JVC

SERVICE MANUAL

MODEL

KD-A7 A/B/C/E/J/U

STEREO CASSETTE DECK

No. 4185
August 1979

Contents

Specifications

Type : Stereo cassette deck
Track system : 4-track, 2-channel
Tape speed : 1-7/8 inch/sec. (4.8 cm/sec.)
Frequency response:
0VU
Metal tape ; 25 – 12500Hz ± 3dB (Typical)
SA/CrO_2 tape ; 25 – 8000Hz ± 3dB (Typical)
– 20VU
Metal tape *1 ; 15 – 18000Hz
25 – 17000Hz ± 3dB (Typical)
SA/CrO_2 tape *2 ; 15 – 18000Hz
25 – 17000Hz ± 3dB (Typical)
SF/Normal tape *3 ; 15 – 17000Hz
25 – 16000Hz ± 3dB (Typical)
Surpasses DIN 45 500
S/N ratio : 60dB (from peak level, weighted, Metal tape)
The S/N is improved by 5dB at 1kHz and by 10dB above 5kHz with ANRS on.
(DIN 45 500 weighted)
Effect of Super ANRS : (normal tape)
Improvement of S/N : the same as with ANRS
Improvement of frequency response :
0VU recording; 6dB at 10kHz
+ 5VU recording; 12dB at 10kHz
Improvement of distortion :
0VU recording;
3% or less at 10kHz
+ 5VU recording;
3% or less at 10kHz
Wow and flutter : 0.04% (WRMS),
0.14% (DIN 45 500)
Crosstalk : 65dB (1kHz)
Harmonic distortion : K3; 0.4%, THD; 1.0%
(metal tape, 1kHz 0VU)
Bias : AC bias (85kHz)
Erasure : AC erasure (85kHz)
Motors : FG type DC servo motor
(for Capstan)
DC motor (for Reel)

Heads : 2 SA (Sen-Alloy) heads
X-cut head for recording and playback
2-Gap head for erasing
Fast forward time : 85 sec. with C-60 cassette
Rewind time : 85 sec. with C-60 cassette
Semiconductors : 35 ICs, 46 transistors, 49 diodes, 8 zener diodes, 7 LEDs
Input terminals : Mic jack x 2,
Max. sensitivity;
0.2mV (– 72dBs)
Matching impedance;
600Ω – 10kΩ
Input jack x 2,
Min. input level;
78mV (– 20dBs)
Input impedance; 100kΩ
Output terminals : Output jack x 2,
Output level; 0 – 300mV
Output impedance; 5kΩ
Matching impedance;
50kΩ or more
Phones jack x 1,
Output level; 0 ~ 0.5mW/8Ω
Matching impedance;
8Ω – 1kΩ
Power requirement : AC 120V, 60Hz (KD-A7C/J)
AC 240/220/120V, 50/60Hz (KD-A7A/B/E)
AC 240/220/120/100V, 50/60Hz (KD-A7U)
Power consumption : 34W
Dimensions : 17-3/4" (450 mm) W
4-3/4" (120 mm) H
12-1/4" (311 mm) D
Weight : 18.3 lbs (8.3 kg)

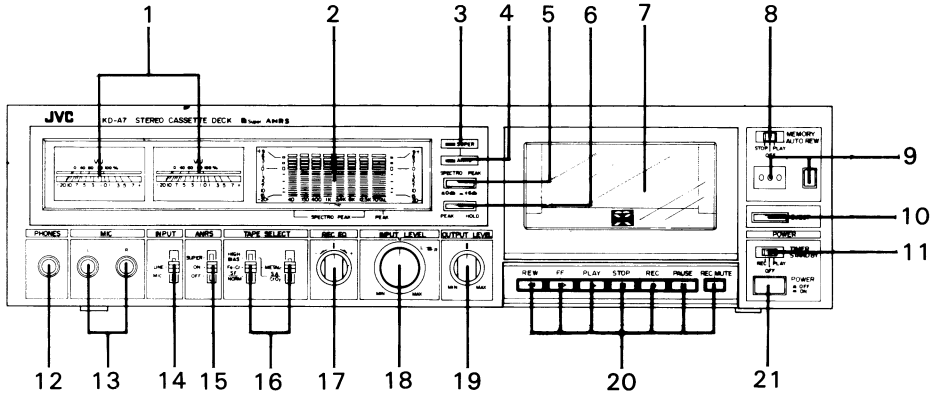
Note: *1 ... SCOTCH METAFINE or Equivalent
*2 ... TDK SA or Equivalent
*3 ... MAXELL UD or Equivalent

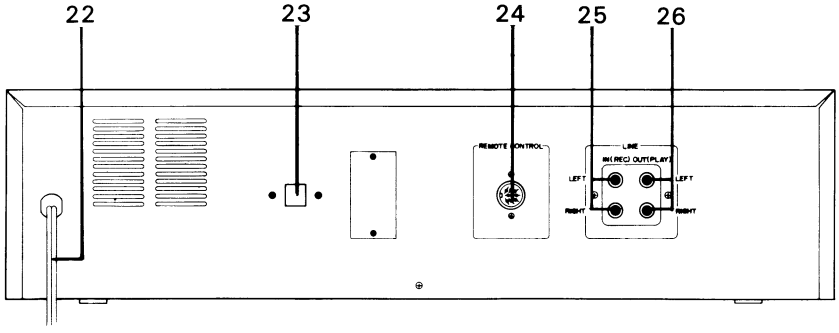
Design and specifications are subject to change without notice.

Features

- SPECTRO PEAK level indicator incorporates fluorescent tubes, a PEAK HOLD switch and a SPECTRO PEAK sensitivity switch (0dB, +6dB).
- 4-position Tape Select Switches allow all kinds of tape, including the new Metal tape, to be used.
- X-cut SA (SEN-ALLOY) record/play head for improved frequency response, minimuzing the contour effect.
- An SA erase head with high erase efficiency is used so that Metal Tape can be erased.
- 2-Motor, ID (Independent Drive) mechanism makes the wow and flutter a low 0.04% (WRMS).
- Self-elluminated buttons for full-logic control operation (excluding STOP and REC-MUTE modes).
- ANRS which lowers tape hiss noise so that it is inaudible and Super ANRS which improves linearity at high frequencies are incorporated.
- MEMORY/AUTO REW switch.
- Recording equalizer switch.
- Timer standby capability for automatic start of recording or playback using an AC timer.
- With the REC MUTE switch, you leave silent passages between program material.
- Geared and oil-damped cassette holder.
- Remote control terminal (for the optional remote control unit — R-30E).

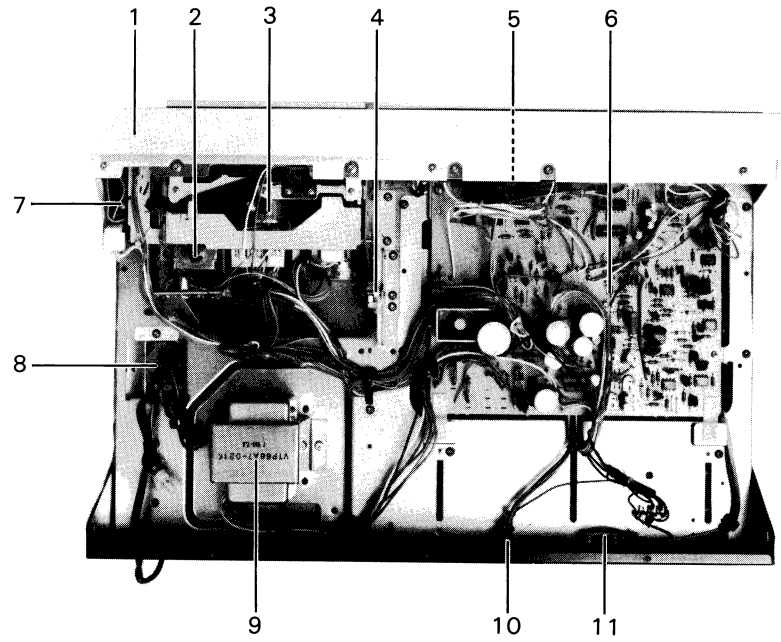
Controls and Connections





1. VU meters
2. SPECTRO-PEAK level indicator
3. SUPER ANRS indicator
4. ANRS indicator
5. SPECTRO-PEAK switch
6. PEAK HOLD switch
7. Cassette holder
8. MEMORY/AUTO REW switch
9. Tape counter/counter reset button
10. EJECT button
11. TIMER STANDBY switch
12. PHONES jack
13. MIC jacks
14. INPUT SELECT switch
15. ANRS switch
16. TAPE SELECT swtiches
17. REC EQ switch
18. INPUT LEVEL control
19. OUTPUT LEVEL control
20. Cassette operation buttons
    - ◀◀ REW (rewind) button
    - ▶▶ FF (fast forward) button
    - ▶ PLAY button
    - ■ STOP button
    - ○ REC (record) button
    - ▮▮ PAUSE button
    - REC MUTE button
21. POWER switch
22. Power cord
23. Voltage select switch (KD-A7 A/B/E/U)
24. REMOTE CONTROL socket
25. LINE IN (REC) terminals
26. LINE OUT (PLAY) terminals

Main Parts Location



1. Front panel assembly
2. DC solenoid for playback
3. Reel motor
4. Geared and oil-damped brake ass'y
5. Spectro peak level indicator
6. Spectro peak level P.W. board ass'y
7. Hall element P.W. board ass'y
8. Power switch
9. Power transformer
10. Remote control socket (DIN socket)
11. Pin jacks

Mechanical parts are the same as location of model KD-A6.
Please refer to the service manual of KD-A6 A/B/C/E/J/U (No. 4179 — page 4).

Maintenance

To get long, trouble-free service, maintenance is important. Do not forget cleaning and demagnetizing.

Cleaning
After long, the heads and tape part — capsten, pinch roller, etc. — will become dirty with dust or magnetize particles. Dirty heads cause imperfect erasing or high frequency drop-off. A dirty capstan and pinch roller will cause unstable tape speed, leading to increased wow and flutter. Always keep them clean by following the procedure below.

1. Heads
1) Push the EJECT button to open the cassette holder.
2) Push up the transparent cover to remove it.
3) Use the head cleaning stick to wipe the surface where the tape comes into contact with the head.
(It is effective to moisten the cotton with alcohol.)

2. Pinch roller and capstan
Close the cassette holder with its transparent cover removed. Insert the cleaning stick into the hole on the right side at the bottom and clean the pinch roller and capstan.

3. Cleaning the cabinet and panel
Wipe the cabinet and panel clean with a soft cloth dipped in a neutral cleaner. Do not use thinner, benzine, alcohol or other strong slovents, as these will cause damage to the surface finish of the cabinet and panel.

Demagnetizing
The heads are made from a material resistant to magnetization, but after long use they may become magnetized. A magnet brough into their vicinity can magnetize the heads, causing excess noise. If noise seems to have increased, demagnetize the heads with a head demagnetizer through the following procedure.
1. Turn the POWER switch OFF.
2. Wrap the tip of the demagnetizer with vinyl tape or soft cloth so as not to damage the head surface. Switch on the demagnetizer and bring it close to the head.
3. Move the tip of the demagnetizer slowly first to the left and right, then up and down in front of head.
Gradually move it away from the head and swtich it off at a distance of more than 30cm (12").
4. The erase head need not be demagnetized. The capstan shaft and tape guide should be demagnetized in the same way as the record/playback head.

* Do not bring a magnetized metallic object (a screwdriver for example) near the head as this will increase noise.

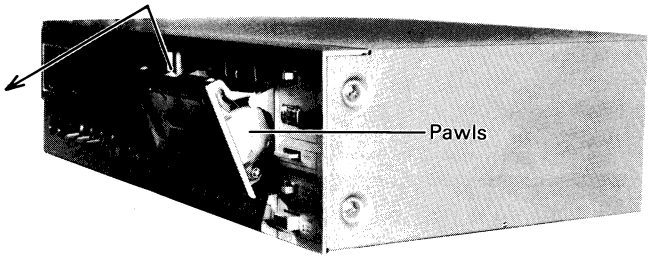
Oiling
Feed one or two drops of machine oil to pinch roller shaft once or twice a year under normal conditions of use.
Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

Removal of the Main Parts

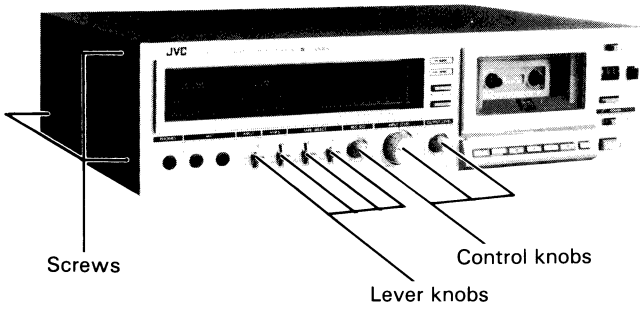
This cassette deck which featurs a compact design and high performance uses miniature sized parts which are closely arranged. Take special care when servicing it.

Removal of the Enclosure assembly

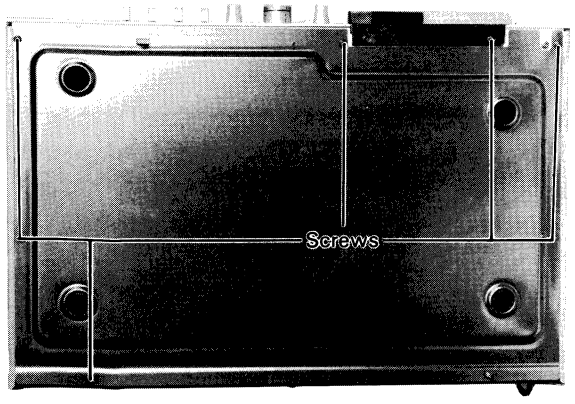
1. **Cassette door**
   Push the EJECT button to open the cassette door. Slide it upwards (approx. 5 mm) to unlock its pawls, and remove it to frontward.



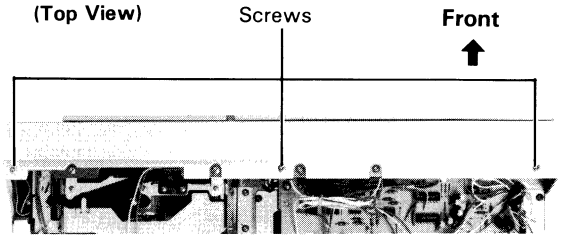
2. **Lever knobs (INPUT, ANRS, TAPE SELECT) and control knobs (REC EQ, INPUT LEVEL, OUTPUT LEVEL)**
   Pull them to frontward.
3. **Top cover**
   Remove 6 screws fastening the top cover.

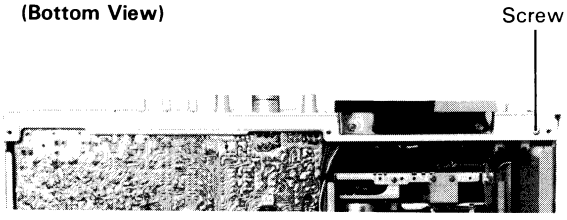


4. **Bottom cover**
   Remove 7 screws fastening the bottom cover.

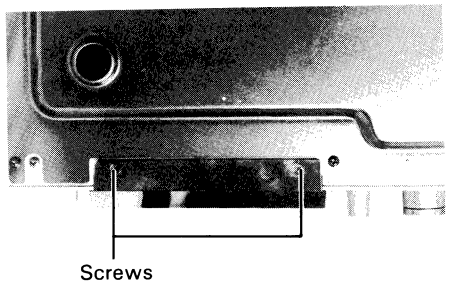


5. **Front plate assembly**
   Remove 4 screws (3 screws on upper side and a screw on bottom side) fastening the front plate assembly.





6. **When adjusting or replacing REC/PB head or Erase head**
   1) Remove the wires of the control switches from the wire clamp and a wire socket after having removed the top cover.
   2) Remove 2 screws positioned below the control switches (on the bottom of the deck) and pull the control section forwards — no need of removing the front panel assembly.

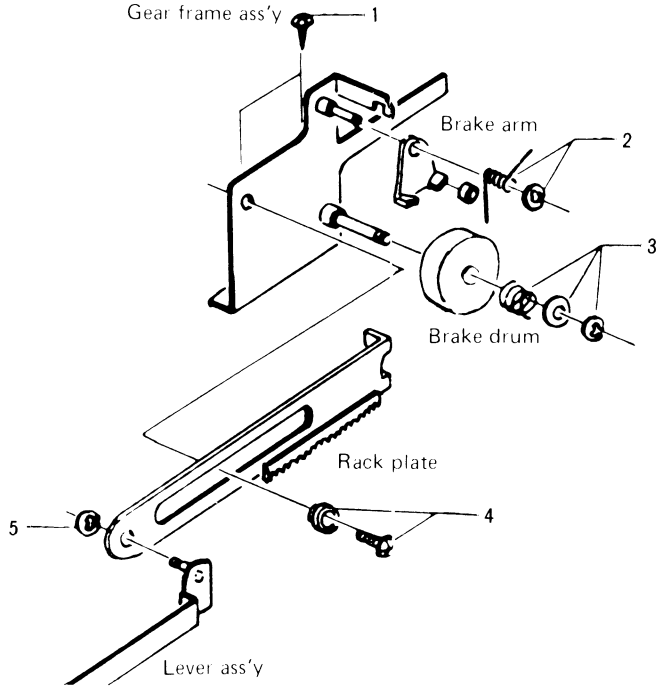


Caution:
When assembling the control switch assembly to the front panel, do in the order of the numbers as below as not to damage the front panel.

1 Wrap the sharp edges of the front panel with vinyl tape, etc.
2 Insert the control switch assembly in the front panel.
3 Remove the vinyl tape.
4 Fasten 2 screws for the control switch assembly.

7. Door brake and its related parts

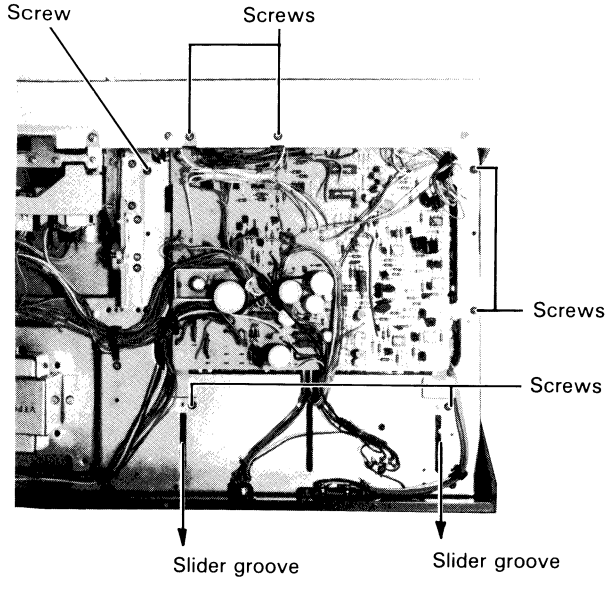
1. Gear frame ass'y ..... Remove 2 screws ① .
2. Brake arm and tire ..... Remove the E-ring and torsion spring ② .
3. Spur gear and brake drum ..... Remove the E-ring and spring ③ .
4. Rack plate ..... Remove the screw and the collar ④ .
5. Brake lever ass'y ..... Remove the E-ring ⑤ .



Removal of the Electrical Parts

8. Spectro peak indicator P.W.B ass'y

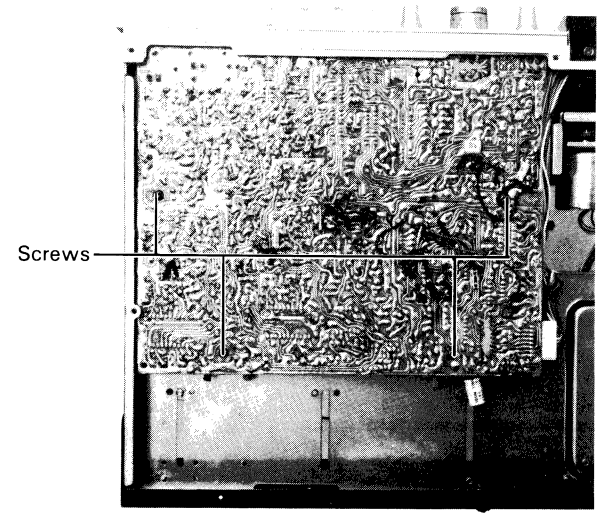
1) Remove 2 screws fastening the spectro peak indicator to the front plate.
2) Remove 5 screws fastening 4 P.W.B brackets.
3) Slide the spectro peak indicator P.W.B to rear side, and open it to upper side.



