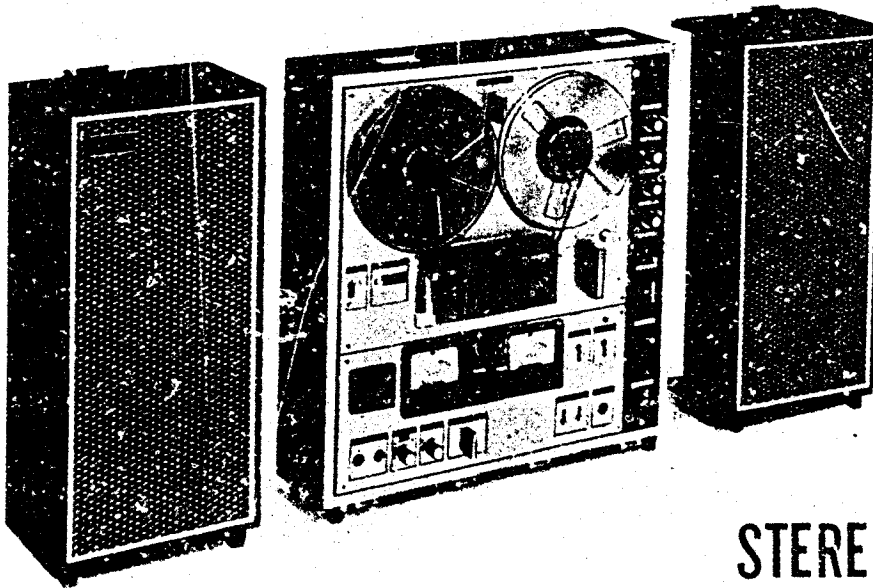


TC-630

Canadian Model
E Model
US Model
AEP Model
UK Model



STEREO TAPECORDER

SPECIFICATIONS

| | | | |
|-------------------------------------|---|------------------------|---|
| Power Requirements: | 85W (100 VA), 117 volts (USA, Canada Model) 85W, 100, 110, 117, 125, 220 & 240 volts (E, AEP, UK Model) (Voltage selector provided in the set) AC 60Hz (USA, Canada Model) AC 50 or 60 Hz (E, AEP, UK Model) (Convertible with power frequency selector and capstan sleeve) | Outputs: | Line outputs: 0 dB (0.775V), Load impedance 100k Ω Speaker outputs (for external): Load impedance 8 Ω Speaker outputs (for lid): Load impedance 16 Ω Headphone outputs (for monitoring): Load impedance 8 Ω Headphone outputs (for listening): Load impedance 8 Ω |
| Tape Speeds: | 19 cm/s, 9.5 cm/s and 4.8 cm/s 7 $\frac{1}{2}$ ips, 3 $\frac{3}{4}$ ips and 1 $\frac{7}{8}$ ips | Recording Time: | 4-track stereo 1.5 hrs at 19cm/s, 7 $\frac{1}{2}$ ips 3 hrs at 9.5cm/s, 3 $\frac{3}{4}$ ips 6 hrs at 4.8cm/s, 1 $\frac{7}{8}$ ips |
| Reel Size: | 7 inches or smaller | | 4-track mono 3 hrs at 19cm/s, 7 $\frac{1}{2}$ ips 6 hrs at 9.5cm/s, 3 $\frac{3}{4}$ ips 12 hrs at 4.8cm/s, 1 $\frac{7}{8}$ ips |
| Track System: | 4-track stereophonic or monophonic | Semiconductors: | Transistor: 40 pcs. Diode: 7 pcs. |
| Frequency Response: (NAB) | 30~22,000 Hz at 19cm/s, 7 $\frac{1}{2}$ ips 30~13,000 Hz at 9.5cm/s, 3 $\frac{3}{4}$ ips 30~10,000 Hz at 4.8cm/s, 1 $\frac{7}{8}$ ips | Heads: | Record: PP 30-2902A PP 102-2902 (Serial No. 124701 and later) Playback: RP30-2902 RP102-2902 (Serial No. 124701 and later) Erase: EF18-2902A |
| Wow and Flutter: (NAB) | Less than 0.09% at 19cm/s, 7 $\frac{1}{2}$ ips Less than 0.12% at 9.5cm/s, 3 $\frac{3}{4}$ ips Less than 0.16% at 4.8cm/s, 1 $\frac{7}{8}$ ips | Dimensions: | 454(w) x 506 (n) x 294 (d) mm 17 $\frac{7}{8}$ (w) x 20 (h) x 11 $\frac{7}{8}$ (d) inches |
| Power Output: | 15W (maximum) per channel 40W (dynamic power) with both channels | Weight: | 21 kg, 46 lb 3 oz |
| Signal-to-Noise Ratio | Better than 50 dB | | |
| Harmonic Distortion: | Less than 1.2% (at normal recording level) Less than 0.5% (in working as an amplifier) | | |
| Recording Level Indication: | Two VU meters | | |
| Tone Controls: | Two separate controls for bass and treble | | |
| Inputs: | Low impedance microphone inputs: -72 dB (0.2 mV) High impedance auxiliary inputs: -22 dB (0.06V) High impedance tuner inputs: -22 dB (0.06V) Phonograph inputs: -52 dB (2 mV) | | |

SONY

SERVICE MANUAL

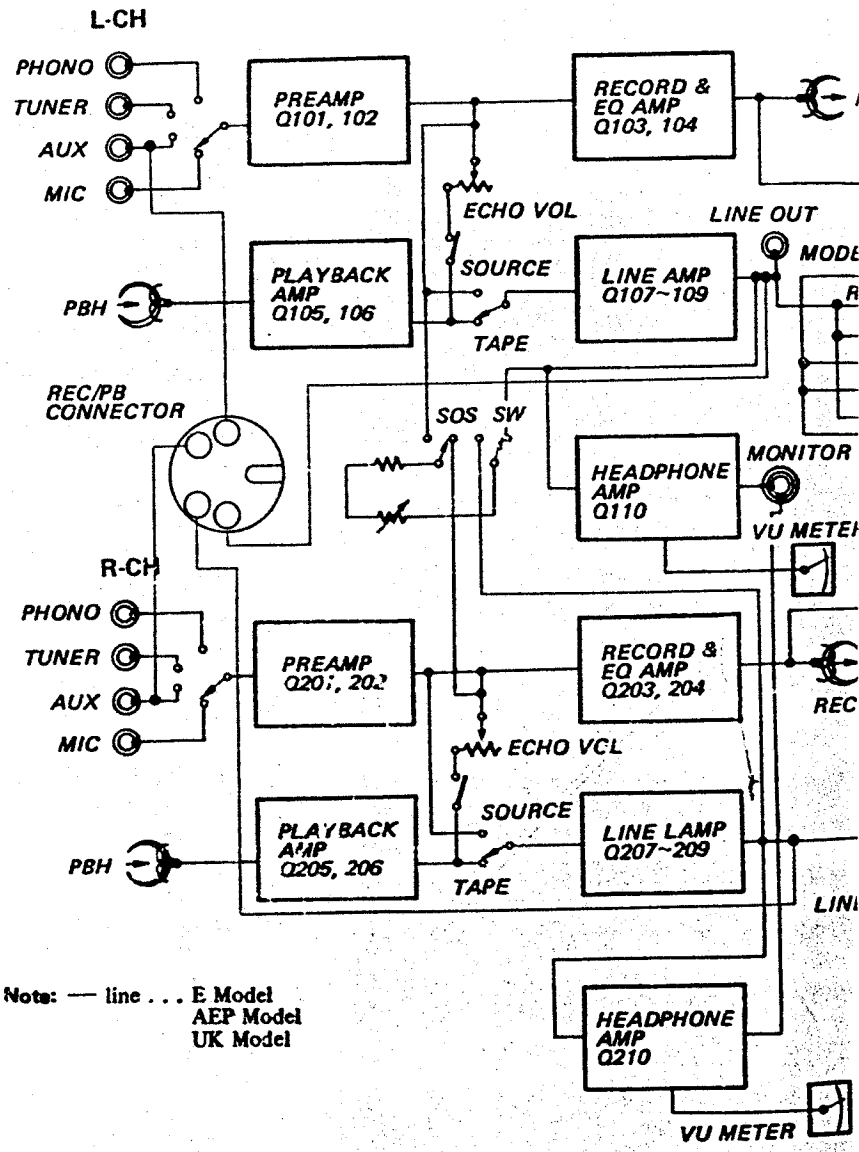
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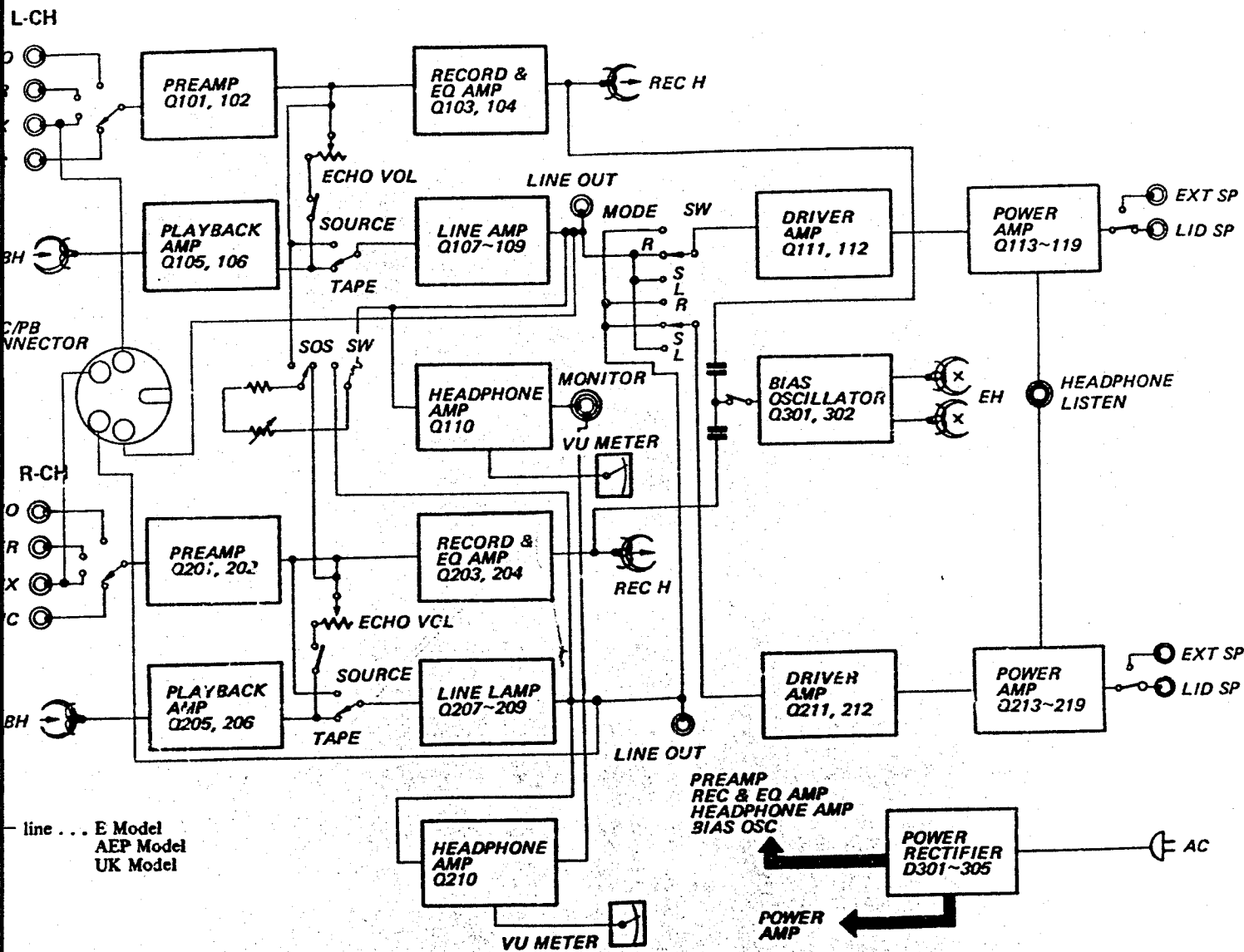
When ordering replacement parts, use PART NUMBERS listed in Parts Lists or shown in EXPLODED VIEWS. Parts List reference numbers should not be used.

All screws in this service manual are Phillips type (cross recess type) unless otherwise indicated.

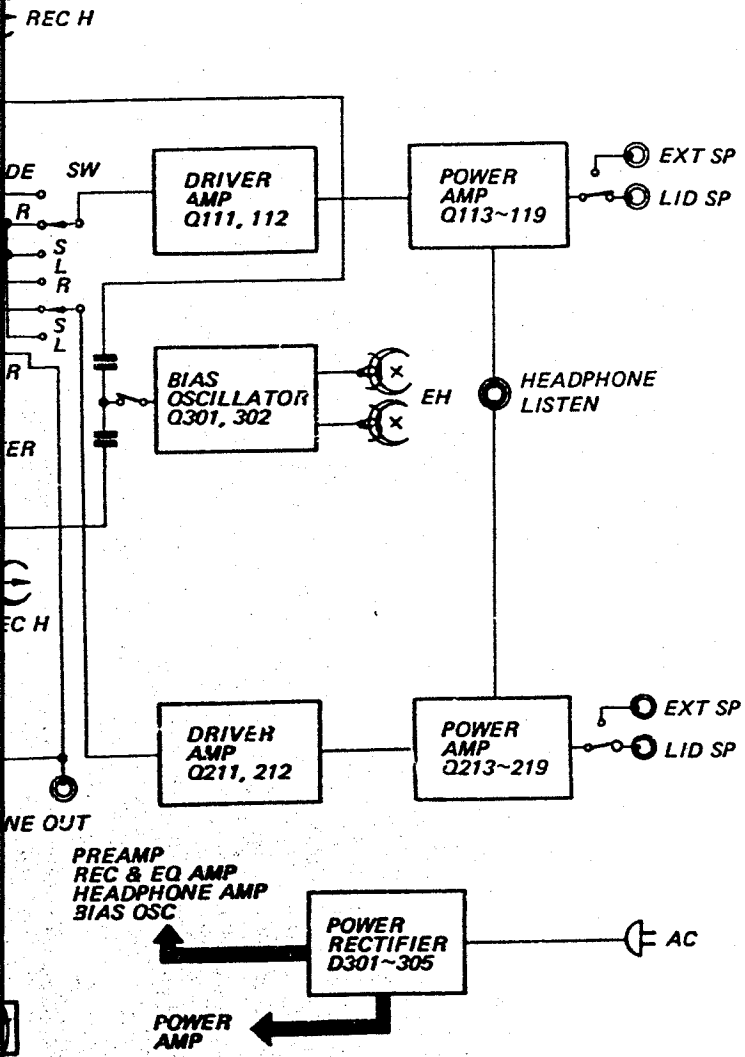
(-) : slotted head



— 3 —



I-1. BLOCK DIAGRAM

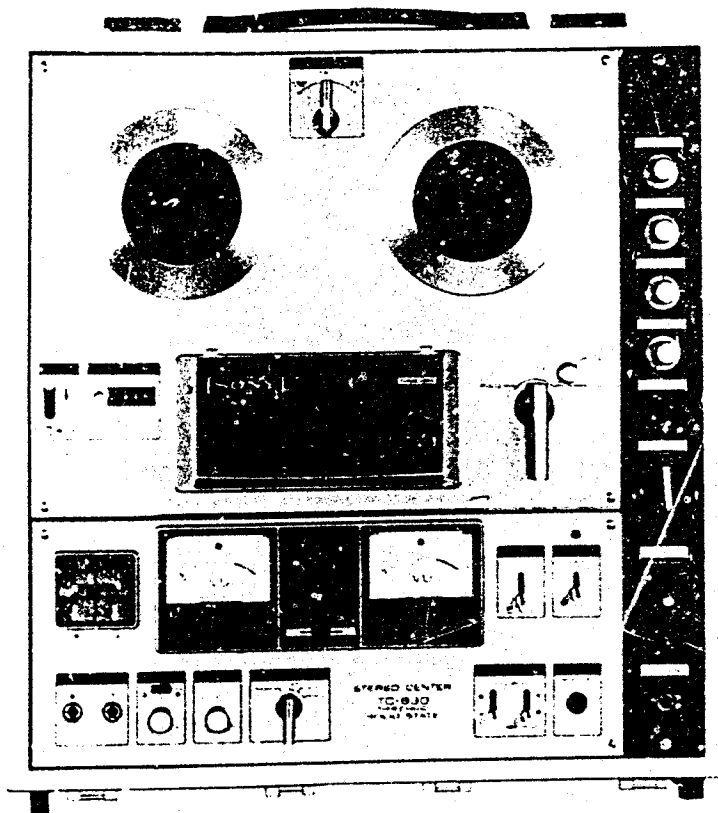


SECTION 1
OUTLINE

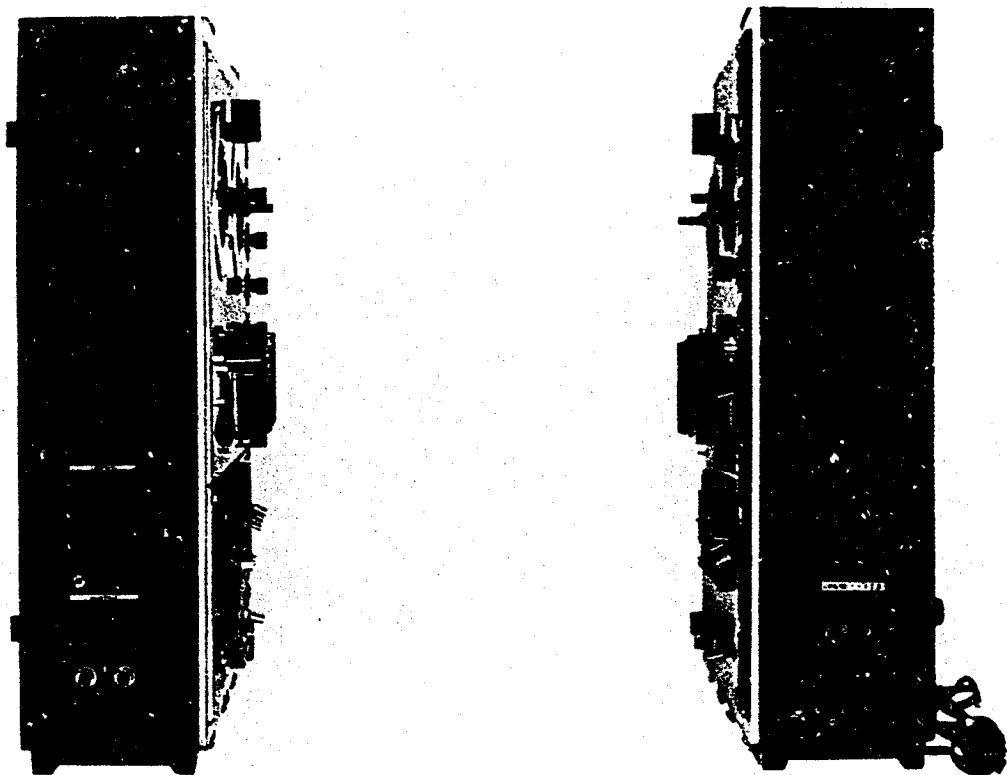
TC-630

TC-630

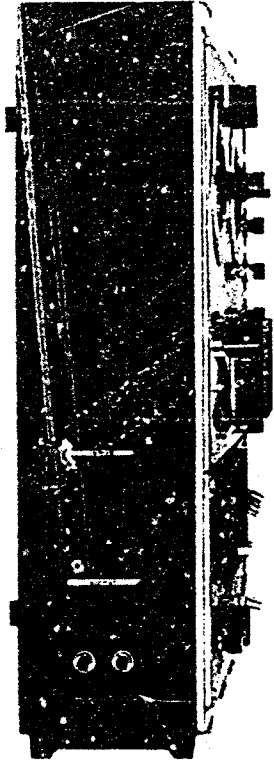
1-2 CABINET TOP VIEW



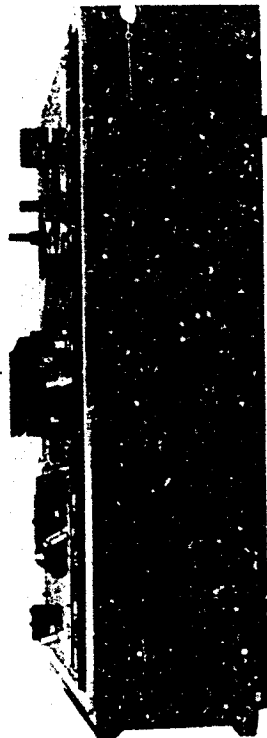
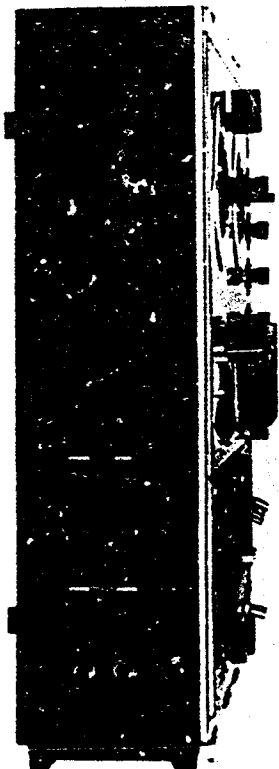
1-3. CABINET SIDE VIEWS (AEP, UK)



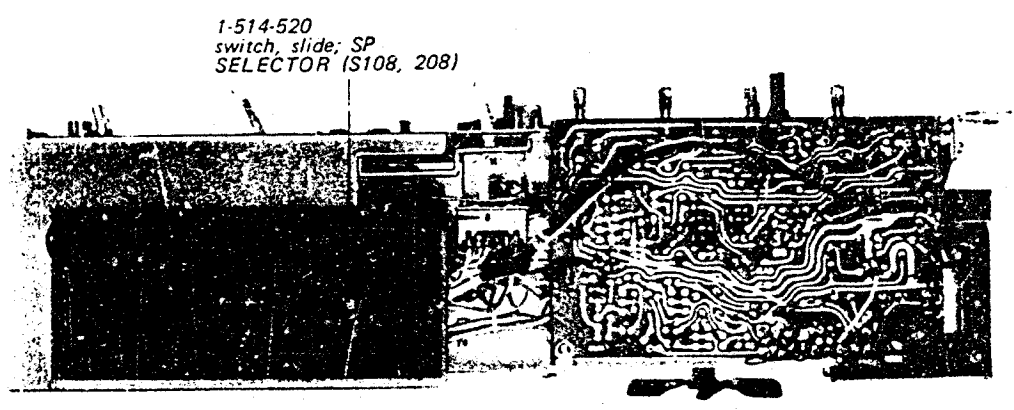
1.4. CABINET SIDE VIEWS (USA, Canada)



1.5. CABINET SIDE VIEWS (E)

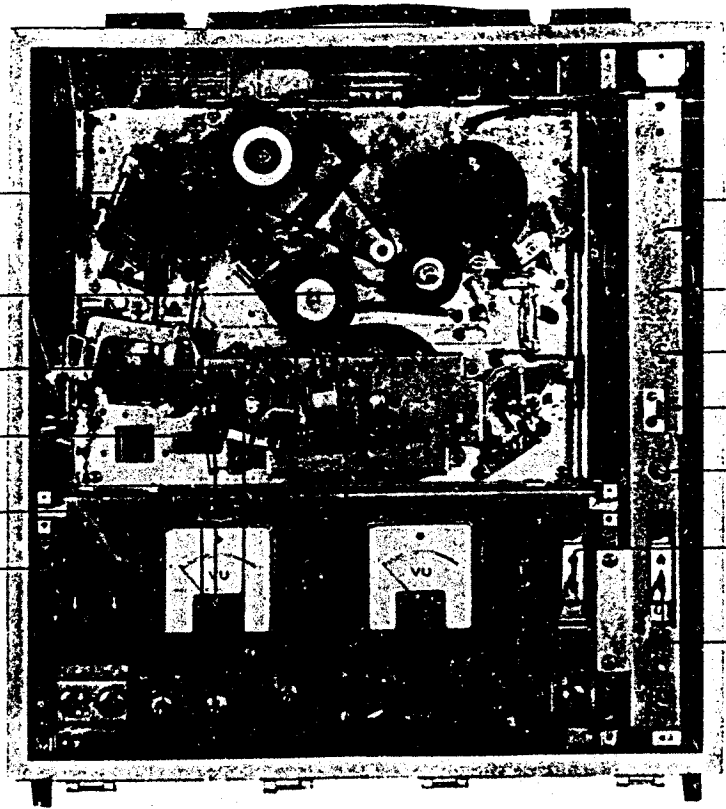


1-6. CHASSIS SIDE VIEW (USA, Canada)



1-514-520
switch, slide; SP
SELECTOR (S108, 208)

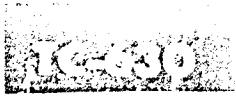
1-7. CHASSIS TOP VIEW



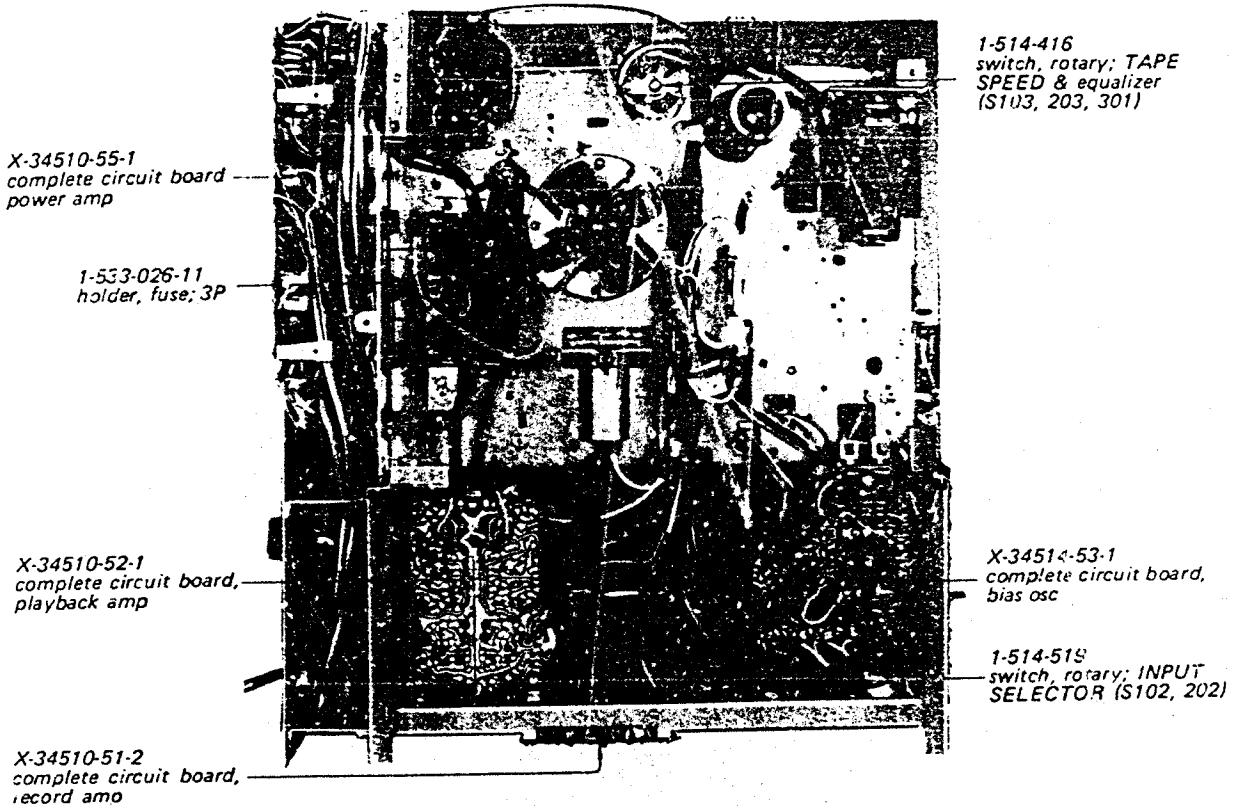
- 1-514-416
switch, TAPE SPEED &
equalizer (S103, 203, 301)
- 1-222-209
resistor, 200kΩ (C);
variable (R135, 235)
- 1-514-519
switch, rotary; INPUT
SELECTOR (S102, 202)
- 1-222-202
resistor, 50KΩ (A); variable
w/switch (R136, 236)
- 1-222-119
resistor, 200KΩ (A);
variable w/switch (R651)
- 1-514-449
switch, rotary; SOS
(S303)

- 1-221-916
resistor 50kΩ (A);
variable (R302, 304, 402, 404,
- 1-222-208
resistor, 100KΩ;
variable (R342)
- 1-221-916
resistor, 50kΩ (A);
variable (R308, 408)
- 1-514-520
switch, slide;
SP SELECTOR (S108, 208)
- 1-514-515
switch, rotary; MODE
selector (S109, 209)
- 1-516-037 (USA)
1-514-852 (AEP, UK)
1-514-325 (E, Canada)
switch, lever; POWER
(S305)
- 1-516-037 (USA)
1-514-325 (AEP, UK)
1-514-325 (E, Canada)
switch, lever; POWER
AMP (S306)

