

# SERVICE MANUAL

**TEAC Tascam Series**  
**MODEL 80-8**  
**8 CHANNEL**  
**RECORDER/REPRODUCER**

**TEAC®**



## TABLE OF CONTENTS

1.	INTRODUCTION -----	1
2.	SPECIFICATIONS -----	2
3.	OPENING THE PACKAGE -----	3
4.	FUNCTION OF THE CONTROLS -----	4
5.	MAINTENANCE	
5.1	Routine maintenance -----	8
5.2	Testing and adjustment -----	10
5.2.1	Test equipment required -----	10
5.2.2	Transport check and adjustment -----	11
5.2.3	Power supply check and adjustment -----	16
5.2.4	Record/reproduce amplifier check and adjustment -----	18
5.3	Corrective maintenance -----	23
5.3.1	Preliminary disassembly procedures -----	23
5.3.2	Disassembly and replacement of assemblies -----	24
5.3.3.	Record/reproduce PC card adjustment -----	25
6.	EXPLODED VIEWS AND PARTS LIST	
6.1	Preliminary disassembly -----	27
6.2	Tape transport assembly -----	29
6.3	Reel motor assembly -----	31
6.4	Pinch roller/ lifter section -----	34
6.5	Capstan motor assembly -----	36
6.6	Impedance roller assembly -----	38
6.7	Right tension arm -----	40
6.8	Left tension arm -----	42
6.9	Control unit assembly -----	44
6.10	Record/reproduce amplifier assembly -----	46
6.11	Power supply unit -----	48
6.12	Rear panel assembly -----	50
6.13	Head assembly/head housing assembly -----	52
7.	PC CARDS AND PARTS LIST	
7.1	Fuse PCB assembly -----	55
7.2	Terminal PCB assembly -----	56
7.3	System control PCB assembly -----	57
7.4	LED indicator PCB assembly -----	64
7.5	Connector board PCB assembly -----	65
7.6	Record/reproduce amplifier PCB assembly -----	66
7.7	Peak indicator PCB assembly -----	72
7.8	Power supply and reel motor control PCB assembly -----	73

8.	ELECTRONICS SCHEMATICS	
8.1	Head assembly -----	76
8.2	System control (Function select) -----	77
8.3	System control -----	78
8.4	Transport control -----	79
8.5	Connector board -----	80
8.6	Power supply and reel motor control -----	81
8.7	Meter and peak indicator -----	82
8.8	Record/reproduce amplifier -----	83
9.	SYSTEM CONTROL AND SWITCHING SIGNAL TIME CHART	
9.1	Tape logic control signal -----	84
9.2	Audio switching control signal -----	85

## I. INTRODUCTION



The TEAC Tascam Series 80-8 Recorder/Reproducer is an 8 track 8 channel machine regardless of its small size and light weight, and is designed for recording studios and other similar applications.

The front panel control layout is designed with emphasis on simplicity without sacrifice in ease of operation for a multi-track recorder.

The record/reproduce amplifiers can be adjusted from the front and a plug-in type PC card is provided for each channel.

Tape travel is controlled by a full IC logic control system housed in the control unit above the record/reproduce amplifiers.

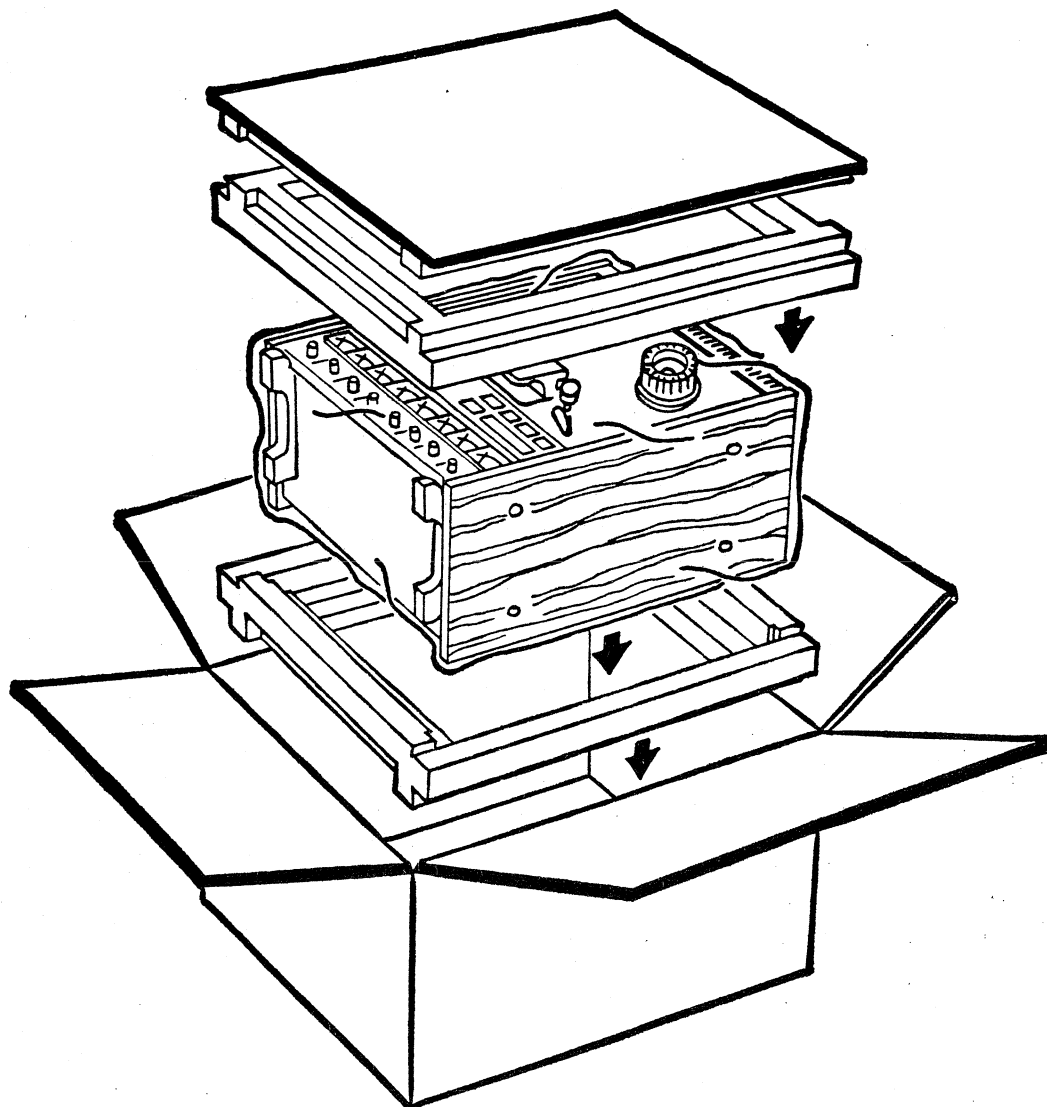
The Series 80-8 can also be mounted on a standard 19" rack by utilizing the TEAC RM-88 Rack Mounting Adaptor.