9. Main amp P.W.B parts ass'y

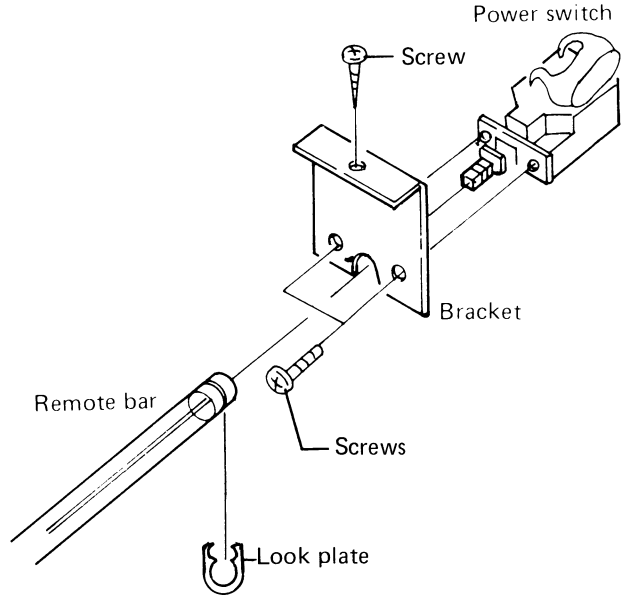
1) Remove 4 screws fastening the main amp P.W. Board (on the bottom side)
2) Remove 4 screws fastening the lever swithes on the front bracket.
3) Remove 6 washers and 6 nuts fastening the PHONES, MIC-L, MIC-R jacks and REC EQ, INPUT LEVEL control, OUTPUT LEVEL control shaftes.

(Bottom View)



10. Power switch

1) Remove a lock plate holding the remote bar.
2) Remove a screw fastening the power switch bracket.
3) Remove 2 screws fastening the power switch.

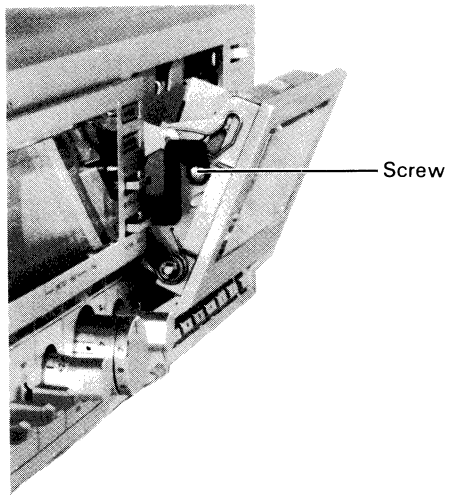


11. Power transformer

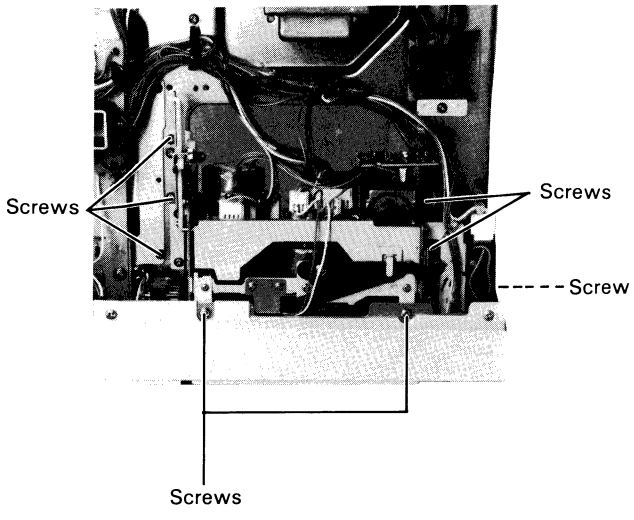
Remove 2 screws and 2 washers fastening the power transformer.

Removal of the mechanical assembly

1. Remove a screw fastening the arm of gear-oil damper (Left side of the cassette holder).



2. Removes 5 screws fastening the mechanical bracket to the amp. chassis (Right-2 p.c.s, Left-3 p.c.s) after having removed the gear frame ass'y of door brake.
3. Remove a screw fastening the counter bracket to the right side the front bracket.
4. Remove 2 screws fastening the joint brackets to the front panel (upper side)



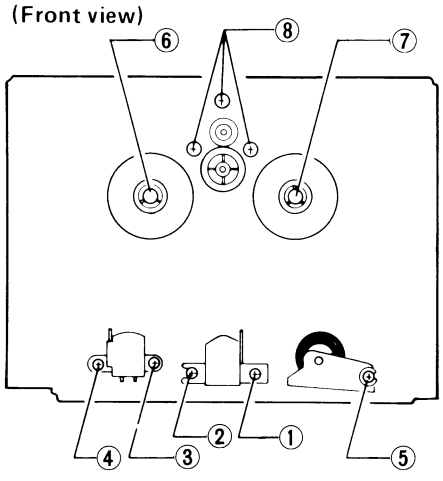
Removal of the mechanical parts.

1. REC/PB head .....
   Remove the screw ① .
   Remove the screw ② for head adjustment.
2. Erase head .....
   Remove the screw ③ .
   Remove the screw ④ for head adjustment.
3. Pinch roller arm ass'y ..... Remove the E-ring ⑤ .
4. Supply reel disc ..... Pull out the reel stopper ⑥ .
5. Take-up disc ..... Pull out the reel stopper ⑦ .
   Remove the counter belt.

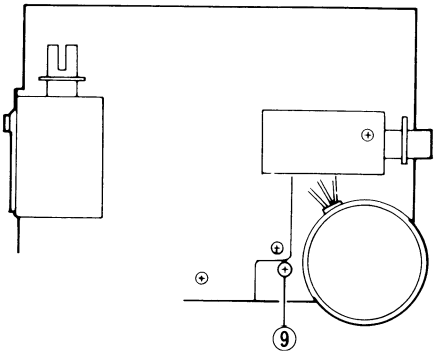
   Note:
   1) Remove the reel disc stoppers with a piece of sheet metal inserted between the reel disc and the stopper.
   2) Be careful not to stain the counter belt.
6. Reel motor ..... Remove the 3 screws ⑧ fastening the reel motor.
7. Capstan motor .....
   1) Remove the screw ⑨ fastening the rubber stopper.
   2) Remove its motor belt.
   3) Turn the motor counter clockwise and pull it for removal.

Note:
When replacing the motor, check the following items.
1) Is the motor placed in the correct position? (Don't deflect the motor at mounting it.)
2) Does the capstan belt run in the center of the motor pulley?
3) Does the capstan belt run in the center of the flywheel?

(Front view)



(Rear view)

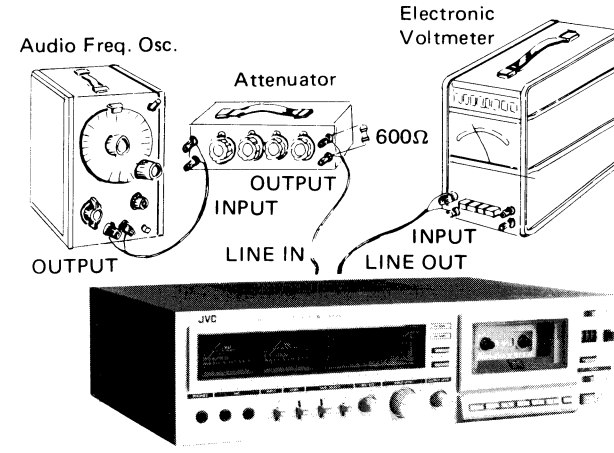


Main Adjustments

[I] Equipment and measuring instruments used for adjustment

1. Electrical adjustment
   1) Electronic voltmeter
   2) Audio frequency oscillator
      (range: 50—20kHz and output 0dB with impedance 600Ω)
   3) Attenuator
   4) Standard tapes for REC/PB
      Maxell UD — SF tape
      TDK SA — SA tape
      SCOTCH METAFINE — Metal tape
      } or equivalent
   5) Reference tapes for playback (JVC Test Tape)
      VTT-658 (for head azimuth adj.)
      VTT-656 (for motor speed, wow flutter adj.)
      VTT-664 (for Reference level 1kHz)
      TMT-6002N (for playback frequency response)
   6) Resistors
      100Ω (for measurement of the bias current)
      600Ω (for attenuator matching)

2. Mechanical adjustment
   1) Gauge for checking the head position.
   2) Torque gauge
   3) Blank tape (C-120) for tape running checker.



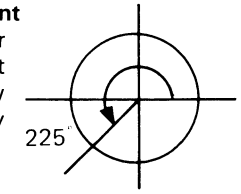
KD-A7

[II] Adjustment and repair of the mechanism

TROUBLESHOOTING HINTS

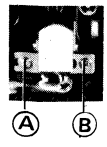
1. Azimuth adjustment and head replacement
   1) Remove the wires of the control switches from the wire clamps after having removed the top cover.
   2) Remove the two screws positioned below the control switches (on the bottom of the deck) and pull the control section forwards.
   3) With the control section pulled out, azimuth adjustment and/or head replacement can be performed. With the JVC cassette deck series of KD-A6, KD-A5 and KD-A8 models, the adjustment of replacement can be performed more easily than with conventional cassette decks which require removal of the entire mechanical section for the adjustments and/or replacements.

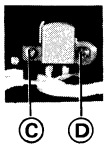
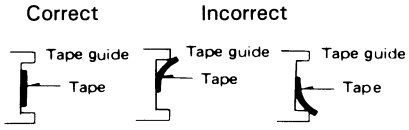
2. Tape-to-head contact adjustment
   1) Turn the adjusting screw for aligning the erase head until it stops. Then, turn the screw in the reverse direction by 225° (a 5/8 revolution).



   2) Check the tape-to-head contact using a C-120 tape having pads.
   3) Check it again with a Metal tape.
      Checking method:
      Record a 400Hz or 1kHz signal with 0VU +20dB. Erase the recording. Checking if the erasing is satisfactorily performed.
   4) After adjustment, apply screw bond on the adjusting screw to prevent its loosening.

(Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting record/playback head position 	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VTT-658 test tape. 3. Adjust the head angle with the screw A until the reading of the electronic voltmeter becomes maximum for both channels. 4. After adjusting, set the screw with screw bond.	Screw A	Maximum	If the head is worn, disconnected or exceedingly magnetized so as not to provide the necessary characteristics, replace it with a new one. After replacement, the head position adjustment as well as the playback level adjustment, the bias current adjustment and the recording level adjustment are all necessary.

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting erase head height 	Employ a special cassette (C-120) from which parts of the casing, where the erase head, record/playback head and capstan engage, has been cut away. Perform tape transport with the cassette tape. Adjust the screw C until the tape runs in the center of the erase head tape guide. (See "Troubleshooting hints" aforesaid.) 	Screw C		If the output difference between the left and right channels exceeds 3—4dB, the head is defective. Replace it with a new one. Be sure to perform this adjustment after replacing the erase head.
Adjusting motor speed	Connect a speed meter to the LINE OUT terminals. Play back the VTT-656 test tape. Adjust the semi-fixed resistor on the motor circuit board until the reading of the speed meter is 3000Hz.	Semi-fixed resistor on the motor circuit board	3000Hz	If the speed meter functions as a wow and flutter meter, also, connect the deck to the INPUT terminals of the meter.
Checking playback torque	Employ a torque testing cassette tape for the checking, or remove the cassette cover and use a torque gauge.		40—70 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 70 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the idler circumference, the motor pulley, the take-up reel disc circumference, the flywheel circumference, etc. 2. Replace the belt and idler.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 70 gr-cm	If the standard torque is not obtained, clean the capstan belt, idler, motor pulley, flywheel circumference, rewinding idler circumference, left reel disc circumference, etc.
Checking wow and flutter	Connect a wow and flutter meter to the LINE OUT terminals. Play back the VTT-656 test tape. Check to see if the reading of the meter is within 0.04% (WRMS).			If the reading becomes moving value even if conforming to the standard, a re-claim may be raised. Repairs are necessary.

Damping gear oil

Oil employed — Torque grease specified by JVC (KANTO KASEI GP-608)
Applying method — Apply in both concaved sections as shown in the figure.

[III] Repair of wow flutter

If wow and flutter increase, check the following points. If there is defect in revolving parts, the wow and flutter generated will increase in proportion to the number of revolutions.

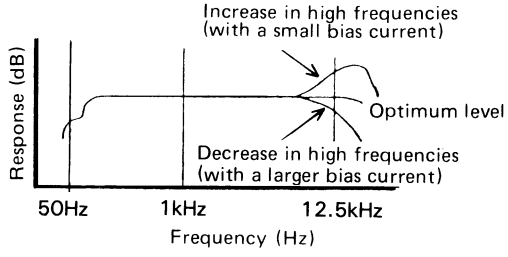
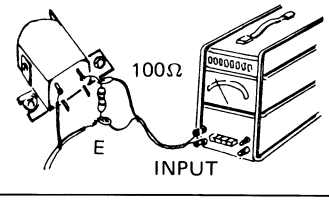
Play a 3000Hz test tape, and defective part can be detected from the sound.

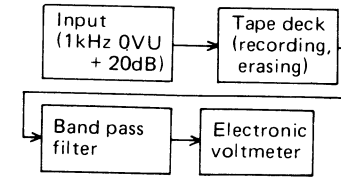
Section	Trouble	Repair
Capstan and flywheel	Capstan shaft has excessive run-out Flywheel turns heavily. (shaft seisure, thrust play, etc.)	Replace flywheel. Clean the capstan shaft and the groove in the flywheel. Apply oil to the metal position. Replace the capstan assembly.
Pinch roller	Rough rotation (Deformation scratches, or dust) The angular position of the pinch roller is not correct. The pinch roller pressure is not correct.	Replace pinch roller, or pinch roller spring. Clean the pinch roller or apply oil to the rotary shaft. Adjust the pinch roller so that it is parallel with the capstan shaft. Replace the pinch roller spring.
Belt	Belt has undue run-out. Belt is dirty or slippery.	Clean the belt. Replace the belt.
Back tension	Back tension is irregular, or back tension is too strong.	Replace back tension spring (under supply disc).
Motor	Motor shaft has undue run-out. Motor pulley is oily and dusty.	Replace motor. Clean motor pulley.

[IV] Electrical circuit adjustment procedure

In the steps marked by an asterisk (*), adjustment should be performed, however, only checking is sufficient with steps other than those.
Adjustment should be performed in the order of steps 1, 2, 3, ...

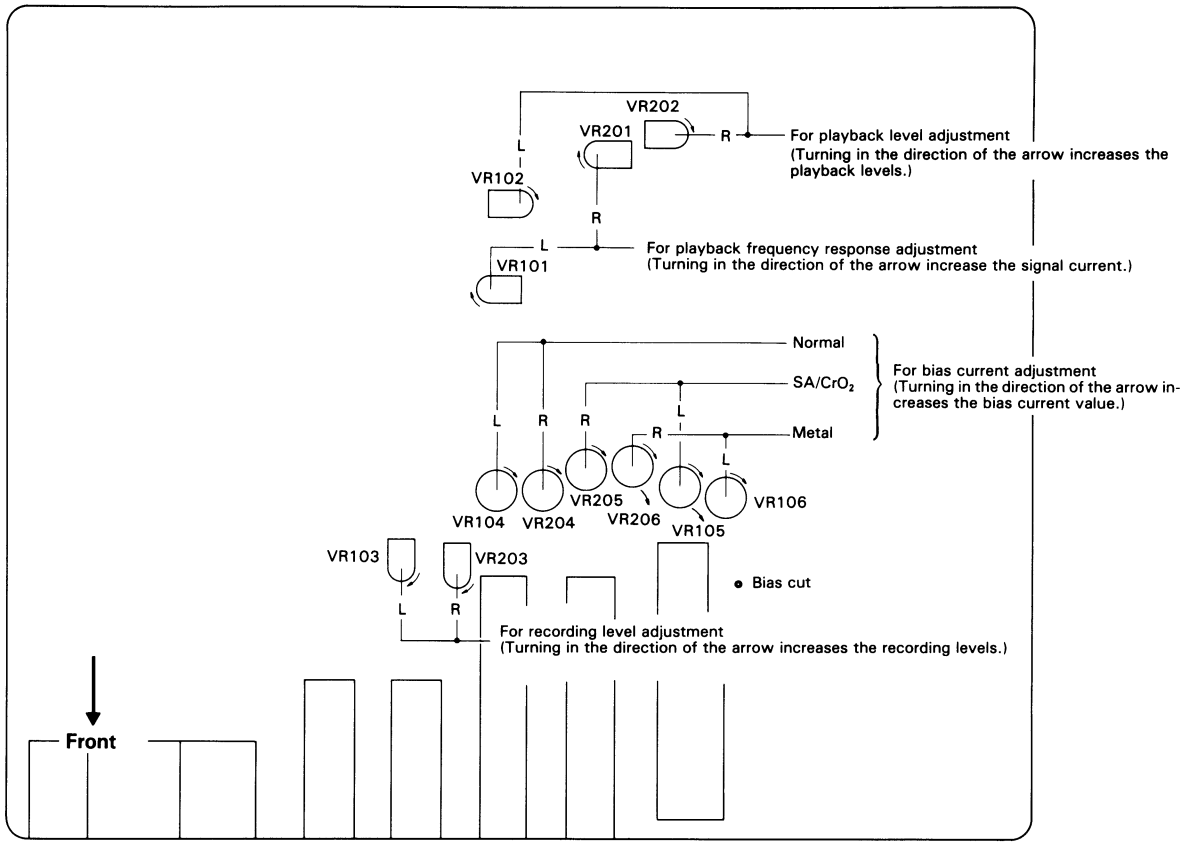
Step	Item	Adjustment	Adjusting point	Standard value	Remarks
1*	Adjusting playback level	1. Playback the VTT-664 Reference tape (1kHz) with the tape select switch set to the NORMAL position. 2. Adjust VR102 and VR202 until the LINE OUT becomes about −8dBs.	VR102 202	−8dBs (0.3V)	1. This adjustment becomes necessary when a change in playback level results (for example, due to head replacement). 2. Perform this adjustment with the ANRS switch set to OFF.
2*	Playback frequency response	Playback test tape TMT-6002N for following adjustment. 1) Adjust VR101. 201 so that 10kHz signal and 1kHz signal gains become flat response.	VR101 201		
3*	Adjusting FL (Fluorescent tube) indicator sensitivity	1. Set the cassette deck to its recording mode. 2. Apply a 1kHz, approx. −10dBs signal to the LINE IN terminals. 3. Adjust the recording level controls until the signal is available at −8dBs at the LINE OUT terminals. 4. Adjust VR302 and VR402 until the Total Peak indicator become to 0dB.	VR302 402	0VU	Perform the adjustment when the parts are replaced.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
4*	Adjusting VU meter sensitivity	1. Set the cassette deck to its recording mode. 2. Apply a 1kHz, approx. −10dBs signal to the LINE IN terminals. 3. Adjust the recording level controls until the signal is available at −8dBs at the LINE OUT terminals. 4. Adjust VR301 and VR401 until the VU meters deflect to 0.	VR301 401	0VU	
5*	Checking record/-playback frequency response	Record 1kHz, 50Hz and 12.5kHz signals at an input level of 0VU to −20dB. Play back the tape. Check to see that the 50Hz and 12.5kHz signal output deviations fall within the standard range, using the 1kHz signal output as a reference. (It is basically desirable that the 1kHz, 50Hz and 12.5kHz signal outputs are the same.	For normal tape: VR104 204 For chrome tape: VR105 205 For Metal tape: VR106 206	Reference frequency; 1kHz 0 ± 3dB at 50Hz 0 ± 3dB at 12.5kHz	This checking should be performed for normal, chrome and metal tapes and for both right and left channels.
6*	Checking recording bias current	Record 1kHz, 50Hz and 12.5kHz signals at an input level of 0VU to −20dB. Play back the tape. Adjust VR104 and VR204 (for a normal tape), VR105 and VR205 (for chrome tape), VR106 and VR206 (for a metal tape) until the indicated deviation of the 10kHz signal output from the 1kHz signal output becomes 0. As no bias current at REC-PAUSE mode, must check recording bias current at REC-PLAY mode.		Output deviation; 0	1. Bias current adjustment for a cassette deck should generally be performed referring to the record/playback frequency response. This is because the frequency response of a cassette deck depends more greatly upon the bias current than does that of an open reel deck. The current measuring method descirbed below is an alternative one. 2. If the bias current is not properly adjusted, the record and playback characteristics become as shown below.
					
		Alternative method 1. Set the deck to its recording mode. 2. Connect a 100Ω resistor to the grounding terminal (+ terminal in playback) and the lead wire of the head as shown below. 3. Measure voltage at both ends of the resistor with electornic voltmeter. REC/PB Head Electronic Voltmeter 	Reference value With normal tape; 30mV With chrome tape; 42mV With metal tape; 65mV		1. In order to distinguish the − terminal of the head from its + terminal, touch the terminals with a finger while the deck is in the playback mode. The VU indicator light when the − terminal during recording is touched. (For a record/playback head, the polarity is reversed according to whether recording or playback.) 2. Be sure to employ a shielded wire.