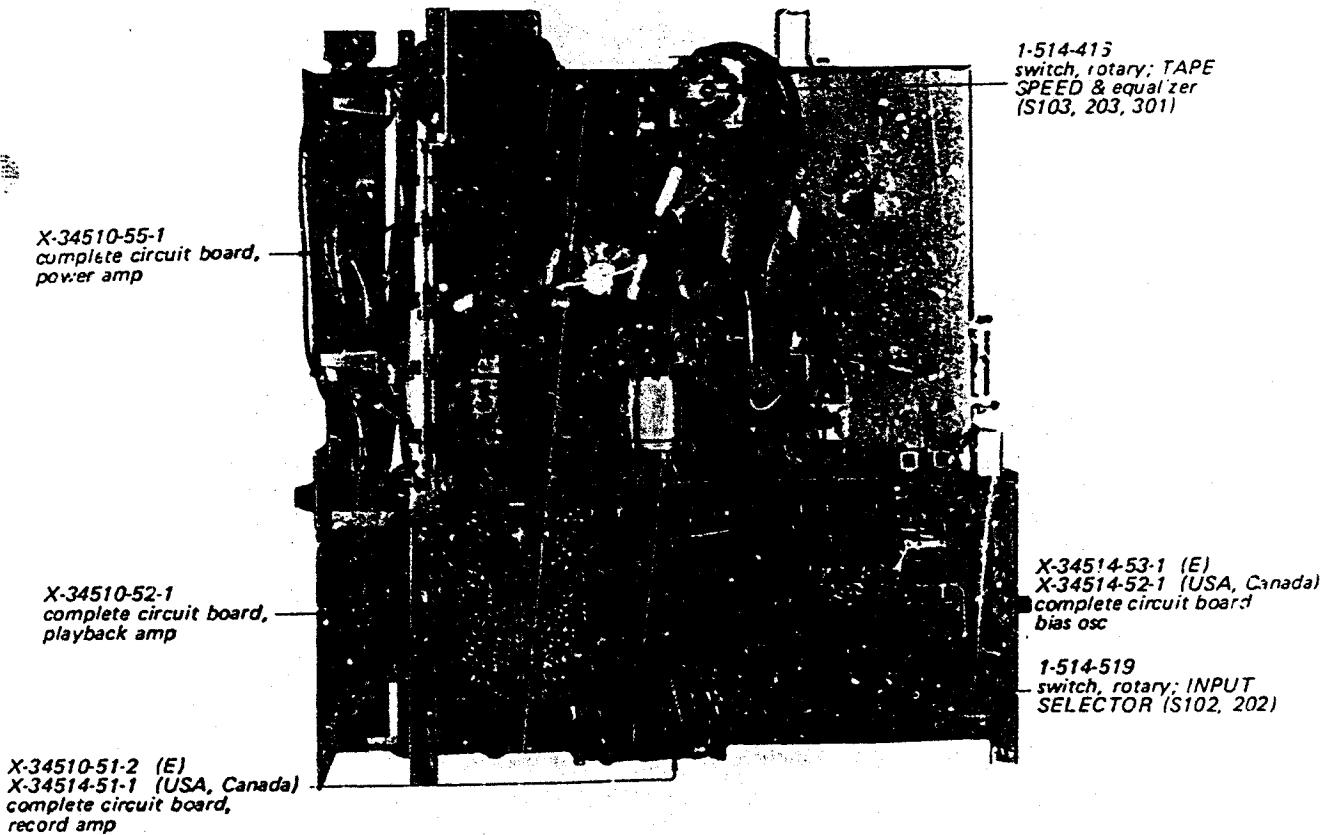
For Service Manuals
MAURITRON SERVICES
8 Cherry Tree Road, Chinnor
Oxfordshire, OX9 4QY.
Tel (01844) 351694
Fax (01844) 352554
email:- mauritron@dia1.pipex.com



1-8. CHASSIS BOTTOM VIEW (AEP, UK)

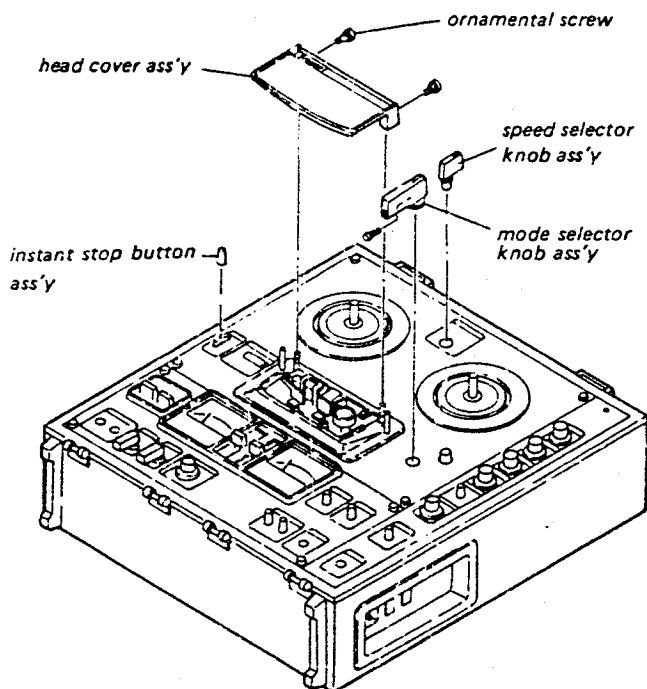


1-9. CHASSIS BOTTOM VIEW (E, USA, Canada)

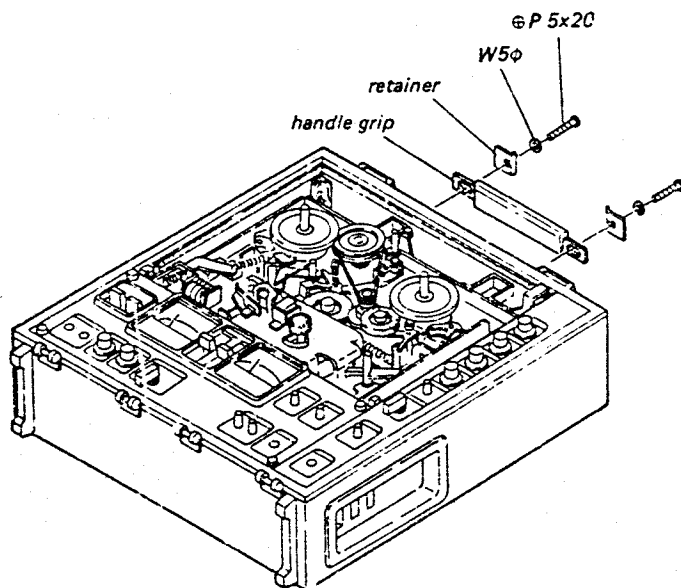


SECTION 2 DISASSEMBLY

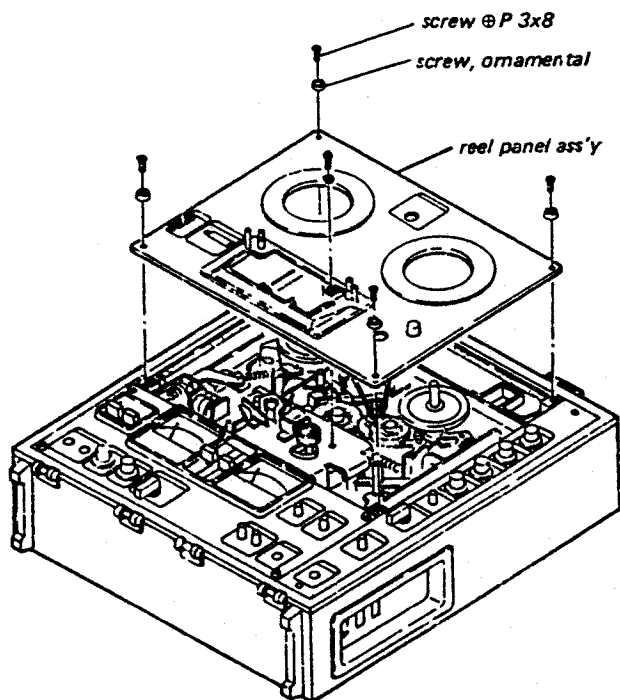
2-1. Knob and Head Cover Removal



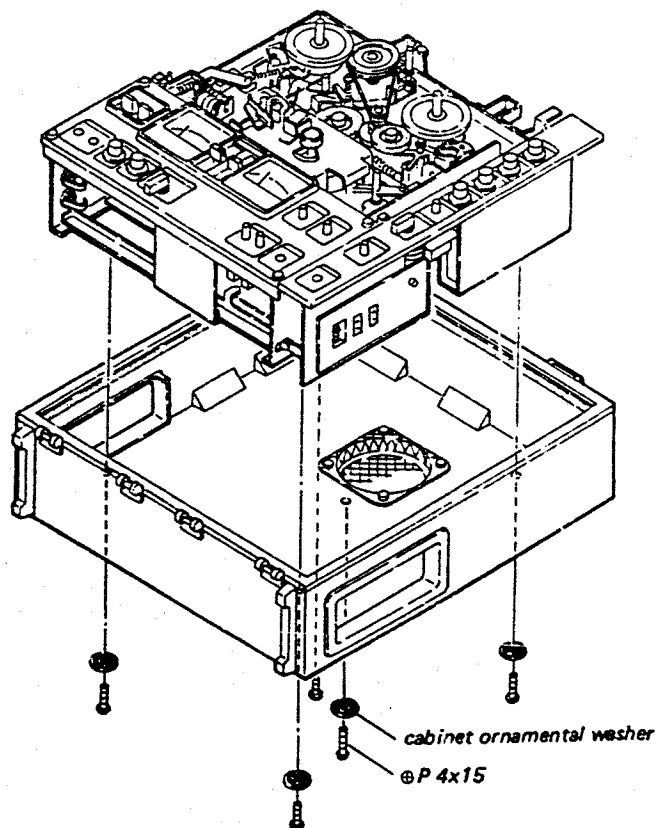
2-3. Handle Grip Removal



2-2. Reel Panel Removal



2-4. Cabinet Removal



SECTION 3 MAINTENANCE

3-1. Lubrication

The following parts of the tape transport mechanism require lubrication after two thousand hours of operation or once a year, whichever occurs first. Lubrication is important to insure proper operation of the equipment.

Motor: Motor requires 4 or 5 drops of SONY Oil (light machine oil).



Fig. 3-1 Motor lubrication

Capstan: Capstan requires 2 or 3 drops of SONY Oil (light machine oil).

Pinch Roller: Pinch Roller requires 2 or 3 drops of SONY Oil (light machine oil).

Idler: Idlers require lubrication only if they become noisy. Use no more than one drop of SONY Oil (light machine oil).

CAUTION

If the oil is spilled on the rubber wheel or the belt, wipe it off immediately with denatured alcohol.

3-2. Cleaning

The following parts must be cleaned with a lintless cloth moistened with denatured alcohol for optimum performance.

- capstan
- pinch roller
- flywheel
- idlers
- tape roller heads

This cleaning is important for the tape threading path to prevent a loss of positive drive at capstan, dropouts, wow and flutter, or poor frequency response.

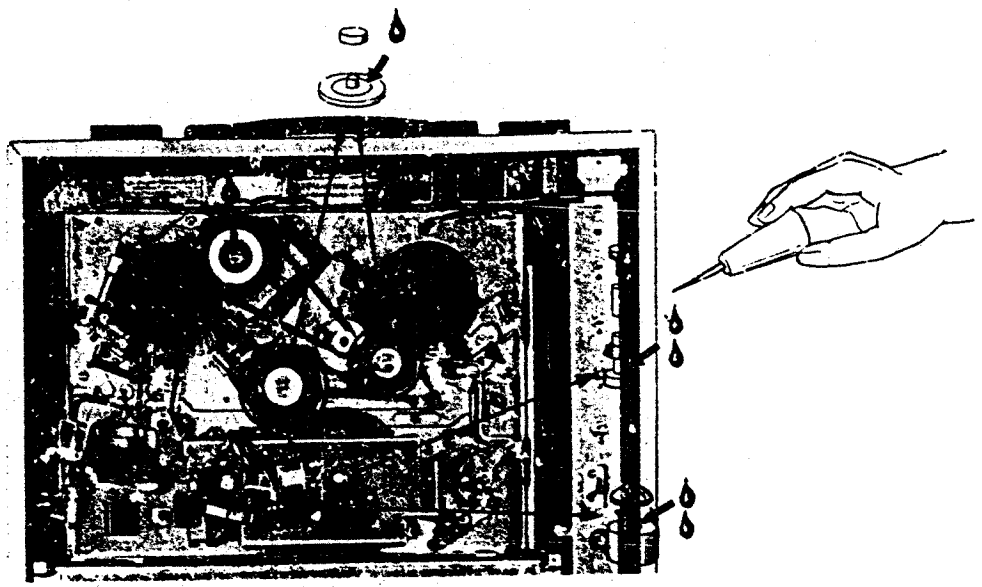
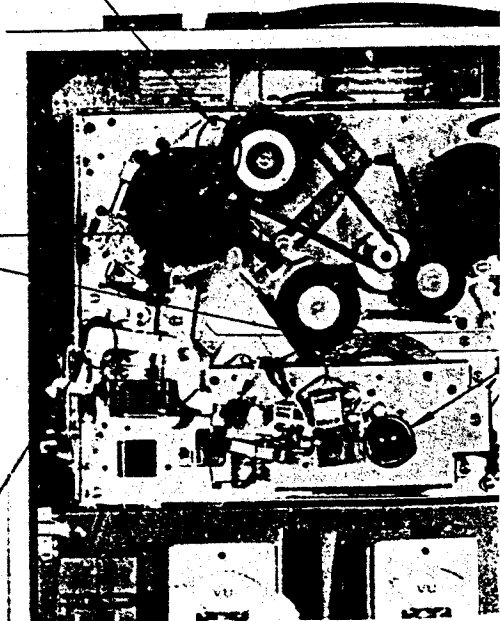
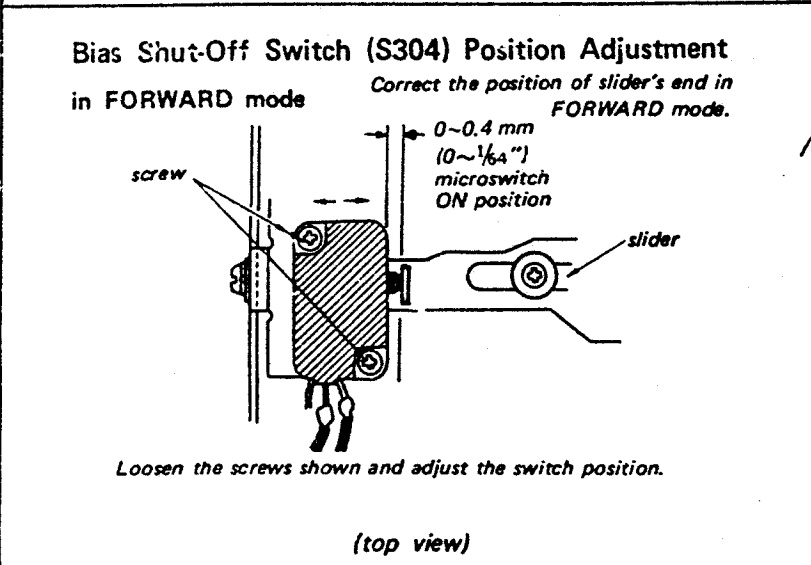
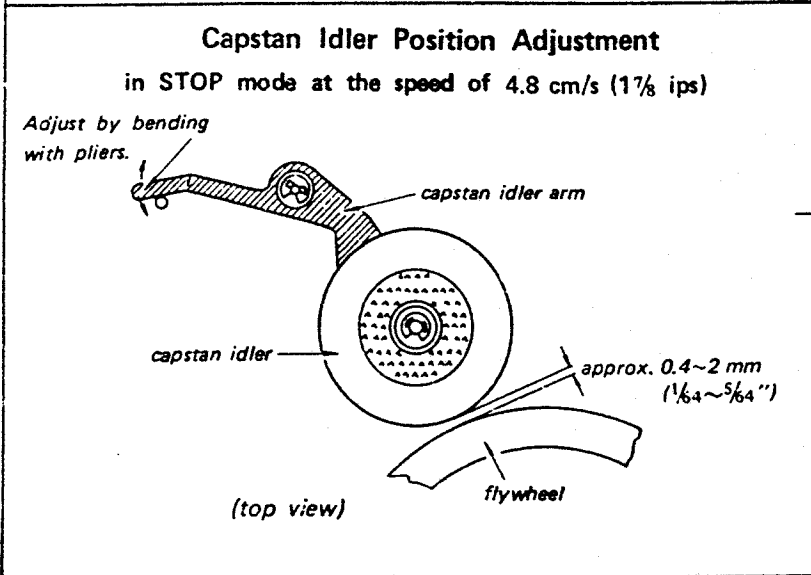
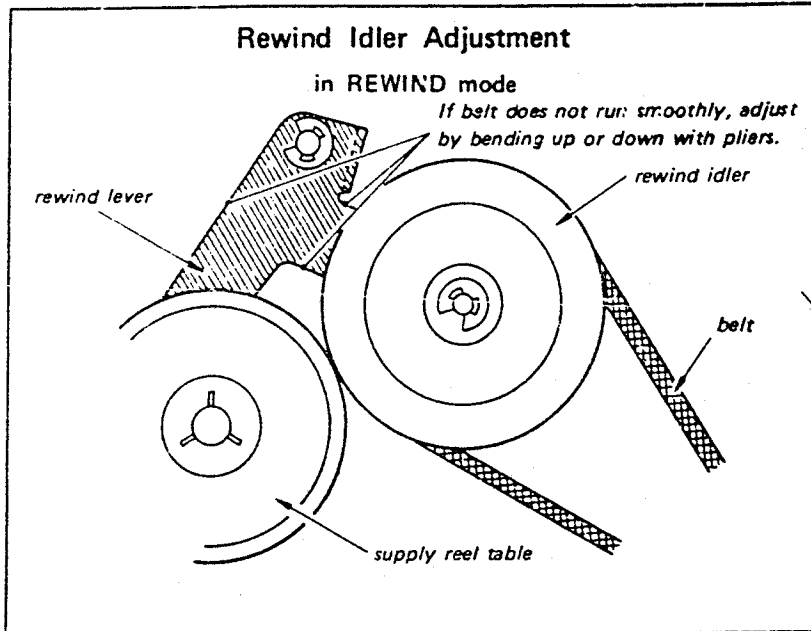


Fig. 3-2 Lubrication

SECTION 4 ADJUSTMENTS

4.1. MECHANICAL ADJUSTMENT



Adjustment locations

**SECTION 4
ADJUSTMENTS**

Adjustment

mode
 belt does not run smoothly, adjust
 bending up or down with pliers.

rewind idler

belt

table

on Adjustment

of 4.8 cm/s (1 7/8 ips)

an idler arm

approx. 0.4~2 mm
 (1/64~5/64")

flywheel

Position Adjustment

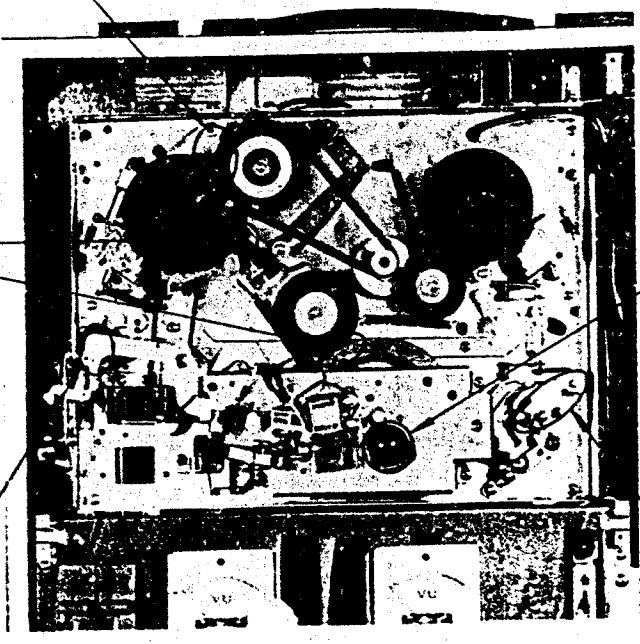
the position of slider's end in
FORWARD mode.

0.4 mm
 (1/64")

switch
 position

slider

the switch position.



Adjustment locations

Pinch Roller

pinch roller
 up & down cam

1. When
 Adjust by
 moving up

pinch

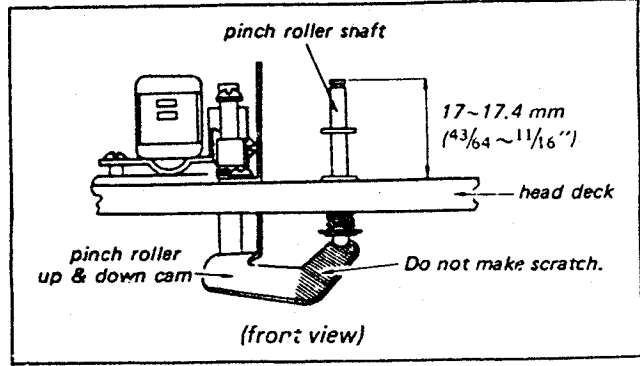
(b)

FAST FOR

ir

approx.
 0.4 mm (1/64")

Pinch Roller Shaft Height Adjustment in FORWARD mode

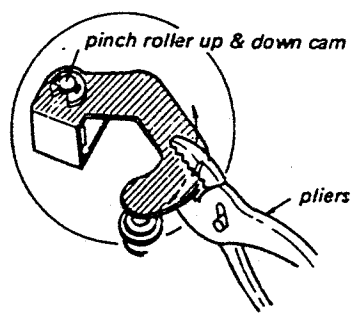


1. When adjusting roughly

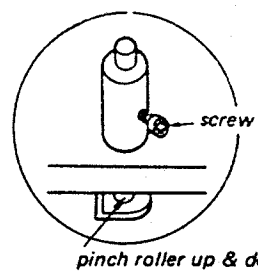
Adjust by bending with pliers moving up or down as shown below.

2. When adjusting accurately

Adjust to obtain 17~17.4 mm ($43/64 \sim 11/16$ "") by loosening the screw and moving the shaft up or down. After fastening the screw, apply lock paint.

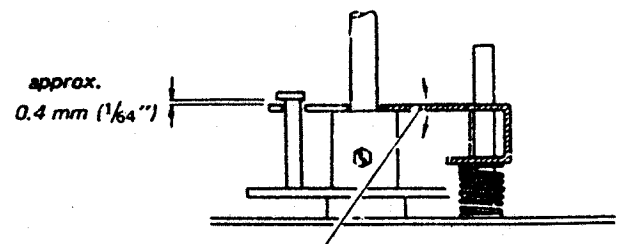


(bottom view)



(top view)

FAST FORWARD Lever Position Adjustment in FAST FORWARD mode



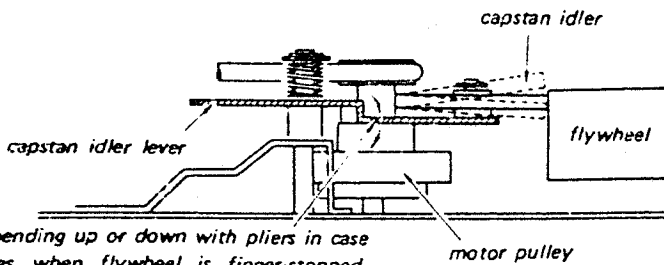
Adjust by bending up or down with pliers.

(side view)



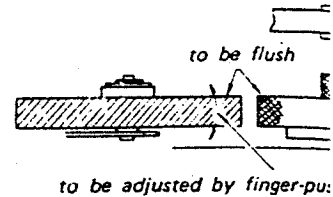
Capstan Idler Slip Check

in FORWARD mode at the speed of 4.8 cm/s (1 7/8 ips)



Adjust by bending up or down with pliers in case idler inclines when flywheel is finger-stopped. If idler slips, clean the surface of idler with denatured alcohol.

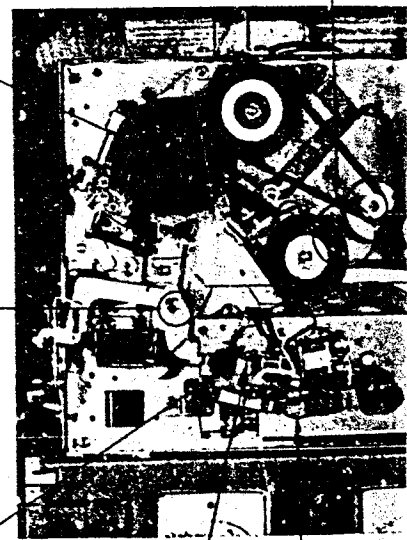
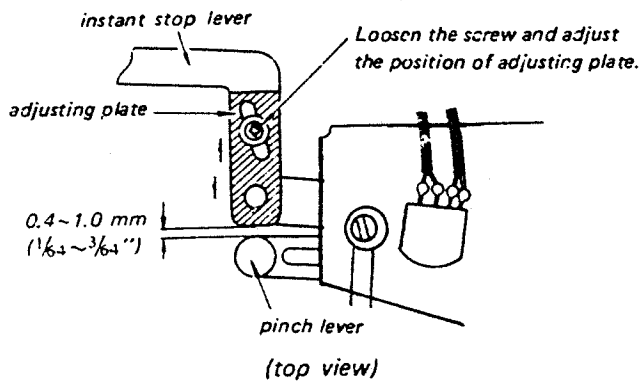
Capstan Idler Height in STOP mode at the speed



(side view)

Instant Stop Lever Adjustment

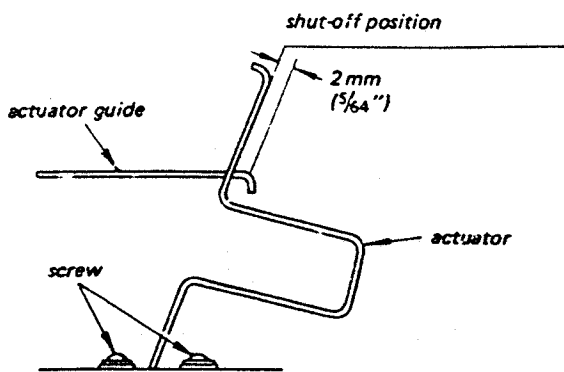
in FORWARD mode without capstan sleeve attached



Located at the bottom side.

Adj

Automatic Shut-Off Switch Adjustment

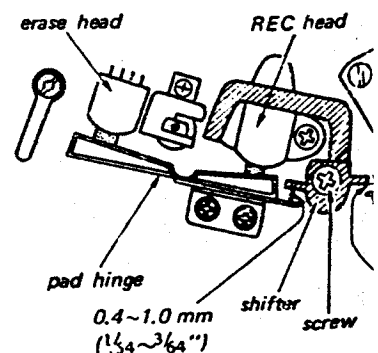


Loosen the screws and adjust by sliding microswitch holder. (side view)

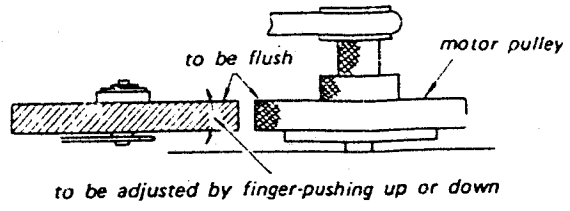
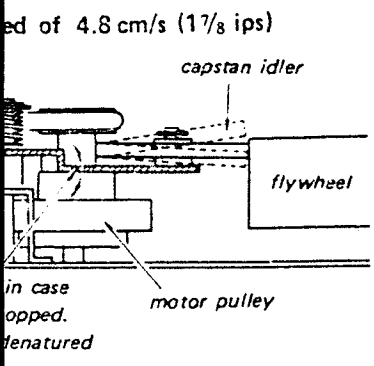
Shifter Adjust

in FORWARD mode

In forward mode, there should be the clearance as shown. In fast forward mode, tape should be in contact. Make the adjustment with sleeve attached. Loosen the screw and adjust by position.

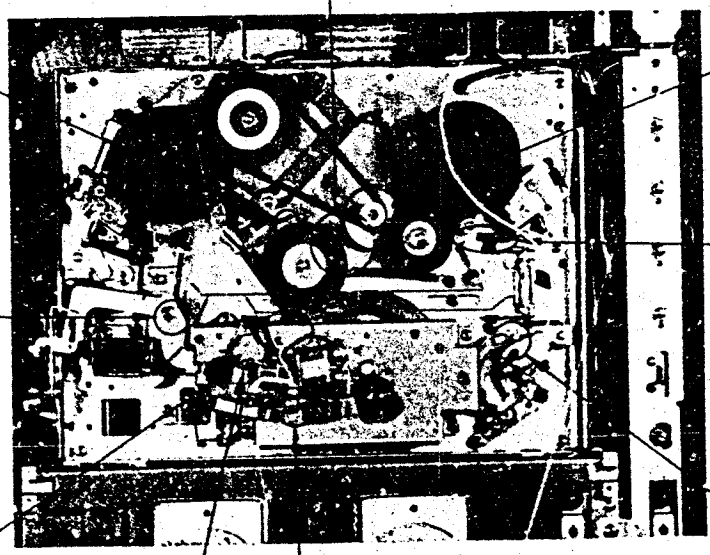
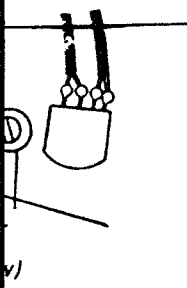


Capstan Idler Height Adjustment
 in STOP mode at the speed of 19 cm/s (7 1/2 ips)



(side view)

Capstan Idler Adjustment
 with capstan sleeve attached
 Loosen the screw and adjust the position of adjusting plate.



Located at the bottom side.

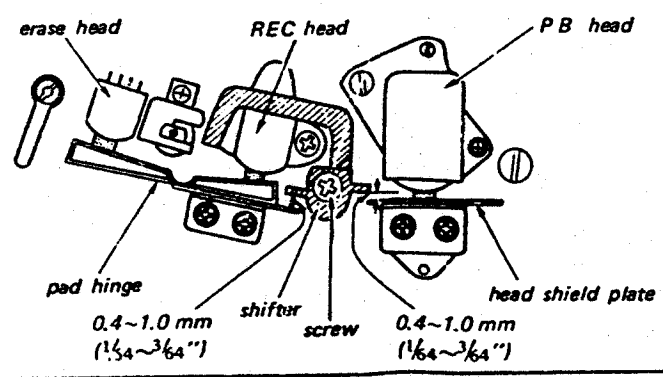
Adjustment locations

Switch Adjustment
 position

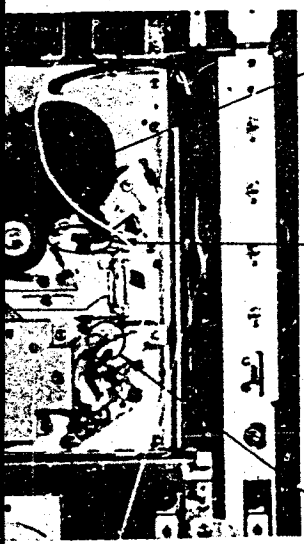
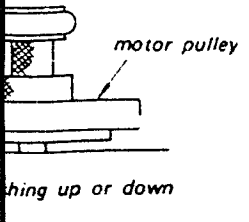
mm
 (1/4")
 actuator
 by sliding microswitch holder.
 view)

Shifter Adjustment
 in FORWARD mode

In forward mode, there should be the clearance of 0.4~1.0 mm (1/64~3/64") as shown. In fast forward mode, tape should not contact heads. Make the adjustment with sleeve attached to capstan and without sleeve. Loosen the screw and adjust by positioning shifter.

