOR 4
- METER LAMP (GND)
- METER LAMP (+B)

- OSC +B → J14-4
- OV → J14-3
- OSC CONT → J14-2



CONTROL PCB

M54410P	Q524 2SC945A(K)	Q552 (Not used)	Q573, Q574 2SC945A(K)	D547 RD4.3EB
Q525 2SC1384(R)	Q553, Q554 2SC945A(K)	D501 ~ D519 IS2473HJ	D548 IS2473HJ	D550 (Not used)
Q526, Q527 2SA934(R)	Q555 (Not used)	D520 (Not used)	D551 ~ D555 IS2473HJ	D556, D557 (Not used)
Q528 2SD288(K)	Q556 2SC945A(K)	D521 EQA01-06(R)	D558 ERB12-01GI	D559 IS2473HJ
Q529 ~ Q532 2SC945A(K)	Q557 2SC2060(Q)	D522, D523 IS2473HJ	D560 (Not used)	D561 IS2473HJ
Q533 2SC1318(S)	Q558 (Not used)	D524 ERB12-02GI	D562 RD4-3EB	
Q534 2SD288(K)	Q559, Q560 2SC945A(K)	D525 ~ D530 IS2473HJ		
Q535 2SC945A(K)	Q561 2SC1741(Q)	D531, D532 ERB12-02GI		
Q536 2SA733(P)	Q562 ~ Q564 (Not used)	D533, D534 IS2473HJ		
Q537 2SD288(K)	Q565 2SC945A(K)	D535 EQA01-06(S)		
Q538, Q539 2SC1318(S)	Q566 2SD288(K)	D536 ~ D544 IS2473HJ		
Q540 ~ Q545 2SC945A(K)	Q567, Q568 (Not used)	D545 EQA01-08(R)		
Q546 2SC900(L)	Q569, Q570 2SC945A(K)	D546 IS2473HJ		
Q547, Q548 (Not used)	Q571 2SA733(P)			
Q549 ~ Q551 2SC945A(K)	Q572 2SC945A(K)			

C-2X
Stereo Cassette Deck

SW PCB 156 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200022600	PCB Assy [U]
	5200022610	PCB Assy [All except U]
	5210022600	PCB [U]
	5210022700	PCB [All except U]
S4 J29	5300512800	Switch, Lever; 6-2 Connector Plug, 9P

SW PCB 158 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200023400	PCB Assy [U]
	5200023410	PCB Assy [All except U]
	5210023400	PCB [U]
	5210023500	PCB [All except U]
S12	5301202800	Switch, Rotary; 2-3

(Continued from page 23)

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 -64	*5534496000	Cam, Eject	C-1
2 -65	*5555856000	Arm, Pinch Roller. R	C-2
2 -66	*5555864000	Arm, Pause; R-B	C-2
2 -67	*5524270000	Spring, Pause Arm; R	C-2
2 -68	*5555895000	Lever, Lock	C-2
2 -69	*5544754000	Shaft, Eject Cam	C-1
2 -70	*5555900001	Plate, Cassette Holder Guide; 2	
2 -71	*5555300000	Holder, Eject Cam	C-1
2 -72	*5555896000	Bracket, Lock Lever	C-2
2 -73	*5555796000	Plate, Joint	C-2
2 -74	*5504796000	Plate Assy, Head Mounting	C-2
2 -75	*5555889000	Spacer	C-2
2 -76	*5785603030	Spacer	

(Continued from page 29)

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5 -46	*5122169000	Connector, Socket; 7P (White)	
5 -47	*5122164000	Connector, Socket; 2P (White)	
5 -48	*5122168000	Connector, Socket; 6P (White)	
5 -49	*5200019600	PCB Assy, SW 155 [U]	
	*5200019610	PCB Assy, SW 155 [All except U]	

[U]: U.S.A.
[A]: AUSTRALIA
[L]: LIMITED AREA

[C]: CANADA
[E]: EUROPE

[GE]: GENERAL EXPORT
[UK]: U.K.