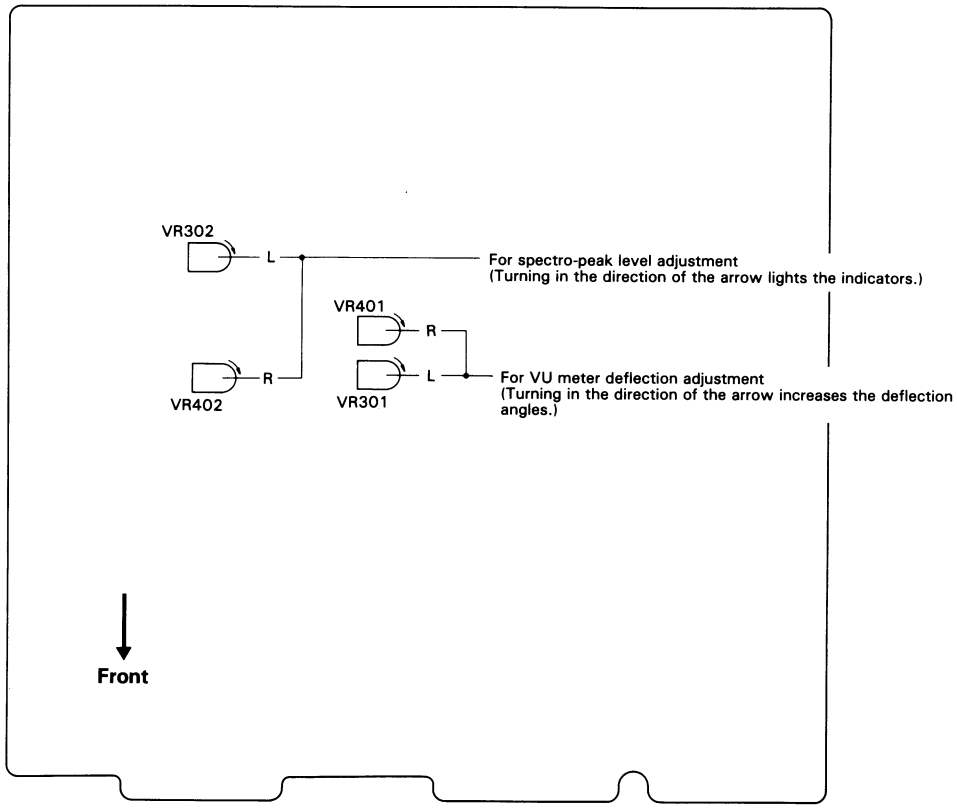
Step	Item	Adjustment	Adjusting point	Standard value	Remarks
7	Adjusting recording level	1. Apply a 1kHz, approx. −10dB signal to the LINE IN terminals. Adjust the recording level controls until the signal is available at −8dBs at the LINE OUT terminals. 2. After checking to see if the VU indicator become to 0, record the signal applied to both left and right channels using normal tape. 3. Play back the recording part. Perform the recording signal adjustment with VR103 and VR203 so that the VU indicator become to 0.	VR103 203	0VU	The level difference between left and right channels for normal tape, chrome tape and metal tape should be less than 1dB (1VU). Perform the adjustment using a normal tape, level difference between recording and playback for CrO_2 and metal tapes shold be less than 1.5dB, and that between left and right channels should also be less than 1dB.
8	Checking record/-playback signal distortion	1. Record a 1kHz, −8dBs signal to LINE IN terminals and perform recording with the VU indicator become to 0. 2. Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		Normal tape; Less than 1.2%	Be sure to perform this adjustment following bias current and recording level adjustments.
9	Checking signal to noise ratio in recording/playback	1. Record a 1kHz, 0VU signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2. Play back the recorded part. Measure the 0VU recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		Normal tape; More than 42dB Chrome tape; More than 42dB	Apply an output (−72dBs) to the MIC terminals with the recording level controls set to maximum so that the VU indicator become to 0.
10	Checking erasing coefficient	1. Apply a 1kHz signal to the LINE IN terminals. Adjust the recording level controls until the VU indicator become to 0. 2. Perform recording with the signal enhanced by 20dB. 3. Erase a part of the recording. 4. Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 65dB	For the measuring, connect a band pass filter between the deck and the electronic voltmeter. 

[V] Adjustment Location of Electrical Circuit

Main P.W. Board

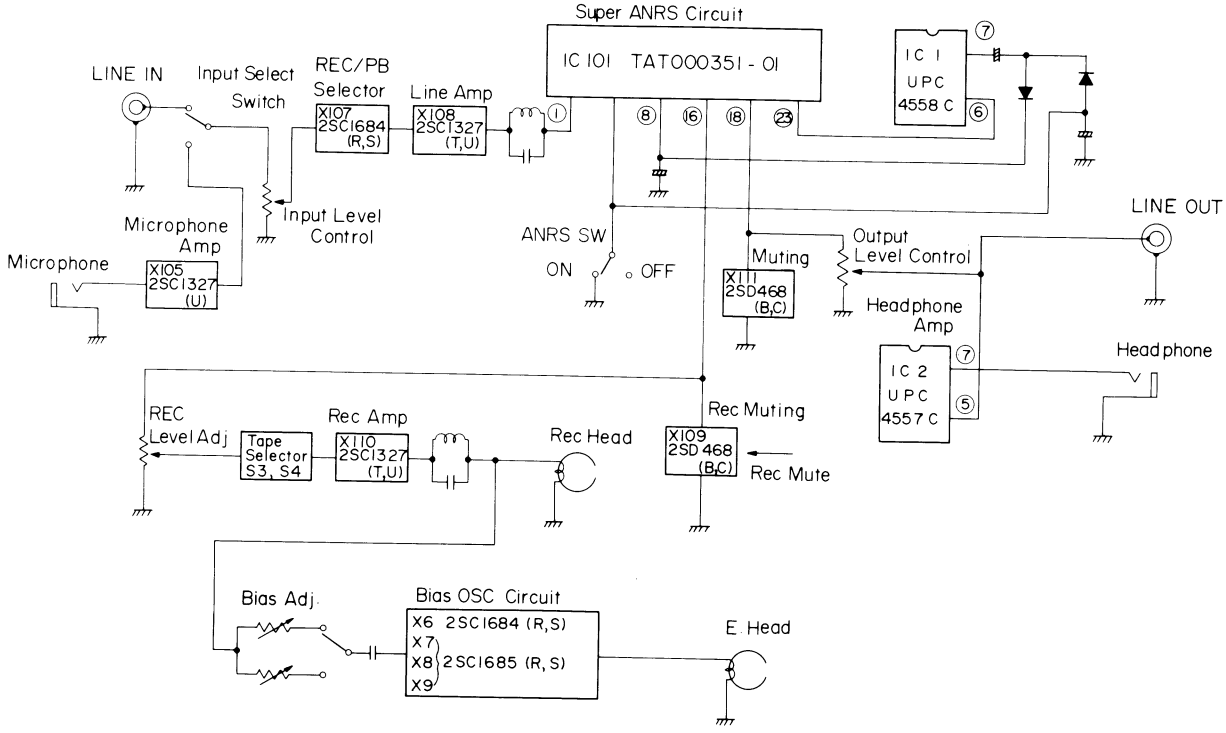


Spectro-peak P.W. Board

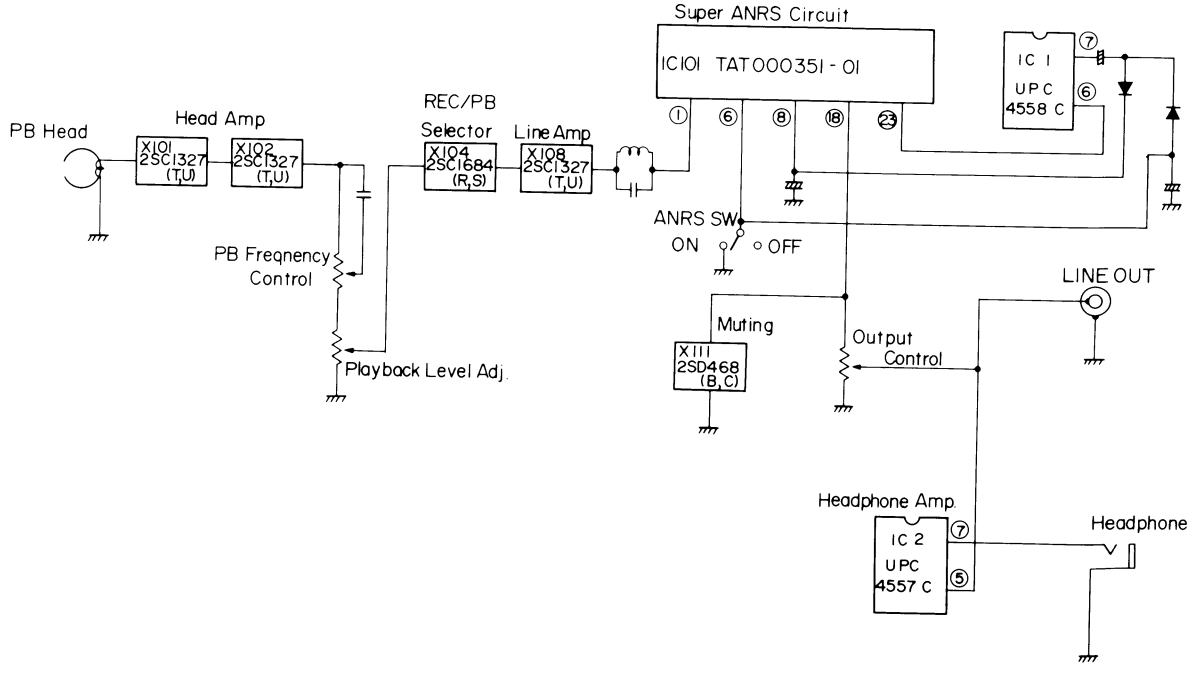


Block diagram

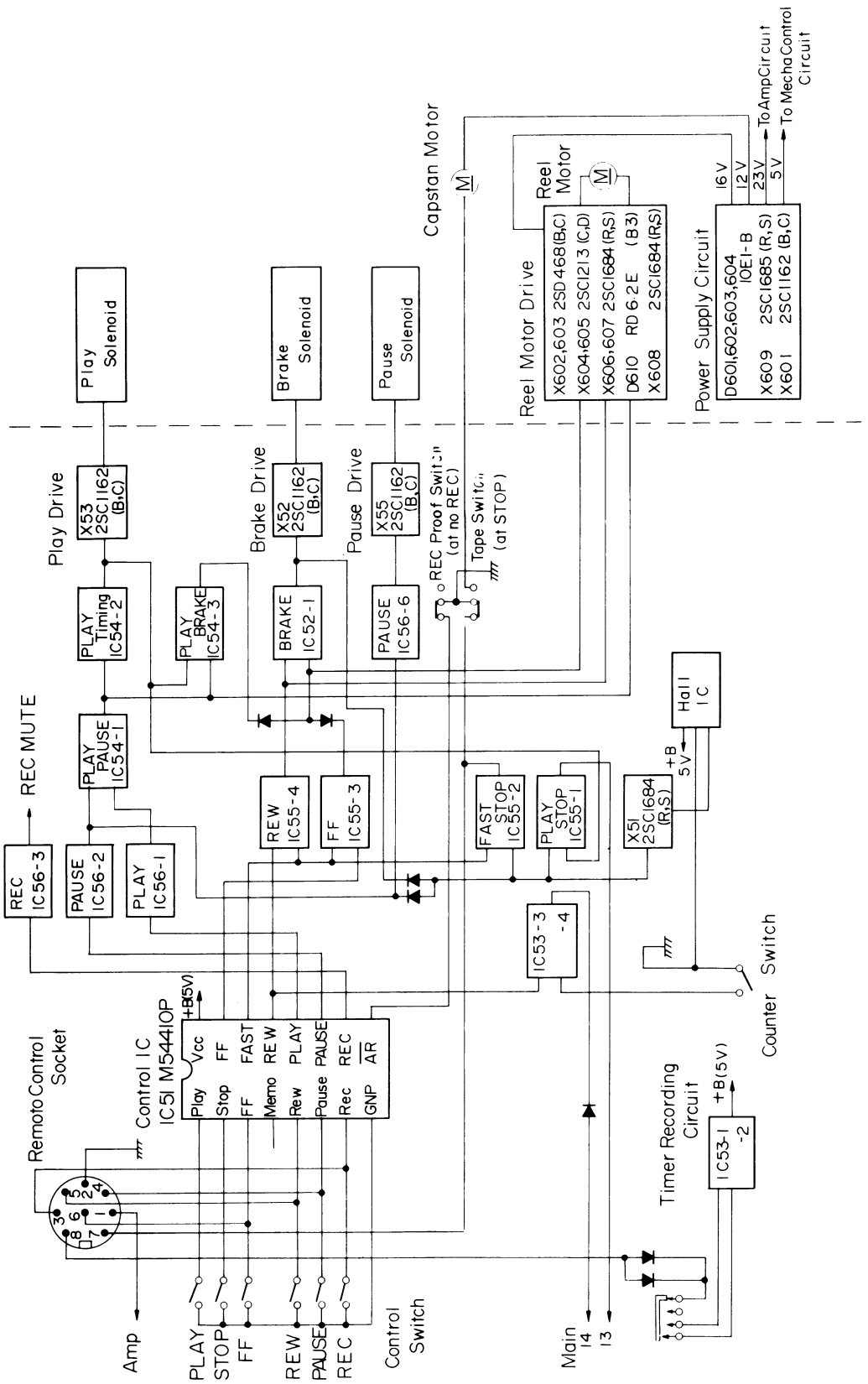
Recording System



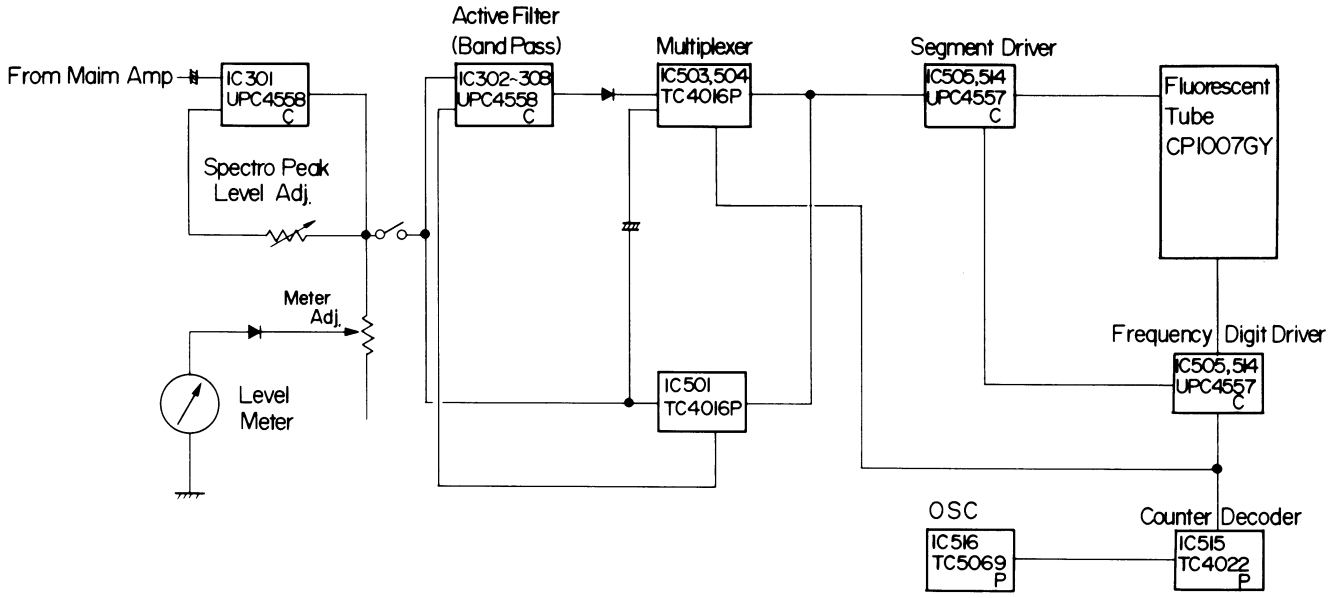
Playback System



Mechanical Control System



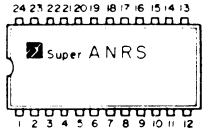
Spectro-peak level Circuit



Integrant Circuit

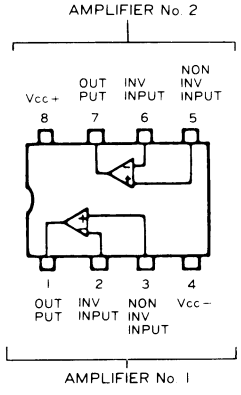
IC101,201 TAT000351-01 Super ANRS Circuit

(Top View)

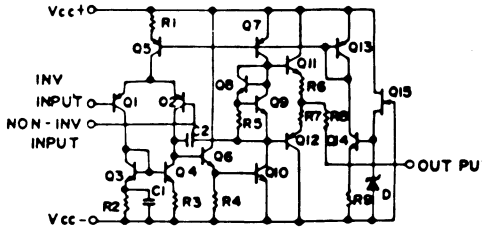


IC1	UPC4558C	ANRS Control Amp.
IC301	〃	Spectro-peak level
IC302~308	〃	Active filter
IC502	〃	Segment driver

(Top view)



Equivalent circuit (1/2)



IC2	UPC4557C	Headphone Amp.
IC505,514	〃	Segment driver

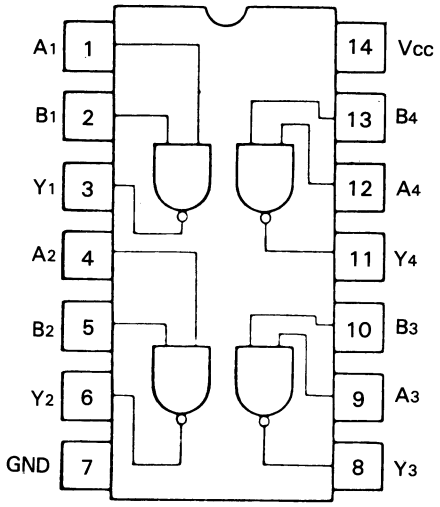
Top view is the same as UPC4558C.
Equivalent cirucit is the same as UPC4558C except R8 only.

IC51	M54410P	Mecha. Control

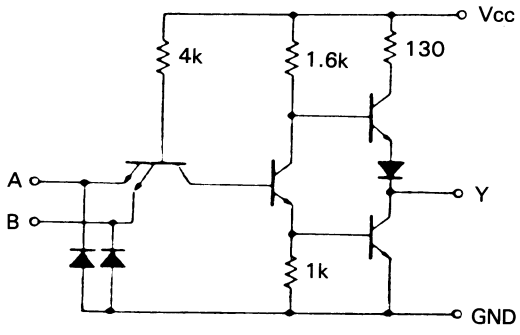
See the service manual of KD-85 A/B/C/E/J/U
(No. 4165 — page 7.)

IC52,53,54 HD7400

(Top view)



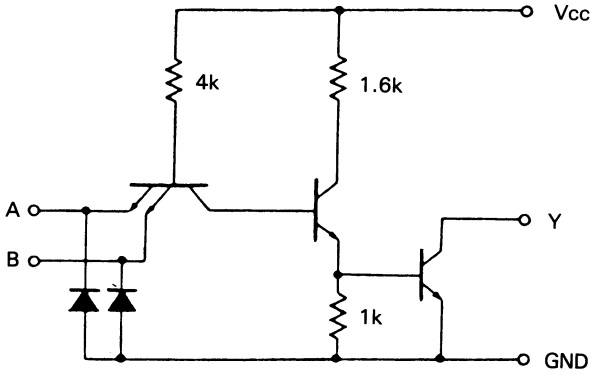
Equivalent circuit (1/4)



IC55 HD7403

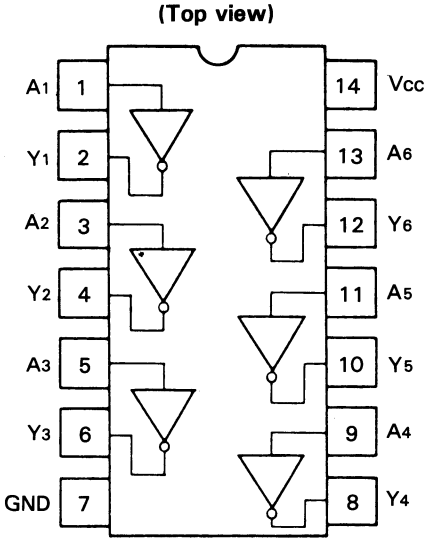
Top view is the same as HD7400.