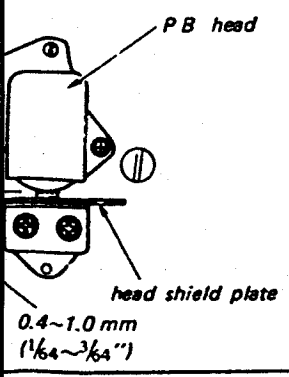


Adjustment of 19 cm/s (7 1/2 ips)

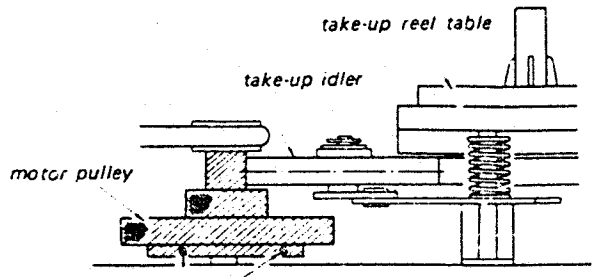


Adjustment locations

Head Deck Position Adjustment
in FORWARD mode
 Clearance of 0.4~1.0 mm (1/64~3/64") should not contact heads. Adjusted to capstan and without sleeve. Loosen the capstan shifting shifter.



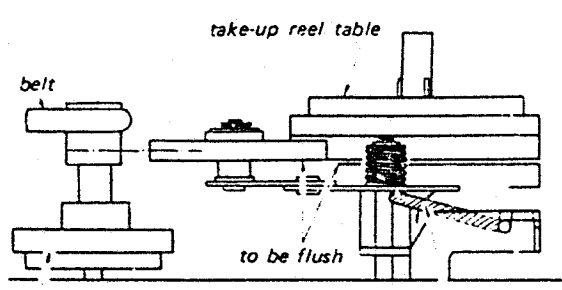
Motor Pulley Height Adjustment in FORWARD mode at the speed of 4.8 cm/s (1 7/8 ips)



Loosen the screws and adjust the height of motor pulley so that take-up idler makes contact with the pulley as shown.

(side view)

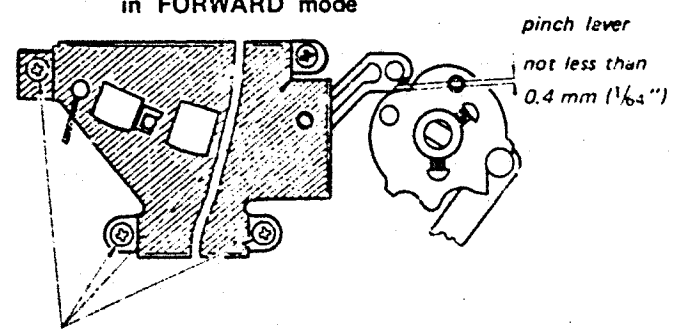
Take-up Idler Height Adjustment in FAST FORWARD mode



Adjust by bending this crank up or down with pliers.

(side view)

Head Deck Position Adjustment in FORWARD mode



Loosen the screws and adjust the position of head deck.

(top view)

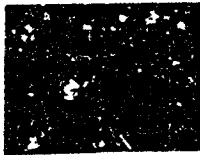
4.2. ADAPTATION TO DIFFERENT POWER LINE FREQUENCY (AEP, E)

From 50 Hz to 60 Hz

Set the power frequency selector switch to 60 Hz and remove the capstan sleeve.

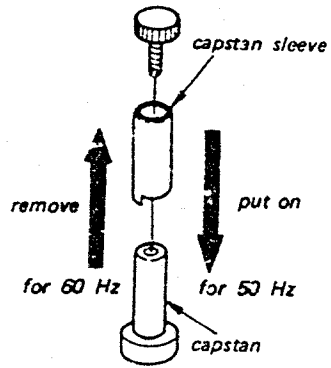
From 60 Hz to 50 Hz

Set the power frequency selector switch to 50 Hz and put on the capstan sleeve.



power frequency selector switch

Power frequency selector switch



Capstan sleeve

For Service Manuals
MAURITRON SERVICES
8 Cherry Tree Road, Chinnor
Oxfordshire, OX9 4QY.
Tel (01844) 351694
Fax (01844) 352554
email: mauritron@dial.pipex.com

4.3. ELECTRICAL ADJUSTMENTS

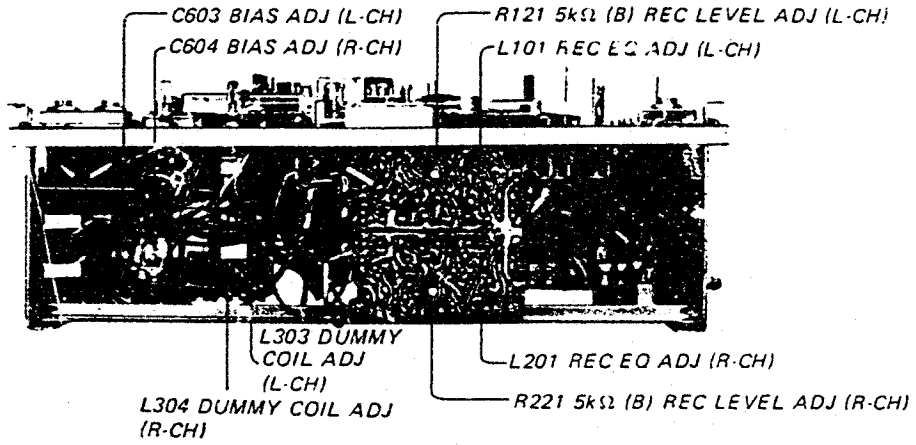


Fig. 4-3-1 Adjustment location

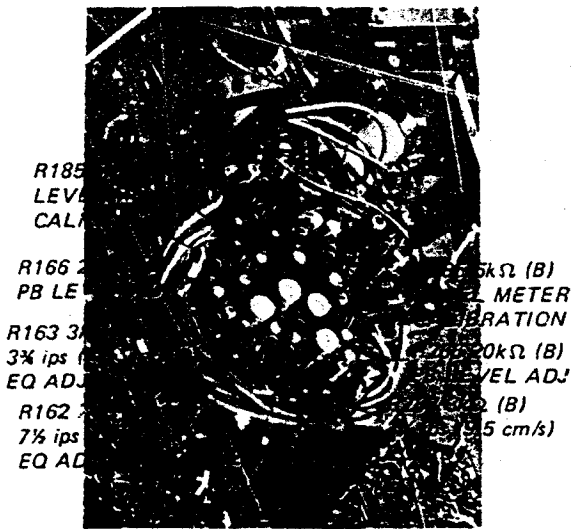


Fig. 4-3-2 Adjustment location

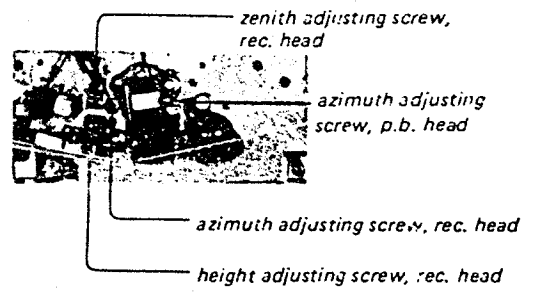


Fig. 4-3-3 Adjusting screws

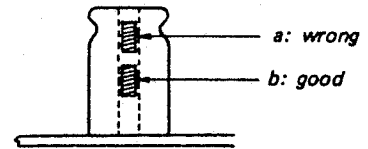


Fig. 4-3-4 Core setting of L101 (L201)

Notes

1. Before making the adjustments, be sure to clean the heads with cloth or swab dampened with denatured alcohol and to demagnetize the record and playback heads with a head demagnetizer (SONY HE-2).
2. The adjustments should be made in numerical order.
3. The SOS switch and the NOISE SUPPRESS switch should be set in OFF position.
4. The adjustments should be made at 17 cm/s (7 1/2 ips) tape speed except the item 3.

5. After the adjustments, apply lock paint to the parts adjusted.
6. The following test equipment is to be used for the adjustments:
 - ☆ audio signal generator
 - ☆ attenuator 600Ω
 - ☆ VTVM
 - ☆ SONY adjustment tape, J-19-F1 & J-19-F2

| Item | Signal Source | Output Connection | Mode | |
|---|---|--|----------|------------------------------|
| 1. Playback Head Azimuth Adjustment | 16 kHz, 3rd tone of SONY adjustment tape, J-19-F2 MONITOR switch: TAPE | VTVM and 100kΩ resistor in parallel with LINE OUT jack | PLAYBACK | playback adjusting See |
| 2. Playback Level Adjustment and Level Meter Calibration | 400 Hz, 1st tone of SONY adjustment tape, J-19-F2 MONITOR switch: TAPE | VTVM and 100kΩ resistor in parallel with LINE OUT jack | PLAYBACK | L-CH: R166 R185 See |
| 3. Playback Equalizer Adjustment (1) 19 cm/s (7 1/2 ips) | SONY adjustment tape, J-19-F2 MONITOR switch: TAPE | VTVM and 100kΩ resistor in parallel with LINE OUT jack | PLAYBACK | L-CH: See |
| (2) 9.5 cm/s (3 3/4 ips) | SONY adjustment tape, J-9-F1 MONITOR switch: TAPE | | | L-CH: See |
| 4. Bias Trap Coil Adjustment | _____ | VTVM to test point and ground (See page 25, TP) | RECORD | L-CH: See |
| 5. Record Head Height Adjustment | 1 kHz, -60 dB (0.78 mV) to MIC jack INPUT SELECTOR: MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | record h azimuth See |
| 6. Record Head Azimuth Adjustment | 15 kHz, -90 dB (24.5μV) to MIC jack INPUT SELECTOR: MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | record h screw See |
| 7. Record Bias Adjustment | 1 kHz, -60 dB (0.78 mV) to MIC jack INPUT SELECTOR: MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | L-CH: See |
| 8. Record Level Adjustment | 1 kHz, -60 dB (0.78 mV) to MIC jack INPUT SELECTOR: MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | L-CH: See |
| 9. Record Equalizer Adjustment | 1k, 20 kHz, -90 dB (24.5μV) to MIC jack INPUT SELECTOR: MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | L-CH: See |
| 10. Dummy Coil Adjustment | _____ | VTVM to test point (See page 25, TP) | RECORD | at moc L-CH: |

TC-630 TC-630

- 5. After the adjustments, apply lock paint to the parts adjusted.
- 6. The following test equipment is to be used for the adjustments:
 - ☆ audio signal generator
 - ☆ attenuator 600Ω
 - ☆ VTVM
 - ☆ SONY adjustment tape, J-19-F1 & J-19-F2

- ☆ 100kΩ resistor
- 7. Bias voltages across the heads should be read on VTVM as follows.
 - record head: approx. 16 volts at 19 cm/s (7½ ips)
 - 14 volts at 9.5 cm/s (3¾ ips)
 - 12 volts at 4.8 cm/s (1¾ ips)
 - erase head: approx. 120 volts

impregnated with denatured alcohol (NY HE-2).
 unon.
 item 3.

| Source | Output Connection | Mode | Adjust | | | | | | | | | | | | | |
|-------------------------------|--|---|--|--|-----------|-----------|-------|-----------|----------|--------|--------|--------|--------|------|--|--|
| SONY adjustment tape | VTVM and 100kΩ resistor in parallel with LINE OUT jack | PLAYBACK | playback head azimuth adjusting screw See Fig. 4-3-3. | Adjust the screw to obtain maximum | | | | | | | | | | | | |
| SONY adjustment tape | VTVM and 100kΩ resistor in parallel with LINE OUT jack | PLAYBACK | L-CH: R166 R185 R-CH: R266 (20kΩ; B) R285 (5kΩ; B) See Fig. 4-3-2. | 1. Adjust R166 (L-CH) and R266 2. Adjust R185 (L-CH) and R285 | | | | | | | | | | | | |
| SONY adjustment tape, J-19-F2 | VTVM and 100kΩ resistor in parallel with LINE OUT jack | PLAYBACK | L-CH: R162 2kΩ (B) See Fig. 4-3-2. | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Tape tone</td> <td>4th</td> <td>5th</td> </tr> <tr> <td>Frequency</td> <td>12.5 kHz</td> <td>10 kHz</td> </tr> <tr> <td>L-CH</td> <td>0±2 dB</td> <td>0±2 dB</td> </tr> <tr> <td>R-CH</td> <td></td> <td></td> </tr> </table> Deviation against the level at 400 Hz After the adjustment, repeat the | Tape tone | 4th | 5th | Frequency | 12.5 kHz | 10 kHz | L-CH | 0±2 dB | 0±2 dB | R-CH | | |
| Tape tone | | | 4th | | 5th | | | | | | | | | | | |
| Frequency | 12.5 kHz | 10 kHz | | | | | | | | | | | | | | |
| L-CH | 0±2 dB | 0±2 dB | | | | | | | | | | | | | | |
| R-CH | | | | | | | | | | | | | | | | |
| SONY adjustment tape, J-9-F1 | L-CH: R163 3kΩ (B) See Fig. 4-3-2. | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Tape tone</td> <td>4th</td> <td>5th</td> </tr> <tr> <td>Frequency</td> <td>5 kHz</td> <td>2.5 kHz</td> </tr> <tr> <td>L-CH</td> <td>0±2 dB</td> <td>0±2 dB</td> </tr> <tr> <td>R-CH</td> <td></td> <td></td> </tr> </table> Deviation against the level of 400 Hz | Tape tone | 4th | 5th | Frequency | 5 kHz | 2.5 kHz | L-CH | 0±2 dB | 0±2 dB | R-CH | | | | |
| Tape tone | 4th | 5th | | | | | | | | | | | | | | |
| Frequency | 5 kHz | 2.5 kHz | | | | | | | | | | | | | | |
| L-CH | 0±2 dB | 0±2 dB | | | | | | | | | | | | | | |
| R-CH | | | | | | | | | | | | | | | | |
| | VTVM to test point and ground (See page 25, TP) | RECORD | L-CH: L301 1.8 mH See Fig. 4-3-1. | 1. Set the REC VOL controls 2. Adjust to obtain minimum | | | | | | | | | | | | |
| 78 mV to MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | record head height, zenith and azimuth adjusting screw See Fig. 4-3-3. | 1. Turn the three screws (height, zenith and azimuth) visually horizontal. 2. Set the MONITOR switch to MONITOR. 3. Turn the height adjusting screw. Memorize the number of turns. 4. Turn the zenith and azimuth adjusting screws. 5. Follow the steps 3 and 4 to | | | | | | | | | | | | |
| 24.5μV to MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | record head azimuth adjusting screw See Fig. 4-3-3. | 1. Set the MONITOR switch to MONITOR. 2. Turn the azimuth adjusting screw. When the signal is maximum, read the screw, the maximum reading. | | | | | | | | | | | | |
| 78 mV to MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | L-CH: C603 30-200pF See Fig. 4-3-1. | 1. Set the MONITOR switch to MONITOR. 2. Turn the trimmer capacitors to minimum. 3. Recording the signal, turn the trimmer capacitors until the VTVM reads the maximum value. 4. Continue to turn the capacitors until the VTVM reading is maximum. 5. Adjust the trimmer capacitors until the VTVM reading is maximum. 6. Make sure that the reading is maximum. 7. If not, follow the steps 2-6. | | | | | | | | | | | | |
| 78 mV to MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | L-CH: R121 5kΩ (B) See Fig. 4-3-1. | 1. Set the MONITOR switches to MONITOR. 2. Feeding the signal, slide the REC VOL control to 0 VU (100%). 3. Record the signal on a blank tape. 4. Set the MONITOR switches to MONITOR. 5. Adjust R121 (R221) so that the VTVM reading is maximum. | | | | | | | | | | | | |
| 24.5μV to MIC | VTVM and 100kΩ resistor in parallel with LINE OUT jack | RECORD | L-CH: L101 1.8/1.45 mH See Fig. 4-3-1. | 1. Set the MONITOR switches to MONITOR. 2. Record an 1 kHz signal of -10 dB. 3. Record a 20 kHz signal of -10 dB. Note: Two peaks appear during recording. See Fig. 4-3-4. | | | | | | | | | | | | |
| | VTVM to test point (See page 25, TP) | RECORD | at mode L-CH: L304 See Fig. 4-3-1. | 1. Set the REC VOL controls to MONITOR. 2. Read the VTVM readings on the L-CH and R-CH. 3. Set the machine in L-CH RECORD mode. 4. Adjust L304 so that VTVM reading is maximum. 5. Set the machine in R-CH RECORD mode. | | | | | | | | | | | | |

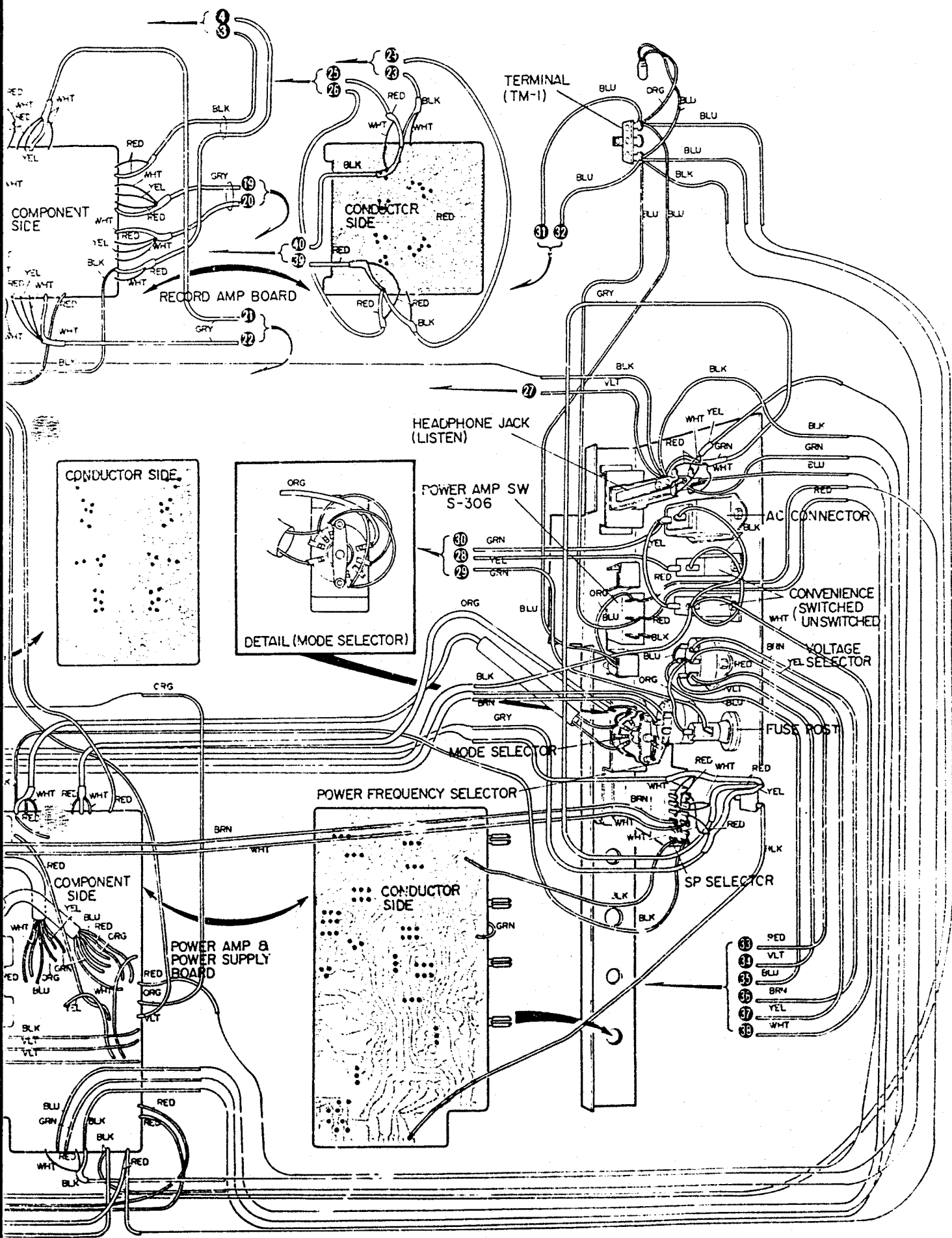
☆ 100kΩ resistor

7. Bias voltages across the heads should be read on VTVM as follows.

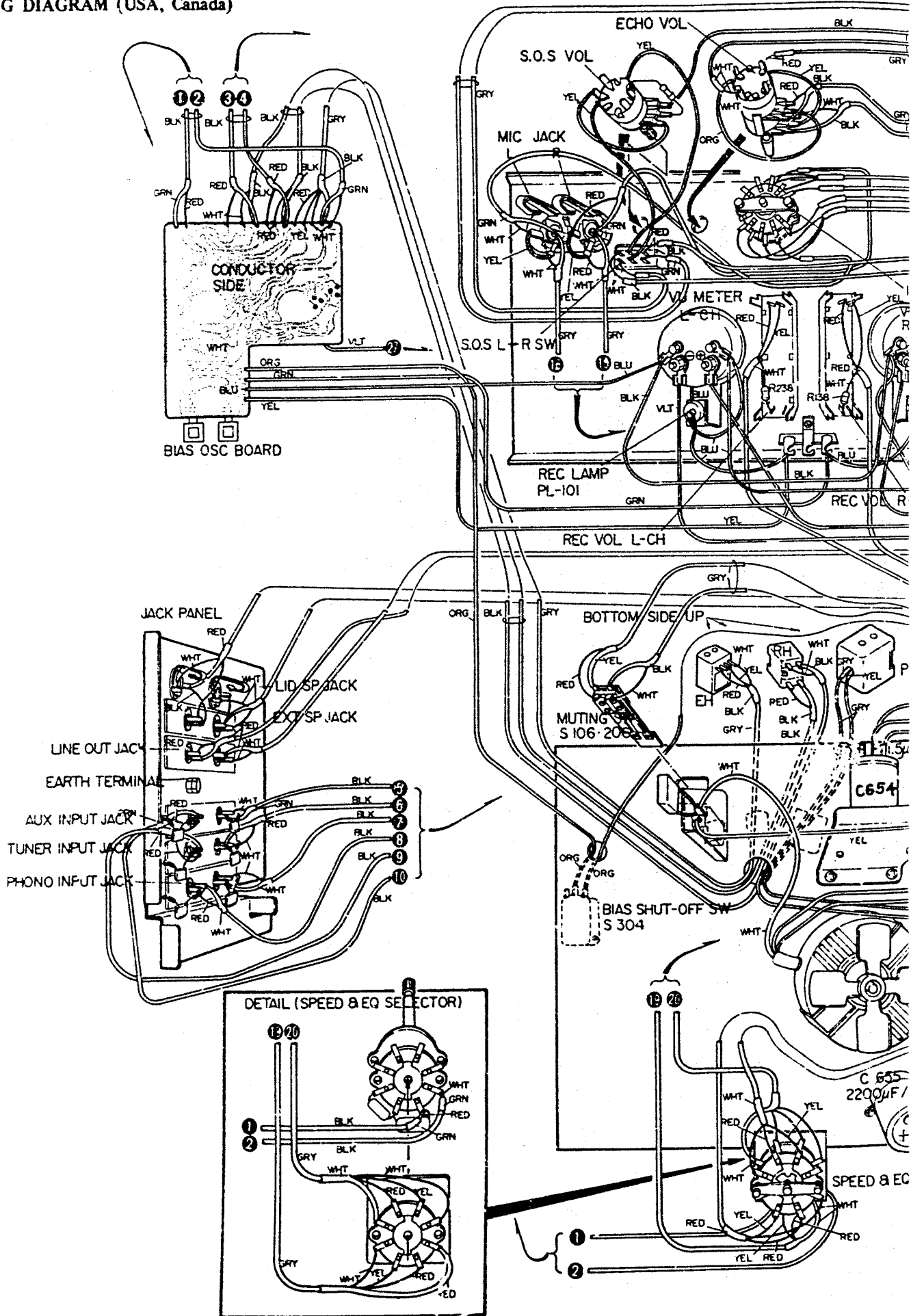
record head: approx. 16 volts at 19 cm/s (7 1/4 ips)
 14 volts at 9.5 cm/s (3 3/4 ips)
 12 volts at 4.8 cm/s (1 7/8 ips)