Equivalent circuit (1/4)

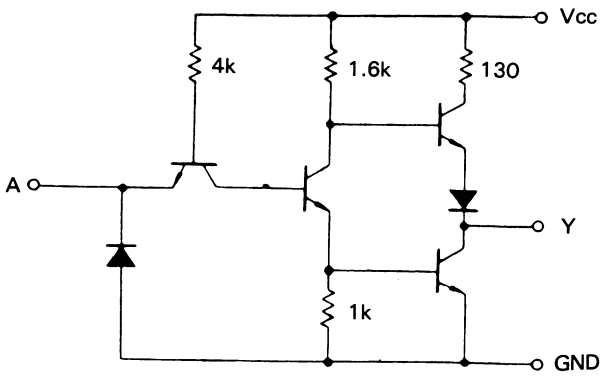


IC56 HD7404

(Top view)

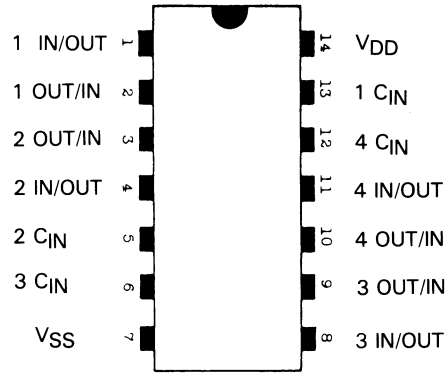


Equivalent circuit (1/6)

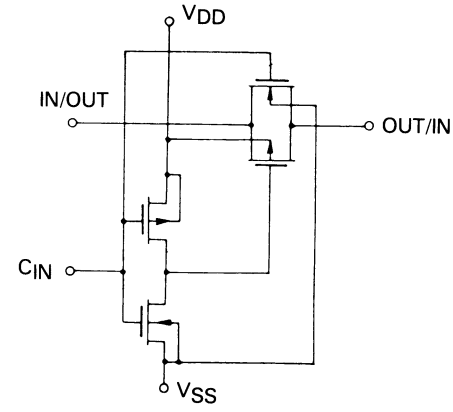


IC501,503,504 TC4016P Multiplexer Circuit

(Top view)

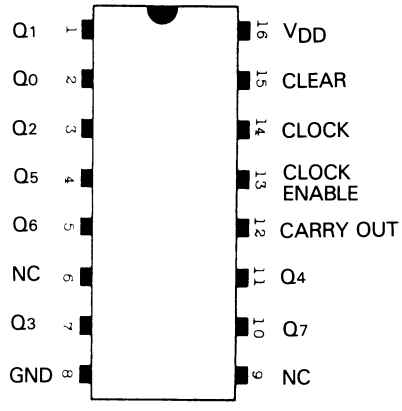


Equivalent circuit (1/4)

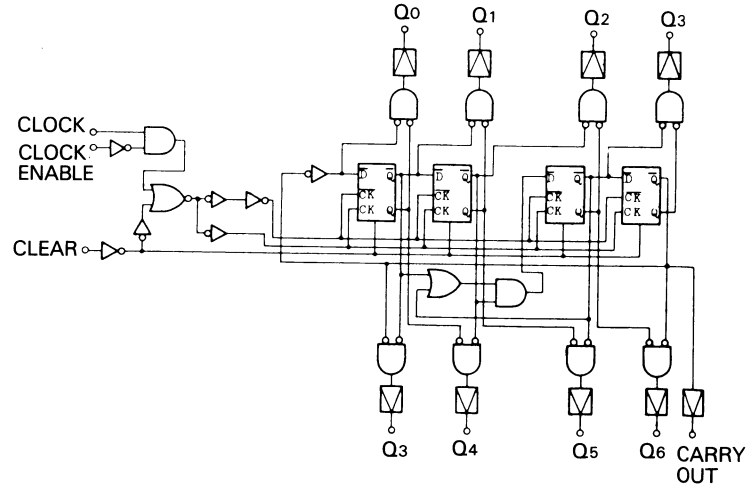


IC515 TC4022P Counter Decorder

(Top view)

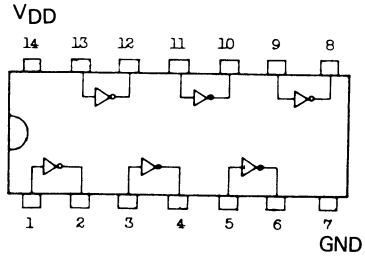


Equivalent circuit

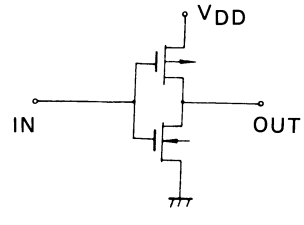


IC516 TC4069 OSC Circuit

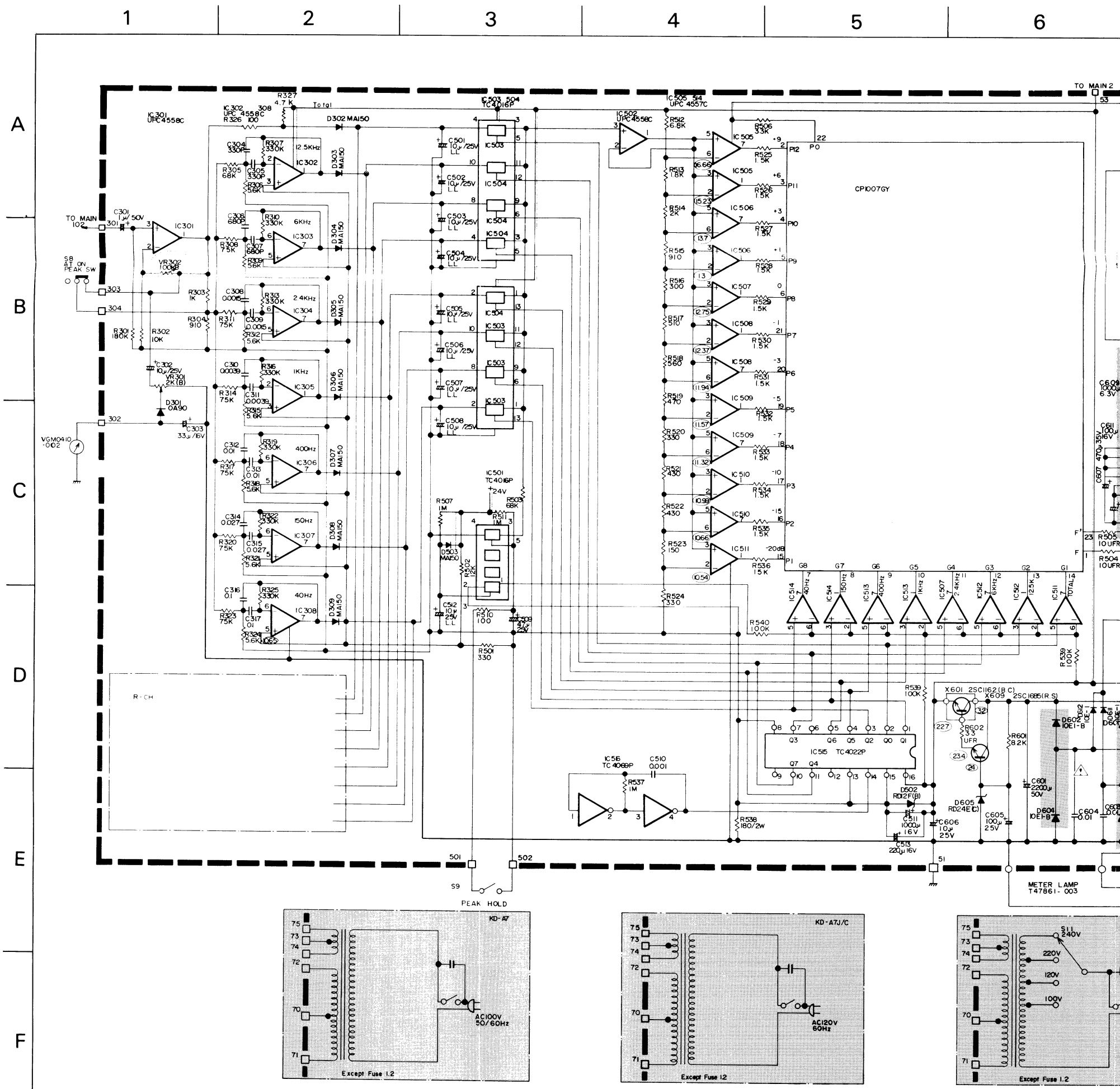
(Top view)



Equivalent circuit (1/6)



Standard Schematic Diagram of KD-A7
(Spectro-peak level circuit)

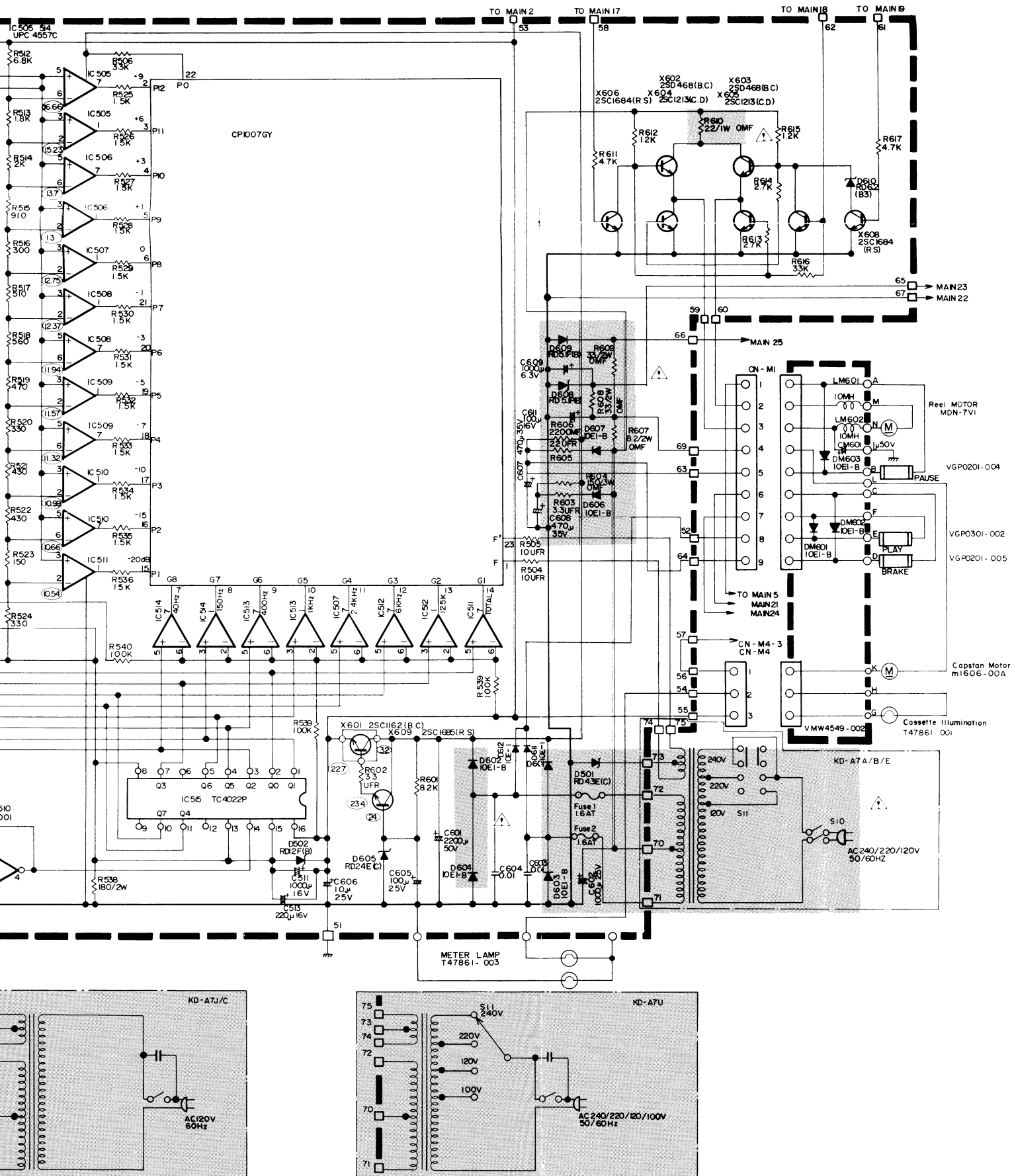


NOTES:

1. All voltages are measured by Electronic Voltmeter.
   Unless otherwise specified, all resistors are 1/4W, ±5% carbon resistors.
   And all capacitors are 50V fixed ceramic capacitors or 50V mylar capacitors.
2. UF — Unflammable carbon resistor
   MF — Metal film resistor
   OMF — Oxided metal film resistor
   Ta — Tantalum solid electrolytic capacitor
   LL — +20% low leak current electrolytic capacitor
   PP — Polypropylene capacitor
   PS — Polystyrene capacitor
   MM — Metallized mylar capacitor
   NP — Non-polarized electrolytic capacitor
3. Red lines show +B circuits.
4. ⚠ parts are safety assurance parts. When replacing those parts, make sure to use the specified one.

– Diode –

– Tr



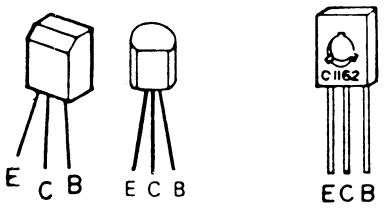
	E	C	B
X601	22.7	32.0	23.3
X602	STOP & REW 0 PLAY 5.8 FF 8.7	12.8	STOP & REW 0 PLAY 6.4 FF 9.3
X603	FF 8.6 PLAY & PAUSE 5.6 Other 0	12.0	FF 9.2 PLAY & PAUSE 6.3 Other 0
X604	0	REW 8.5 Other 0	FF, PLAY 0.7 Other 0
X605	0	FF 8.6 PLAY or PAUSE 5.6 Other 0	REW 0.75 Other 0
X606	0	0	0
X607	0	FF 9.2 PLAY 6.3 Other 0	REW, STOP or PAUSE 0.7 Other 0
X608	0	FF 4.5 Other 0	PLAY or PAUSE 0.6 Other 0
X609	23.4	32.0	24.0

.
pylene capacitor
rene capacitor
ed mylar capacitor
larized electrolytic capacitor

ke sure to use the specified one.

— Diode —

— Transistor —



Standard Schematic Diagram of KD-A7
(Amplifier Circuit)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC101,201	8.36	7.66	8.51	8.46	6.02	5.19	1.04	4.72	9.19	9.17	0.35	0	0.06	0.71	18.75	9.21	10.52	9.24	10.55	11.79	11.8	11.81	11.8	16.5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
IC1	11.26	11.29	11.26	0	11.26	11.27	11.29	22.6							
IC2	11.4	11.35	10.9	0	10.8	11.3	11.51	22.6							
IC51	PLAY L	STOP L	FF L	H	REW L	PAUSE L	REC L	0	REC PROOF ON L	REC H	PAUSE H	PLAY H	REW H	FF or REW H	FF H
IC52	REW L	FF,PLAY or PAUSE L	FF,REW PLAY or PAUSE H	PLAY or PAUSE ⊓	PLAY or PAUSE ⊓	PLAY or PAUSE ⊓	0	—	—	—	—	—	—	—	

X101 2SC1327(TU) X102 2SC1327(TU) X103 2SC1684(RS) X104 2SC1684(RS) X108 2SC1327(TU)

IC 101 TAT000351-01

X105 2SC1327(TU)

X107 2SC1684 (RS)

X1 2SC1684(RS) X3 2SC1684(RS) X2 2SA564(RS) X52 2SC1684(RS) X4 2SA564(RS) X5 2SC1684(RS)

X109 2SD468 (BC) X110 2SC1327(TU) X6 2SC1684(RS) X7 2SC1685(R

X106 2SC1684 (RS)

X53 2SC1162 (BC)

X111 2SD468(BC)

X51 2SC1684(RS)

X55 2SC1162(BC)

X54 2SC1162(BC)

IC 2 UPC4557C

IC 51 M54410P

S7 (MIC-LINE) S4 (OFF-ANRS-Super) S1 S2 S3(-2 -1 0 +1 +2)

S2 (CrO_2 - Metal)(Nor - Fe Cr - H)S_2

S5 MEMORY SW STOP-OFF-PLAY

S6 TIMER SW REC-OFF-PLAY

LINE IN R-CH L-CH

REC PROOF (at on) Cassette SW (at off)

OUTPUT VOLUME

COUNTER

To SPI 61 To SPI 58 To SPI 62 To SPI 56

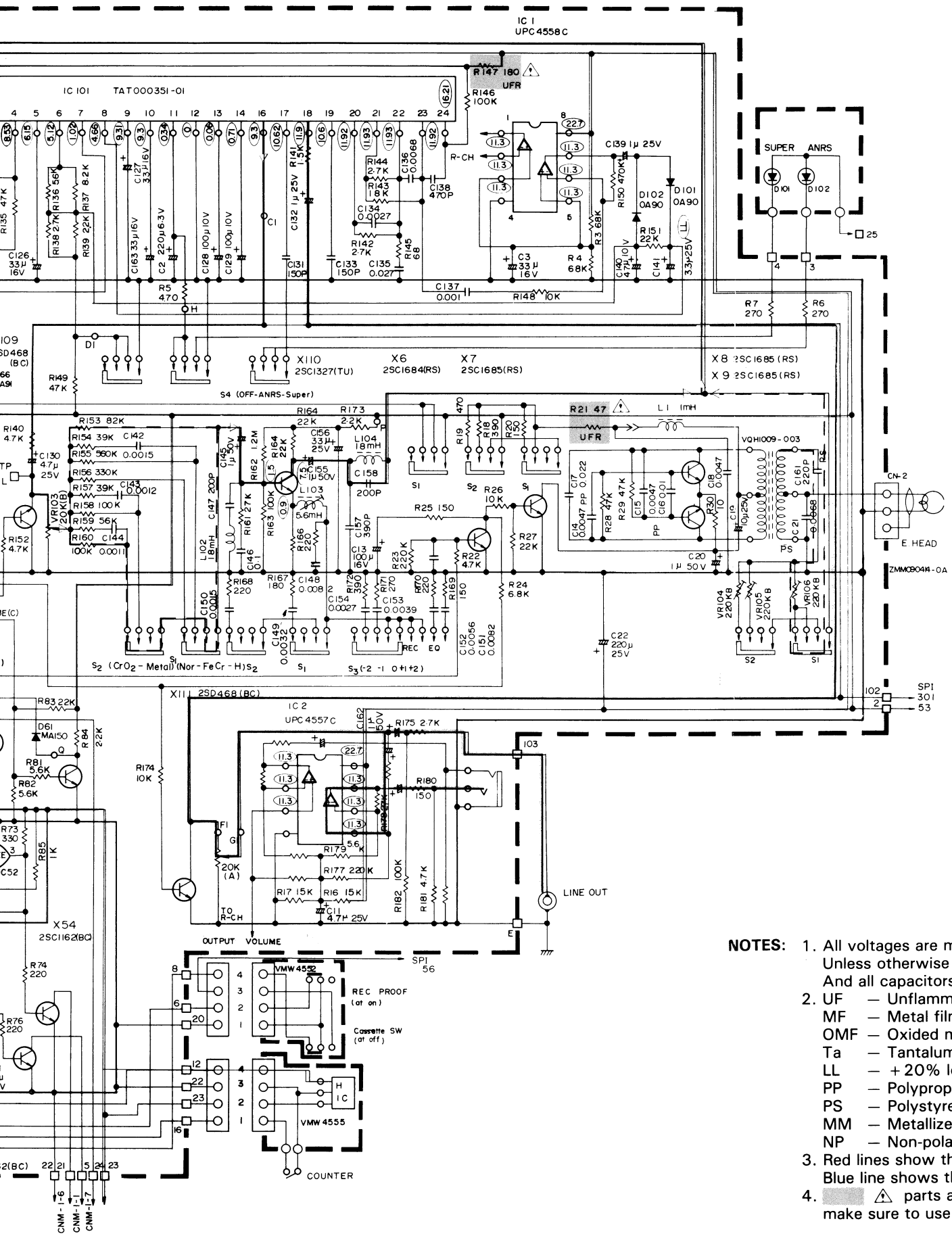
CNM-1-6 CNM-1-7

5 | 6 | 7 | 8 | 9 | 10

											24
										8	16.5

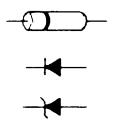
	7	8	9	10	11	12	13	14	15	16
27	11.29	22.6								
3	11.51	22.6								
SE	REC L	0	REC PROOF ON L	REC H	PAUSE H	PLAY H	REW H	FF or REW H	FF H	5V
f or SE L	0	—	—	—	—	—	—	—		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC53	POWER ON						0	999,REW	REW	999,REW		999		5V
	⎍	⎍	⊓	⊓	⎣	∫		⊓	H	⎍	⎍	⊓	⊓	
IC54	PLAY L	PAUSE L	PLAY or PAUSE H	PLAY or PAUSE H	FF or REW L	PLAY or PAUSE L	0	PLAY or PAUSE L	H	H	H	L	L	5V
IC55	PLAY or PAUSE H	TAPE END H	PLAY TAPE END L	TAPE END H	FF or REW H	FF or REW TAPE END L	0	FF L	FF H	FF or REW H	REW L	REW H	FF or REW H	5V
IC56	PLAY H	PLAY L	PAUSE H	PAUSE L	REC H	REC L	0	FF or REW H	L	L	H	PAUSE H	L	5V