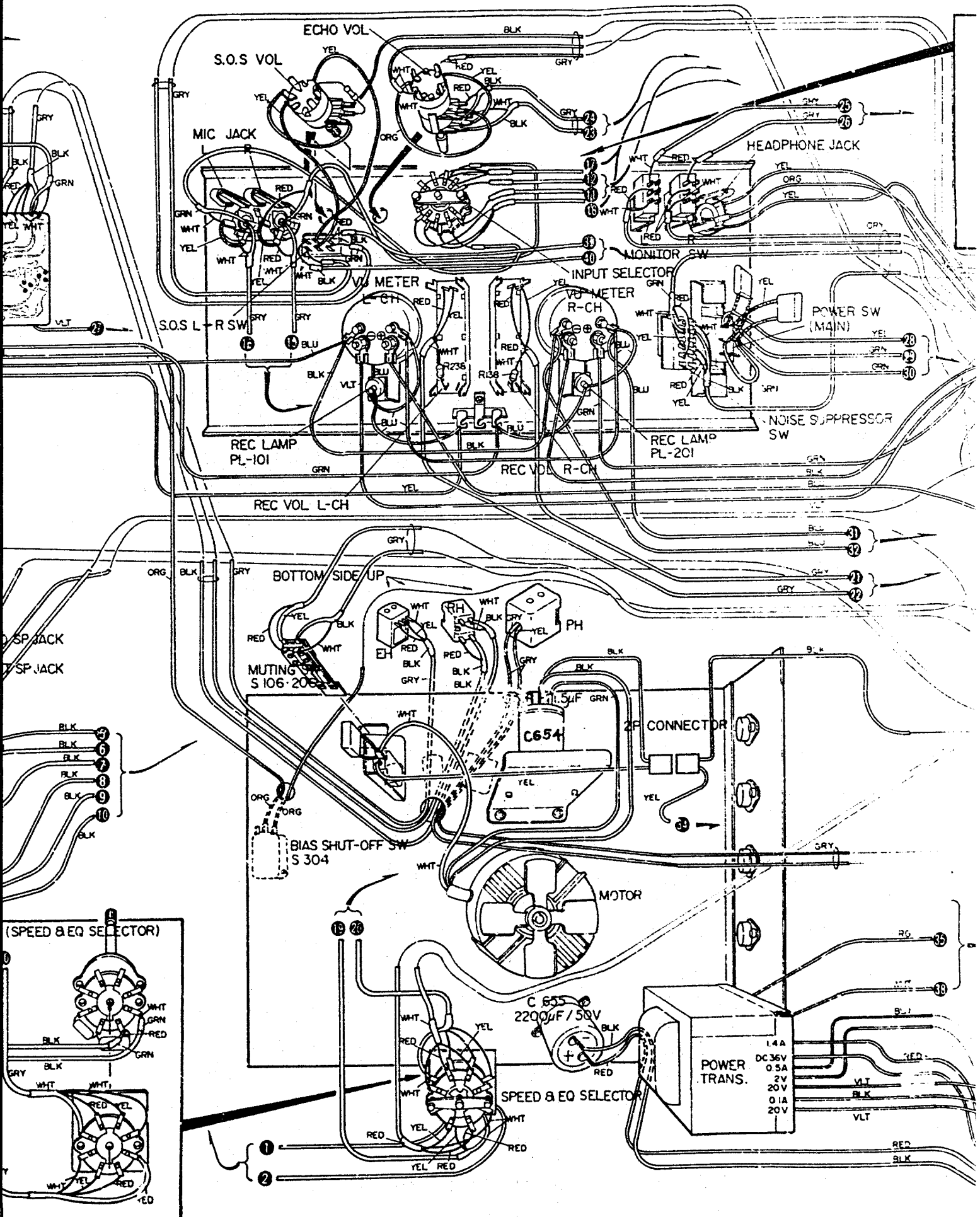
erase head: approx. 120 volts

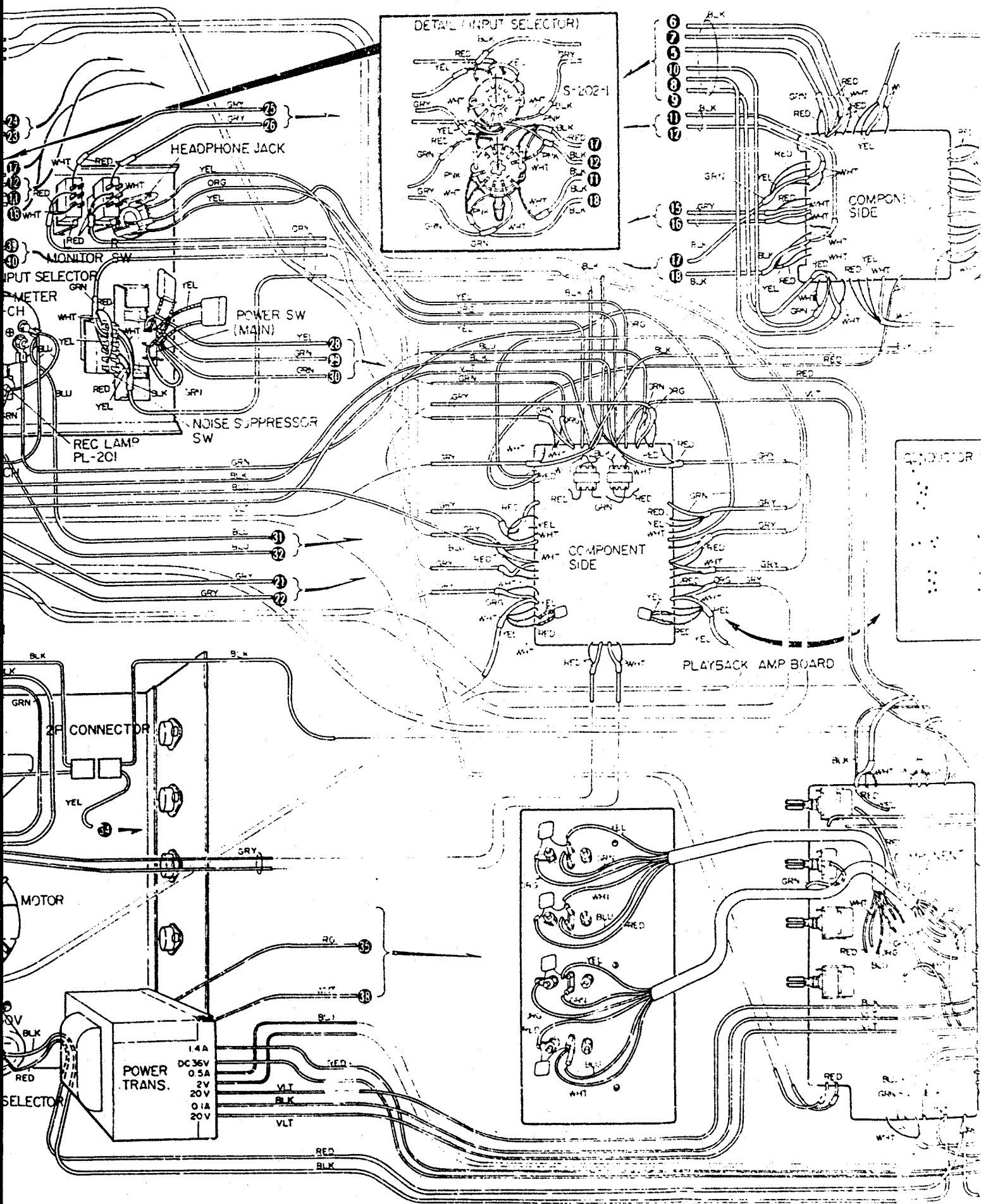
| Adjust | Procedures and Remarks | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-----------|-----------|-----------|-----------|-----|-----------|-----------|----------|--------|-------|-------|--------|--------|---------|-----------|--------|-----------|-----------|-----------|-----------|--|--|-----------|-----------|
| k head azimuth g screw e Fig. 4-3-3. | Adjust the screw to obtain maximum reading on VTVM. | | | | | | | | | | | | | | | | | | | | | | | | |
| R-CH: R266 (20kΩ; B) R285 (5kΩ; B) e Fig. 4-3-2. | 1. Adjust R166 (L-CH) and R266 (R-CH) to obtain 0 dB (0.775V) on VTVM. 2. Adjust R185 (L-CH) and R285 (R-CH) so that pointers of level meters stay at 0 VU (100%). | | | | | | | | | | | | | | | | | | | | | | | | |
| R162 R-CH: R262 2kΩ (B) e Fig. 4-3-2. | Deviation against the level at 400 Hz of 3rd tone <table border="1" data-bbox="341 592 1110 703"> <thead> <tr> <th>Tape tone</th> <th>4th</th> <th>5th</th> <th>6th</th> <th>7th</th> <th>8th</th> </tr> </thead> <tbody> <tr> <td>Frequency</td> <td>12.5 kHz</td> <td>10 kHz</td> <td>7 kHz</td> <td>80 Hz</td> <td>40 Hz</td> </tr> <tr> <td>L-CH</td> <td>0±2 dB</td> <td>0±2 dB</td> <td>0±2 dB</td> <td>+3.0±2 dB</td> <td>+2.0±2 dB</td> </tr> <tr> <td>R-CH</td> <td></td> <td></td> <td></td> <td>+3.5±2 dB</td> <td>+3.0±2 dB</td> </tr> </tbody> </table> After the adjustment, repeat the playback level adjustment. | Tape tone | 4th | 5th | 6th | 7th | 8th | Frequency | 12.5 kHz | 10 kHz | 7 kHz | 80 Hz | 40 Hz | L-CH | 0±2 dB | 0±2 dB | 0±2 dB | +3.0±2 dB | +2.0±2 dB | R-CH | | | | +3.5±2 dB | +3.0±2 dB |
| Tape tone | 4th | 5th | 6th | 7th | 8th | | | | | | | | | | | | | | | | | | | | |
| Frequency | 12.5 kHz | 10 kHz | 7 kHz | 80 Hz | 40 Hz | | | | | | | | | | | | | | | | | | | | |
| L-CH | 0±2 dB | 0±2 dB | 0±2 dB | +3.0±2 dB | +2.0±2 dB | | | | | | | | | | | | | | | | | | | | |
| R-CH | | | | +3.5±2 dB | +3.0±2 dB | | | | | | | | | | | | | | | | | | | | |
| R163 R-CH: R263 3kΩ (B) e Fig. 4-3-2. | Deviation against the level of 400 Hz of 3rd tone <table border="1" data-bbox="341 791 984 902"> <thead> <tr> <th>Tape tone</th> <th>4th</th> <th>5th</th> <th>6th</th> <th>7th</th> </tr> </thead> <tbody> <tr> <td>Frequency</td> <td>5 kHz</td> <td>2.5 kHz</td> <td>200 Hz</td> <td>80 Hz</td> </tr> <tr> <td>L-CH</td> <td>0±2 dB</td> <td>0±2 dB</td> <td>+2±2 dB</td> <td>+0.5±2 dB</td> </tr> <tr> <td>R-CH</td> <td></td> <td></td> <td>+2.5±2 dB</td> <td>+1.0±2 dB</td> </tr> </tbody> </table> | Tape tone | 4th | 5th | 6th | 7th | Frequency | 5 kHz | 2.5 kHz | 200 Hz | 80 Hz | L-CH | 0±2 dB | 0±2 dB | +2±2 dB | +0.5±2 dB | R-CH | | | +2.5±2 dB | +1.0±2 dB | | | | |
| Tape tone | 4th | 5th | 6th | 7th | | | | | | | | | | | | | | | | | | | | | |
| Frequency | 5 kHz | 2.5 kHz | 200 Hz | 80 Hz | | | | | | | | | | | | | | | | | | | | | |
| L-CH | 0±2 dB | 0±2 dB | +2±2 dB | +0.5±2 dB | | | | | | | | | | | | | | | | | | | | | |
| R-CH | | | +2.5±2 dB | +1.0±2 dB | | | | | | | | | | | | | | | | | | | | | |
| L301 R-CH: L302 1.8 mH e Fig. 4-3-1. | 1. Set the REC VOL controls (R135 & R235) to minimum. 2. Adjust to obtain minimum reading on VTVM. | | | | | | | | | | | | | | | | | | | | | | | | |
| head height, zenith and adjusting screw e Fig. 4-3-3. | 1. Turn the three screws (height, zenith and azimuth adjusting) so that the record head will be visually horizontal. 2. Set the MONITOR switch to TAPE. 3. Turn the height adjusting screw to obtain maximum reading on VTVM. Memorize the number of turns. 4. Turn the zenith and azimuth adjusting screws the same number of turns of height adjusting screw. 5. Follow the steps 3 and 4 to obtain maximum reading. | | | | | | | | | | | | | | | | | | | | | | | | |
| head azimuth adjusting e Fig. 4-3-3. | 1. Set the MONITOR switch to TAPE position. 2. Turn the azimuth adjusting screw to obtain maximum reading on VTVM. Within one turn of the screw, the maximum reading should be obtained. If not, repeat the adjustment as in the item 5. | | | | | | | | | | | | | | | | | | | | | | | | |
| C603 R-CH: C604 30-200pF e Fig. 4-3-1. | 1. Set the MONITOR switch to TAPE position. 2. Turn the trimmer capacitors counterclockwise and set them in minimum capacitance position. 3. Recording the signal, turn the trimmer capacitor (C603, L-CH) clockwise slowly until the VTVM reads the maximum value. 4. Continue to turn the capacitor until the VTVM reads a value 0.5 dB below the maximum reading. Read the VTVM reading. 5. Adjust the trimmer capacitor (C604, R-CH) in the same way. 6. Make sure that the reading of L-CH is the same as the one reading in the step 4. 7. If not, follow the steps 2-6 again. | | | | | | | | | | | | | | | | | | | | | | | | |
| R121 R-CH: R221 5kΩ (B) e Fig. 4-3-1. | 1. Set the MONITOR switches (S105 & S205) to SOURCE position. 2. Feeding the signal, slide the REC VOL controls (R135 & R235) so that the level meters indicate 0 VU (100%). 3. Record the signal on a blank tape. 4. Set the MONITOR switches (S105 & S205) to TAPE position. 5. Adjust R121 (R221) so that VTVM indicates 0 dB (0.775V). | | | | | | | | | | | | | | | | | | | | | | | | |
| L101 R-CH: L201 1.8/1.45 mH e Fig. 4-3-1. | 1. Set the MONITOR switches (S105 & S205) to TAPE position. 2. Record an 1 kHz signal of -90 dB (24.5μV) on a blank tape and read the VTVM reading. 3. Record a 20 kHz signal of -90 dB (24.5μV) and adjust L101 (L201) so that VTVM reading is the same as the one of 1 kHz signal. Note: Two peaks appear during turning L101 (L201). Take the peak where the core is "b" position shown in Fig. 4-3-4. | | | | | | | | | | | | | | | | | | | | | | | | |
| e at mode L304 R-CH: L303 See Fig. 4-3-1. | 1. Set the REC VOL controls (R135 & R235) to minimum. 2. Read the VTVM readings of both channels. 3. Set the machine in L-CH RECORD mode. 4. Adjust L304 so that VTVM reading is the same as the one reading in the step 2. 5. Set the machine in R-CH RECORD mode and adjust L303 in the same way. | | | | | | | | | | | | | | | | | | | | | | | | |

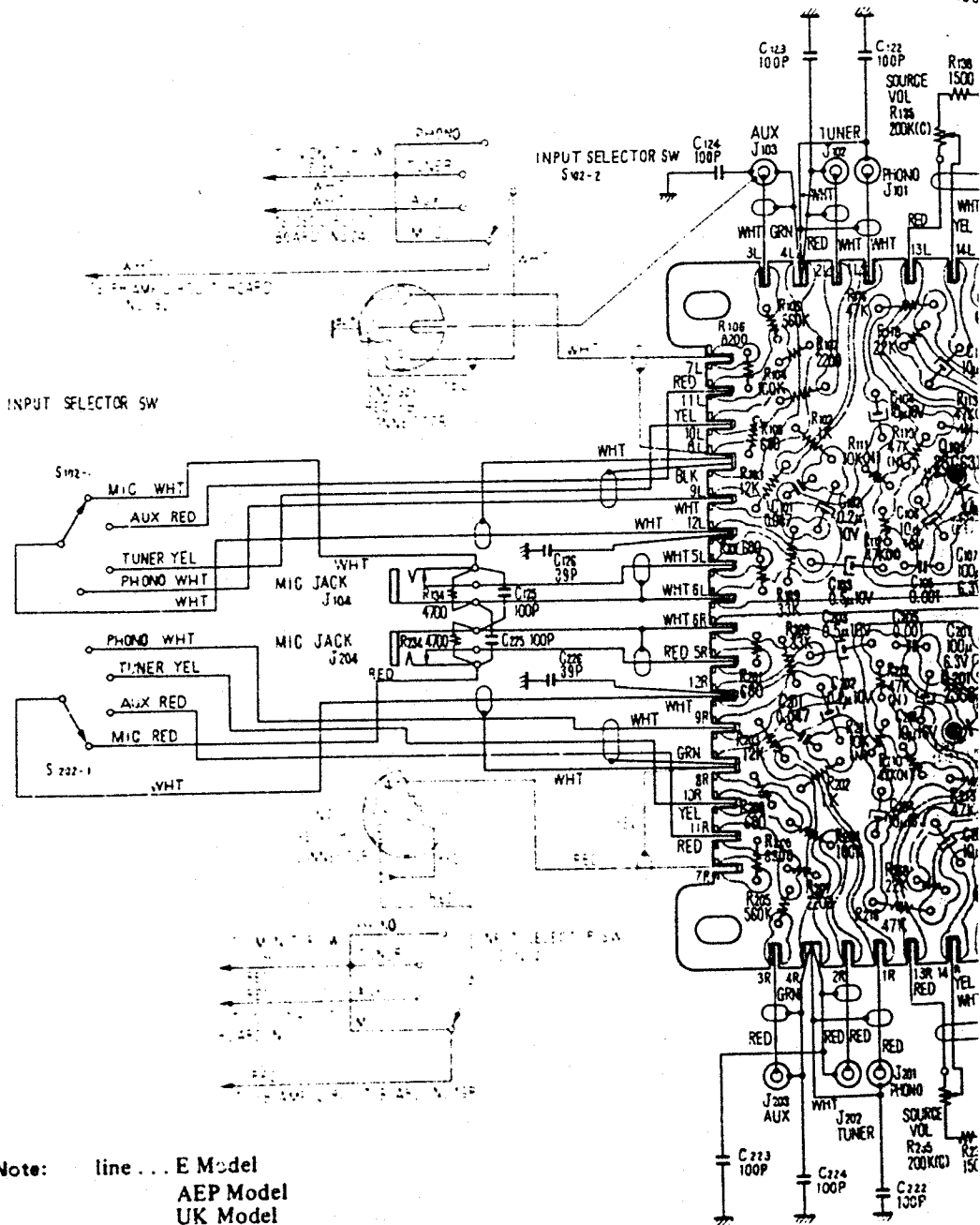


5-2. WIRING DIAGRAM (USA, Canada)



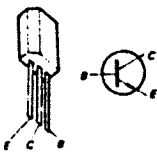


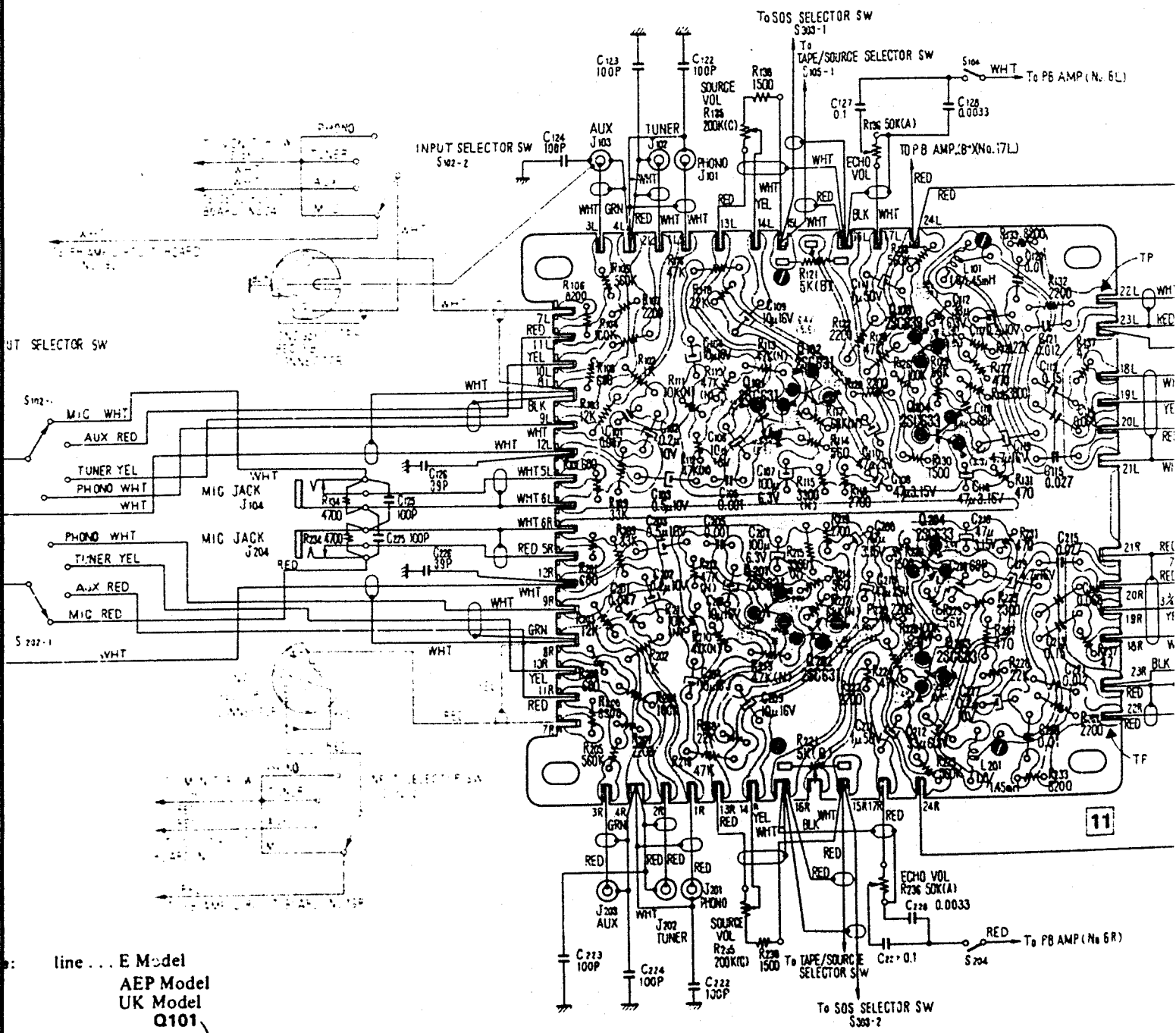




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Note: line ... E Model
 AEP Model
 UK Model
 Q101
 Q201) : 2SC631
 Q102)
 Q202)
 Q103) : 2SC633
 Q203)
 Q104)
 Q204)

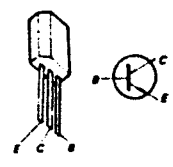




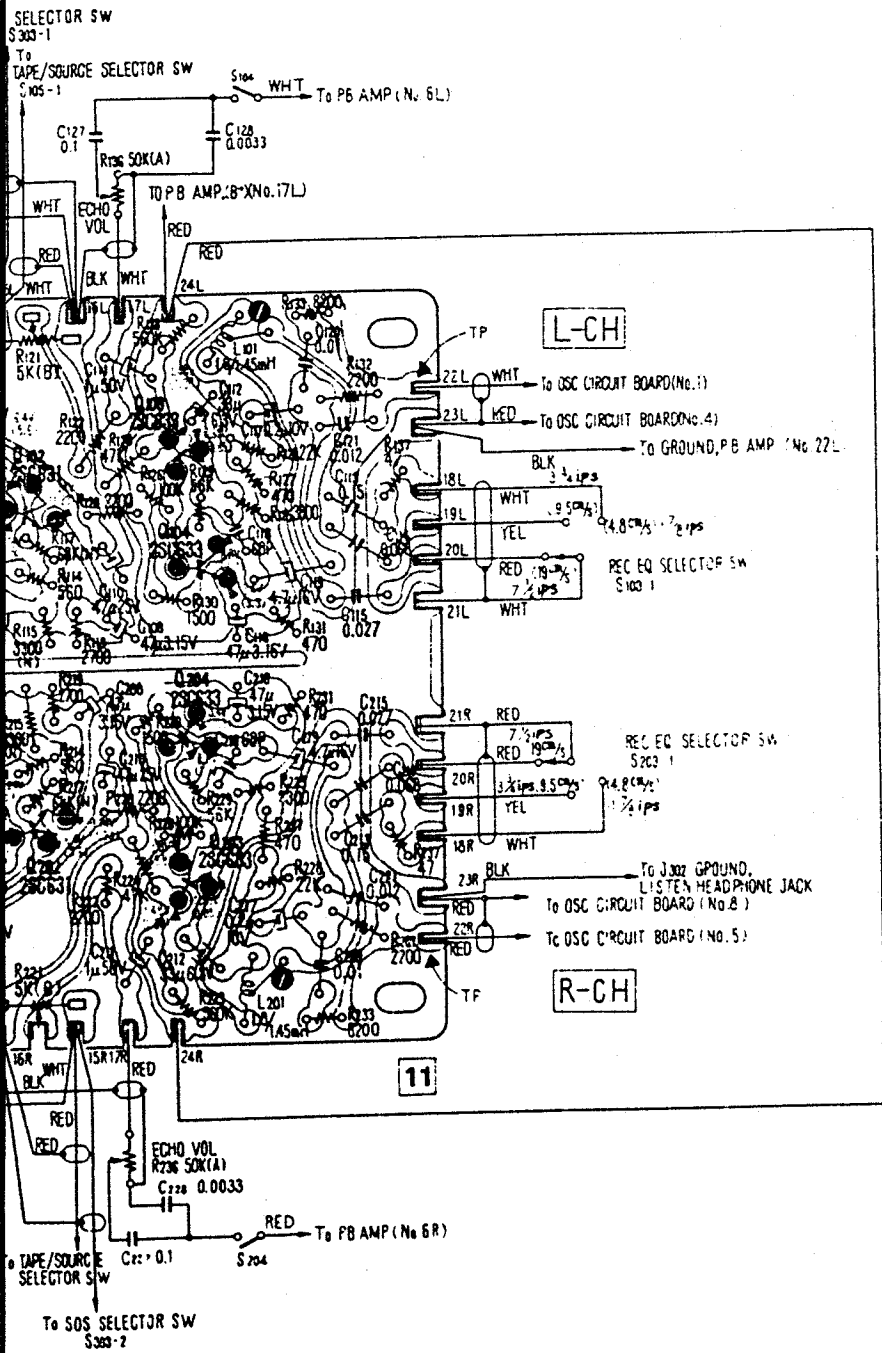
line ... E Model
 AEP Model
 UK Model

- Q101
- Q201
- Q102
- Q202
- Q103
- Q203
- Q104
- Q204

: 2SC631
 : 2SC633

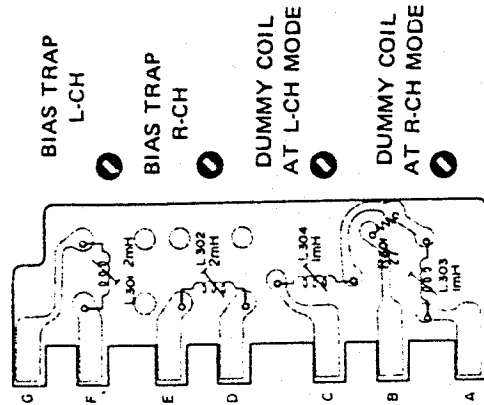


5-3. MOUNTING DIAGRAMS
 Record Amp Circuit Board
 - Conductor Side -



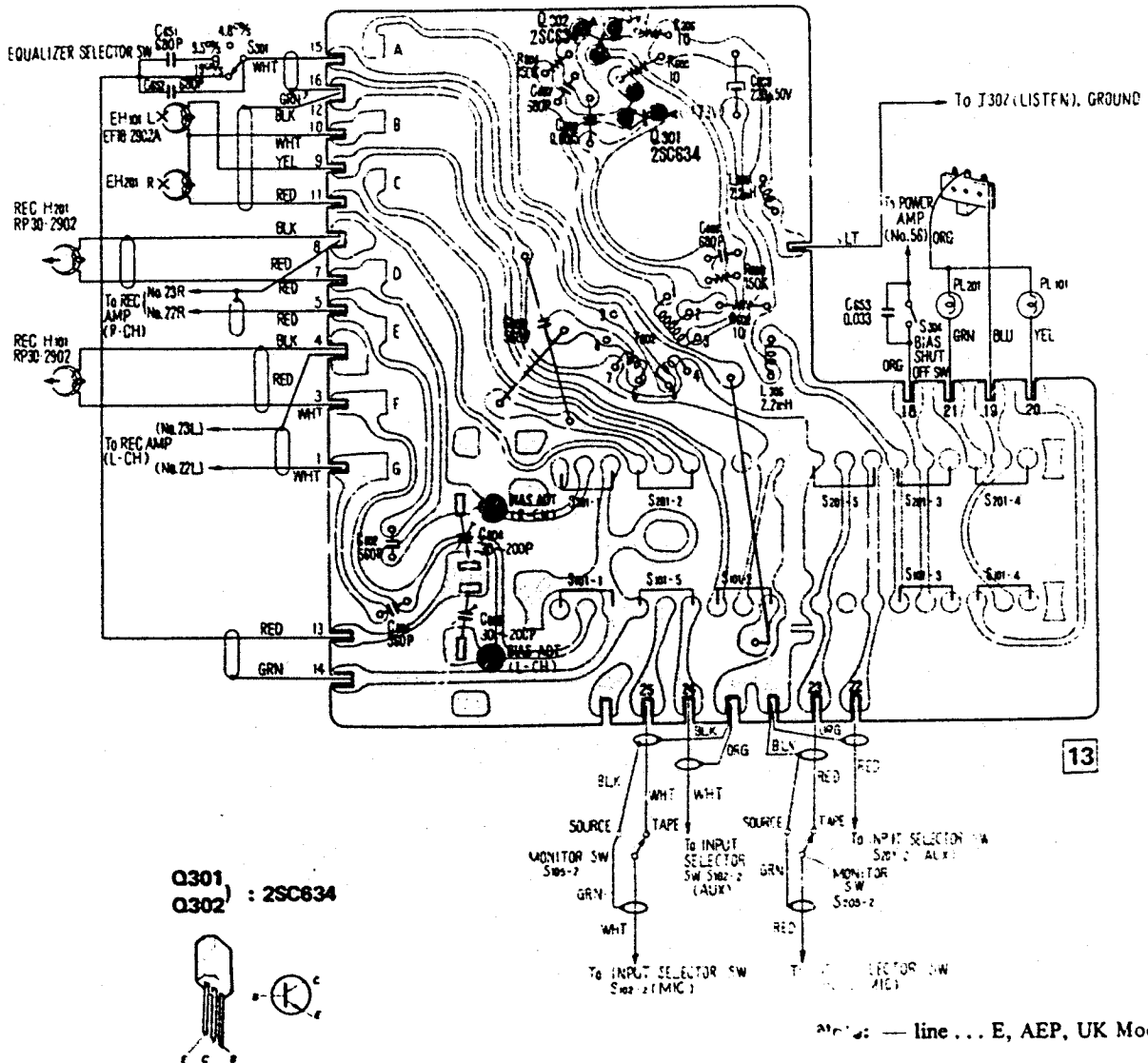
TC-630

Trap & Dummy Coil Circuit Board
 - Conductor Side -



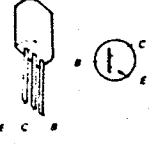
11
 printed circuit board
 part no. I-539-017-11

Bias Osc Circuit Board
 - Conductor Side -



Note: — line ... E, AEP, UK Model

- Q105
- Q205
- Q106 : 2SC671
- Q206
- Q107
- Q207
- Q108, 208
- Q109, 209 : 2SC633
- Q110, 210

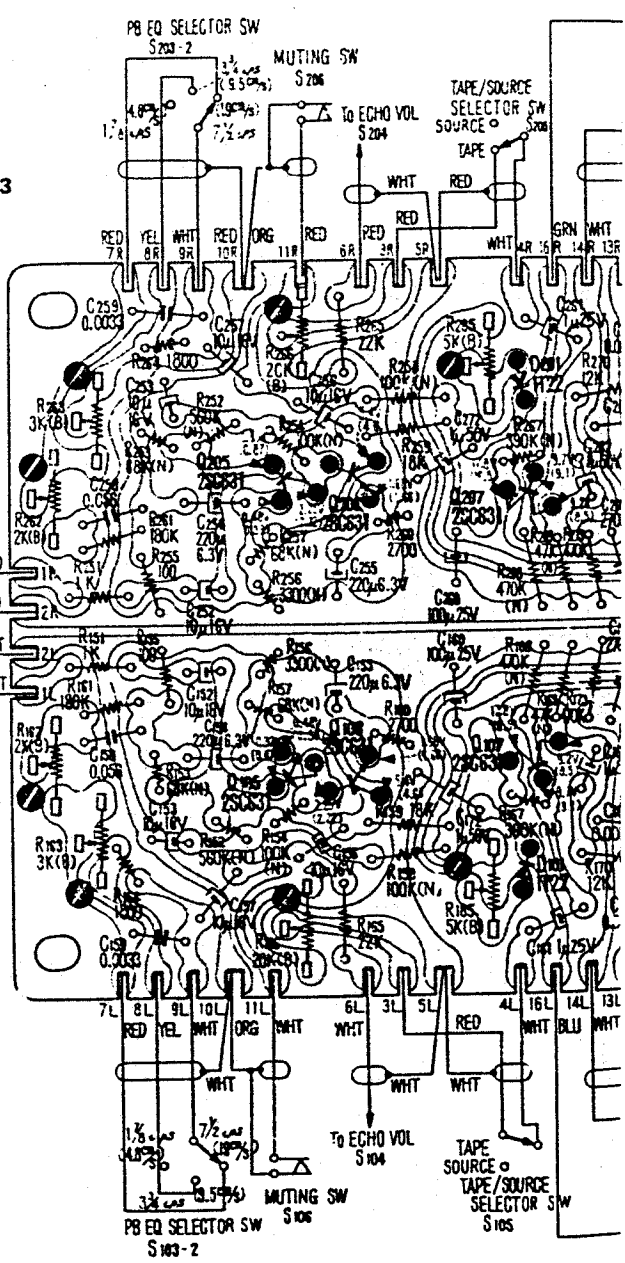
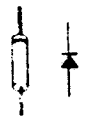


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P3H 201
PP30-2902A

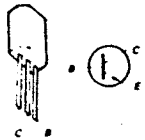
P3H 101
PP30-2902A

D101, 201: 1T22



For Service Manuals
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 362554
 email: mauritron@dial.pipex.com

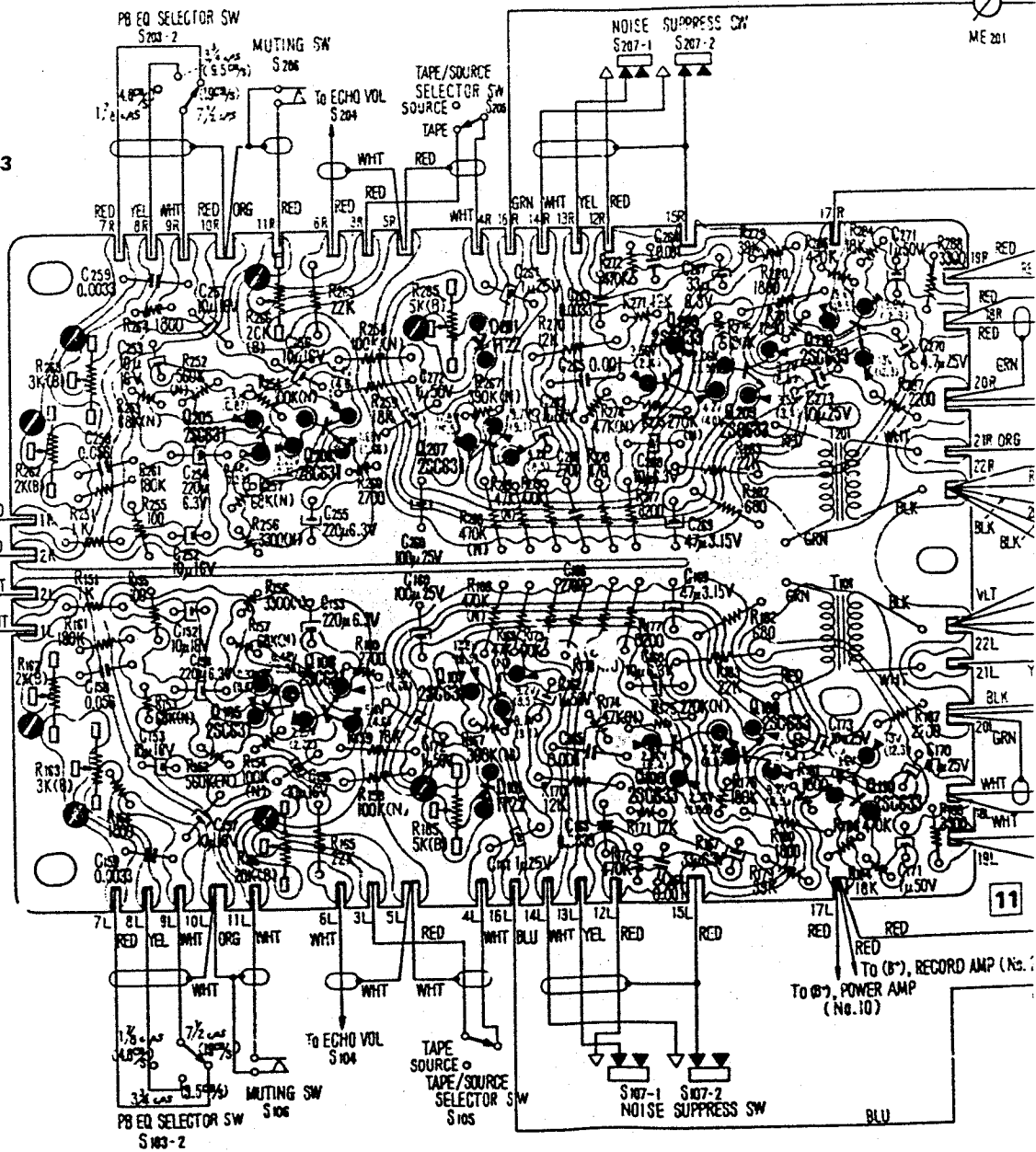
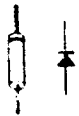
- Q105
- Q205
- Q106 :2SC671
- Q206
- Q107
- Q108, 208
- Q109, 209 :2SC633
- Q110, 210



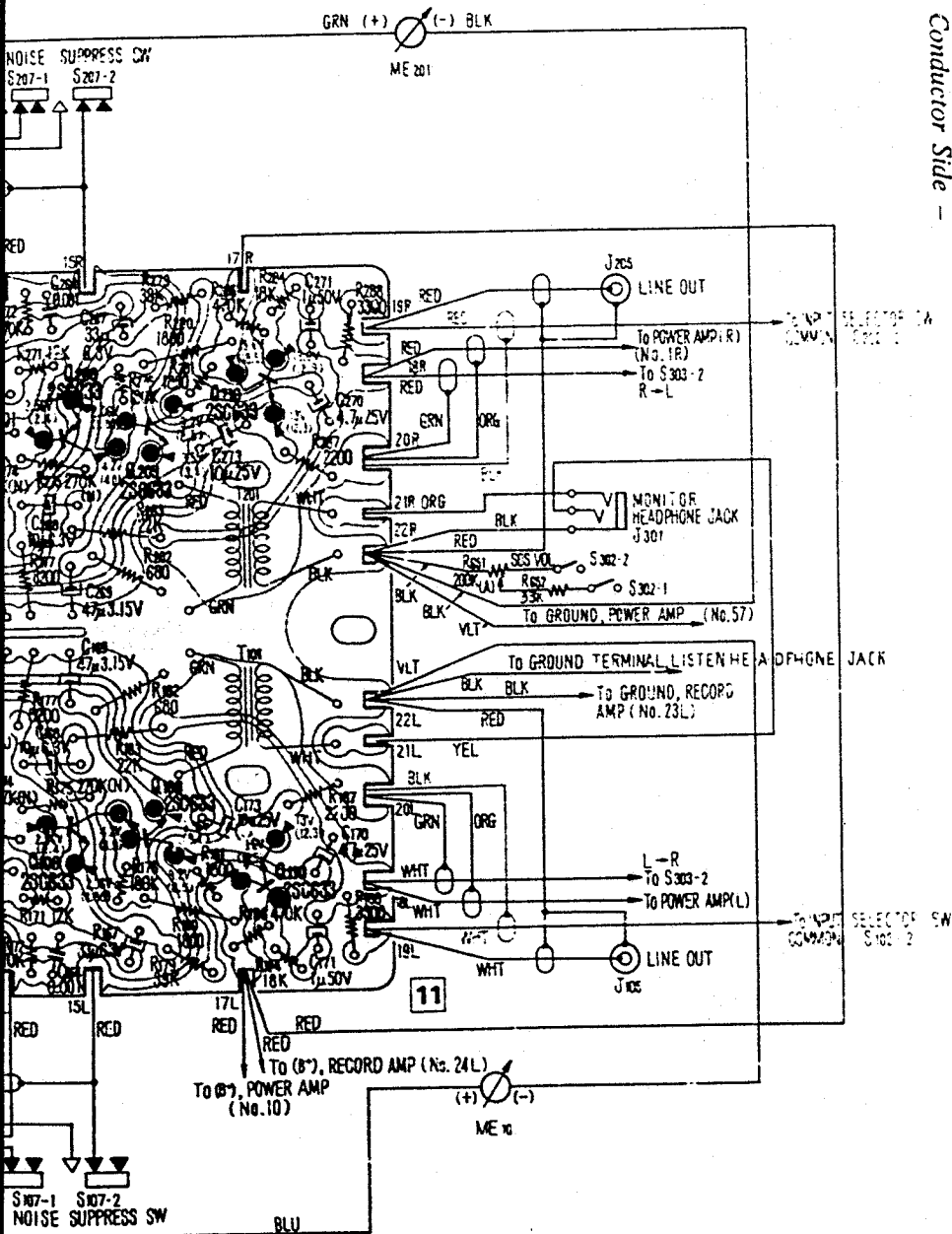
PBH 201
PP30-2902A

PBH 101
PP30-2902A

D101, 201: 1T22



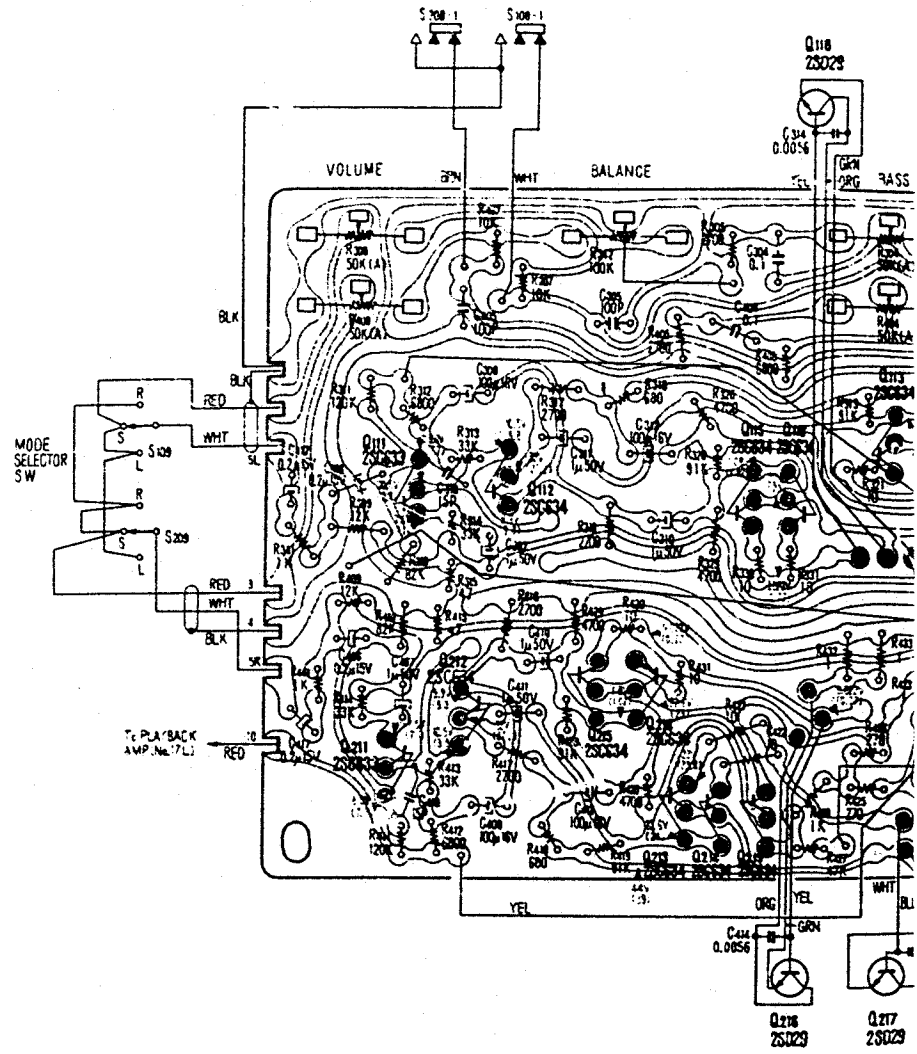
Playback Amp Circuit Board
 - Conductor Side -



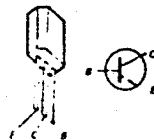
Note: — line . . . F. A/P, UK Model

TC-630

TO LID/EXT SP SELECTOR SW



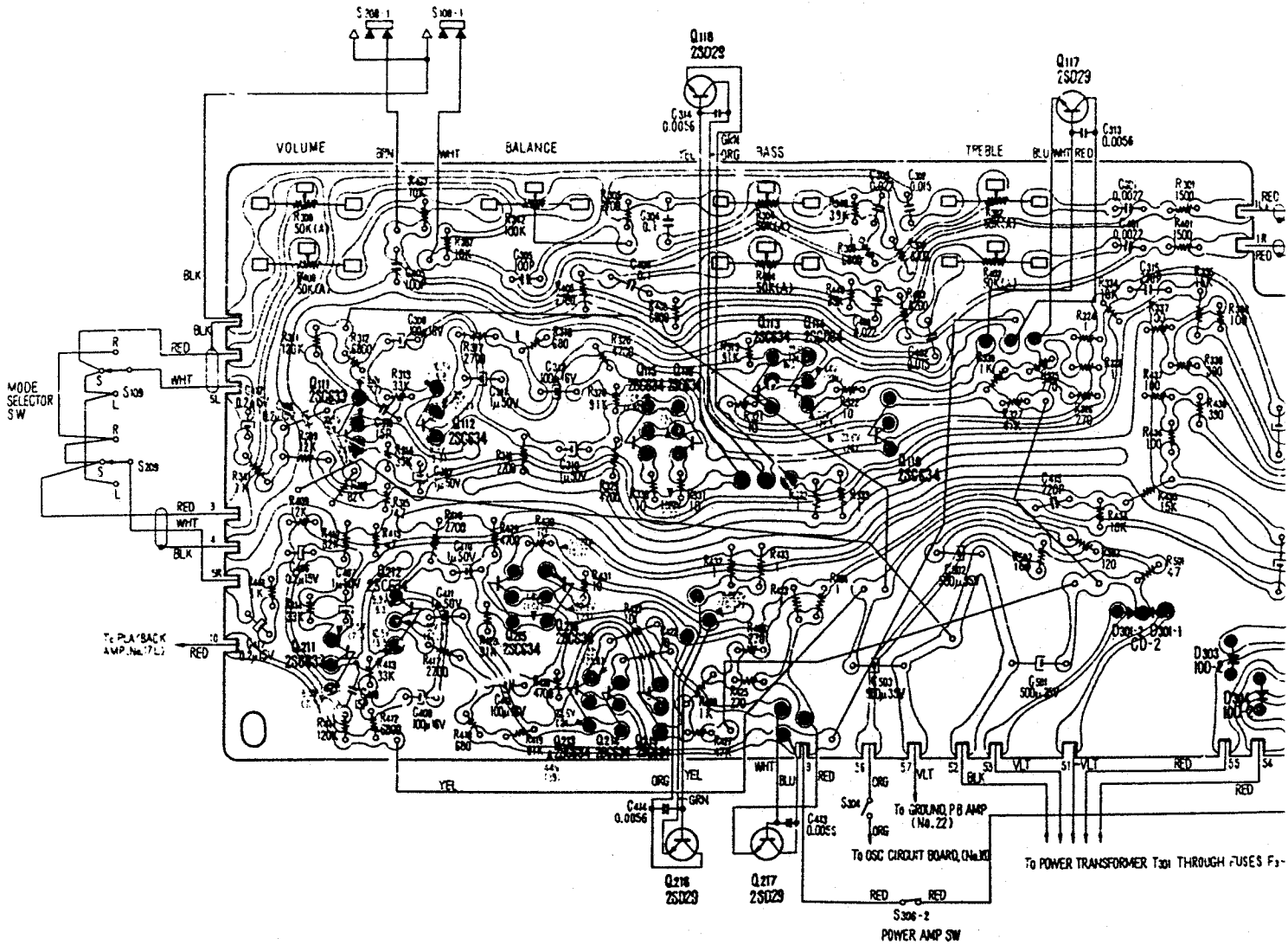
Q111, 211 : 2SC633
 Q112, 212
 Q113, 213
 Q114, 214 : 2SC634
 Q115, 215
 Q116, 216
 Q119, 219



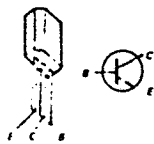
Q117, 217
 Q118, 218 : 2SC895



To LID/EXT SP SELECTOR SW



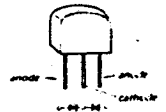
Q111, 211 : 2SC633
 Q112, 212
 Q113, 213
 Q114, 214 : 2SC634
 Q115, 215
 Q116, 216
 Q119, 219



Q117, 217
 Q118, 218 : 2SC895



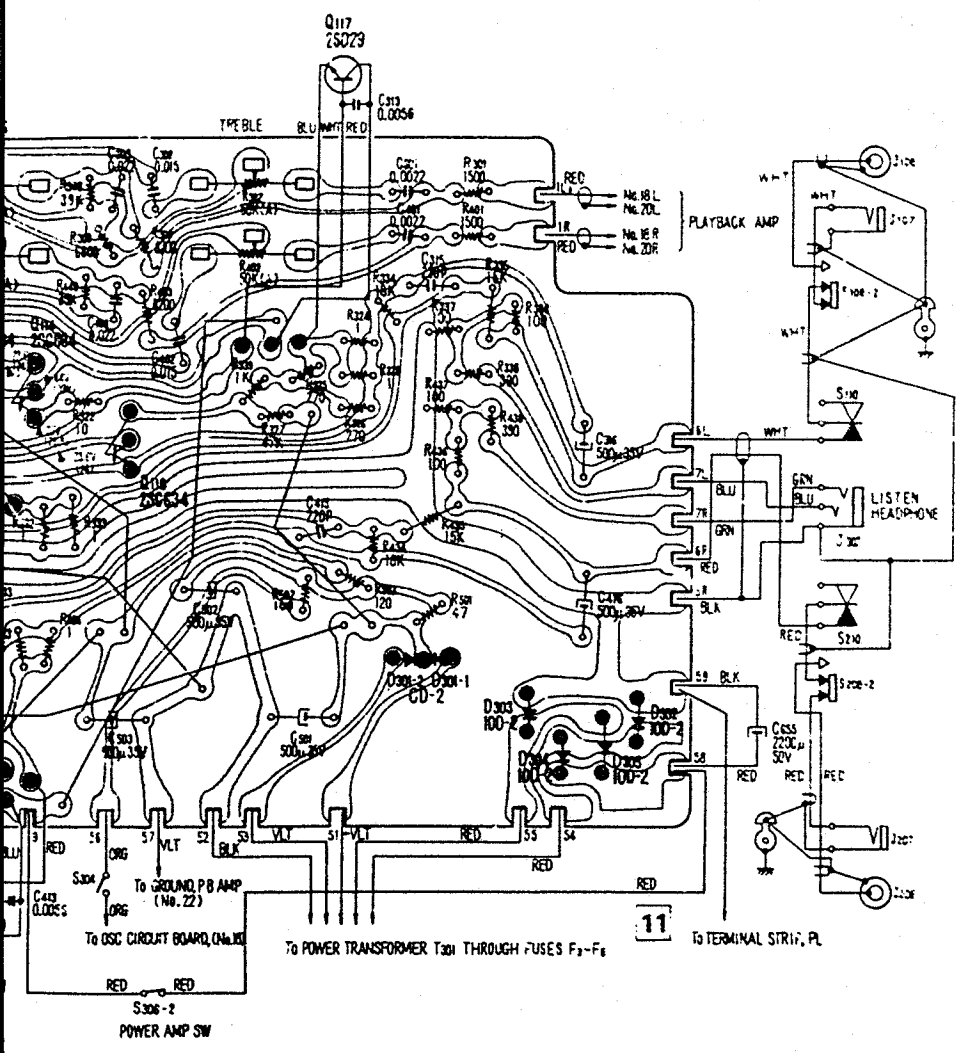
D301: CD-2



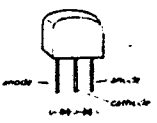
D302
 D303 : 10D
 D304
 D305

TC-630

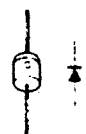
Power Amp Circuit Board
 - Conductor Side -



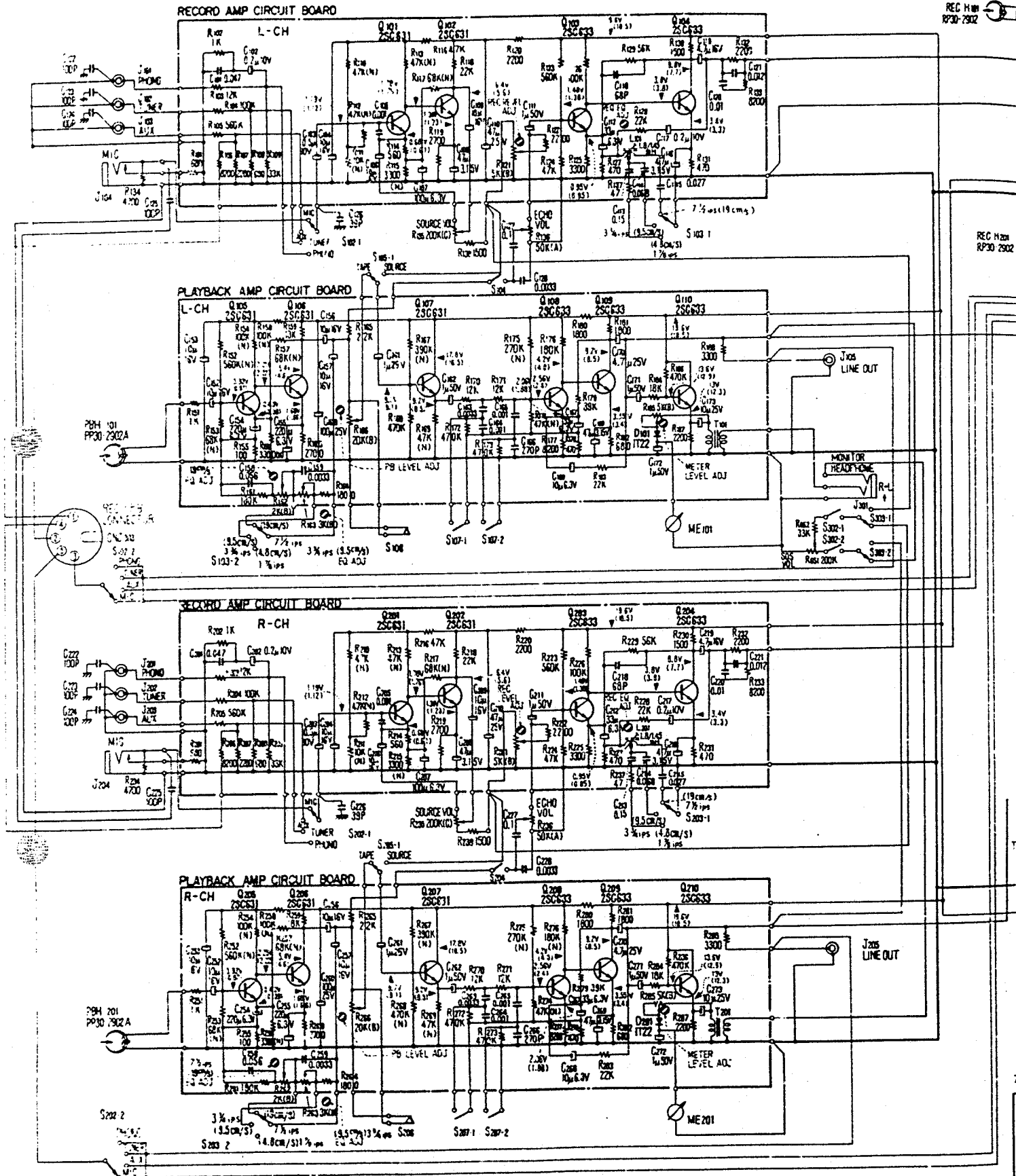
D301: CD-2



D302
 D303 : 10D-2
 D304
 D305



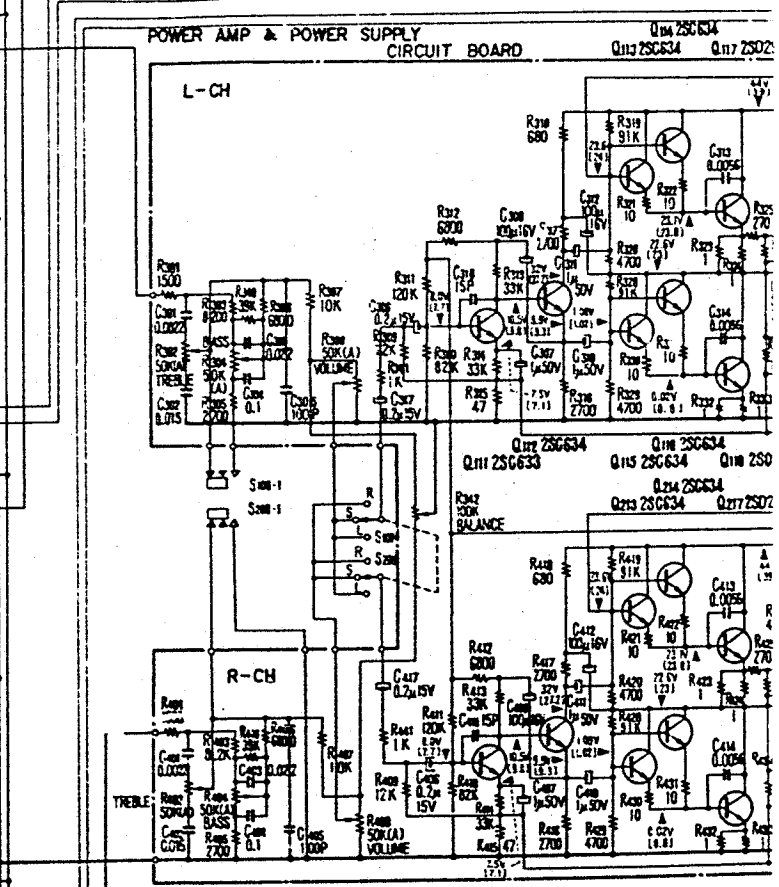
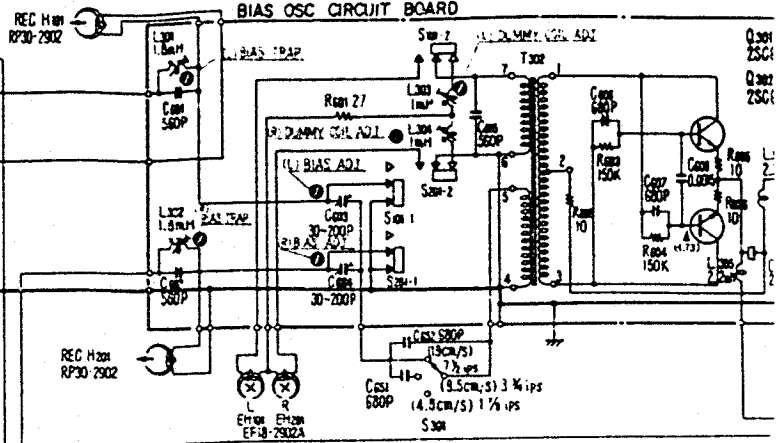
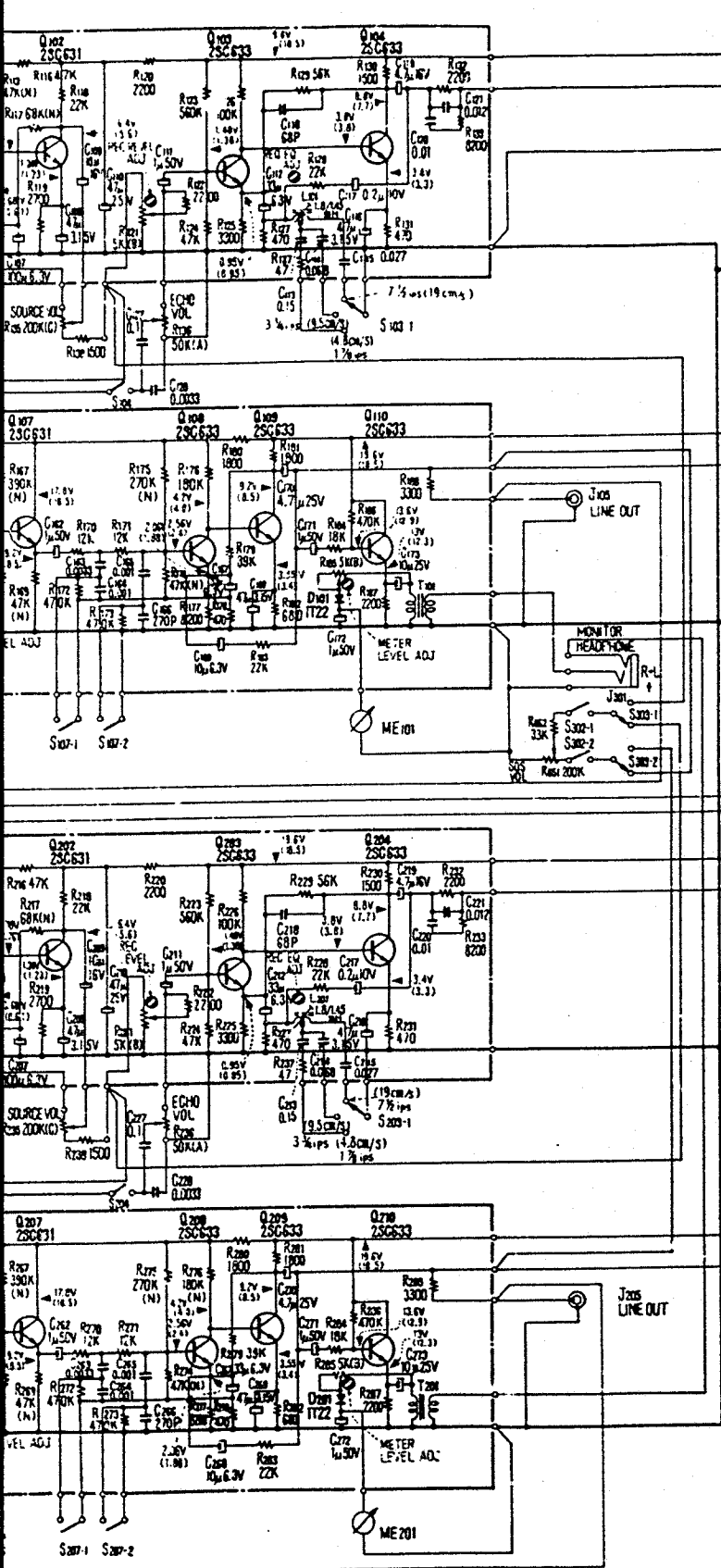
5-4. SCHEMATIC DIAGRAM



Notes:

1. : adjustable
2. : grounded to chassis
3. All resistors and capacitors are rated in Ω and μF respectively unless otherwise specified.
4. Resistor whose rating value is suffixed with the letter (N) is low-noise resistor.
5. The letter (A), (B) or (C) suffixed to rating value of variable resistor indicates its characteristic.
6. Voltage values are measured to ground with a VTVM in PLAYBACK and RECORD modes at the speed of 7 1/2 ips (19 cm/s). Variations may be noted due to normal production tolerances. Voltage values in RECORD mode are in parenthesis.

TC-630 TC-630



Note: — line ... E, AEP, UK Model

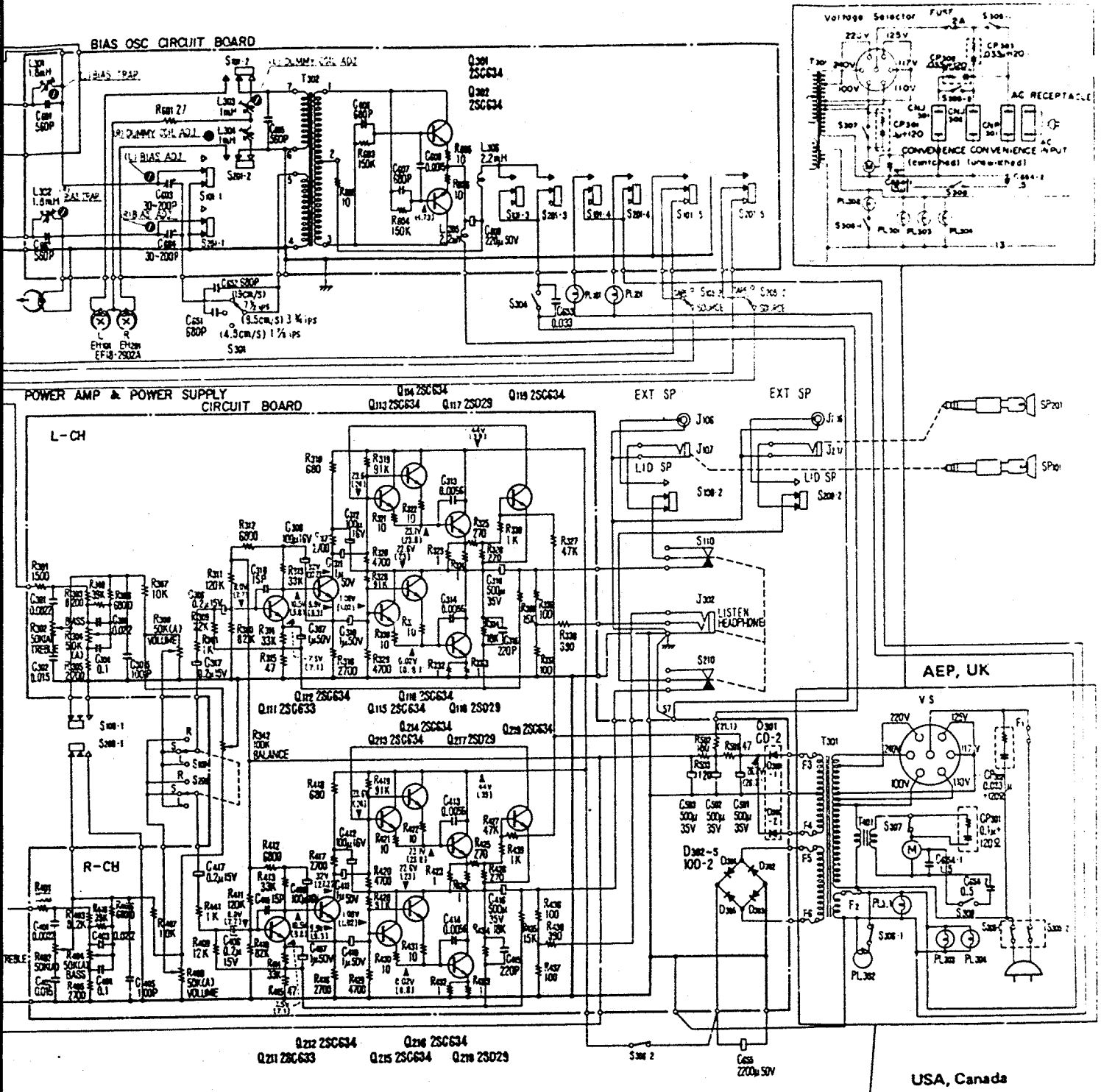
7. Switch positions are as per the following table:

| Switch No. | Description | Position |
|-------------------|-------------------------------|---------------------|
| S101-1-5, 201-1-5 | record/playback switch | playback |
| S102-1-2, 202-1-2 | INPUT SELECTOR switch | MIC |
| S103-1-2, 203-1-2 | TAPE SPEED & equalizer switch | 7 1/2 ips (19 cm/s) |
| J104, 204 | ECHO switch | OFF |
| S105-1-2, 205-1-2 | MONITOR switch | TAPE |
| S106, 206 | muting switch | OFF |
| S107-1-2, 207-1-2 | NOISE SUPPRESS switch | OFF |
| S108-1-2, 208-1-2 | SPEAKER SELECTOR switch | LID |
| S109, 209 | MODE selector switch | STEREO |
| S110, 210 | HEADPHONE & speaker switch | speaker |
| S301 | SPEED & equalizer switch | 7 1/2 ips (19 cm/s) |
| S302-1, 302-2 | SOS switch | OFF |
| S303-1, 303-2 | SOS selector switch | L — R |
| S304 | bias shut-off switch | ON (E,AEP,UK) |
| S305-1, 305-2 | POWER switch | ON (E,AEP,UK) |
| S306-1, 306-2 | POWER AMP switch | ON (E,AEP,UK) |
| S307 | auto-shut-off switch | ON (E,AEP,UK) |
| S308 | frequency selector switch | 60Hz |

5. The letter (A), (B) or (C) suffixed to rating value of variable resistor indicates its characteristic.

6. Voltage values are measured to ground with a VTVM in PLAYBACK and RECORD modes at the speed of 7 1/2 ips (19 cm/s). Variations may be noted due to normal production tolerances. Voltage values in RECORD mode are in parenthesis.