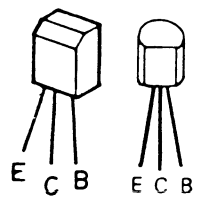


	E	C	B
X101,201	0.01	2.1	0.6
X102,202	1.5	11.8	2.1
X103,203	—	—	NORM 0 Other 0.6
X104,204	3.8	Except REC 3.8	Except REC 4.4
X105,205	1.87	823	2.45
X106,206	—	—	REC 0 Other 0.6
X107,207	3.8	REC 3.8	REC 4.4
X108,208	0.27	8	0.87
X109,209	0	0	REC or REC MUTE 0.6
X110,210	0.95	7.5	1.5
X111,211	0	—	PLAY or REC 0.6 Other 0
X1	0	REC 19.8 Other 0.1	REC 0.2 Other 0.7
X2	20.2	REC 0 Other 19.3	REC 20 Other 18.6
X3	REC 19 Other 0	20	REC 19.6 Other 0
X4	18.3	PLAY or REC 0 Other 18.3	PLAY or REC 17.7 Other 21.9
X5	0	REC 0 Other 1.04	REC 0.6 Other 0
X6	0	REC 11 Other 0	REC MUTE 0.6 Other 0
X7	0	REC 0 Other 22	REC 0.6 Other 0
X9	REC 0.07 Other 22.1	REC 19.9 Other 22.5	REC 1.2 Other 22.4
X51	0	TAPE END H	0.6
X52	0	PLAY or REC H	PLAY or REC 0
X53	0	PLAY or PAUSE	PLAY or PAUSE
X54	0	PAUSE L Other H	PAUSE 0.6 Other 0
X55	0	PAUSE 0	PAUSE 0.6
X56	0	REC MUTE 20 Other 0	REC MUTE 0 Other 0.6

— Diode —



— Transistor —



NOTES:
1. All voltages are measured by Electronic Voltmeter.
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   And all capacitors are 50V fixed ceramic capacitors or 50V mylar capacitors.
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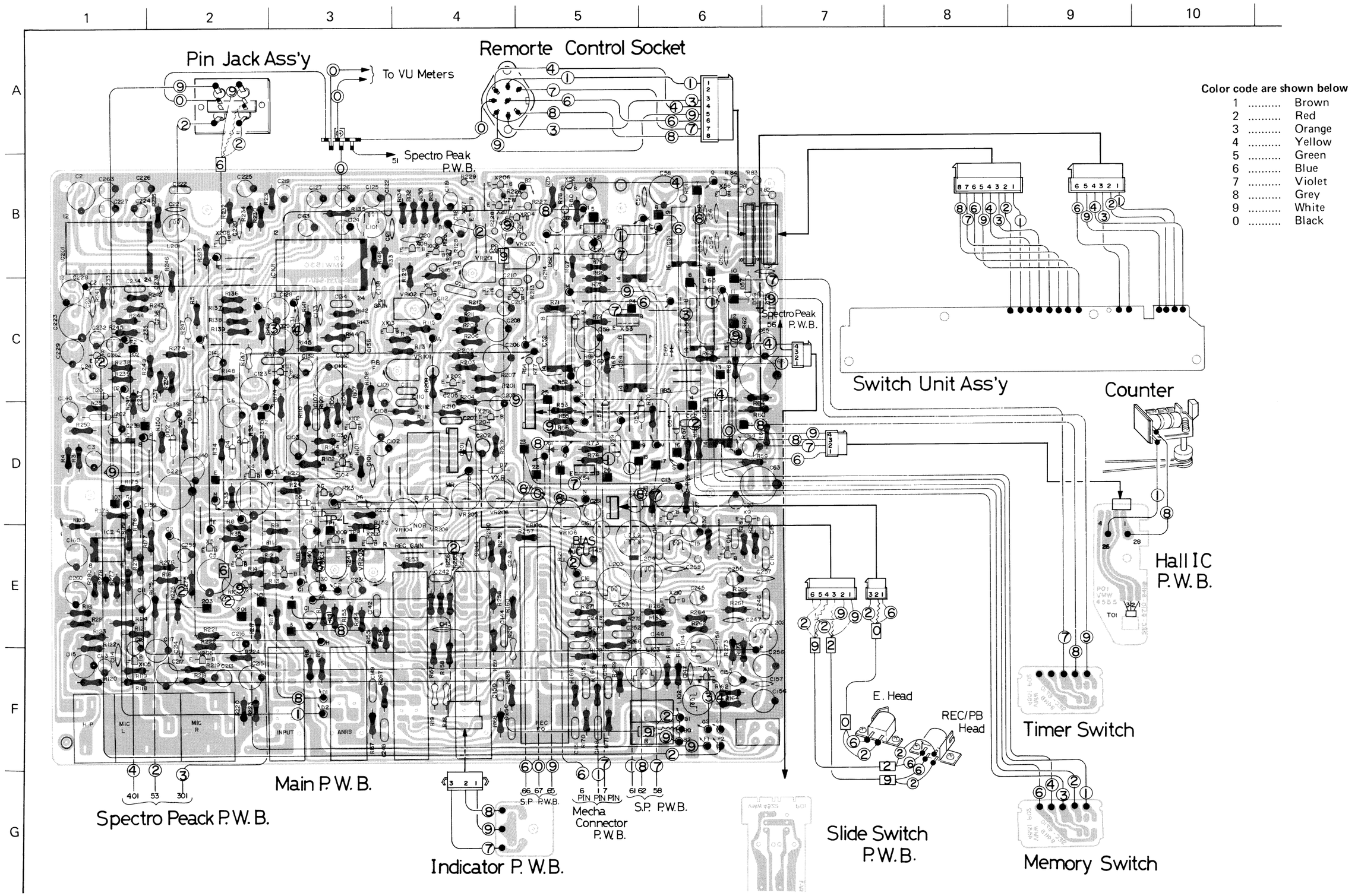
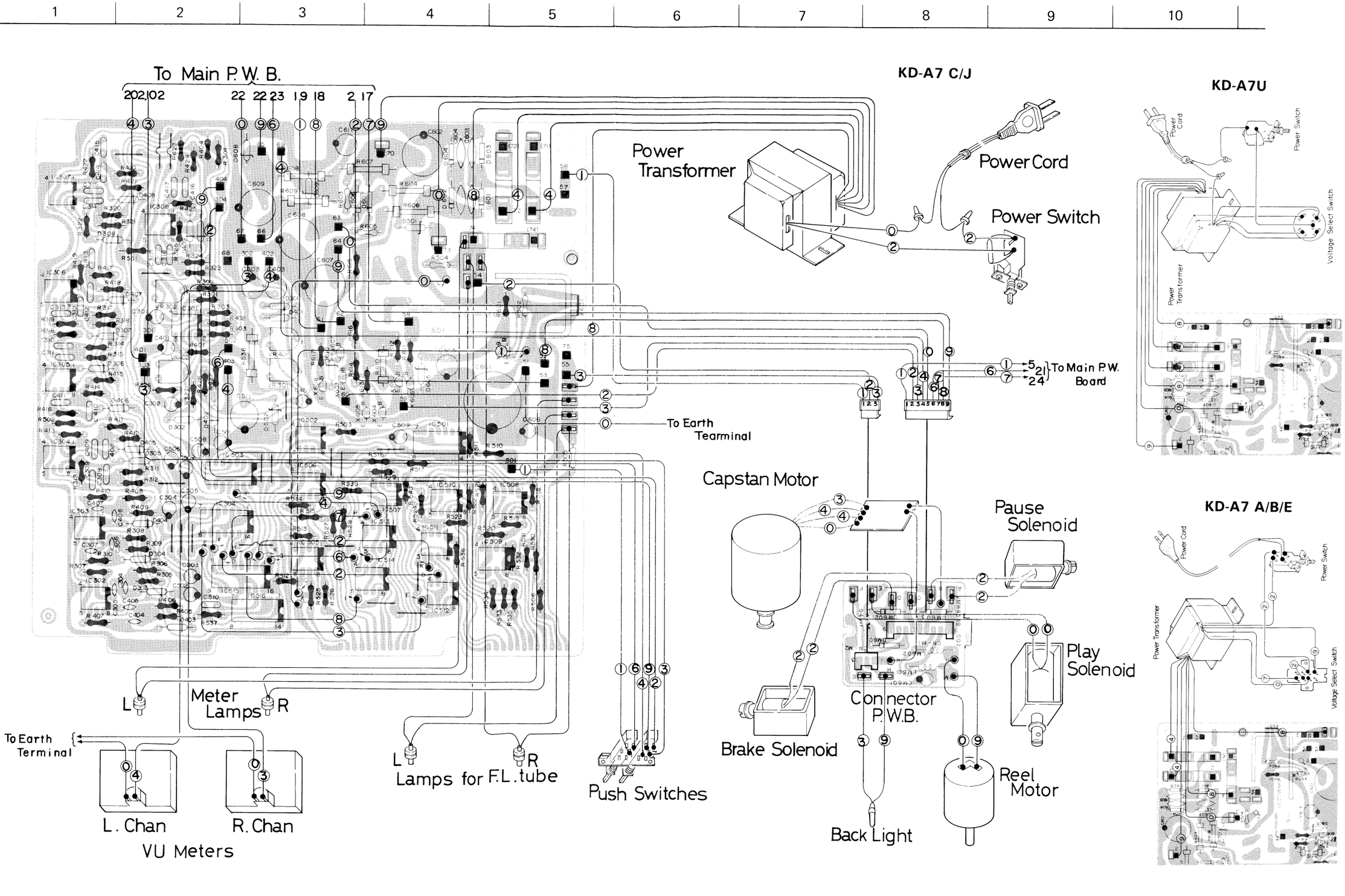
   MF — Metal film resistor
   OMF — Oxided metal film resistor
   Ta — Tantalum solid electrolytic capacitor
   LL — +20% low leak current electrolytic capacitor
   PP — Polypropylene capacitor
   PS — Polystyrene capacitor
   MM — Metallized mylar capacitor
   NP — Non-polarized electrolytic capacitor
3. Red lines show the signal at recording and +B circuit.
   Blue line shows the signal at playback.
4. ▨ ⚠ parts are safety assurance parts. When replacing those parts, make sure to use the specified one.

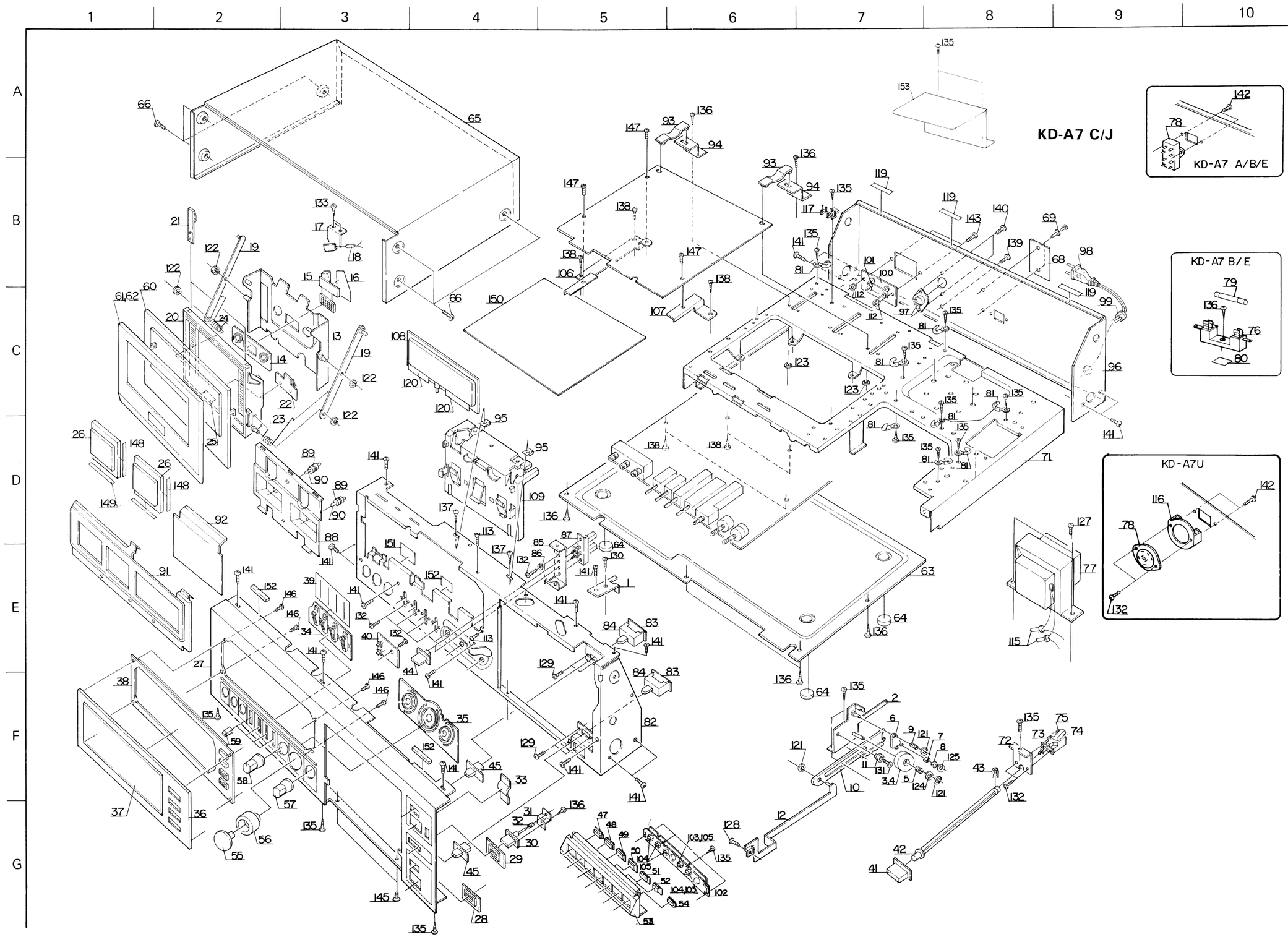
Wiring Connection (1) of KD-A7



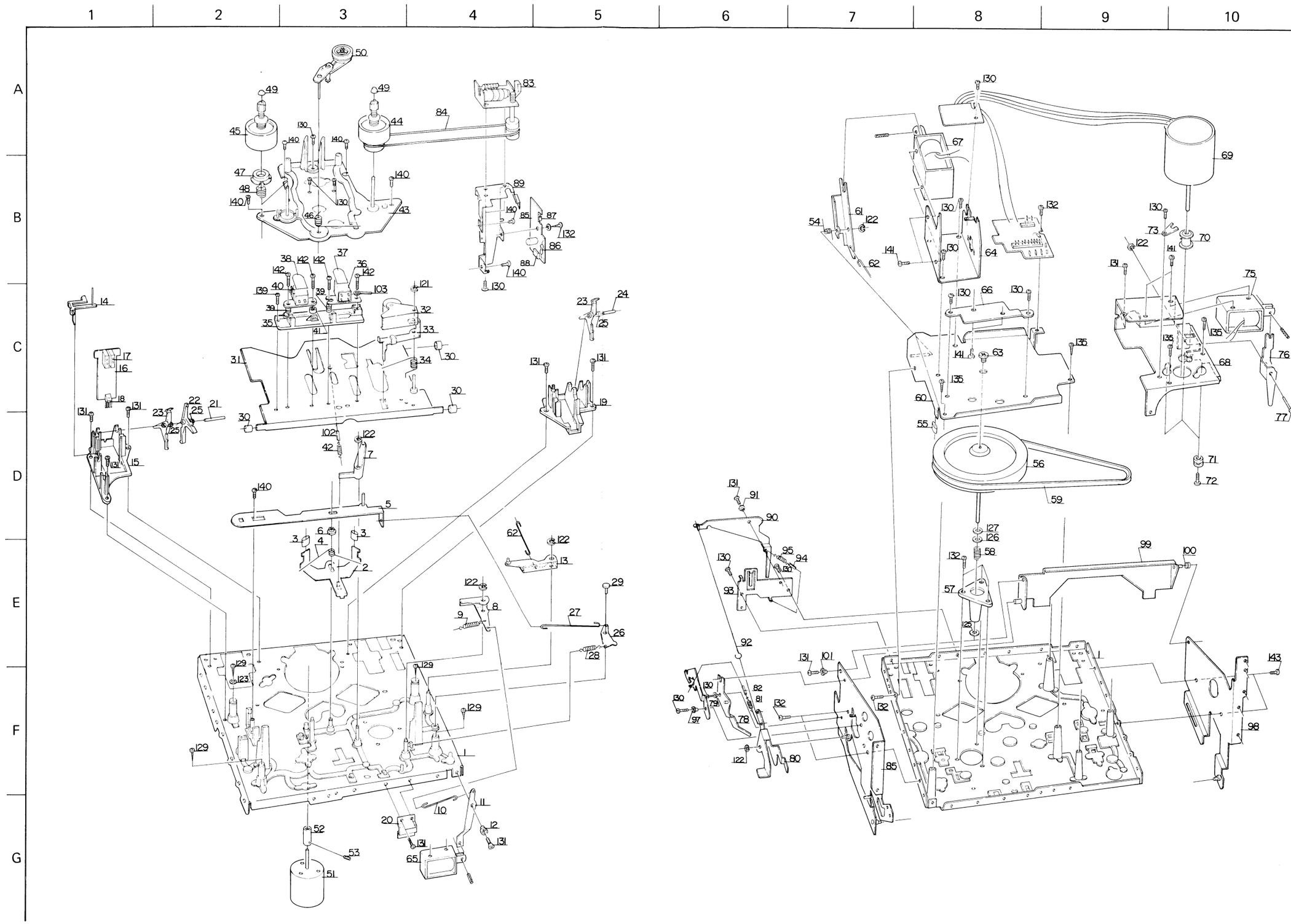
Wiring Connection (2) of KD-A7



Enclosure Ass'y and Electrical Parts (Except P.W. Board Parts)



Mechanical Component Parts



Enclosure Assembly and Electrical parts List (Except P.W. Board Parts)

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL4522-001	Joint Bracket		1
2	VKL4644-00A	Gear Frame Ass'y		1
3	VKS4109-004	Brake Drum		1
4	VKS4108-003	Spur Gear		1
5	VKW3001-006	Spring		1
6	VKS4110-002	Brake Arm		1
7	VKZ4111-001	Rubber Tire		1
8	VKL4271-001	Rubber Retainer		1
9	VKW4106-001	Torsion Spring		1
10	VKS3102-001	Rack Plate		1
11	VKH4123-001	Collar		1
12	VKL4609-00A	Arm Ass'y		1
13	VKL3188-00D	Holder Plate Ass'y		1
14	VKL4213-002	Panel Plate		1
15	VJD4273-001	Indicator		1
16	VKZ4120-001	Sheet		1
17	VKL4507-001	Lamp Bracket		1
18	T47861-001	Pilot Lamp		1
19	VKL4380-00A	Cross Bar Ass'y		2
20	VJT2035-001	Cassette Lid		1
21	VKY4156-001	Cassette Spring		2
22	VKY4159-002	〃		1
23	VKW4153-002	Holder Spring		1
24	VKW4153-003	〃		1
25	VJD4272-001	Head Mark		1
26	VGM0410-002	Level Meter		2
(27~29 33~35,39)	ZCKDA7Y-CBF-1	Front Plate Sub Ass'y		1 set
27	*VJC1090-002	Front Plate		1
28	VJD4262-003	Power Escutcheon		1
29	VJD4332-001	Knob Escutcheon		1
30	VXP4057-00B	Push Button Ass'y		1
31	VKL4476-001	Knob Bracket		1
32	VKW3001-028	Spring		1
33	VJK4106-001	Counter Lens		1
34	VJD4325-001	Lever Escutcheon		1
35	VJD4333-001	Volume Escutcheon		1
(36,37,38)	ZCKDA7Y-CBF-2	Meter Plate Ass'y		1 set
36	VJD3205-001	Meter Plate		1
37	VJD3142-001	Finder		1
38	VJD3203-002	Escutcheon		1
39	VYTA448-001	Blind		1
40	VMW4562-001	P.W. Board	for Indicator	1
41	VXP3027-00A	Power Knob Ass'y		1
42	VKS4113-002	Remote Bar		1
43	VYTS404-001	Lock Plate		1
44	VXP4055-001	Knob	for P. Hold	2
45	VXS4019-001	〃	for Memory & Timer	2
46	T47818-001	Spacer		3
47	VXP3046-001	Push Button	for REW	1
48	〃 -002	〃	for FF	1
49	〃 -003	〃	for Play	1
50	〃 -004	〃	for Stop	1
51	〃 -005	〃	for Rec	1
52	〃 -006	〃	for Pause	1
53	VJD3204-001	Button Case		1
54	VXP4056-001	Push Button	for Rec Mute	1
55	VXL4083-00A	Knob Ass'y	for Rec (L)	1
56	VXL4084-00A	〃	〃 (R)	1
57	VXL4085-00A	〃	for Output	1
58	VXL4086-001	〃	for Rec EQ	1
59	VXQ4017-002	Lever Knob Ass'y		4
(60,61,62)	ZCKDA7Y-CCA	Cassette Door Ass'y		1 set
60	VJT3046-001	Cassette Door		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
61	VJT3032-002	Door Plate		1
62	VJZ4008-001	Double Face		1
63	VKL1158-001	Bottom Cover		1
64	VJF4003-001	Foot		6
65	VKL1124-002	Top Cover		1
66	VKZ3001-002	Special Screw		6
67	VND4016-001	Metal Sticker		1
68	VYN2053-002GA	Name Plate	KD-A7 B	1
	〃 -003GA	〃	KD-A7 A	1
	〃 -004GA	〃	KD-A7 C	1
	〃 -005GA	〃	KD-A7 E	1
	〃 -006GA	〃	KD-A7 J	1
	〃 -007GA	〃	KD-A7 U	1
69	E48729-002	Plastic Rivet	for name plate	2
70	*VYSH102-021	Spacer		2
71	*VKL1159-001	Amp. Chassis		1
72	VKL4441-001	Switch Bracket		1
73	QSP2111-011	Push Switch	KD-A7 A/E (power switch) ⚠	1
	QSP2111-011BS	〃	KD-A7 B (〃) ⚠	1
	QSP1110-222	〃	KD-A7 C/J (〃) ⚠	1
	QSP1110-221	〃	KD-A7 U (〃) ⚠	1
74	QFA72BM-223	M.P. Capacitor	KD-A7 C 0.022μF ⚠	1
	QFH72BM-223	M.M. Capacitor	KD-A7 J 〃 ⚠	1
	QFH53AM-223	〃	KD-A7 U 〃 ⚠	1
75	T47047-001	Condenser Boot	KD-A7 J/U ⚠	1
76	QMG1321-002BS	Fuse Holder	KD-A7 B ⚠	1
	QMG1321-002	〃	KD-A7 E ⚠	1
77	*VTP66C7-021KBS	Power Transformer	KD-A7 B ⚠	1
	VTP66C7-021K	〃	KD-A7 A/E ⚠	1
		〃	KD-A7 C/J ⚠	1
		〃	KD-A7 U ⚠	1
78	QSS2325-011BS	Voltage Select Switch	KD-A7 B ⚠	1
	QSS2325-011	〃	KD-A7 A/E ⚠	1
	QSR0084-001	〃	KD-A7 U ⚠	1
79	QMF51A2-R20LBS	Fuse	KD-A7 B ⚠	1
	QMF51A2-1R6	〃	KD-A7 A/E ⚠	1
80	TAZ000509-08	Fuse Seal		1
81	VKZ4001-011	Wire Holder		8
82	*VKL1160-001	Front Bracket		1
83	VMW4551-001	Switch P.W. Board	for Timer, Memory	2
84	QSS2301-101	Slide Switch	〃 〃	2
85	*VKL4627-001	Switch Bracket		1
86	VKH3001-007	Collar		2
87	*QSP0031-001	Switcch Ass'y	for Peak	1
88	*VKS3113-002	Lamp Hood		1
89	*VYH4335-002	Lamp Holder		2
90	T47861-003SN	Pilot Lamp		2
91	*VJD2144-001	Meter Escutcheon		1
92	*VJK3143-002	Peak Indicator		1
93	VKS3000-001	P.W.B. Holder		2
94	*VKL4628-00A	Slider Ass'y		2
95	TFB313563-02	Plate Nut		2
96	VKL1157-001	Rear Bracket	KD-A7 A/B/E/U	1
	VKL1157-002	〃	KD-A7 C/J	1
97	*VKS3113-002	DIN Jack Ass'y	for Remote	1
98	QMP2560-200	Power Cord with Plug	KD-A7 A ⚠	1
	QMP9017-008BS	Power Cord	KD-A7 B ⚠	1
	QMP1200-200	Power Cord with Plug	KD-A7 C/J ⚠	1
	QMP3900-200	〃	KD-A7 E ⚠	1
	QMP7600-200	〃	KD-A7 U ⚠	1
99	QHS3876-162	Strain Relief Bushing	KD-A7 A/C/E/J/U ⚠	1
	QHS3876-162BS	〃	KD-A7 B ⚠	1
100	TAJ331301-03	Pin Jack Ass'y		1
101	TAA345532-01	Circuit Board	for Pin Jack Ass'y	1
102	VST0003-001	Switch Unit Ass'y		1
103	TLR102S	LED		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
104	TLG102S	LED		4
105	*VKS4167-001	Spacer	for LED	5
106	*VKL4624-001	P.W.B. Bracket (L)		1
107	*VKL4654-001	〃 (R)		1
108	*VGZ0002-001	Fluorencent Tube		1
109	*VKS2016-001	FL Holder		1
112	NTB3000S	Nut	for Pin Jack Board	2
113	*VKZ4128-001	Special Screw		2
114	TFB313563-02	Plate Nut	for FL Holder	2
115	TAW000504-01	Connector	KD-A7 J/U	2
116	VKL4275-001	Bracket	KD-A7 U, for Voltage Select SW.	1
117	E46651-001	Wrapping Terminal		1
118	VYSR1R5-007	Spacer		1
119	VYSH103-023	〃		1
120	VYSA1R8-042	〃		2
121	REE2000	"E" ring	for Brake Drum x 1 Rubber Retainer x 1 Rack Plate x 1, Arm Ass'y x 1	4
122	REE2500	〃	for Holder Plate x 2 Cross Bar Ass'y x 2	4
123	REE3000	〃	for P.W.B.Holder	2
124	WNS2600Z	Washer	for Brake Drum	1
125	Q03093-524	〃	for Rubber Retainer	1
126	WSS3000N	〃		1
127	DPSP4010ZS	Screw	for Power Transformer	4
128	LDSP2604R	〃	for Cassette Lid	1
129	LPSP2604Z	〃	for Timer SW. P.W.B. x 2 Memory SW. P.W.B. x 2	4
130	LPSP2605Z	〃	for Joint Bracket x 1 Peak Switch Ass'y x 1 Lamp Bracket x 2	4
131	LPSP2608Z	〃	for Rack Plate	1
132	LPSP3006ZS	〃	for P.W.B x 1, Power x 2, Lever Switch x 4, Switch x 2	9
133	SBSB2606Z	Tapping Screw	for Lamp Bracket	2
134	SBSB2608Z	〃	for Button Case	4
135	SBSB3006Z	〃	for Dumper x 2, Front Plate x 5, Button Cover x 4, Switch Bracket x 1, Front Bracket x 7, Wire Holder x 8, Wrapping Terminal x 1	28
136	SBSB3008Z	〃	for Knob Bracket x 1, Fuse Holder x 1, P.W.B. Holder x 2	4
137	SBSB3008V	〃	for FL holder	2
138	SBSB3006V	〃	for Amp. P.W.B x 4, S.P.I. P.W.B. x 2	6
139	SDSB3006R	Screw	for Rear Bracket	4
140	SDSP2606R	〃	for DIN Jack Ass'y	2
141	SDSP3006Z	〃	for Front Plate x 3 Mecha. Ass'y x 2 Mecha. Amp. x 7	12
142	SDSP3006RS	〃	for Voltage Select Switch	2
143	SDSP3008RS	〃	for Pin Jack Ass'y	2
144	SSSP2605Z	〃	for Mecha.	2
145	SSSP2608Z	〃	for Button Case	2
146	DPSP2608Z	〃	for Escutcheon	4
147	DPSP3006Z	〃	for P.W.B. Bracket	4
148	VYSA1R8-041	Spacer	for VU meter	2
149	VYSA1R8-044	〃	〃	2
150	VMA3103	Shield Plate		1
151		Cushion	for Front Panel	2
152		〃	〃	2
153	VKL4665-001	Plate	for Radiation	1

Mechanical Component Parts List

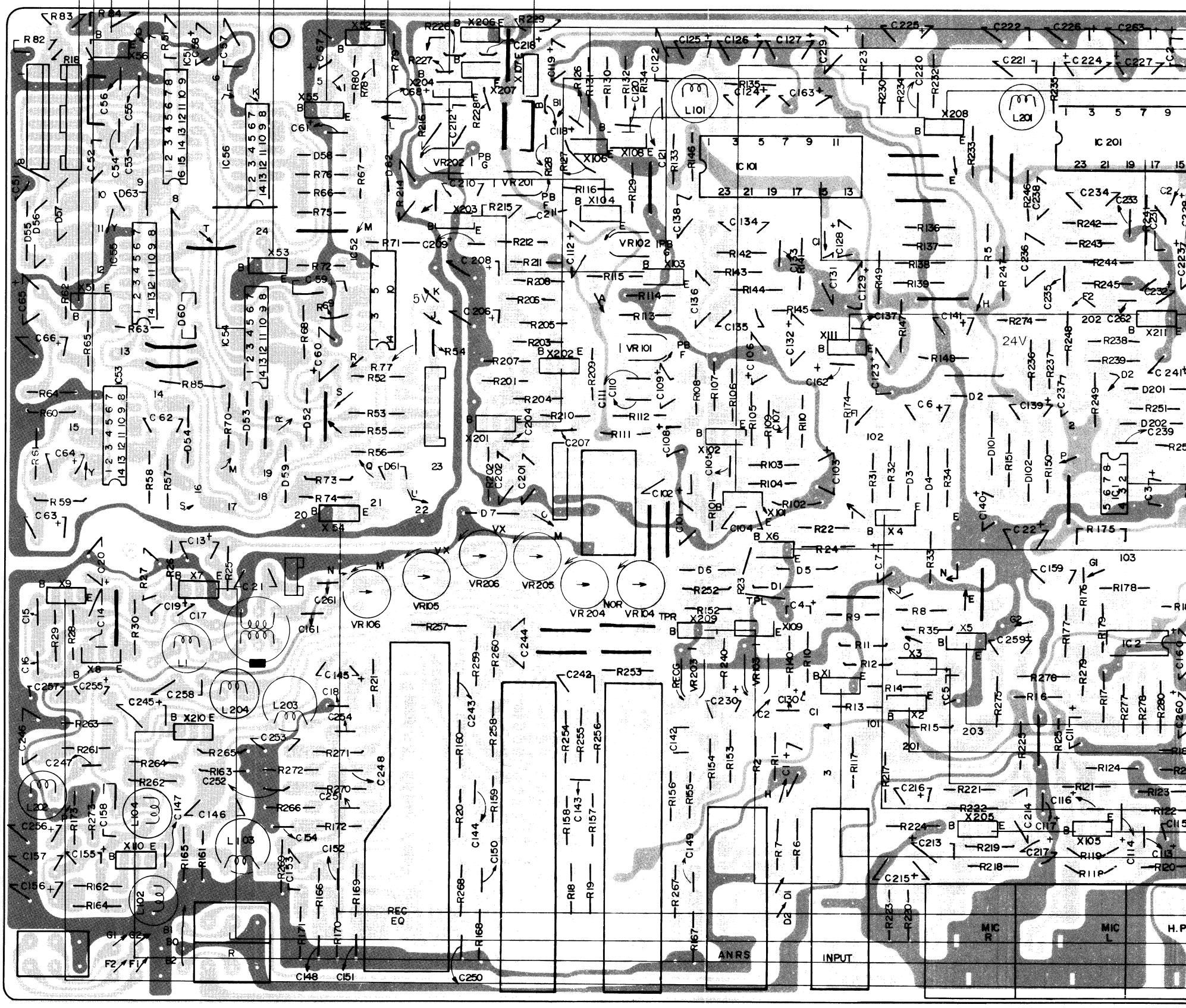
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL1118-00C	Chassis Base Ass'y		1
2	VKL4361-002	Brake Bar		1
3	T44341-001	Rubber Tire		2
4	VKW4145-001	Brake Bar Spring	for Brake Bar	1
5	VKL4362-001	Lock Bar		1
6	VKZ4005-001	Stopper	for Brake Bar	1
7	VKS4135-00A	Lock Lever Ass'y		1
8	VKL4364-001	Pause Lever		1
9	VKW3002-004	Tension Spring	for Pause Lever	1
10	VKW4136-001	Connecting Wire		1
11	VKL4365-001	Pause Solenoid Lever		1
12	VKH3001-027	Flange Collar		1
13	VKL4366-00A	Play Arm Ass'y		1
14	VKS4166-001	Cassette SW. Lever		1
15	VKS3109-001	Switch Holder (L)		1
16	VMW4522-001	P.W. Board (L)		1
17	QSP0029-001	Slide Switch		2
18	QMV5004-004	Connector		1
19	VKS3110-001	Switch Holder (R)		1
20	VKL4479-001	Flywheel Cover		1
21	VKH4196-001	Shaft		1
22	VKS4136-002	Switch Lever		2
23	VKS4156-001	Pressure Lever		2
24	VKH4196-002	Shaft		1
25	VKW4138-001	Pressure Lever Spring		4
26	VKL4399-001	Eject Safety Lever		1
27	VKW4142-001	Connecting Wire		1
28	VKW3002-004	Spring		1
29	TEP357469-02	Stopper		1
30	VKZ3003-001	Rubber Tube		3
31	VKL4370-00C	Slide Base Ass'y		1
32	VKP4105-00B	Pinch Roller Bracket Ass'y		1
33	VKL4371-001	Push Arm		1
34	VKW4139-001	Pinch Roller Spring		1
35	VKS2102-001	Head Mount Base		1
36	ZMM089401-0D	R/P Head Ass'y		1
37	VND4012-001	Head Plate	for X-cut	1
38	THC037417-02	Head Plate	for SA	1
39	VKW3001-020	Compression Spring	for R/P E. Head	2
40	ZMM090414-0A	E. Head Ass'y		1
41	VKH4215-001	Head Collar		1
42	VKW3002-005	Tension Spring	for Slide Base	1
43	VKL3155-00A	Reel Disk Bracket Ass'y		1
44	VKR4113-00A	Take-up Reel Ass'y		1
45	VKR4118-00A	Supply Reel Ass'y		1
46	VKW4134-001	Idler Spring		1
47	VKS4130-001	Back Tension Base		1
48	VKW3001-026	Compression Spring	for Back Tension	1
49	VKS4131-001	Reel Stopper		2
50	VKS4151-00B	Idler Ass'y Unit		1
51	MDN-7V1	Reel Motor		1
52	VKR4121-001	Motor Pulley		1
53	YRS2603B	Screw	for Motor Pulley	1
54	VKW4149-001	Play Solenoid Spring		1
55	VKZ3003-001	Rubber Tube		1
56	VKF3107-00B	Flywheel Ass'y		1
57	VKF3103-00B	Capstan Metal		1
58	T30301-137	Spring		1
59	VKB3001-007	Capstan Belt		1
60	VKL4372-00B	Flywheel Holder Ass'y		1
61	VKL4368-002	Play Solenoid Lever		1
62	VKW4137-001	Connecting Wire		1
63	TEP357456-01	Thrust Screw		1
64	VKL4629-001	Play Solenoid Bracket		1
65	VGP0201-004	D.C. Solenoid Ass'y	for Pause	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
66	VKL4478-001	Pause Solenoid Bracket		1
67	VGP0301-002	D.C. Solenoid Ass'y	for Play	1
68	VKL3161-002	Motor Bracket		1
69	m1606-00A	D.C. Motor	Capstan	1
70	VKS4139-001	Motor Pulley		1
71	TER357465-03	Cushion Rubber		3
72	VKZ4109-001	Motor Screw		3
73	TFB345469-01	Rubber Stopper		1
74	VKZ4001-011	Wire Holder		1
75	VGP0201-005	D.C. Solenoid Ass'y	for Brake	1
76	VKL4363-002	Lock Solenoid Lever		1
77	VKH4194-001	Shaft		1
78	VKL4622-00A	Joint Arm Ass'y		1
79	VKH4202-001	Flange Collar		1
80	VKL4464-001	Lock Lever		1
81	VKW3000-030	Spring		1
82	TJN265559-04	Silencer		1
83	VKC6110-001T	Counter Ass'y		1
84	VKB3000-012	Belt	for Counter	1
85	VKL4608-00B	Mecha. Bracket (R) Ass'y		1
86	VMW4555-001	P.W. Board		1
87	DN6835	Hall I.C.		1
88	QMV5004-004	Connector		1
89	VKL4617-001	Counter Bracket		1
90	VKL4614-001	Lock Arm		1
91	VKH3001-028	Flange Collar		1
92	VKW4161-002	Wire		1
93	VKL4615-001	Lock Arm Bracket		1
94	VKW3002-024	Tension Spring		1
95	TJN265559-04	Silencer		1
96	VKL4568-001	Hold Arm		1
97	VKH3001-027	Flange Collar		1
98	VKL4607-00A	Mecha. Bracket (L) Ass'y		1
99	VKL4403-00D	Shift Arm Ass'y		1
100	VKW4156-001	Shift Arm Spring		1
101	T43909-002	Metal		1
102	TJN265559-02	Silencer		1
103	VMZ0008-00A	Wire Ass'y		1
121	REE2000	E ring	for Push Arm	1
122	REE2500	〃	for Lock Lever Ass'y x 1 Play Solenoid Lever x 1 Shaft x 1, Lock Lever x 1	1
123	WNB2600N	Washer	for Slide Base Ass'y	1
124	Q03095-206	〃		1
125	Q03093-522	〃	for Flywheel	1
126	Q03093-621	〃	〃	1
127	Q03093-827	〃	〃	1
128	DPSP2606Z	Screw		1
129	GPSA2612Z	〃	for Slide Base	4
130	LPSP2604Z	〃	for Reel Motor x 3 Play Solenoid Bracket x 2 Pause Solenoid Bracket x 2 Rubber Stopper x 1 Lock Arm Bracket x 2	10
131	LPSP2605Z	〃	for Pause Solenoid Lever x 1 Flywheel Cover x 2 Motor Bracket x 1 Counter Bracket x 3 Flange Collar x 2, Metal x 1	10
132	LPSP2606Z	〃	for Capstan Metal x 3 Flywheel Holder x 1	4
133	LPSP3004ZS	〃	for Solenoid	2
134	LPSP3006CS	〃	for Counter Bracket	1
135	SBSB2610Z	Tapping Screw	for Flywheel Holder x 2 Motor Bracket x 2	4

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
136	SBSB3006C	Tapping Screw	for Mecha. x 4	4
137	SDSP2606Z	Screw	for P.W. Board	2
138	SDSP3006CS	〃	for Mecha.	2
139	SPSP2006N	〃	for Head Mount Base	1
140	SPSP2605Z	〃	for Reed Ass'y Unit x 4 Switch Holder x 5	9
141	SPSP3003ZS	〃	for Play Solenoid x 2 Brake Solenoid x 2	4
142	SPSX2010N	〃	for R/P, E Head	4
143	SSSP2605Z	〃	for Flange Collar x 1, Mecha. x 2	3
144	SSSP3006ZS	〃	for Counter	2