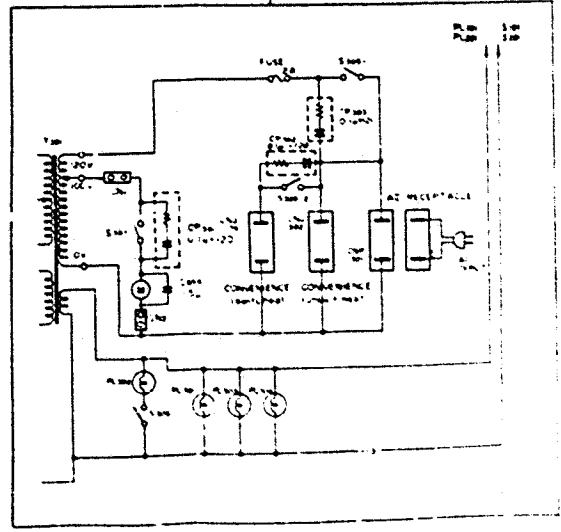
Resistors are rated in ohms and microfarads respectively. Capacitors are rated in microfarads and microfarads respectively. The letter (N) is suffixed with the letter (N).



Note: — line ... E, AEP, UK Model

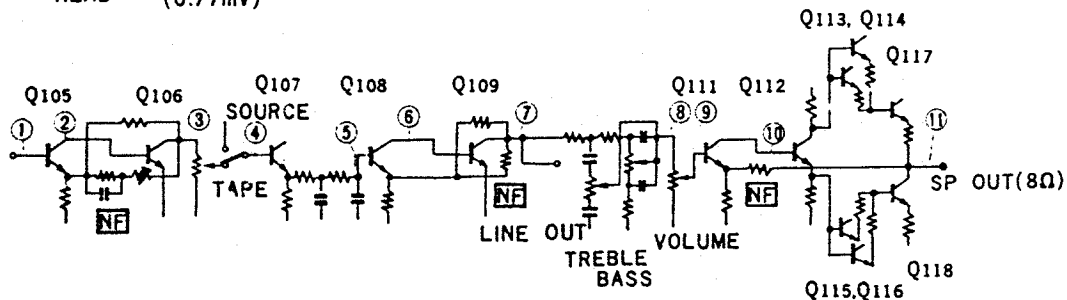
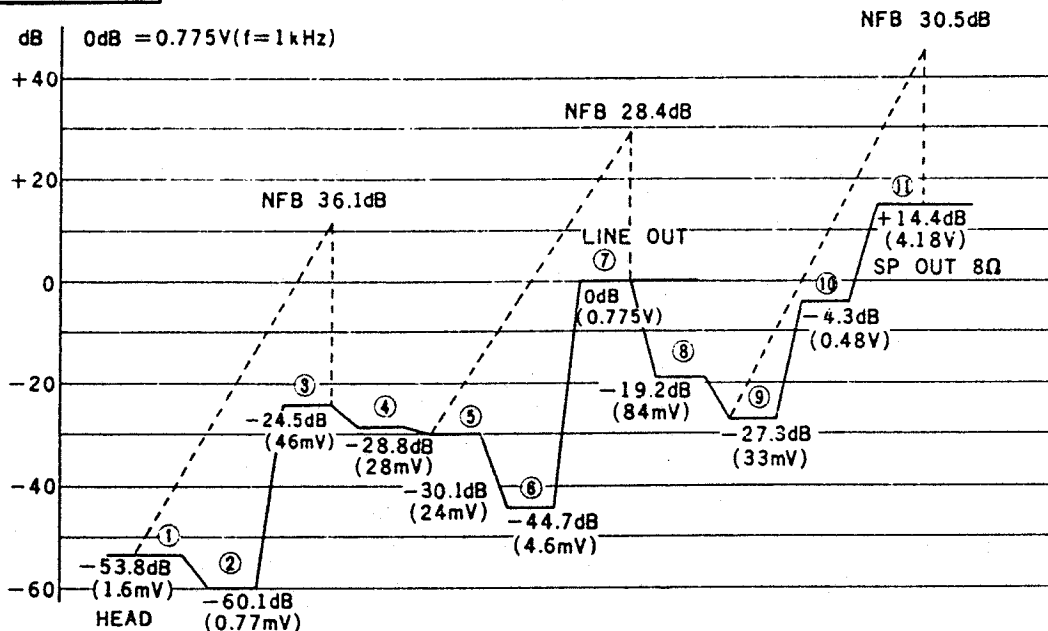
7. Switch positions are as per the following table:

| Switch No. | Description | Position |
|-------------------|-------------------------------|-----------------------------------|
| S101-1-5, 201-1-5 | record/playback switch | playback |
| S102-1-2, 202-1-2 | INPUT SELECTOR switch | MIC |
| S103-1-2, 203-1-2 | TAPE SPEED & equalizer switch | 7 1/2 ips (19 cm/s) |
| J104, 204 | ECHO switch | OFF |
| S105-1-2, 205-1-2 | MONITOR switch | TAPE |
| S106, 206 | muting switch | OFF |
| S107-1-2, 207-1-2 | NOISE SUPPRESS switch | OFF |
| S108-1-2, 208-1-2 | SPEAKER SELECTOR switch | LID |
| S108, 208 | MODE selector switch | STEREO |
| S110, 210 | HEADPHONE & speaker switch | speaker |
| S301 | SPEED & equalizer switch | 7 1/2 ips (19 cm/s) |
| S302-1, 302-2 | SOS switch | OFF |
| S303-1, 303-2 | SOS selector switch | L — R |
| S304 | bias shut-off switch | ON (E, AEP, UK) OFF (USA, Canada) |
| S305-1, 305-2 | POWER switch | ON (E, AEP, UK) OFF (USA, Canada) |
| S306-1, 306-2 | POWER AMP switch | ON (E, AEP, UK) OFF (USA, Canada) |
| S307 | auto-shut-off switch | ON (E, AEP, UK) OFF (USA, Canada) |
| S308 | frequency selector switch | 60 Hz |

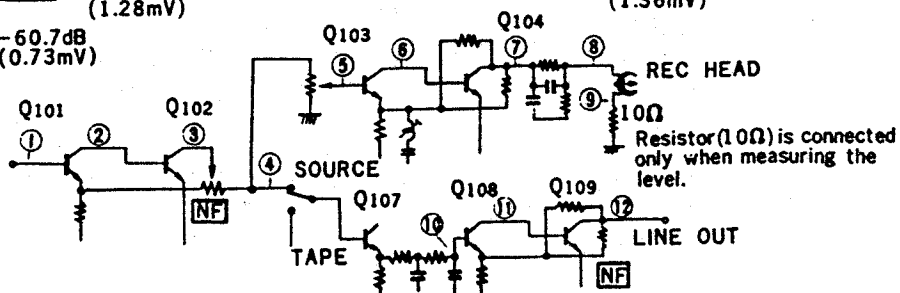
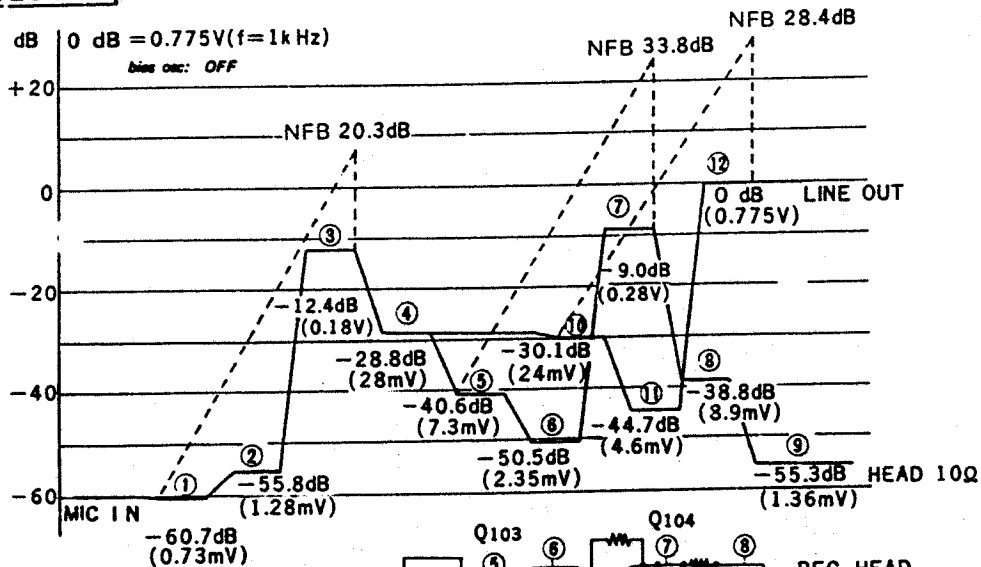


5-5. LEVEL DIAGRAMS

PLAYBACK



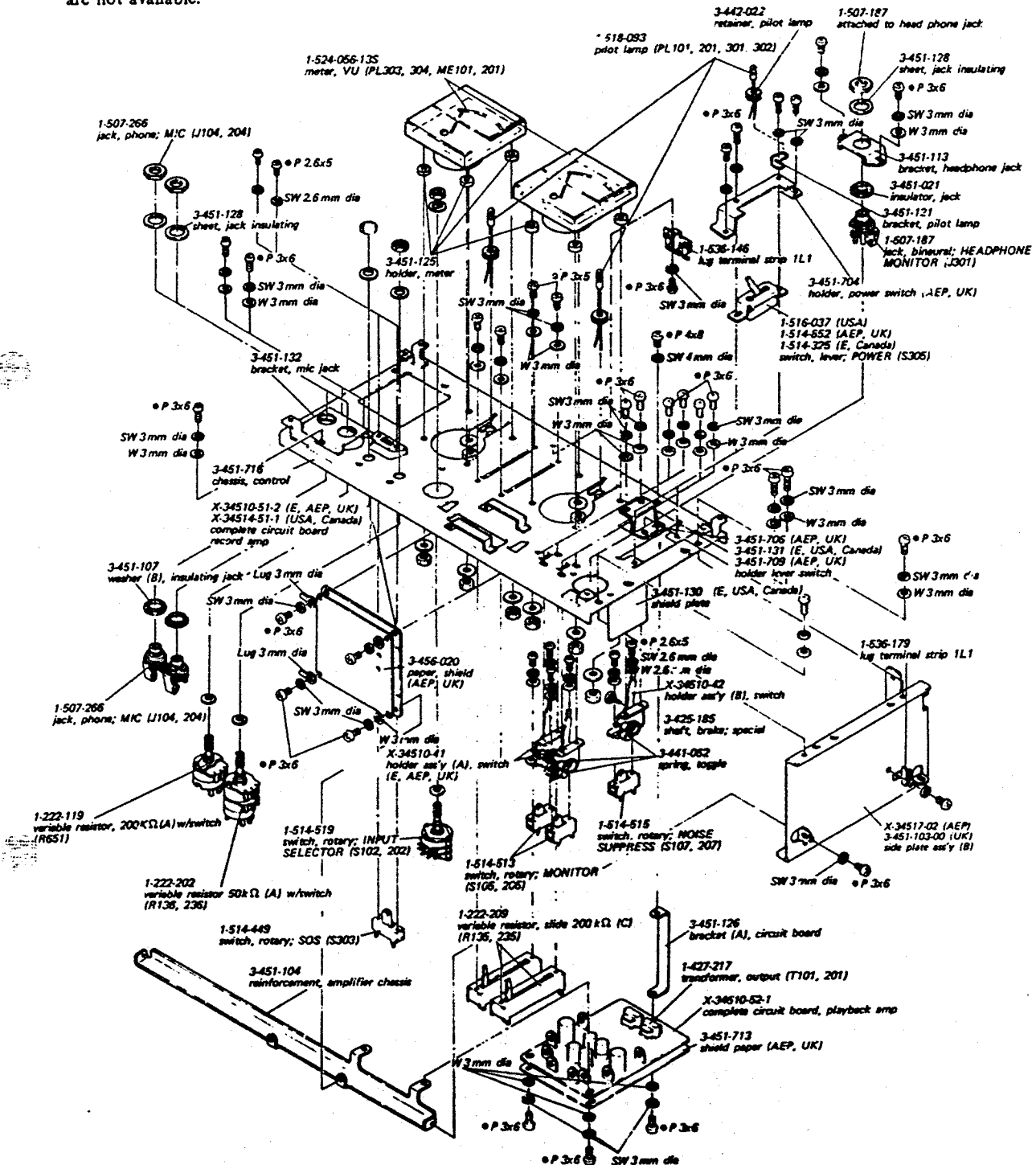
RECORD



SECTION 6 EXPLODED VIEWS

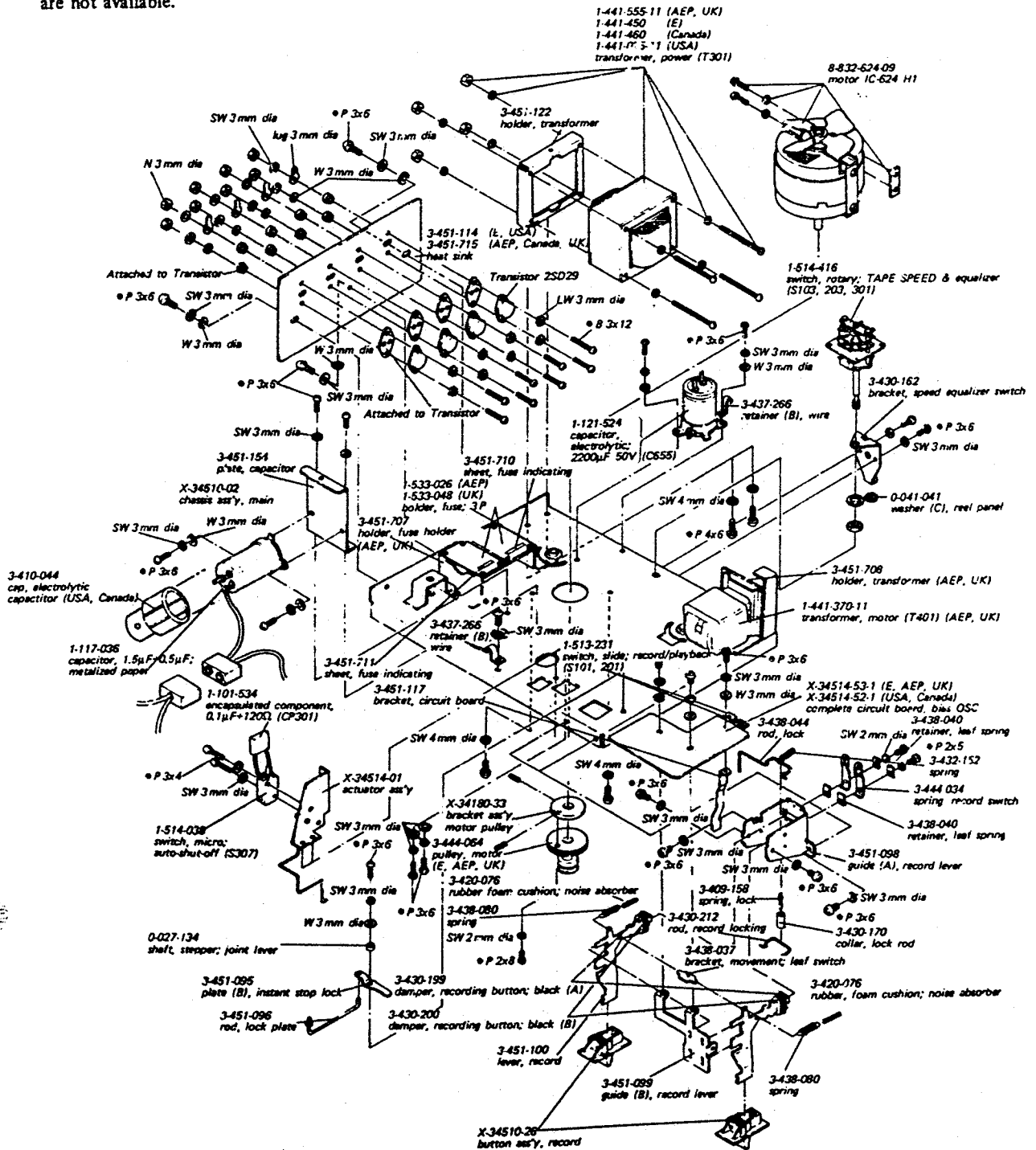
6-1. CONTROL CHASSIS - Top View -

Note: Parts without part numbers and names are not available.



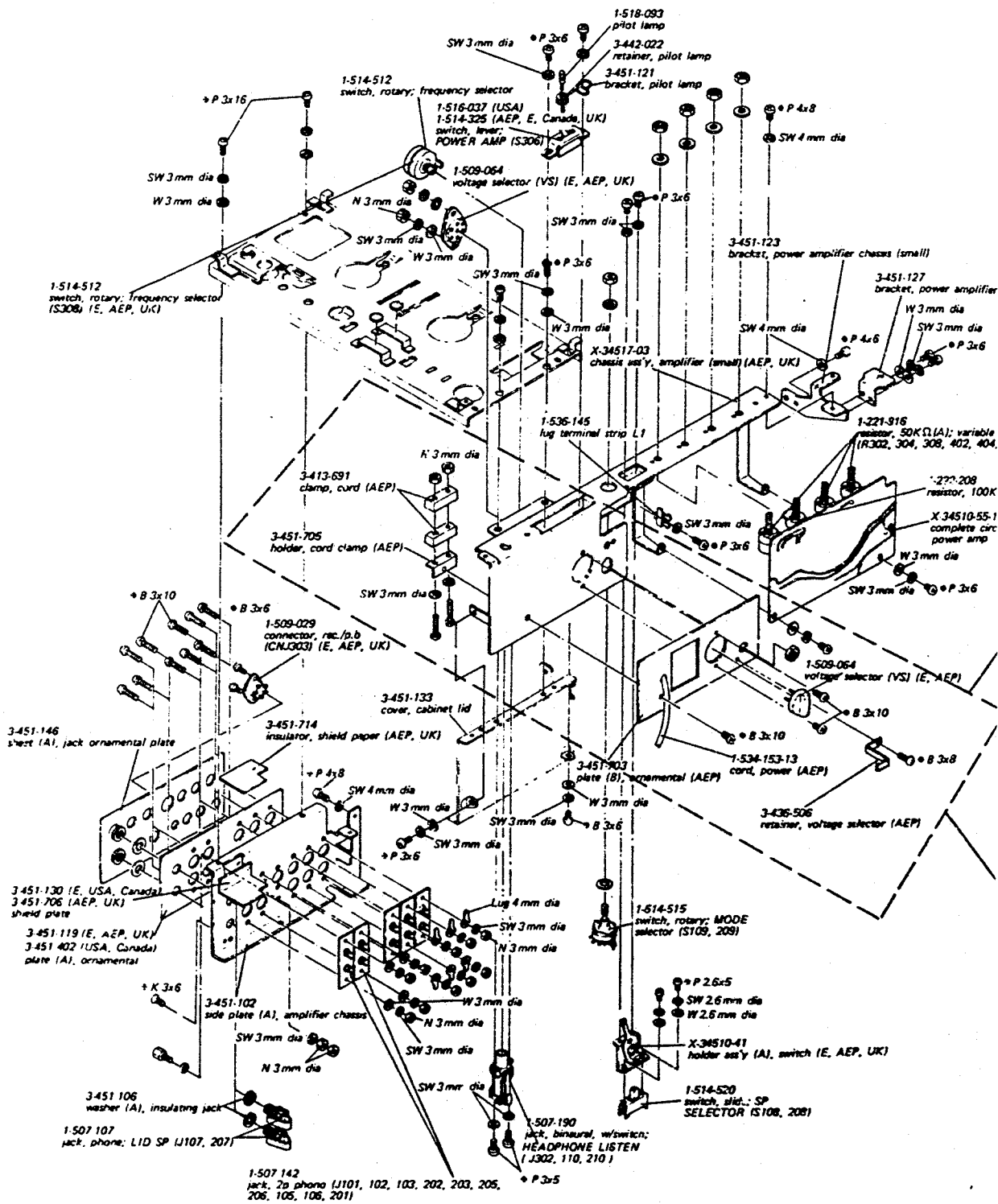
6-2. CHASSIS – Bottom View –

Note: Parts without part numbers and names are not available.

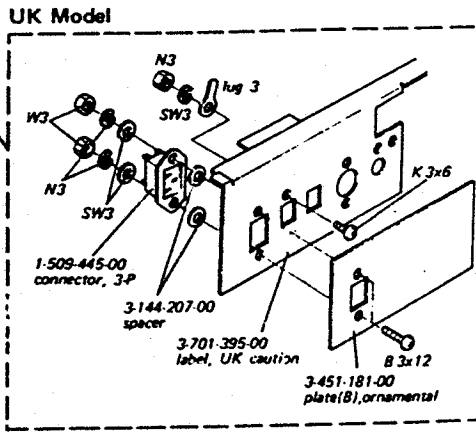
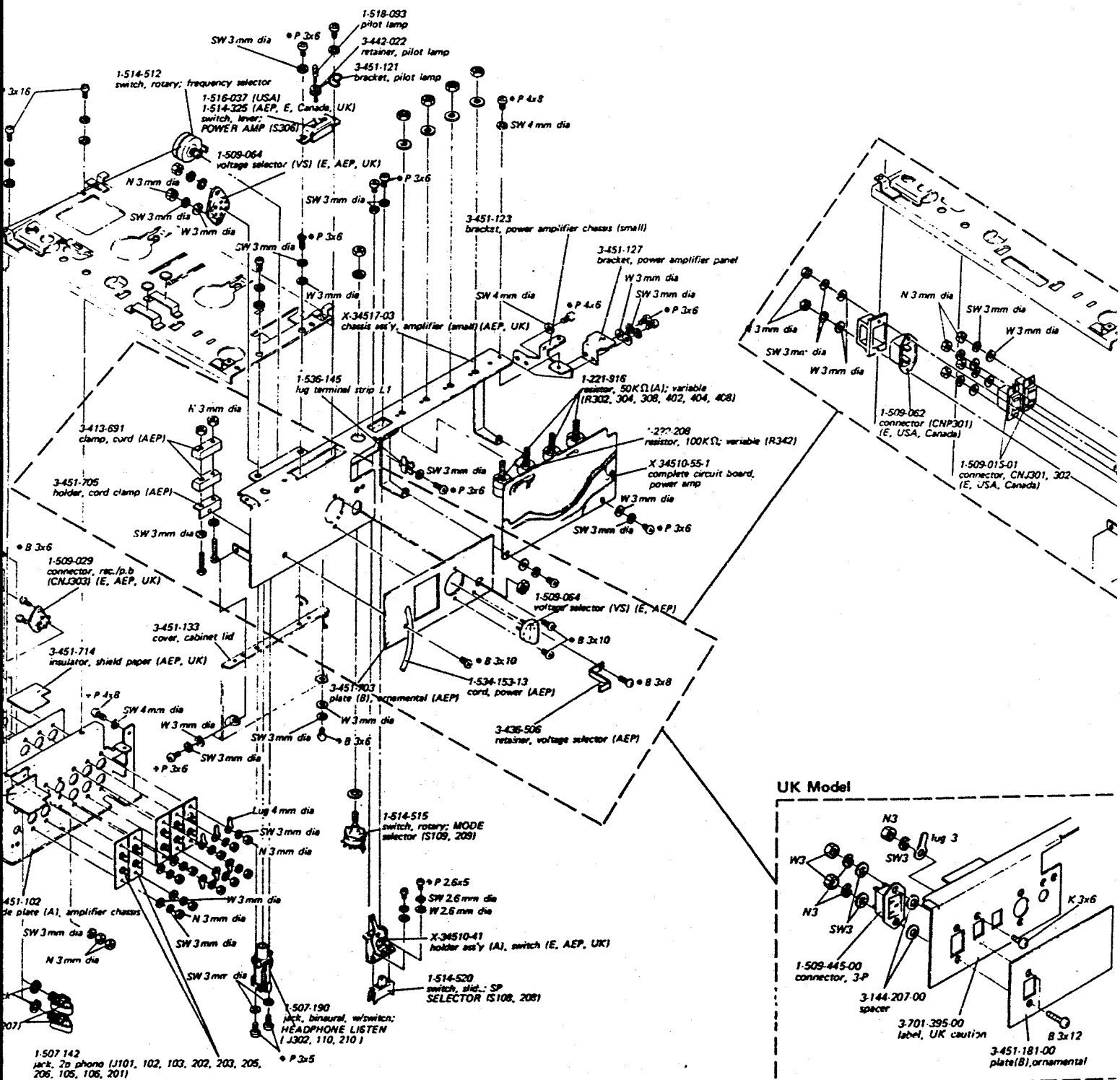


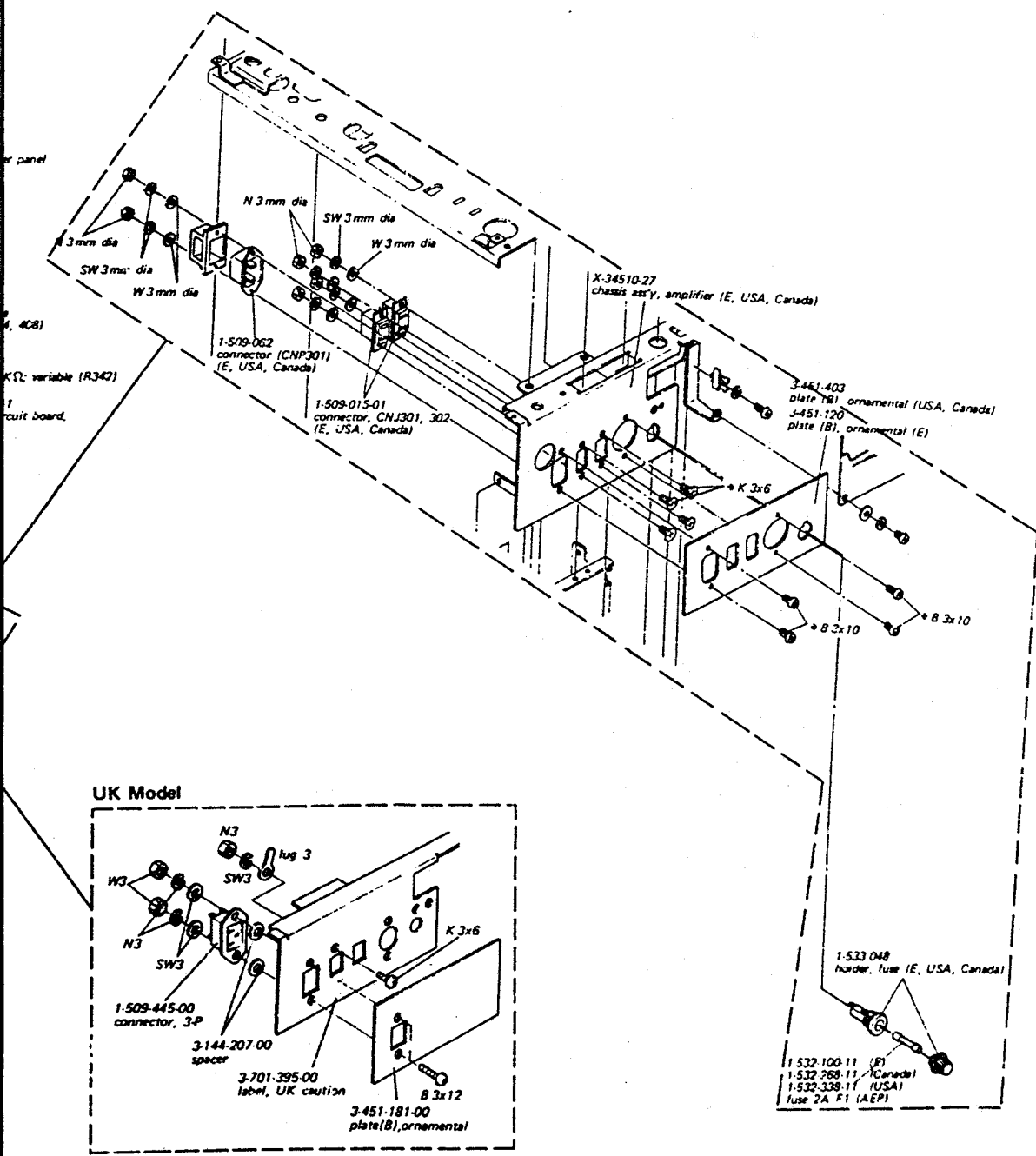
6-3. AMP CHASSIS - Top View -

Note: Parts without part numbers and names are not available.



nes

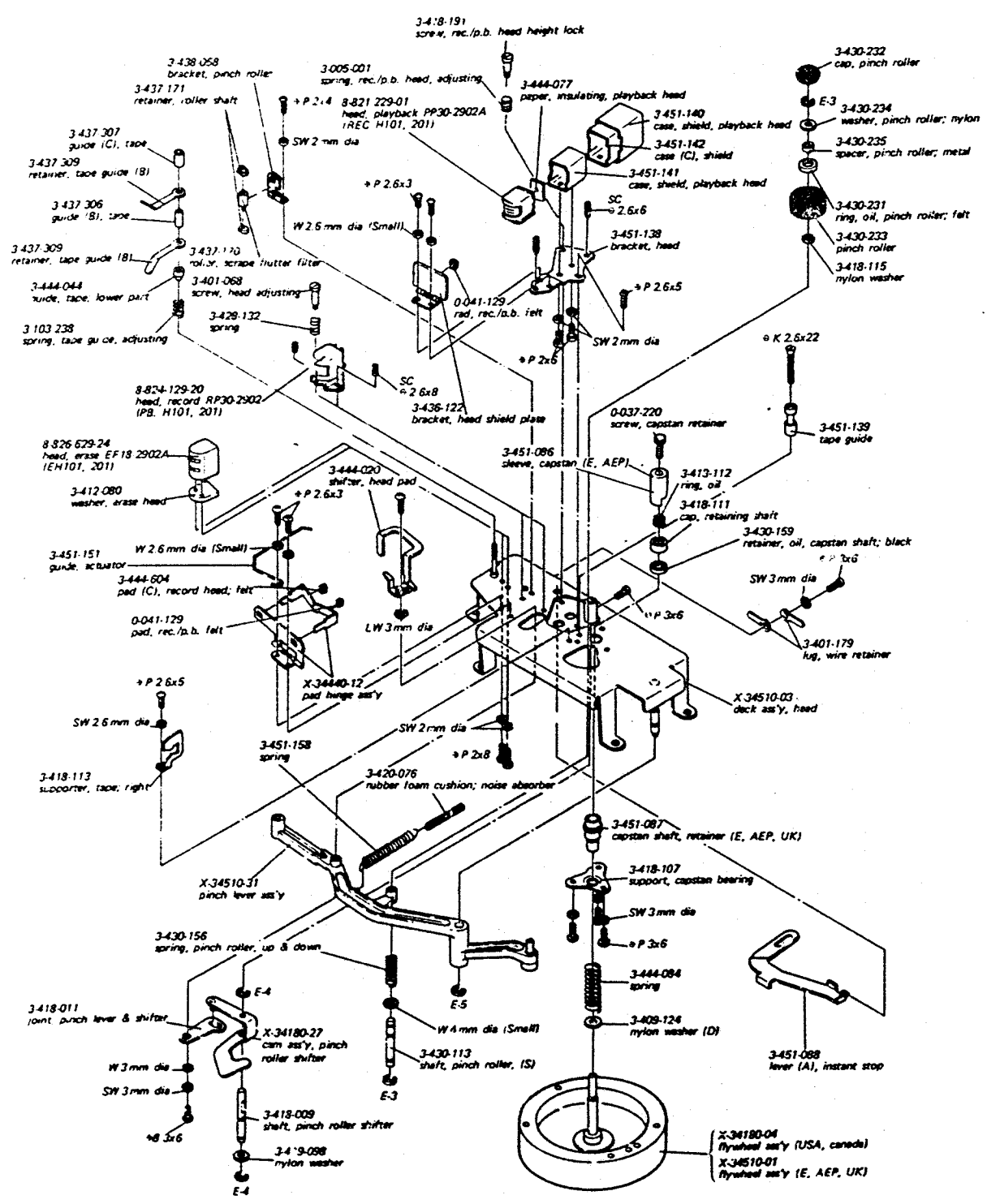




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 Fax (01844) 352554
 email: mauritron@dial.pipex.com

6-4. HEAD DECK - Top View -

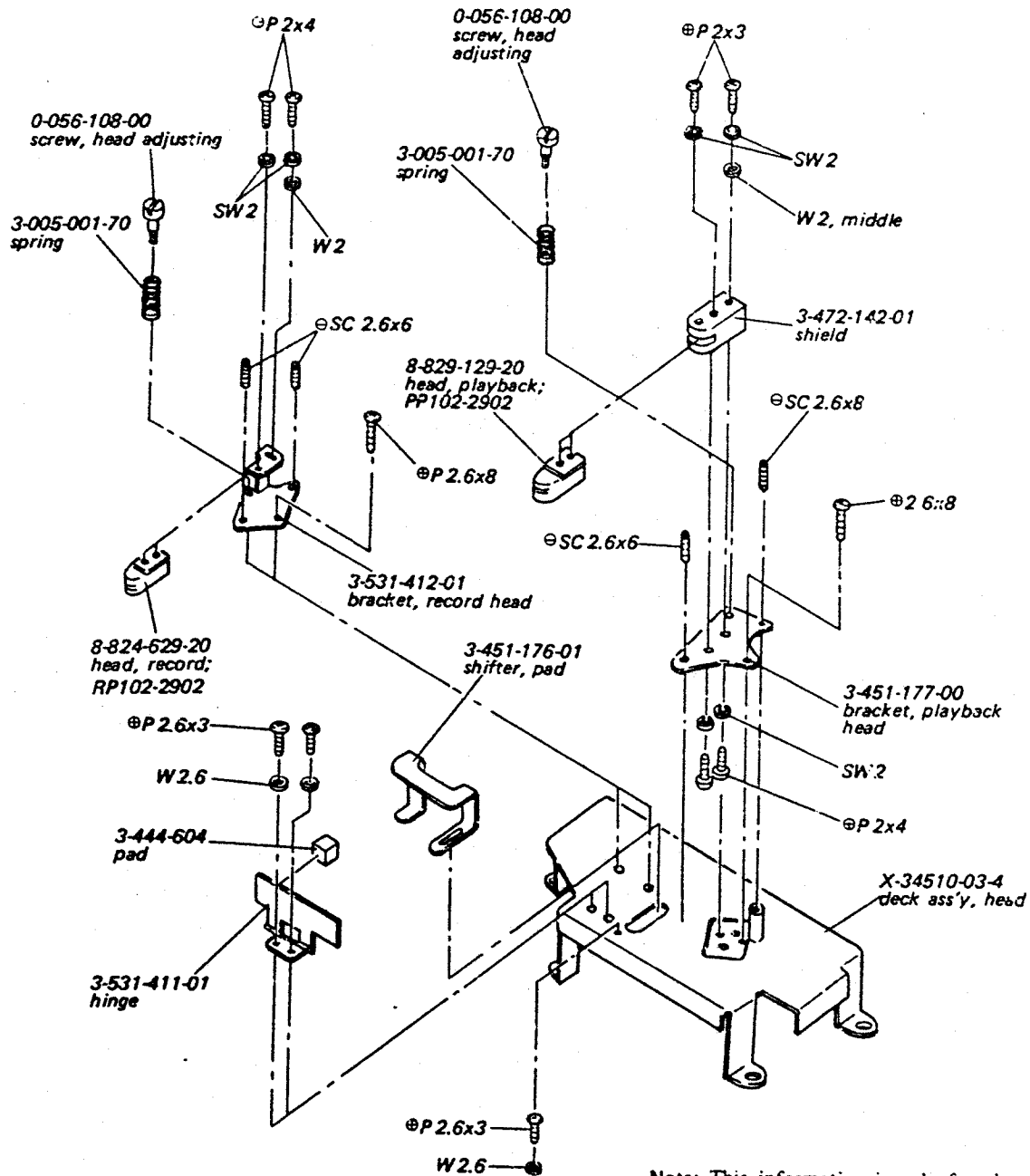
Note: Parts without part numbers and names are not available.



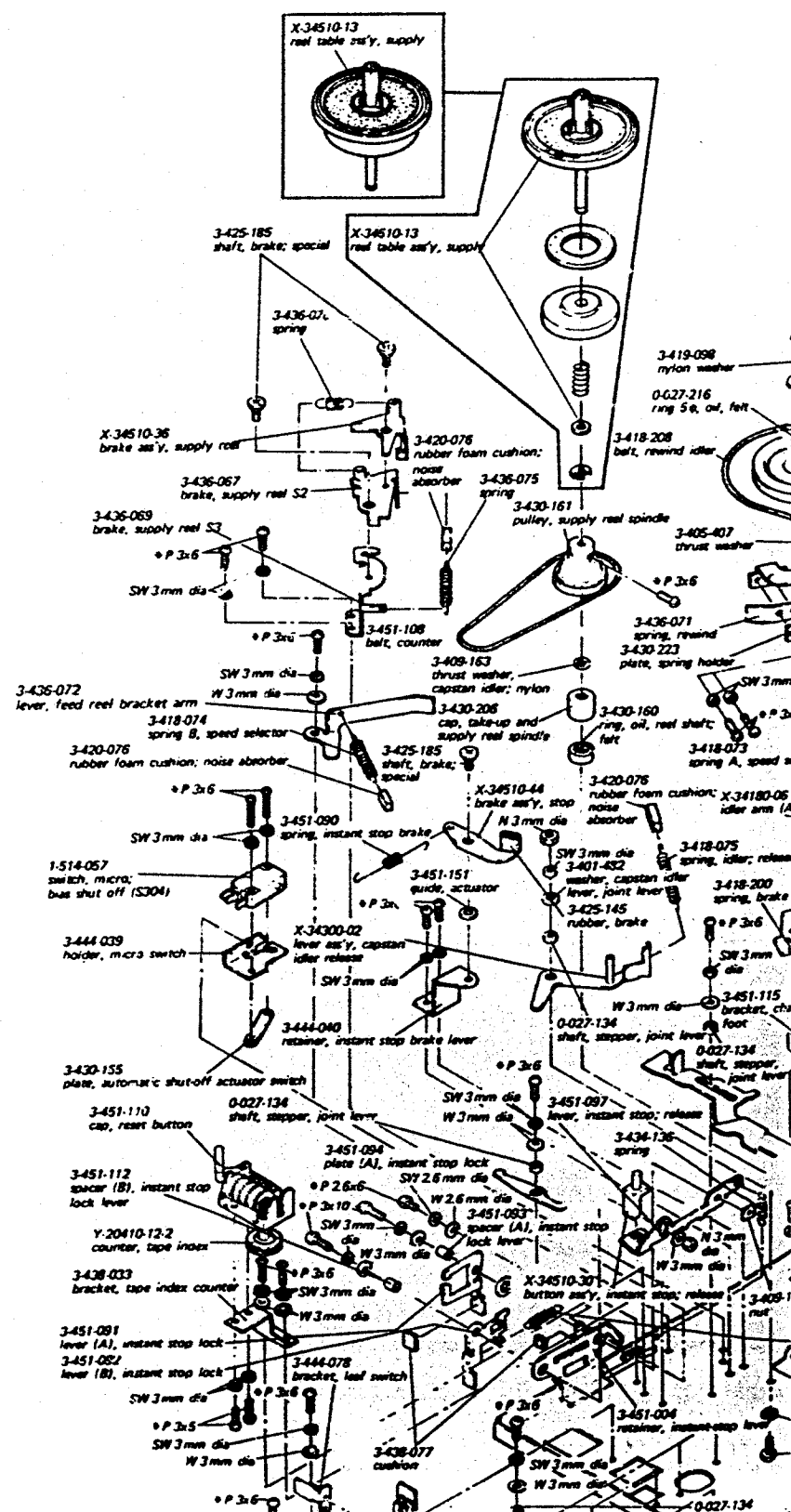
6-5. HEAD DECK - Top View -

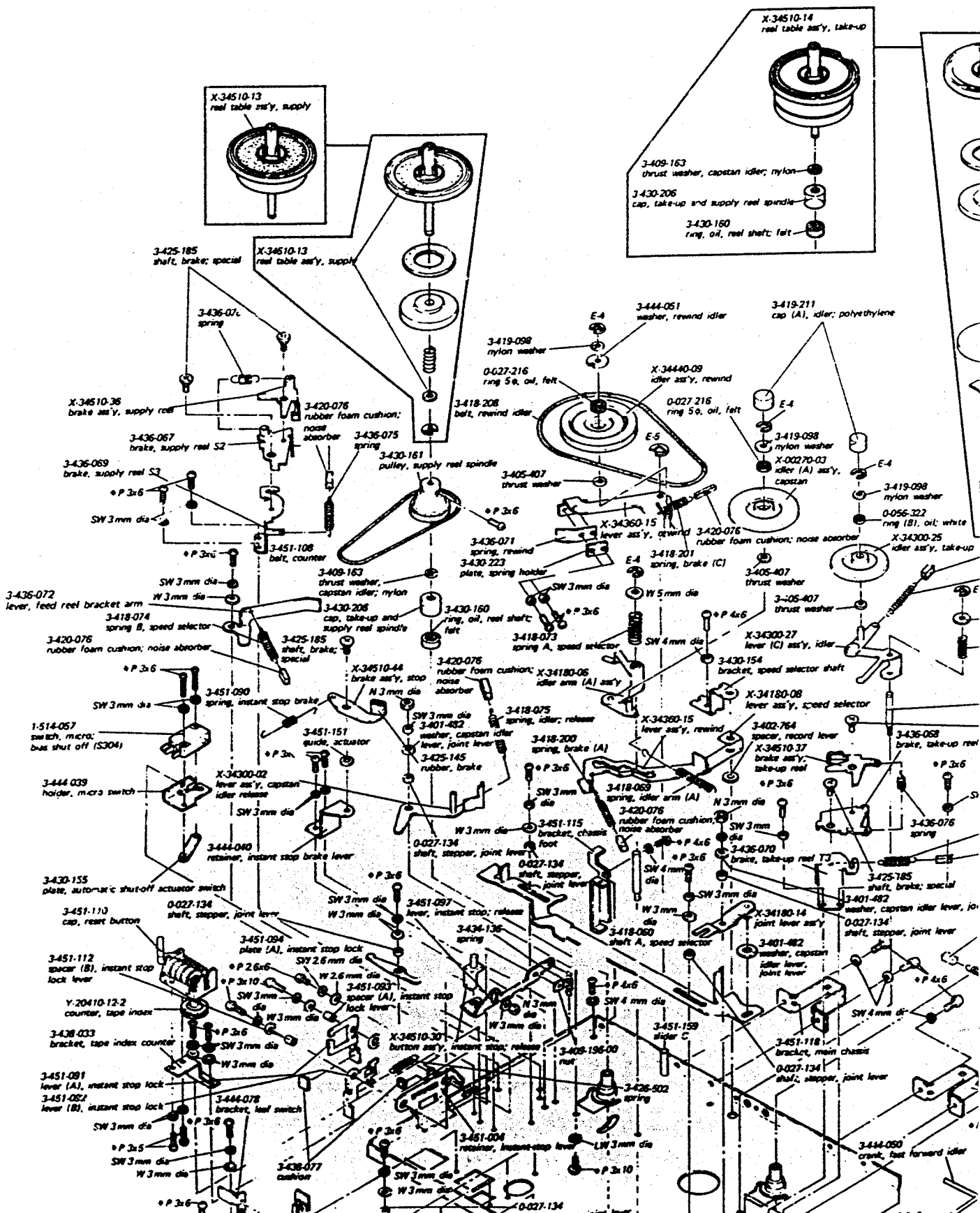
Note: Parts without part numbers and names are not available.

(Serial No. 124,701 and later)

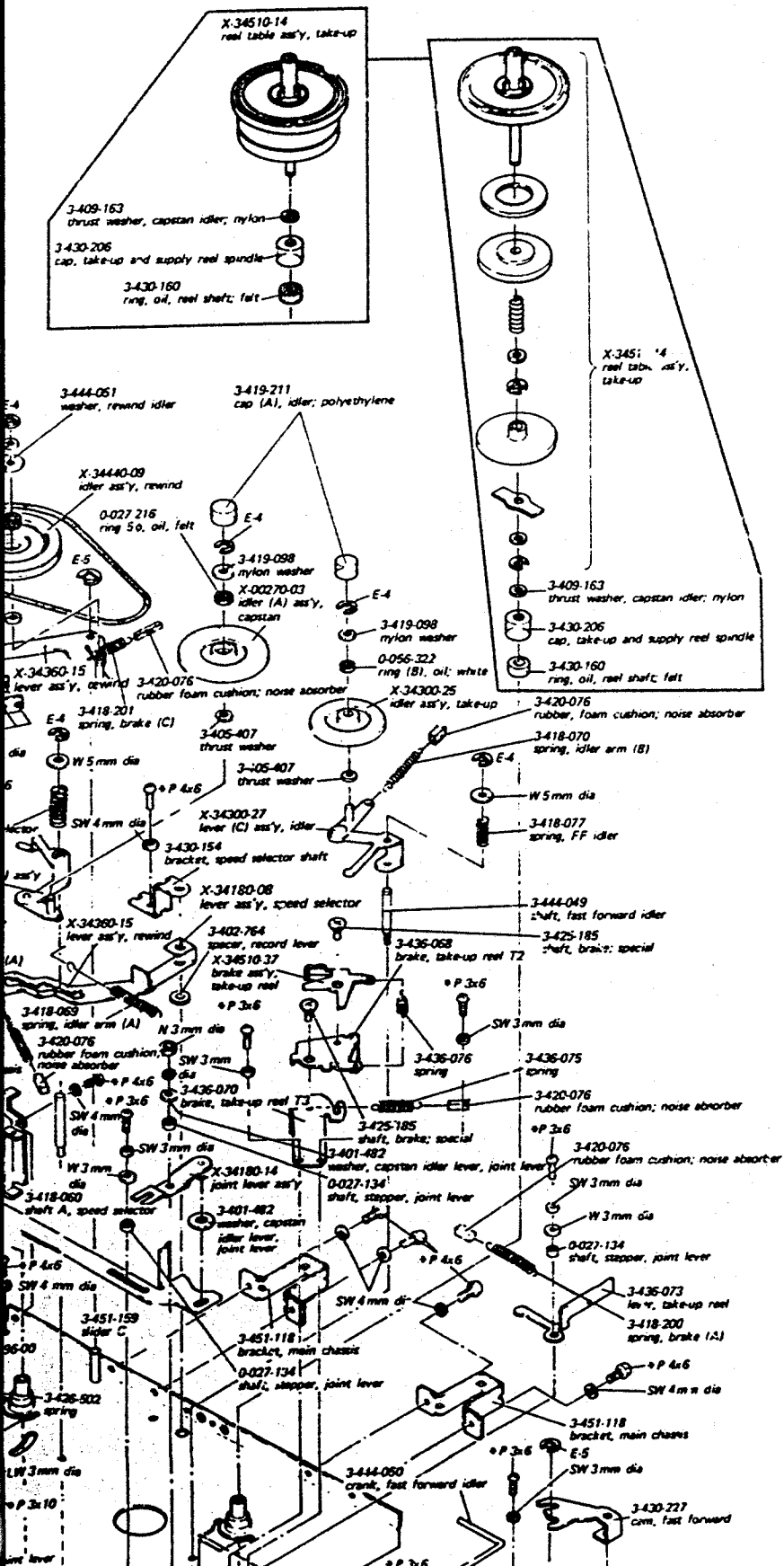


Note: This information is only for changed parts of Serial No. 124,701 and later. See page 37 for other information.

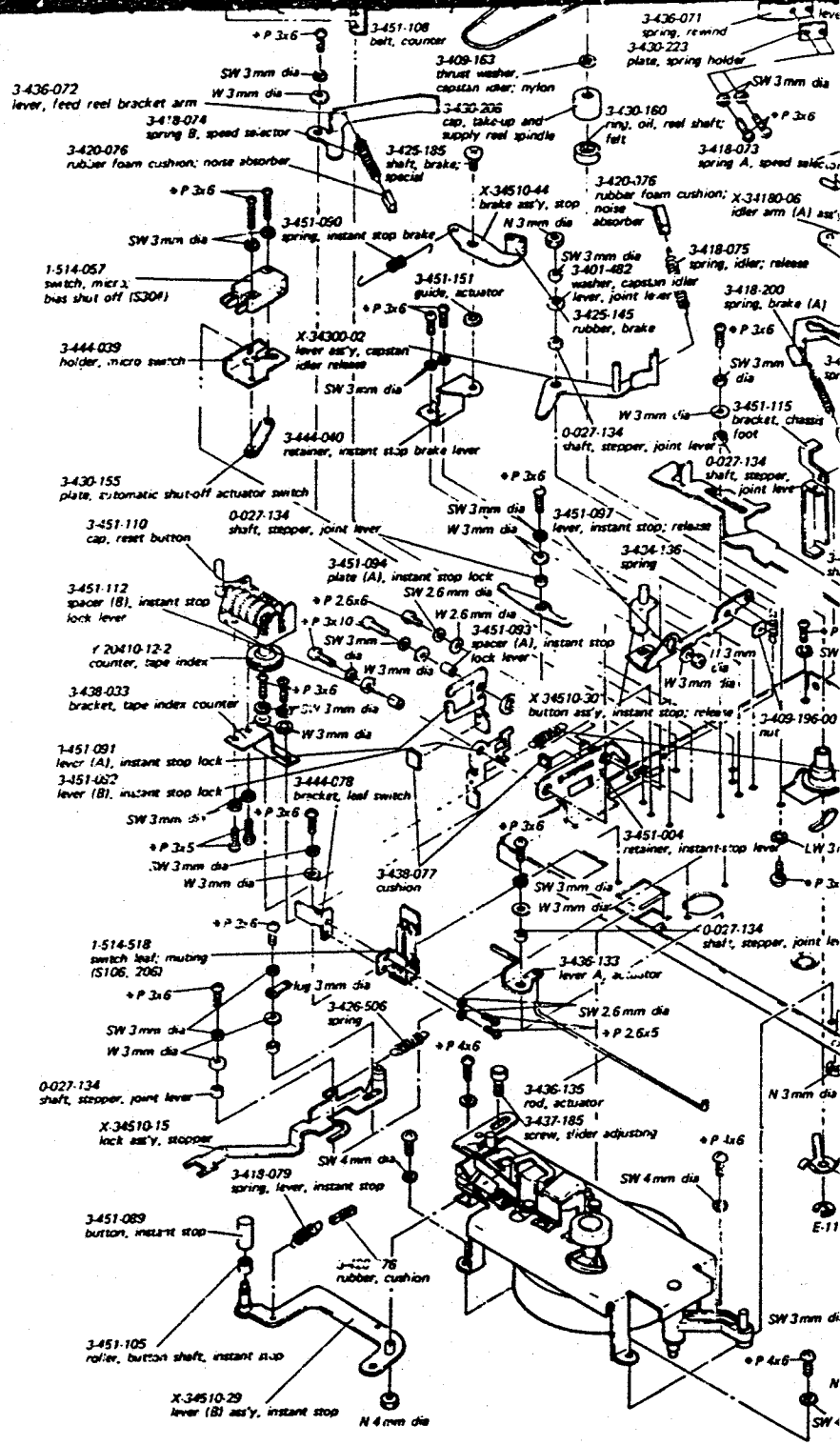


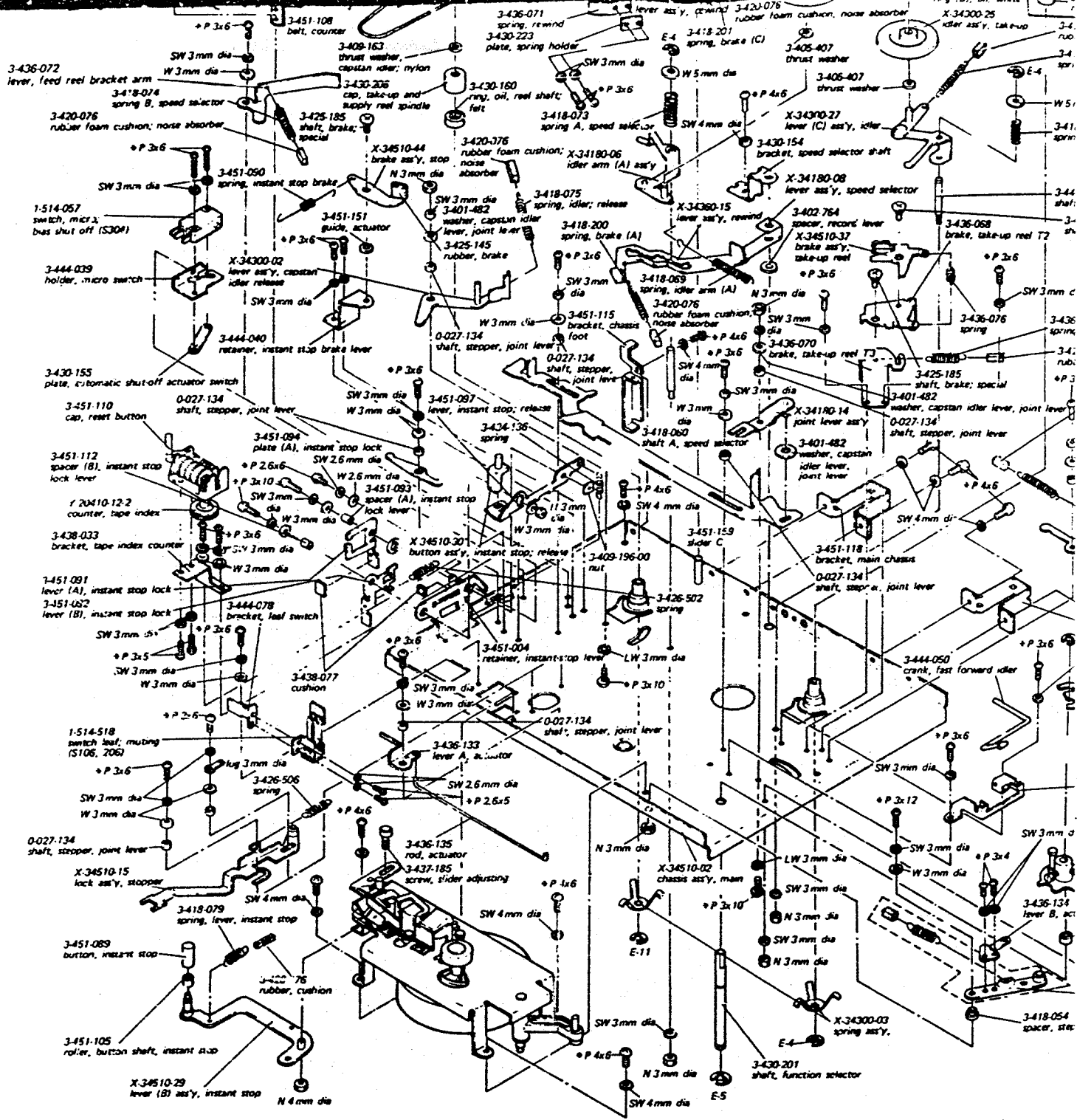


6-6. CHASSIS - Top View -
 Note: Parts without part numbers and names are not available.