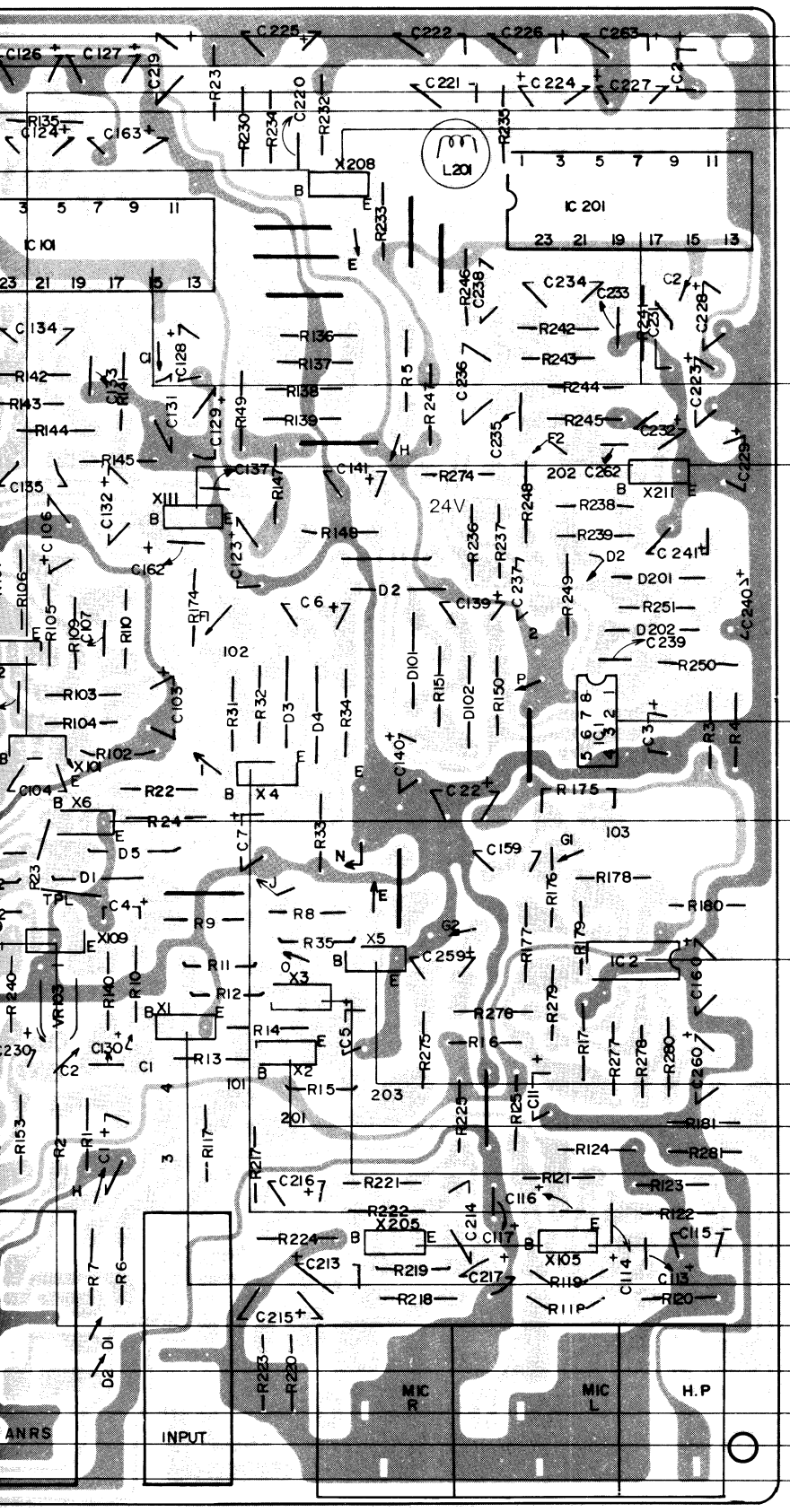
Printed Wiring Board Parts
Main P.W. Board Parts

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC53	POWER ON						0	999,REW	REW	999,REW		999		5V
IC55	PLAY or PAUSE H	TAPE END H	PLAY TAPE END L	TAPE END H	FF or REW H	FF or REW TAPE END L	0	FF L	FF H	FF or REW H	REW L	REW H	FF or REW H	5V
IC51	PLAY L	STOP L	FF L	H	REW L	PAUSE L	REC L	0	REC PROOF ON L	REC H	PAUSE H	PLAY H	REW H	FF or REW H
IC54	PLAY L	PAUSE L	PLAY or PAUSE H	PLAY or PAUSE H	FF or REW L	PLAY or PAUSE L	0	PLAY or PAUSE L	H	H	H	L	L	5V
IC56	PLAY H	PLAY L	PAUSE H	PAUSE L	REC H	REC L	0	FF or REW H	L	L	H	PAUSE H	L	5V
IC52	REW L	FF,PLAY or PAUSE L	FF,REW PLAY or PAUSE H	PLAY or PAUSE	PLAY or PAUSE	PLAY or PAUSE	0	—	—	—	—	—	—	—



5	6	7	8	9	10	11	12	13	14	15	16
			999,REW	REW	999,REW		999				
⌐¯	⌐¯	0	⌐¯	H	⌐¯	⌐¯	⌐¯	⌐¯	5V		
FF or REW H	FF or REW TAPE END L	0	FF L	FF H	FF or REW H	REW L	REW H	FF or REW H	5V		
REW L	PAUSE L	REC L	0	REC PROOF ON L	REC H	PAUSE H	PLAY H	REW H	FF or REW H	FF H	5V
FF or REW L	PLAY or PAUSE L	0	PLAY or PAUSE						5V		
			L	H	H	H	L	L			
REC H	REC L	0	FF or REW				PAUSE		5V		
			H	L	L	H	H	L			
PLAY or PAUSE ⌐¯	PLAY or PAUSE ⌐¯	0	—	—	—	—	—	—	—		

	E	C	B
X51	0	TAPE END H	0.6
X56	0	REC MUTE 20 Other 0	REC MUTE 0 Other 0.6
X53	0	PLAY or PAUSE ⌐¯	PLAY or PAUSE ⌐¯
X55	0	Pause 0	PAUSE 0.6
X52	0	PLAY or REC H	PLAY or REC 0
X104,204	3.8	Except REC 3.8	Except REC 4.4
X107,207	3.8	REC 3.8	REC 4.4
X106,206	—	—	REC 0 Other 0.6
X103,203	—	—	NORM 0 Other 0.6
X101,201	0.01	2.1	0.6
X102,202	1.5	11.8	2.1
X6	0	REC 11 Other 0	REC MUTE 0.6 Other 0
X111,211	0	—	PLAY or REC 0.6 Other 0
X108,208	0.27	8	0.87

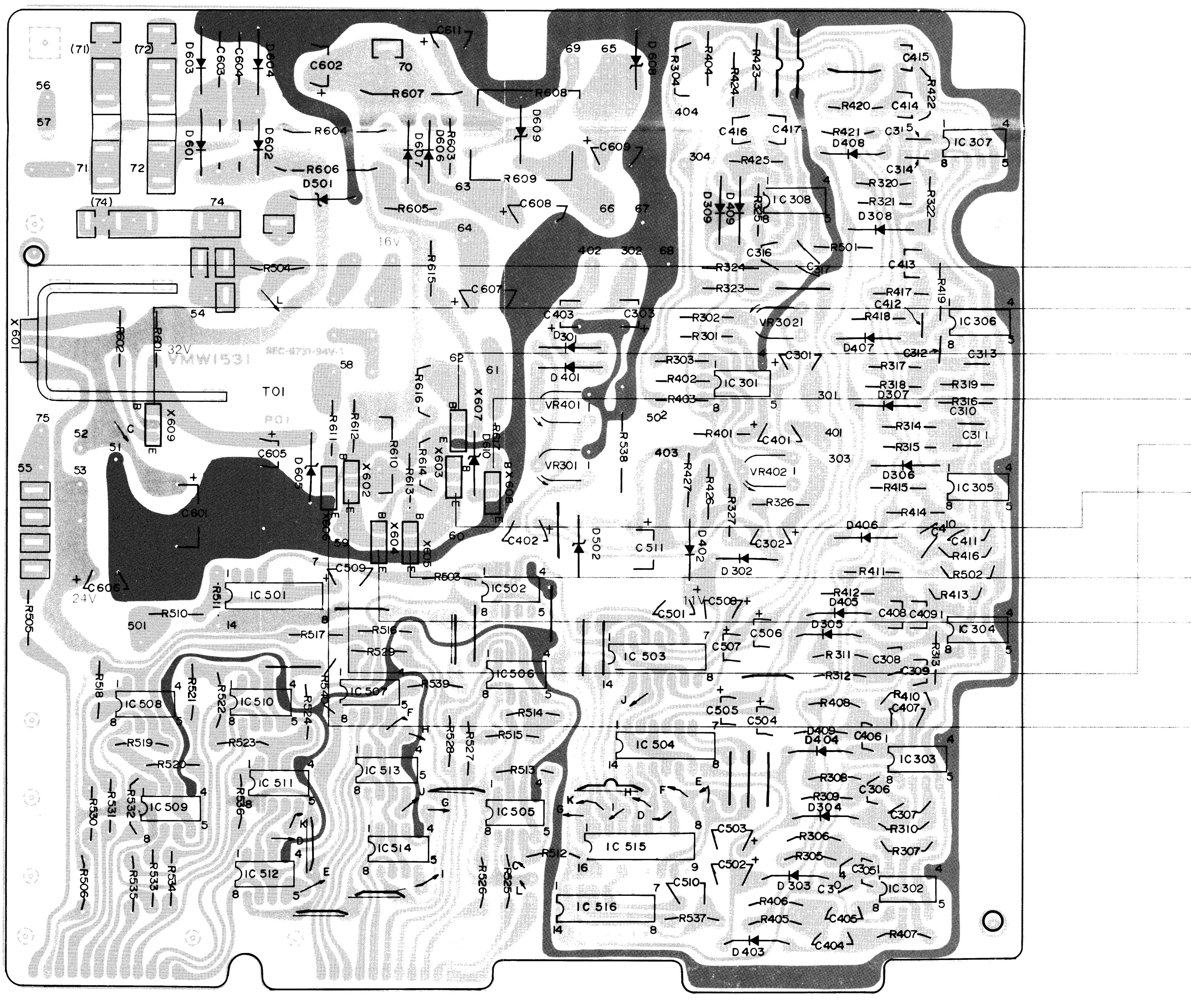


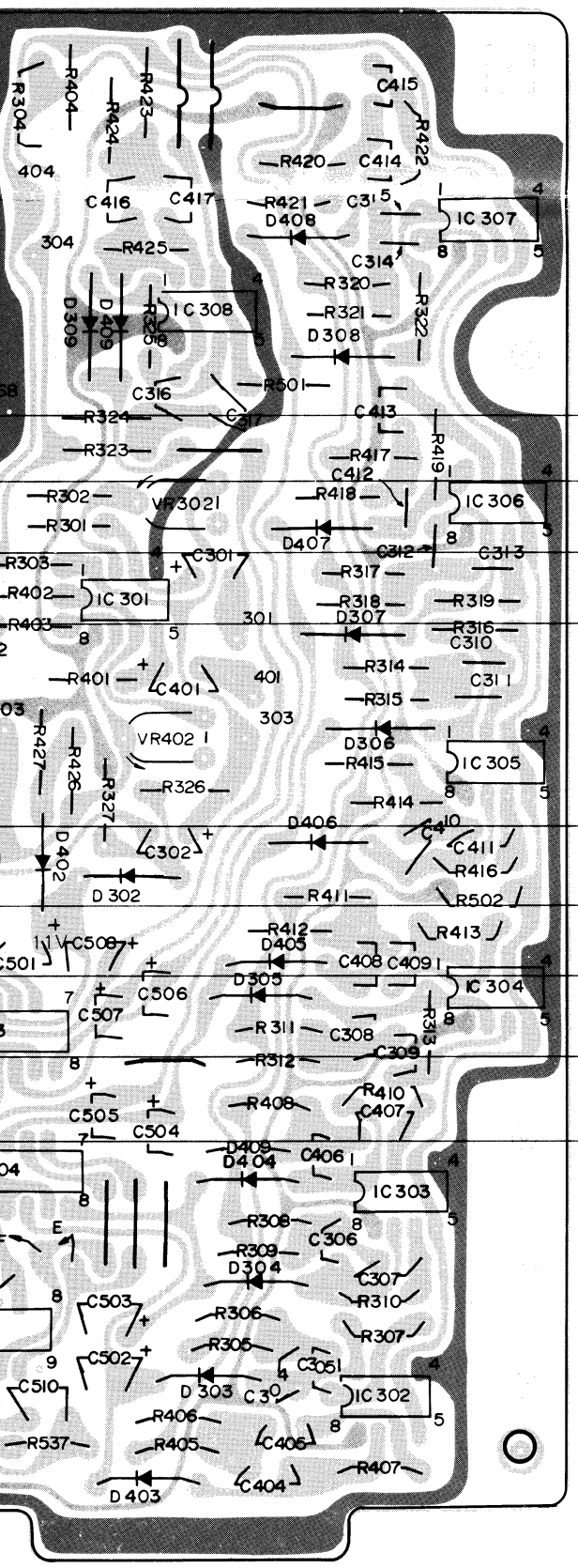
IC101 201	1	2	3	4	5	6	7	8	9	10	11	12
	8.36	7.66	8.51	8.46	6.02	5.19	1.04	4.72	9.19	9.17	0.35	0
	13	14	15	16	17	18	19	20	21	22	23	24
	0.06	0.71	18.75	9.21	10.52	9.24	10.55	11.79	11.8	11.81	11.8	16.5

	1	2	3	4	5	6	7	8
IC1	11.26	11.29	11.26	0	11.26	11.27	11.29	22.6
IC2	11.4	11.35	10.9	0	10.8	11.3	11.51	22.6

	E	C	B
X5	0	REC 0 Other 1.04	REC 0.6 Other 0
X2	20.2	REC 0 Other 19.3	REC 20 Other 18.6
X3	REC 19 Other 0	20	REC 19.6 Other 0
X4	18.3	PLAY or REC 0 Other 18.3	PLAY or REC 17.7 Other 21.9
X105,205	1.87	823	2.45
X1	0	REC 19.8 Other 0.1	REC 0.2 Other 0.7
X109,209	0	0	REC or REC MUTE 0.6
X54	0	PAUSE L Other H	PAUSE 0.6 Other 0
X7	0	REC 0 Other 22	REC 0.6 Other 0
X110,210	0.95	7.5	1.5
X9	REC 0.07 Other 22.1	REC 19.9 Other 22.5	REC 1.2 Other 22.4

Spectro Peak P.W. Board Parts





	E	C	B
X601	22.7	32.0	23.3
X609	23.4	32.0	24.0
X607	0	FF 9.2 PLAY 6.3 Other 0	REW, STOP or PAUSE 0.7 Other 0
X608	0	FF 4.5 Other 0	PLAY or PAUSE 0.6 Other 0
X602	STOP & REW 0 PLAY 5.8 FF 8.7	12.8	STOP & REW 0 PLAY 6.4 FF 9.3
X603	FF 8.6 PLAY & PAUSE 5.6 Other 0	12.0	FF 9.2 PLAY & PAUSE 6.3 Other 0
X606	0	0	0
X604	0	REW 8.5 Other 0	FF, PLAY 0.7 Other 0
X605	0	FF 8.6 PLAY or PAUSE 5.6 Other 0	REW 0.75 Other 0

Main Amp P.W.B. Parts list

⚠parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW1530-001	P.W. Board	No supply as parts ass'y	1
R101,201,104,204	QRD141J-823SL	C. Resistor	82kΩ 1/4W	4
R102,202	〃 -820SY	〃	82Ω 〃	2
R25,72,169,269, 180,280	〃 -151SY	〃	150Ω 〃	8
R103,203,161,261, 32,178,278	〃 -273SY	〃	27kΩ 〃	7
R105,205,122,222	〃 -101SY	〃	100Ω 〃	4
R106,206,60,62,85, 61,87	〃 -102SY	〃	1kΩ 〃	7
R107,207	〃 -681SY	〃	680Ω 〃	2
R108,208,115,215, 127,227,131,231, 148,248,174,274 2,26,31,33,79,86	〃 -103SY	〃	10kΩ 〃	18
R109,209	〃 -562SY	〃	5.6kΩ 〃	2
R110,210	〃 -274SY	〃	270kΩ 〃	2
R111,211,141,241, 165,265	〃 -152SY	〃	1.5kΩ 〃	6
R137,237	〃 -822SY	〃	8.2kΩ 〃	2
R114,214,117,217, 124,224,129,229, 146,246,158,258, 163,263,176,276, 57,58,63,160,260, 182,282	〃 -104SY	〃	100kΩ 〃	23
R116,216	〃 -394SY	〃	390kΩ 〃	2
R118,218	〃 -820SY	〃	82Ω 〃	2
R119,219,156,256	〃 -334SY	〃	330kΩ 〃	4
R120,220,135,235, 149,249,28,29	〃 -473SY	〃	47kΩ 〃	8
R121,221,151,251, 164,264,27,35,59, 83	〃 -223SY	〃	22kΩ 〃	10
R123,223,77,88	〃 -332SY	〃	3.3kΩ 〃	4
R125,225	〃 -392SY	〃	3.9kΩ 〃	2
R126,226,133,233, 140,240,152,252, 181,281,9,10,22, 34,66,67,70,112, 212	〃 -472SY	〃	4.7kΩ 〃	19
R128,228	〃 -394SY	〃	390kΩ 〃	2
R130,230	〃 -124SY	〃	120kΩ 〃	2
R132,232	〃 -121SY	〃	120Ω 〃	2
R134,234,159,259, 1,8	〃 -563SY	〃	56kΩ 〃	6
R136,236,12,64,69, 113,213,81,82, 179,279	〃 -562SY	〃	5.6kΩ 〃	11
R138,238,142,242, 144,244	〃 -272SY	〃	2.7kΩ 〃	6
R139,239,173,273, 11,13,84	〃 -222SY	〃	2.2kΩ 〃	7
R143,242,78	〃 -183SY	〃	18kΩ 〃 ⚠	3
R145,245	〃 -680SY	〃	68Ω 〃	2
R147,247	QRD146J-181S	Unflammable Resistor	180Ω 〃	1
R167,267	QRD141J-181SY	C. Resistor	180Ω 〃	2
R150,250	〃 -474SY	〃	470kΩ 〃	2
R153,253	〃 -823SY	〃	82kΩ 〃	2
R154,254,157,257, 36	〃 -393SY	〃	39kΩ 〃	5
R155,255	〃 -564SY	〃	560kΩ 〃	2
R162,262	〃 -125SY	〃	1.2MΩ 〃	2
R166,266,168,268, 170,270,74,76	〃 -221SY	〃	220Ω 〃	8

Ref. No.	Parts No.	Parts Name	Remarks		Q'ty
R171,271,6,7,52, 53,55,56,71	QRD141J-271SY	C. Resistor	270Ω	1/4W	9
R172,272	〃 -391SY	〃	390Ω	〃	2
R175,275	〃 -272SY	〃	2.7kΩ	〃	2
R177,277,23	〃 -224SY	〃	220kΩ	〃	3
R3,4	〃 -683SY	〃	68kΩ	〃	2
R5,61,51	〃 -471SY	〃	470Ω	〃	3
R14	〃 -333SY	〃	33kΩ	〃	1
R16,17	〃 -153SY	〃	15kΩ	〃	2
R15	QRD146J-121S	Unflammable Resistor	120Ω	〃	⚠ 1
R18	〃 -391S	〃	390Ω	〃	⚠ 1
R19	〃 -471S	〃	470Ω	〃	⚠ 1
R20	〃 -151S	〃	150Ω	〃	⚠ 1
R21	〃 -470S	〃	47Ω	〃	⚠ 1
R24	QRD141J-682SY	C. Resistor	6.8kΩ	〃	1
R30	〃 -100SY	〃	10Ω	〃	1
R54,73,75	〃 -331SY	〃	330Ω	〃	3
R65	〃 -560SY	〃	56Ω	〃	1
R68	〃 -561SY	〃	560Ω	〃	1
R80	〃 -200SY	〃	20Ω	〃	1
	V44611-005	Bus Wire			3
	QWY123-022	〃			28
C101,201	QCS11HJ-221	F. Ceramic Capacitor	220pF	50V	2
C157,257	〃 -391	〃	390pF	〃	2
C102,202,109,209	QEB41EM-475N	Low Leak E. Capacitor	4.7μF	25V	4
C103,203,125,225, 126,226,127,227, 64,3,163,263	QEW41CA-336N	E. Capacitor	33μF	16V	12
C104,204	QCS11HJ-101	F. Ceramic Capacitor	100pF	50V	2
C105,205	〃 -680	〃	68pF	〃	2
C106,206,2	QEW40JA-227N	E. Capacitor	220μF	6.3V	3
C107,207	QFM41HJ-183	Mylar Capacitor	0.018μF	50V	2
C108,208,117,217, 156,256,160,260	QEW41EA-336N	E. Capacitor	33μF	25V	8
C110,210	QFM41HJ-153	Mylar Capacitor	0.015μF	50V	2
C148,248,151,251	〃 -822	〃	0.0082μF	〃	4
C111,211	〃 -102	〃	0.001μF	〃	2
C122,222,144,244	〃 -102	〃	0.001μF	〃	4
C112,212,116,216, 118,218,119,219	QEB41EM-105N	Low Leak E. Capacitor	1μF	25V	8
C113,213,141,241	〃 -335N	〃	3.3μF	〃	4
C114,214,318,238	QCS11HJ-471	F. Ceramic Capacitor	470pF	50V	4
C115,215,128,228, 129,229,6	QEW41AA-107N	E. Capacitor	100μF	10V	7
C120,220,131,231, 133,233	QCS11HJ-151	F. Ceramic Capacitor	150pF	50V	6
C121,221	〃 -201	〃	200pF	〃	2
C123,223,5,7,22	QEW41EA-227N	E. Capacitor	220pF	25V	5
C124,224,68	〃 -335N	〃	3.3μF	〃	3
C130,230,1,61	〃 -475N	〃	4.7μF	〃	4
C132,232	〃 -105N	〃	1μF	〃	2
C134,234,154,254	QFM41HJ-272	Mylar Capacitor	0.0027μF	50V	4
C135,235	〃 -273	〃	0.027μF	〃	2
C136,236	〃 -682	〃	0.0068μF	〃	2
C137,237	〃 -102	〃	0.001μF	〃	2
C139,239,145,245, 155,255,159,259, 162,262,20,69	QEW41HA-105N	E. Capacitor	1μF	〃	12
C140,240	QEW41AA-476N	〃	47μF	10V	2
C142,242,150,250	QFM41HJ-152	Mylar Capacitor	0.0015μF	50V	4
C143,243	〃 -122	〃	0.0012μF	〃	2
C146,246	〃 -104	〃	0.1μF	〃	2
C147,247	QCS11HJ-201	F. Ceramic Capacitor	200pF	〃	2
C149,249	QFM41HJ-332	Mylar Capacitor	0.0033μF	〃	2
C152,252	〃 -562	〃	0.0056μF	〃	2
C153,253	〃 -392	〃	0.0039μF	〃	2