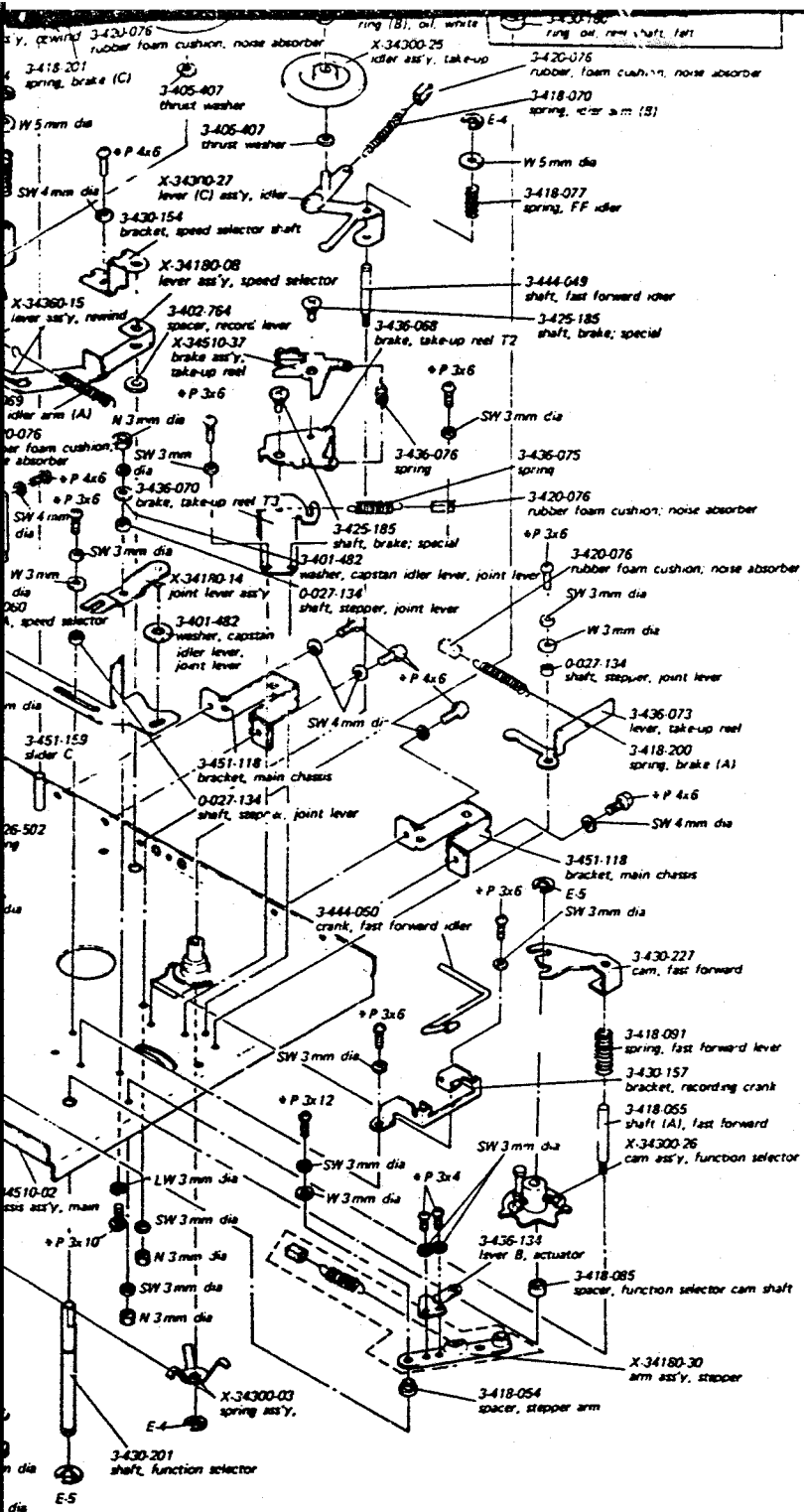


Tc-630 Tc-630





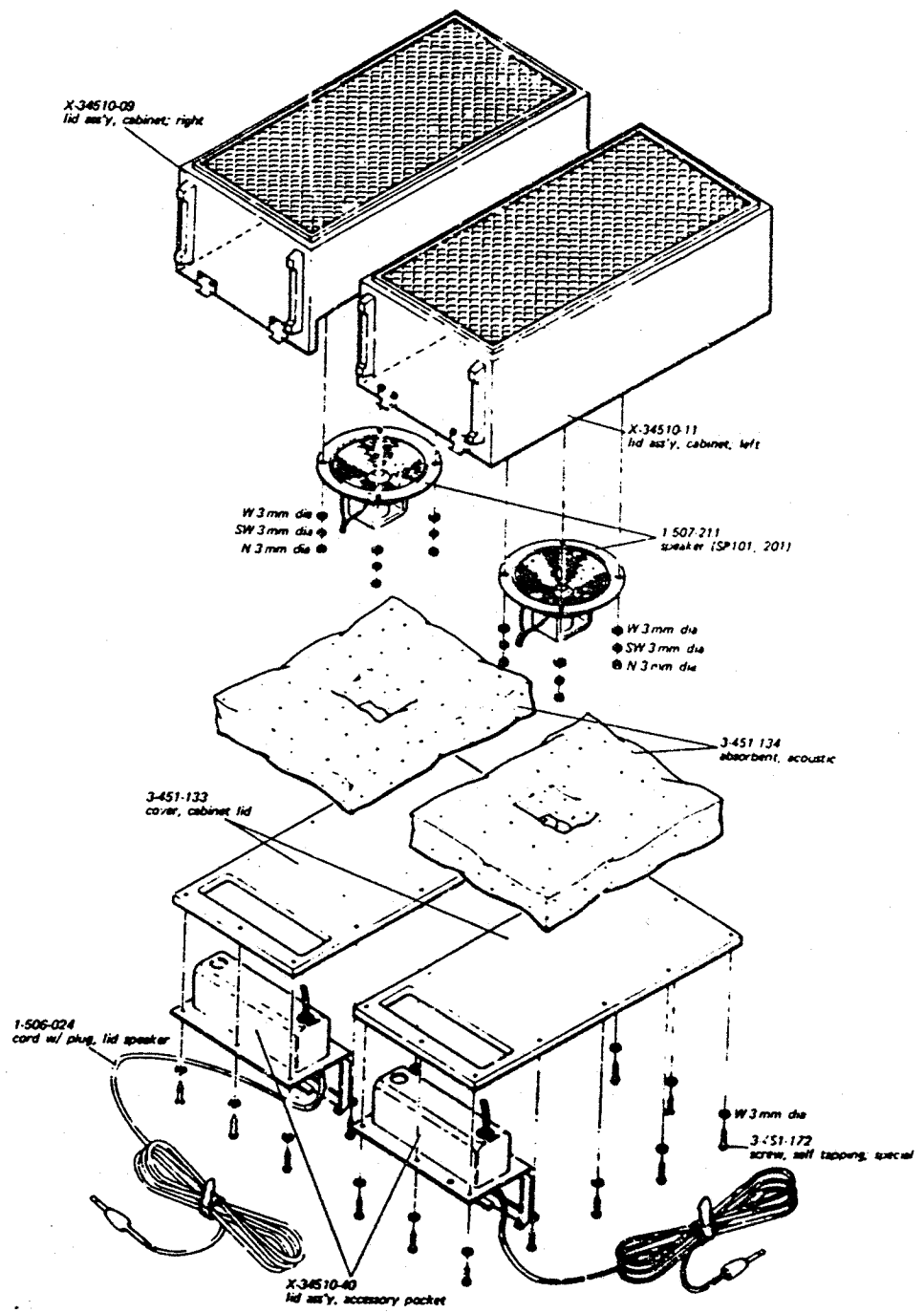
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6-8. SPEAKER BOX - Top View -

Note: Parts without part numbers and names are not available.



ACCESSORIES & PACKING

| | | | |
|--------------|--|--------------|--|
| 3-430-229-03 | cap, reel | 3-793-636-81 | leaflet, tape talk (UK) |
| 3-790-272-05 | manual, instruction (E, AEP) | 8-811-260-10 | microphone, F-26 |
| 3-790-272-26 | manual, instruction (USA) | 8-918-210-71 | tape, demonstration DSE-721 (E, AEP, Canada, UK) |
| 3-790-272-44 | manual, instruction (Canada) | X-34510-34-6 | carton ass'y (E, AEP, Canada) |
| 3-790-272-81 | manual, instruction (UK) | X-34510-34-7 | carton ass'y (USA) |
| 3-793-010-20 | leaflet, tape talk (E, AEP, Canada, USA) | X-37010-18-2 | cleaning tip (E, AEP, Canada) |

SECTION 7 ELECTRICAL PARTS LIST

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|--------------------------------|-----------------|--------------------------|
| COMPLETE CIRCUIT BOARDS | | |
| X-34514-51-1 | | record amp (USA, Canada) |
| X-34510-51-2 | | record amp (E, AEP, UK) |
| X-34510-52-1 | | playback amp |
| X-34510-55-1 | | power amp |
| X-34514-52-1 | | bias osc (USA, Canada) |
| X-34510-53-1 | | bias osc (E, AEP, UK) |
| X-34510-54-1 | | trap coil |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|-----------------|-----------------|------------------------------|
| T101, 201 | 1-427-217-12 | transformer, output |
| T301 | 1-441-450-16 | transformr, power (E) |
| | 1-441-460-14 | transformer, power (Canada) |
| T301 | 1-442-025-11 | transformer, power (USA) |
| | 1-441-555-12 | transformer, power (AEP, UK) |
| T302 | 1-433-133-11 | transformer, bias osc |
| T401 | 1-441-370-11 | transformer, motor (AEP, UK) |

SEMICONDUCTORS

| | | |
|-----------|------------|--------|
| Q101, 201 | transistor | 2SC631 |
| Q102, 202 | transistor | 2SC631 |
| Q103, 203 | transistor | 2SC633 |
| Q104, 204 | transistor | 2SC633 |
| Q105, 205 | transistor | 2SC631 |
| Q106, 206 | transistor | 2SC631 |
| Q107, 207 | transistor | 2SC631 |
| Q108, 208 | transistor | 2SC633 |
| Q109, 209 | transistor | 2SC633 |
| Q110, 210 | transistor | 2SC633 |
| Q111, 211 | transistor | 2SC633 |
| Q112, 212 | transistor | 2SC634 |
| Q113, 213 | transistor | 2SC634 |
| Q114, 214 | transistor | 2SC634 |
| Q115, 215 | transistor | 2SC634 |
| Q116, 216 | transistor | 2SC634 |
| Q117, 217 | transistor | 2SC895 |
| Q118, 218 | transistor | 2SC895 |
| Q119, 219 | transistor | 2SC634 |
| Q301, 302 | transistor | 2SC634 |
| D101, 201 | diode | 1T22 |
| D301 | diode | CD-2 |
| D302, 303 | diode | 10D-2 |
| D304, 305 | diode | 10D-2 |

COILS & TRANSFORMERS

| | | |
|-----------|-----------|--------------------------------|
| L101, 201 | 1-231-069 | coil, equalizer 1.45 mH/1.8 mH |
| L301, 302 | 1-409-141 | coil, trap 1.8 mH |
| L303, 304 | 1-407-284 | coil, dummy 1 mH |
| L305, 306 | 1-408-198 | inductor, micro 2.2 mH |

CAPACITORS

All capacitors are in μF unless otherwise indicated.
pF: $\mu\mu\text{F}$, elect: electrolytic

| | | | | |
|-----------|--------------|-------|-------|---------------|
| C101, 201 | 1-105-681-12 | 0.047 | 50V | mylar |
| C102, 202 | 1-127-020 | 0.2 | 10V | elect |
| C103, 203 | 1-127-022 | 0.5 | 10V | elect |
| C104, 204 | 1-121-347 | 10 | 16V | elect |
| C105, 205 | 1-105-821-12 | 0.001 | 50V | mylar |
| C106, 206 | 1-121-347 | 10 | 16V | elect |
| C107, 207 | 1-121-291 | 100 | 6.3V | elect |
| C108, 208 | 1-121-287 | 47 | 3.15V | elect |
| C109, 209 | 1-121-347 | 10 | 15V | elect |
| C110, 210 | 1-121-289 | 47 | 25V | elect |
| C111, 211 | 1-121-347 | 1 | 50V | elect |
| C112, 212 | 1-121-284 | 33 | 6.3V | elect |
| C113, 213 | 1-105-687-12 | 0.15 | 50V | mylar |
| C114, 214 | 1-105-683-12 | 0.068 | 50V | mylar |
| C115, 215 | 1-105-678-12 | 0.027 | 50V | mylar |
| C116, 216 | 1-121-287 | 47 | 3.15V | elect |
| C117, 217 | 1-127-020 | 0.2 | 10V | elect |
| C118, 218 | 1-107-034 | 68p | 500V | silvered mica |
| C119, 219 | 1-121-463 | 4.7 | 16V | elect |
| C120, 220 | 1-105-673-12 | 0.01 | 50V | mylar |
| C121, 221 | 1-105-674-12 | 0.012 | 50V | mylar |
| C122, 222 | 1-107-004 | 100p | 500V | silvered mica |
| C123, 223 | 1-107-004 | 100p | 500V | silvered mica |
| C124, 224 | 1-107-004 | 100p | 500V | silvered mica |
| C125, 225 | 1-107-004 | 100p | 500V | silvered mica |
| C126, 226 | 1-107-055 | 39p | 500V | silvered mica |
| C127, 227 | 1-105-845-12 | 0.1 | 50V | mylar |
| C128, 228 | 1-105-827-12 | 0.033 | 50V | mylar |
| C152, 252 | 1-121-347 | 10 | 16V | elect |
| C153, 253 | 1-121-347 | 10 | 16V | elect |
| C154, 254 | 1-121-295 | 220 | 6.3V | elect |
| C155, 255 | 1-121-295 | 220 | 6.3V | elect |
| C156, 256 | 1-121-347 | 10 | 16V | elect |
| C157, 257 | 1-121-347 | 10 | 16V | elect |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | | |
|--------------------|-----------------|--------------------|-------|----------------------------------|
| C158, 258 | 1-105-682-12 | 0.056 | 50V | mylar |
| C159, 259 | 1-105-667-12 | 0.0033 | 50V | mylar |
| C160, 260 | 1-121-293 | 100 | 25V | elect |
| C161, 261 | 1-131-134 | 1 | 25V | tantalum elect |
| C162, 262 | 1-121-343 | 1 | 50V | elect |
| C163, 263 | 1-105-667-12 | 0.0033 | 50V | mylar |
| C164, 264 | 1-105-661-12 | 0.001 | 50V | mylar |
| C165, 265 | 1-105-661-12 | 0.001 | 50V | mylar |
| C166, 266 | 1-107-140 | 270p | 50V | silvered mica |
| C167, 267 | 1-121-284 | 33 | 6.3V | elect |
| C168, 268 | 1-121-468 | 10 | 6.3V | elect |
| C169, 269 | 1-121-287 | 47 | 3.15V | elect |
| C170, 270 | 1-121-281 | 4.7 | 25V | elect |
| C171, 271 | 1-121-343 | 1 | 50V | elect |
| C172, 272 | 1-121-343 | 1 | 50V | elect |
| C173, 273 | 1-121-283 | 10 | 25V | elect |
| C301, 401 | 1-105-825-12 | 0.0022 | 50V | mylar |
| C302, 402 | 1-105-835-12 | 0.015 | 50V | mylar |
| C303, 403 | 1-105-837 | 0.022 | 50V | mylar |
| C304, 404 | 1-105-845-12 | 0.1 | 50V | mylar |
| C305, 405 | 1-107-004 | 100p | 500V | silvered mica |
| C306, 406 | 1-127-202 | 0.2 | 15V | elect |
| C307, 407 | 1-121-343 | 1 | 50V | elect |
| C308, 408 | 1-121-356 | 100 | 16V | elect |
| C309 | ----- | | | |
| C310, 410 | 1-121-343 | 1 | 50V | elect |
| C311, 411 | 1-121-343 | 1 | 50V | elect |
| C312, 412 | 1-121-356 | 100 | 16V | elect |
| C313, 413 | 1-105-821-12 | 0.0056 | 50V | mylar |
| C314, 414 | 1-105-821-12 | 0.0056 | 50V | mylar |
| C315, 415 | 1-107-005 | 220p | 500V | silvered mica |
| C316, 416 | 1-121-361 | 500 | 35V | elect |
| C317, 417 | 1-127-202 | 0.2 | 15V | elect |
| C318, 418 | 1-107-051 | 15p | 500V | silvered mica |
| C501, 502, C503 | 1-121-361 | 500 | 35V | elect |
| C601, 602 | 1-129-663 | 560p | 50V | polyethylene |
| C603, 604 | 1-141-076 | 30~200p | 500V | trimmer |
| C605 | 1-129-318 | 560p | 500V | polyethylene |
| C606, 607 | 1-129-684 | 680p | 50V | polyethylene |
| C608 | 1-105-823-12 | 0.0015 | 50V | mylar |
| C609 | 1-121-385 | 220 | 50V | elect |
| C651, 652 | 1-129-320 | 680p | 500V | polyethylene |
| C653 | 1-105-839-12 | 0.033 | 50V | mylar |
| C654 | 1-117-036-22 | 1.5+0.5 | | metalized paper (E, AEP, UK) |
| C654 | 1-117-034-23 | 1.5 | | metalized paper (USA, Canada) |
| C655 | 1-121-524 | 2,200 | 50V | elect |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|-----------------|-----------------|--------------------|
|-----------------|-----------------|--------------------|

RESISTORS

All resistors are in Ω , $\frac{1}{4}W$ and carbon type unless otherwise indicated. k: 1,000, N: low noise

| | | |
|-----------|--------------|----------------------------|
| R101, 201 | 1-242-669 | 680 |
| R102, 202 | 1-242-673 | 1 k |
| R103, 203 | 1-242-699 | 12 k |
| R104, 204 | 1-242-721-11 | 100 k |
| R105, 205 | 1-242-739 | 560 k |
| R106, 206 | 1-242-695 | 8.2 k |
| R107, 207 | 1-242-681 | 2.2 k |
| R108, 208 | 1-242-669 | 680 |
| R109, 209 | 1-242-709 | 33 k |
| R110, 210 | 1-242-713-09 | 47 k (N) |
| R111, 211 | 1-242-697-09 | 10 k (N) |
| R112, 212 | 1-242-713-09 | 47 k (N) |
| R113, 213 | 1-242-713-09 | 47 k (N) |
| R114, 214 | 1-242-667 | 560 |
| R115, 215 | 1-242-685-09 | 3.3 k (N) |
| R116, 216 | 1-242-713-11 | 47 k (N) |
| R117, 217 | 1-242-717-09 | 68 k (N) |
| R118, 218 | 1-242-705 | 22 k |
| R119, 219 | 1-242-683 | 2.7 k |
| R120, 220 | 1-242-681 | 2.2 k |
| R121, 221 | 1-221-748 | 5 k (B) adjustable |
| R122, 222 | 1-242-681 | 2.2 k |
| R123, 223 | 1-242-739 | 560 k |
| R124, 224 | 1-242-713-11 | 47 k (N) |
| R125, 225 | 1-242-685-11 | 3.3 k |
| R126, 226 | 1-242-721-11 | 100 k |
| R127, 227 | 1-242-665 | 470 |
| R128, 228 | 1-242-705 | 22 k |
| R129, 229 | 1-242-715 | 56 k |
| R130, 230 | 1-242-677 | 1.5 k |
| R131, 231 | 1-242-665 | 470 |
| R132, 232 | 1-242-681 | 2.2 k |
| R133, 233 | 1-242-695 | 8.2 k |
| R134, 234 | 1-244-689 | 4.7 k |
| R135, 235 | 1-222-209-14 | 200 k (C) variable |
| R136, 236 | 1-222-202-11 | 50 k (A) variable w/switch |
| R137, 237 | 1-242-641 | 47 |
| R138, 238 | 1-242-677 | 1.5 k |
| R151, 251 | 1-242-673 | 1 k |
| R152, 252 | 1-242-739-09 | 560 k (N) |
| R153, 253 | 1-242-717-09 | 68 k (N) |
| R154, 254 | 1-242-721-09 | 100 k (N) |
| R155, 255 | 1-242-649 | 100 |
| R156, 256 | 1-242-685-09 | 3.3 k (N) |
| R157, 257 | 1-242-717 | 68 k (N) |
| R158, 258 | 1-242-721-09 | 100 k (N) |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|-----------------|-----------------|---------------------|
| R159, 259 | 1-242-703 | 18 k |
| R160, 260 | 1-242-683 | 2.7 k |
| R161, 261 | 1-242-727 | 180 k |
| R162, 262 | 1-221-663-21 | 2 k (B) adjustable |
| R163, 263 | 1-221-320-21 | 3 k (B) adjustable |
| R164, 264 | 1-242-679 | 1.8 k |
| R165, 265 | 1-242-705 | 22 k |
| R166, 266 | 1-221-630-21 | 20 k (B) adjustable |
| R167, 267 | 1-242-735-09 | 390 k (N) |
| R168, 268 | 1-242-739-09 | 470 k (N) |
| R169, 269 | 1-242-713-09 | 47 k (N) |
| R170, 270 | 1-242-699 | 12 k |
| R171, 271 | 1-242-699 | 12 k |
| R172, 272 | 1-242-737-11 | 470 k |
| R173, 273 | 1-242-737-11 | 470 k |
| R174, 274 | 1-242-713-09 | 47 k (N) |
| R175, 275 | 1-242-731-09 | 270 k |
| R176, 276 | 1-242-727 | 180 k |
| R177, 277 | 1-242-695 | 8.2 k |
| R178, 278 | 1-242-665 | 470 |
| R179, 279 | 1-242-711 | 39 k |
| R180, 280 | 1-242-679 | 1.8 k |
| R181, 281 | 1-242-679 | 1.8 k |
| R182, 282 | 1-242-669 | 680 |
| R183, 283 | 1-242-705 | 22 k |
| R184, 284 | 1-242-703 | 18 k |
| R185, 285 | 1-221-311 | 5 k (B) adjustable |
| R186, 286 | 1-242-737-11 | 470 k |
| R187, 287 | 1-242-681 | 2.2 k |
| R188, 288 | 1-242-685-11 | 3.3 k |
| R301, 401 | 1-242-677 | 1.5 k |
| R302, 402 | 1-221-916-11 | 50 k (A) variable |
| R303, 403 | 1-242-695 | 8.2 k |
| R304, 404 | 1-221-916-11 | 50 k (A) variable |
| R305, 405 | 1-242-683 | 2.7 k |
| R306, 406 | 1-242-693 | 6.8 k |
| R307, 407 | 1-242-697 | 10 k |
| R308, 408 | 1-221-916-11 | 50 k (A) variable |
| R309, 409 | 1-242-699 | 12 k |
| R310, 410 | 1-242-719 | 82 k |
| R311, 411 | 1-242-723 | 120 k |
| R312, 412 | 1-242-693 | 6.8 k |
| R313, 413 | 1-242-709 | 33 k |
| R314, 414 | 1-242-709 | 33 k |
| R315, 415 | 1-242-641 | 47 |
| R316, 416 | 1-242-683 | 2.7 k |
| R317, 417 | 1-242-683 | 2.7 k |
| R318, 418 | 1-242-669 | 680 |
| R319, 419 | 1-242-720 | 91 k |
| R320, 420 | 1-242-689 | 4.7 k |
| R321, 421 | 1-242-625 | 10 |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|-----------------|-----------------|-----------------------------|
| R322, 422 | 1-242-625 | 10 |
| R323, 423 | 1-242-601 | 1 |
| R324, 424 | 1-242-601 | 1 |
| R325, 425 | 1-242-659 | 270 |
| R326, 426 | 1-242-659 | 270 |
| R327, 427 | 1-242-713 | 47 k |
| R328, 428 | 1-242-720 | 91 k |
| R329, 429 | 1-242-689 | 4.7 k |
| R330, 430 | 1-242-625 | 10 |
| R331, 431 | 1-242-625 | 10 |
| R332, 432 | 1-242-601 | 1 |
| R333, 433 | 1-242-601 | 1 |
| R334, 434 | 1-242-703 | 18 k |
| R335, 435 | 1-242-701 | 15 k |
| R336, 436 | 1-242-649 | 100 |
| R337, 437 | 1-242-649 | 100 |
| R338, 438 | 1-242-663 | 390 |
| R339, 439 | 1-242-673 | 1 k |
| R340, 440 | 1-242-711 | 39 k |
| R341, 441 | 1-242-673 | 1 k |
| R342 | 1-222-208-11 | 100 k variable |
| R501 | 1-242-641 | 47 |
| R502 | 1-242-649 | 100 |
| R503 | 1-242-651 | 120 |
| R601 | 1-242-635 | 27 k |
| R602 | 1-242-625 | 10 |
| R603, 604 | 1-242-725 | 150 k |
| R605, 606 | 1-242-625 | 10 |
| R651 | 1-222-119 | 200 k (A) variable w/switch |
| R652 | 1-244-709 | 33 k |

| SWITCHES | | |
|-----------------|-----------|--------------------------------------|
| S101, 201 | 1-513-231 | slide, record/playback |
| S102, 202 | 1-514-519 | rotary, INPUT SELECTOR |
| S103, 203 | 1-514-416 | rotary, TAPE SPEED & equalizer |
| S104, 204 | | included in resistor (R136, R236) |
| S105, 205 | 1-514-513 | rotary, MONITOR |
| S106, 206 | 1-514-518 | leaf, muting |
| S107, 207 | 1-514-515 | rotary, NOISE SUPPRESS |
| S108, 208 | 1-514-520 | slide, SP SELECTOR |
| S109, 209 | 1-514-515 | rotary, MODE selector |
| S110, 210 | | included in jack (J302) |
| S301 | 1-514-416 | rotary, equalizer |
| S302 | | included in variable resistor (R651) |
| S303 | 1-514-449 | rotary, SOS |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|-----------------|-----------------|--|
| S304 | 1-514-057 | micro, bias shut-off |
| S305, 306 | 1-516-037 | lever, POWER (L.S.A) |
| S305, 306 | 1-514-325 | lever, POWER (Canada, E) |
| S305 | 1-514-852 | lever, POWER (AEP, UK) |
| S306 | 1-514-325 | lever, POWER AMP (AEP, UK) |
| S307 | 1-514-039 | micro, auto-shut-off |
| S308 | 1-514-512 | rotary, frequency selector (E, AEP, UK) |

JACKS

| | | |
|------------------|--------------|---|
| J101, 201 | 1-507-142 | 2P phono, PHONO |
| J102, 202 | 1-507-142 | 2P phono, TUNER |
| J103, 203 | 1-507-142 | 2P phono, AUX |
| J104, 204 | 1-507-266 | phone, MIC |
| J105, 205 | 1-507-142 | 2P phono, LINE |
| J106, 206 | 1-507-142 | 2P phono, EXT SP |
| J107, 207 | 1-507-107 | phone, LID SP |
| J301 | 1-507-187 | binaural, HEADPHONE MONITOR |
| J302 | 1-507-190 | binaural, w/switch; HEADPHONE LISTEN |
| CNJ301 CNJ302 | 1-509-015-01 | connector (E, USA, Canada) |
| CNJ303 | 1-509-029 | connector, REC/PB (E, AEP, UK) |
| CNP301 | 1-509-062 | connector (E, USA, Canada) |

MISCELLANEOUS

| | | |
|-------------------|--------------|---|
| REC. H101, 201 | 8-821-229-01 | head, playback; PP30-2902A |
| | 8-829-129-20 | head, playback; PP102-2902 (Serial No. 124,761) |

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|--------------------------|------------------------------|--|
| PB. H101, 201 | 8-824-129-20 8-824-629-20 | head, record; RP30-2902 head, reocrd; RP102-2902 (Serial No. 124,701~) |
| EH101, 201 | 8-826-629-24 | head, erase; EF18-2902A |
| M | 8-832-624-09 | motor IC-624HI |
| SP101, 201 | 1-502-211 | speaker |
| VS | 1-509-064 | voltage selector (E, AEP) |
| PL101, 201 PL301, 302 | 1-518-093 | lamp |
| | 1-534-153-13 | cord, power; w/plug (AEP) |
| | 1-534-819-00 | cord, power; w/plug (UK) |
| PL303, 304 | | included in VU meter (ME101, 201) |
| ME101, 201 | 1-524-056-13S | meter, VU w/lamp |
| CP301 | 1-101-534 | encapsulated component 0.1 μ F + 120 Ω |
| CP302 | 1-134-11 1-231-057 | encapsulated component 0.033 μ F + 120 Ω |
| | 1-533-048 | holder, fuse (E, USA, Canada) |
| F1 | 1-532-204 | fuse 2A (AEP, UK) |
| F | 1-532-100-11 | fuse 2A (E) |
| F1 | 1-532-268-11 | fuse 2A (Canada) |
| F1 | 1-532-338-11 | fuse 2A (USA) |
| F2,5,6 | 1-532-078-11 | fuse 1AT (AEP, UK) |
| F3,4 | 1-532-074-11 | fuse 160mAT (AEP, UK) |
| | 1-533-026-11 | holder, fuse; 3P (AEP, UK) |
| | 1-536-376 | terminal strip, 1-L-1 |
| | 1-536-145 | terminal strip, L-1 |
| | 1-536-179 | terminal strip, 1-L-1 |
| | 1-506-024 | cord w/plug |

SECTION 8 HARDWARE














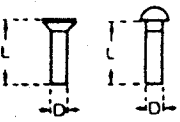






| <u>Part No.</u> | <u>Description</u> | <u>Part No.</u> | <u>Description</u> |
|-----------------|-------------------------------|----------------------|---------------------|
| SCREWS | | | |
| 7-621-255-25 | RF 2 x 4 (E, AEP, UK) | 7-682-549-01 | B 3 x 10 |
| 7-621-255-35 | RF 2 x 5 (E, AEP, UK) | 7-682-549-13 | B 3 x 10 |
| 7-621-255-45 | RF 2 x 6 (E, AEP, UK) | 7-682-550-13 | B 3 x 12 |
| 7-621-255-55 | RF 2 x 8 (E, AEP, UK) | 7-682-581-14 | B 5 x 30 |
| 7-621-259-12 | RF 2.6 x 3 (E, AEP, UK) | 7-683-237-01 | 3 x 3, self-tapping |
| 7-621-259-15 | RF 2.6 x 3 (E, AEP, UK) | | |
| 7-621-259-22 | RF 2.6 x 4 (E, AEP, UK) | WASHERS | |
| 7-621-259-32 | RF 2.6 x 5 (E, AEP, UK) | 7-623-107-02 | 2.6 (small) |
| 7-621-259-35 | RF 2.6 x 5 (E, AEP, UK) | 7-623-107-12 | 2.6 |
| 7-621-259-45 | RF 2.6 x 6 (E, AEP, UK) | 7-623-108-02 | 3 (small) |
| 7-621-510-32 | (-)K 2.6 x 22 (E, AEP, UK) | 7-623-108-12 | 3 |
| 7-621-559-42 | K 2.6 x 22 (E, AEP, UK) | 7-623-108-18 | 3 |
| 7-621-659-47 | RK 2.6 x 6 (E, AEP, UK) | 7-623-108-22 | 3 (large) |
| 7-621-712-56 | (-)SC 2.6 x 6 (E, AEP, UK) | 7-623-110-02 | 4 (small) |
| 7-621-712-66 | (-)SC 2.6 x 8 (E, AEP, UK) | 7-623-112-12 | 5 (t=0.8) |
| 7-621-844-29 | R 3.1 x 8, wood (E, AEP, UK) | 7-623-112-16 | 5 (t=0.4) |
| 7-621-852-17 | K 2.7 x 8, wood (E, AEP, UK) | 7-623-205-22 | 2 spring |
| 7-621-852-38 | K 2.6 x 10, wood (E, AEP, UK) | 7-623-207-22 | 2.6 spring |
| 7-682-145-01 | P 3 x 4 | 7-623-208-22 | 3 spring |
| 7-682-146-01 | P 3 x 5 | 7-623-210-22 | 4 spring |
| 7-682-147-01 | P 3 x 6 | 7-623-308-05 | 3 internal tooth |
| 7-682-148-01 | P 3 x 8 | 7-623-408-05 | 3 external tooth |
| 7-682-149-01 | P 3 x 10 | | |
| 7-682-150-01 | P 3 x 12 | MISCELLANEOUS | |
| 7-682-151-01 | P 3 x 14 | 7-622-307-07 | nut 2.6 |
| 7-682-152-01 | P 3 x 16 | 7-684-013-01 | nut 3 |
| 7-682-154-13 | P 3 x 25 (AEP, UK) | 7-684-014-01 | nut 4 |
| 7-682-169-01 | P 4 x 6 | 7-622-308-02 | lug 3 |
| 7-682-161-01 | P 4 x 8 | 7-623-508-01 | lug 3 |
| 7-682-165-14 | P 4 x 6 | 7-623-510-01 | lug 4 |
| 7-682-247-14 | K 3 x 6 | 7-624-106-01 | retaining ring E 3 |
| 7-682-248-01 | K 3 x 8 | 7-624-108-01 | retaining ring E 4 |
| 7-682-348-14 | RK 3 x 8 | 7-624-109-01 | retaining ring E 5 |
| 7-682-547-13 | B 3 x 6 | 7-629-100-86 | nail 1 x 6 |
| 7-682-547-14 | B 3 x 6 | | |
| 7-682-548-13 | B 3 x 8 (E, UK) | | |

Note: 1. All screws are Phillips type (cross recess type) unless otherwise indicated.

(-): slotted head

For Service Manuals
MAURITRON SERVICES
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- Hardware Nomenclature -

| | |
|--|--|
| <p>P - Pan Head Screw  </p> | <p>SC - Set Screw  </p> |
| <p>PS - Pan Head Screw with Spring Washer  </p> | <p>E - Retaining Ring (E Washer) </p> |
| <p>K - Flat Countersunk Head Screw ...  </p> | <p>W - Washer SW - Spring Washer LW - Lock Washer N - Nut</p> |
| <p>B - Binding Head Screw  </p> | <p>- Example -</p> |
| <p>RK - Oval Countersunk Head Screw ...  </p> | <p>Type of Slot ⊕ P 3×10 Length in mm (L) Diameter in mm (D) Type of Head</p>  |
| <p>T - Truss Head Screw  </p> | |
| <p>R - Round Head Screw  </p> | |
| <p>F - Flat Fillister Head Screw  </p> | |