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C158,258	QCS11HJ-201	F. Ceramic Capacitor	200pF 50V	2
C70	QCF11HP-104	〃	0.1μF 〃	1
C161,261	QFS32BK-221	Polystyrene Capacitor	220pF	2
C13	QEW41CA-107N	E. Capacitor	100μF 16V	1
C14,15,18	QFM41HJ-472	Mylar Capacitor	0.0047μF 50V	3
C16	QFP32AJ-103L	Polypropylene Capacitor	0.01μF 10V	1
C17	QFP32AJ-223L	〃	0.022μF 〃	1
C19,67,4	QEW41EA-106N	E. Capacitor	10μF 25V	3
C21	QFS32BK-682	Polystyrene Capacitor	0.0068μF	1
C51~57	QCF11HP-102	F. Ceramic Capacitor	0.001μF 50V	7
C58	QEW40JA-108N	E. Capacitor	1000μF 6.3V	1
C59	QEN41EM-476M	N.P.E. Capacitor	47μF 25V	1
C60,65	QEW41CA-476N	E. Capacitor	47μF 16V	2
C62	QFM41HK-473	Mylar Capacitor	0.047μF 50V	1
C63,66	QEW40JA-108N	E. Capacitor	1000μF 6.3V	2
VR101,201,103,203	QVP8A0B-024	V. Resistor	20kΩ	4
VR102,202	〃 -054	〃	50kΩ	2
VR104,204,105,205, 106,206	QVP4A0B-224	〃	22kΩ	6
L101,201,102,202, 104,204	VQP0001-183	Inductor	18mH	6
L103,203	TAC000320-07	〃	5.6mH	2
L1	VQP0001-102	〃	1mH	1
X101,201,102,202 105,205,109,209	2SC1327(T.U)	Si. Transistor		8
X103,203,104,204, 106,206,107,207, 1,3,5,6,51,52,56	2SC1684(R.S)	〃		15
X108,208	2SC1327(U)	〃		2
X109,209,110,210	2SD468(B.C)	〃		4
X2,4	2SA564(R.S)	〃		2
X7,8,9	2SC1685(R.S)	〃		3
X53,54,55	2SC1162(B.C)	〃		3
IC101,201	TAT000351-01	I.C		2
IC1	UPC4558C	〃		1
IC2	UPC4557C	〃		1
IC51	M54410P	〃		1
IC52,53,54	HD7400	〃		3
IC55	HD7403	〃		1
IC56	HD7404	〃		1
D101,201,102,202, 52~57,59,60,63, 65	0A90	Si. Diode		14
D61,62,64	MA150	〃		3
	VQH1009-003	Osc. Coil		1
	VSK5D24-211	Relay		1
	*QSR6045-250	Rotary Switch	for Rec EQ	1
	QSL8309-001	Lever Switch	for EQ	1
	QSL8209-012	〃	for Metal	1
	QSL4209-021		for I. & S. x 1, ANRS x 1	2
	VMJ5002-003	Mic & H.P Jack Ass'y		1
	QMV5005-003	Plug Ass'y	for E. Head Wires	1
	QMV5005-006	〃	for R/P Head Wires x 1 Indicator x 1	2
	QMV5004-008	〃	for Cont. x 1, Remote x 1	2
	E43727-002	Tab		33
	VMZ0005-001	Post Pin		1
	*QVL7A7A-054V	V. Resistor	for Rec, 50kΩ	1
	*QVD8A7A-024V	〃	for Output, 20kΩ	1

Spectro-Peak Level Indicator P.W.B. Parts List

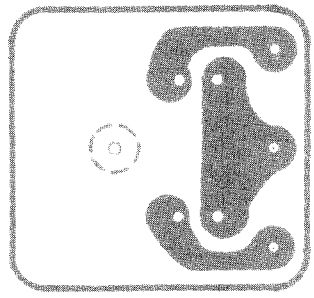
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW1531-001	P.W. Board	No supply as parts ass'y	1
R301,401	QRD141J-184SY	C. Resistor	180kΩ 1/4W	2
R302,402	〃 -103SY	〃	10kΩ 〃	2
R303,403	〃 -102SY	〃	1kΩ 〃	2
R304,404	〃 -911SY	〃	910Ω 〃	2
R305,405	-683SY	〃	68kΩ 〃	2
R308,408,311,411, 314,414,317,417, 320,420,323,423	〃 -753SY	〃	75kΩ 〃	12
R306,406,309,409, 312,412,315,415, 318,418,321,421, 324,424	〃 -562SY	〃	5.6kΩ 〃	14
R307,407	〃 -334SY	〃	330kΩ 〃	2
R310,410,313,413, 316,416,319,419, 322,422,325,425	〃 -334SY	〃	330kΩ 〃	12
R326,426	〃 -101SY	〃	100Ω 〃	2
R327,427	〃 -472SY	〃	4.7kΩ 〃	2
R501,520	〃 -331SY	〃	330Ω 〃	2
R502	〃 -123SY	〃	12kΩ 〃	1
R503,512	〃 -682SY	〃	6.8kΩ 〃	2
R504,505	QRD146J-100S	Unflammable Resistor	10Ω 〃 ⚠	2
R506	QRD141J-332SY	C. Resistor	3.3kΩ 〃	1
R510	〃 -101SY	〃	100Ω 〃	1
R511,507	〃 -105SY	〃	1MΩ 〃	2
R513	〃 -182SY	〃	1.8kΩ 〃	1
R514	〃 -202SY	〃	2kΩ 〃	1
R515	〃 -911SY	〃	910Ω 〃	1
R516	〃 -301SY	〃	300Ω 〃	1
R517	〃 -511SY	〃	510Ω 〃	1
R518	〃 -561SY	〃	560Ω 〃	1
R519	〃 -471SY	〃	470Ω 〃	1
R521,522	〃 -431SY	〃	430Ω 〃	1
R523	〃 -151SY	〃	150Ω 〃	1
R524	〃 -331SY	〃	330Ω 〃	1
R525~536	〃 -152SY	〃	1.5kΩ 〃	12
R537	〃 -105SY	〃	1MΩ 〃	1
R538	QRG029J-181	M.F. Resistor	180Ω 〃	1
R539,540	QRD141J-104SY	C. Resistor	100kΩ 〃	2
R601	〃 -822SY	〃	8.2kΩ 〃	1
R602	QRD146J-3R3S	Unflammable Resistor	3.3Ω 〃 ⚠	1
R603	〃 -3R3S	C. Resistor	3.3Ω 〃 ⚠	1
R604	QRG039J-151	O.M.F. Resistor	150Ω 3W ⚠	1
R605	QRD146J-220S	Unflammable Resistor	22Ω 1/4W ⚠	1
R606	QRG029J-221	O.M.F. Resistor	220Ω 2W ⚠	1
R607	〃 -8R2	〃	8.2Ω 〃 ⚠	1
R608,609	〃 -330	〃	33Ω 〃 ⚠	2
R610	QRG019J-220	〃	22Ω 1W ⚠	1
R611,617,512	QRG141J-472SY	C. Resistor	4.7kΩ 1/4W	3
R612,615	〃 -122SY	〃	1.2kΩ 〃	2
R613,614	〃 -272SY	〃	2.7kΩ 〃	2
R616	〃 -333SY	〃	33kΩ 〃	1
C301,401	QEW41HA-105N	E. Capacitor	1μF 50V	2
C302,402,606	QEW41EA-106N	〃	10μF 25V	3
C303,403	QEW41CA-336N	〃	33μF 16V	2
C304,404,305,405	QCS11HJ-331	F. Ceramic Capacitor	330pF 50V	4
C306,406,307,407	〃 -681	〃	680pF 〃	4
C308,408,309,409	QFM41HJ-152	Mylar Capacitor	0.0015μF 〃	4
C310,410,311,411	〃 -392	〃	0.0039μF 〃	4
C312,412,313,413	〃 -103	〃	0.01μF 〃	4
C314,414,315,415	〃 -273	〃	0.027μF 〃	4
C316,416,317,417	〃 -104	〃	0.1μF 〃	4
C501~508,512	QEB41EM-106N	Low Leak E. Capacitor	10μF 25V	9
C509	QEB41EM-475N	〃	4.7μF 25V	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C510	QFM41HJ-102	Mylar Capacitor	0.001μF 50V	1
C511	QEW41CA-108N	E. Capacitor	1000μF 16V	1
C513	〃 -227N	〃	220μF 〃	1
C611	〃 -107N	〃	100μF 〃	1
C601	QET41HR-228N	〃	2200μF 50V	1
C602	QEW41EA-108N	〃	1000μF 25V	1
C603,604	QCF12HP-103	F. Ceramic Capacitor	0.01μF 50V	2
C607,608	QEW41EA-477N	E. Capacitor	470μF 25V	2
C609	QEW40JA-108N	〃	1000μF 6.3V	1
C605	QEW41EA-107N	〃	100μF 25V	1
VR301,401	QVP8A0B-023	V. Resistor	2kΩ	2
VR302,402	〃 -015	〃	100kΩ	2
X602,603	2SD468(B.C)	Si. Transistor		2
X604,605	2SC1213(C.D)	〃		2
X606,607,608	2SC1684(R.S)	〃		3
X609	2SC1685(R.S)	〃		1
IC301～308 401～408,502	UPC4558C	I.C		17
IC501,503,504	TC4016P	〃		3
IC505～514	UPC4557C	〃		10
IC515	TC4022P	〃		1
IC516	TC4069P	〃		1
D301,401	OA90	Ge. Diode		2
D302～309 402～409,503	MA150	〃		17
D501	RD4.3E(C)	Zener Diode		1
D502	RD12F(B)	〃		1
D601～604 606,607,611,612	10E1-B	Si. Diode	⚠	8
D605	RD24E(C)	Zener Diode		1
D608,609	RD5.1F(B)	〃		2
D610	RD6.2E(B3)	〃		1
	E40130-001	Tab		7
	E43727-002	〃		35
	QMF51A2-1R6BS	Fuse	⚠	2
	TAZ000331-02	Fuse Holder		4
	*VMA3103-001	Shield Board		1

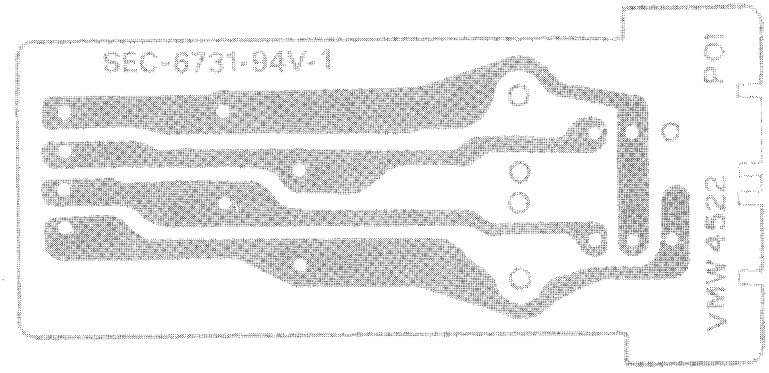
(Transistor)				
	VMW4514-001	P.W. Board		1
	VKL4262-002	Radiation Plate		1
X601	2SC1162(B,C)	Si. Transistor		1
	LPSP2606Z	Screw		1
	SBSB3006Z	Screw		1

Other P.W. Board Parts

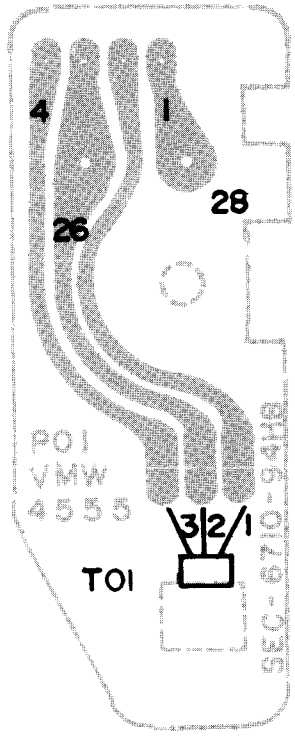
Indicator



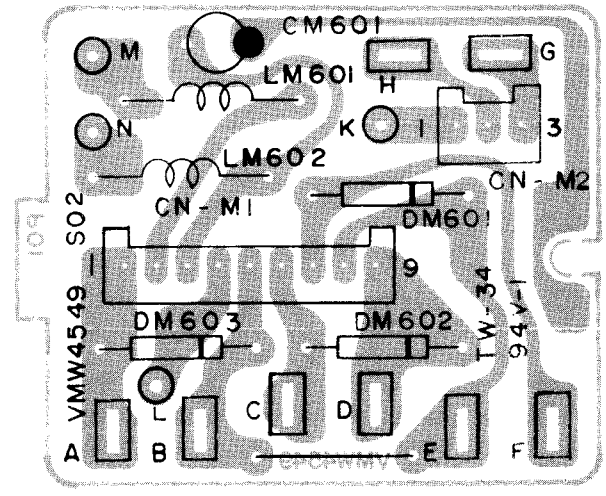
Slide Switch



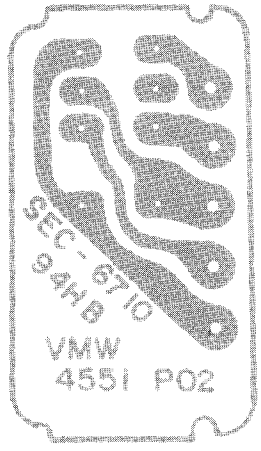
Hall IC



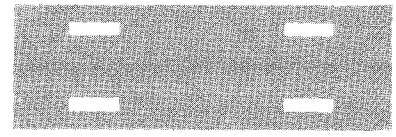
Connector



Timer and memory Switch



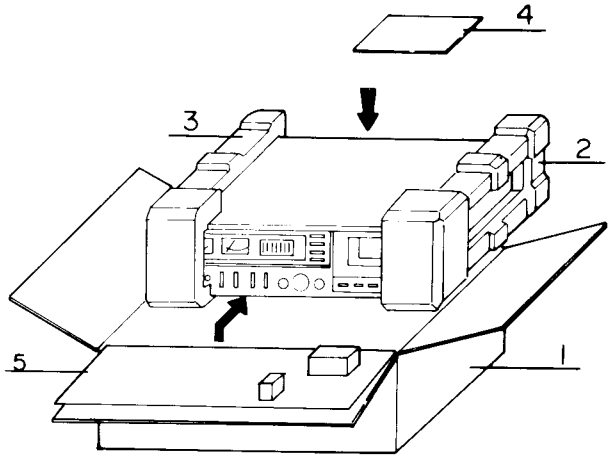
Pin Jacks



Other P.W. Board Parts List

	Parts No.	Parts Name	Remarks	Q'ty
(Indicator)				
	VMW4562-001	P.W. Board	for Indicator	1
	SLB-26GG1N	LED	for Super ANRS Tape	2
	QRD142K-271	C. Resistor	270Ω 1/4W	2
(Slide Switch)				
	VMW4522-001	P.W. Board (L)		1
	QSP0029-001	Slide Switch		2
	QMV5004-004	Connector		1
(Hall IC)				
	VMW4555-001	P.W. Board		1
	DN6835	Hall I.C.		1
	QMV5004-004	Connector		1
(Connector)				
	VMW4549-002	P.W. Board		1
	10E1-B	Si. Diode		3
	QMV5005-003	Connector		1
	QMV5005-009	Connector		1
	FG9010-001	Tab		8
	T41572-001	Inductor		2
	QEW41HA-105N	E. Capacitor		1
(Timer and Memory Switch)				
	VMW4551-001	Switch P.W.B.	Timer SW, Memory SW	2
	QSS2301-101	Slide Switch	〃 〃	2
	LPSP2604Z	Screw	for SW	4
(Pin Jack)				
	TAA345532-01	Circuit Board		1

Packing



Packing Material List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1,2,3	VPA3110-00A	Packing Case Ass'y	KD-A7 A/B/E/J/U	1
1,2,3	〃 -00E	〃	KD-A7 C	1
1	VPA3110-001	Case	KD-A7 A/B/E/J/U	1
1	〃 -005	〃	KD-A7 C	1
2	VPH2124-001	Cushion (L)		1
3	VPH2125-001	Cushion (R)		1
	TKS000501-001	Sheet	for Deck	1
	QPGA060-06005	Envelope	for Deck	1
	AP4056A-036	〃	for Provided Cord	1
4	QPGB024-03404	〃	for Instruction Book	1
5	*VPK3132-001	Front Pad		1

Accessories

Parts No.	Parts Name	Remarks	Q'ty
VMP0002-00A	PIN cord		2
VYA4001-00A	Head Cleaning Stick		1
VNN0047-301	Instruction Book		1
BT20029	Warranty Card	KD-A7 A	1
VND4013-001	Warranty Label	KD-A7 A/B/E	1
T46328-003	Caution Label	KD-A7 A/B	1
TLJ000476-02	ANRS Seal		1
TLJ000477-02	Super ANRS Seal		1
VPZ4001-001	Serial Ticket	KD-A7 A/B/E/J/U	1
BT20013B	Guarantee Certificate	KD-A7 B	1
TJL000443-01	Seal	KD-A7 B	1
	BEAB Label	KD-A7 B	1
QZL1002-003BS	Warning Label	KD-A7 B	1
VNC5004-001	Mark Sticker	KD-A7 B/E	1
BT2005C	Warranty Card	KD-A7 C	1
T44362-001	CSA Marker	KD-A7 C	1
TLT000505-01	UL/CSA Caution Label	KD-A7 C/J	1
T43758-003	Serial Ticket	KD-A7 C	1
T46328-004	Caution Label	KD-A7 E	1
BT20032	Warranty Card	KD-A7 J/U	1
BT20042	Special Reply Card	KD-A7 J/U	1
E7795-1	EP Mark	KD-A7 U	1
V04062-001	Siemens Plug	KD-A7 U	1
T46328-001	Caution Label	KD-A7 U	1

JVC
VICTOR COMPANY OF JAPAN, LIMITED
RADIO & RECORDING MACHINE DIVISION 804 Futoo-cho, Kohoku-ku, Yokohama, Japan

CORRECTION

(Bias current adjustment on page 11 and 13)

	(Wrong)			(Correct)	
	L	R		L	R
SA/CrO_2	VR105	VR205	→	VR106	VR206
Metal	VR106	VR206	→	VR105	VR205

SUPPLEMENTARY

(Main amp P. W. Board parts on page 35)

Additional Parts					
R89	QRD143J-471S	C. Resistor	470Ω	1/4W	1
C71	QEW41CA-106N	E. Capacitor	10μF	16V	1
D66	OA91	Ge. Diode			1
Changeable parts					
C62	QFM41HK-473	Mylar Capacitor	0.047μF	50V	1
	↓				
	QEW41CA-106N	E. Capacitor	10μF	16V	1
R57. 58.	QRD141J-104SY	C. Resistor	100kΩ	1/4W	2
	↓				
	QRD141J-103SY	〃	10kΩ	1/4W	2

(Spectro peak level indicator P. W. board parts on page 36)

R604	QRG039J-151	OMF Resistor	150Ω	3W	1
	↓				
	QRG036J-151	〃	〃	〃	1

(Enclosure assembly and electrical parts on page 27)

Additional parts			
	* VKL4685-001	Bracket	1
	SBSB3006Z	Screw	2
	VKZ4001	Wire clamp	1

(Accessories on page 40)

Additional parts			
	VND4001-005	Caution label	1
	VND4006-002	Caution label	1