The TEAC DX-8 dbx Unit is also available which can be installed into the Series 80-8 to make one complete unit. Necessary connecting cables are included.

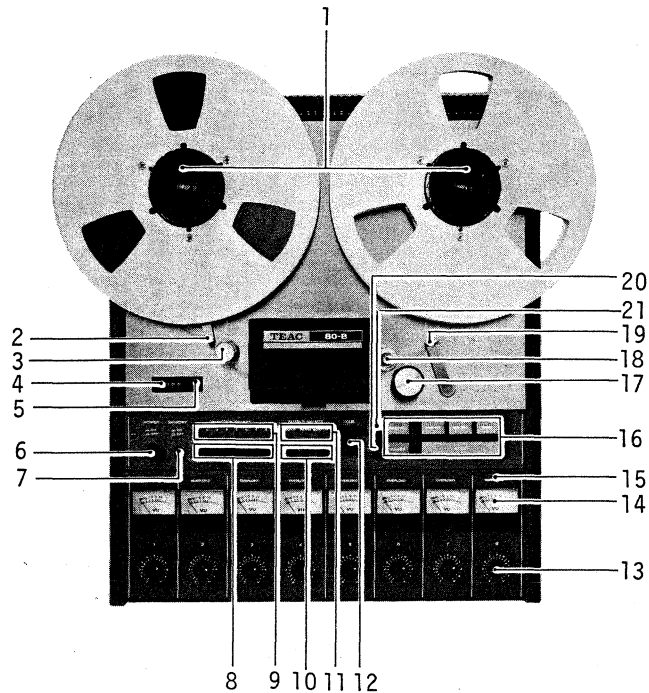
## 2. SPECIFICATIONS

TAPE WIDTH	1/2 inch
FORMAT	8-track, 8-channel
REEL SIZE	10-1/2" maximum, NAB hub only
TAPE SPEED	15 ips
LINE INPUT	-10 dB (0.3V) Impedance: greater than 20K ohms, unbalanced
LINE OUTPUT	-10 dB (0.3V) Load impedance: greater than 10K ohms, unbalanced
RECORD LEVEL CALIBRATION	0 VU referenced to 3 dB above 185nWb/m of tape flux, adjustable
SPEED ACCURACY	±0.5% deviation from 15 ips
WOW AND FLUTTER	0.04% RMS (NAB), weighted ±0.06% peak (ANSI), weighted Measured with flutter test tape
STARTING TIME	Less than 0.5 second
FAST WIND TIME	120 second for 2400 ft. of tape
OVERALL FREQUENCY RESPONSE, SYNC	40 Hz ~ 18 KHz, ±3 dB
SIGNAL TO NOISE RATIO	65 dB weighted, 60 dB unweighted (22.4 Hz ~ 22.4 KHz), referenced to 3% T.H.D. level (10 dB above 0 VU) at 400 Hz
DISTORTION	1% at 400 Hz, 0 VU
T.H.D. Overall	3% at 10 dB above 0 VU
CROSSTALK	Greater than 45 dB at 400 Hz
ERASURE	Greater than 65 dB at 1 KHz, +10 VU reference
POWER REQUIREMENTS	117 V, 60 Hz, 200 W
DIMENSIONS Overall	17-1/2" (W) X 21" (H) X 12" (D)
WEIGHT	17 lbs.

### 3. OPENING THE PACKAGE



## 4. FUNCTION OF THE CONTROLS



### 1. NAB hub adaptors

These are permanently mounted on the reel turntables.

In securing the 10-1/2" reel on the turntable, the three nicks in the reel center hole is matched with the three protrusions in the hub adaptor, the reel snugly pressed against the turntable face and the top knob of the hub adaptor rotated clockwise to firmly seat the reel.

### 2. Tape tension arm

### 3. Impedance roller

### 4. Index counter

By switching ON the MEMORY button located on the control panel just below the counter, the tape will automatically stop from the rewind mode when all digits of the counter reach "zero."

### 5. Index counter reset button

All digits of the tape counter will be reset to "zero" when the button on the right side of the counter is depressed.



6. Power switch

Controls AC power to the tape transport and the electronics assembly.

Press to energize and power ON will be indicated by illumination of the VU meter lamps and an OUTPUT SELECT lamp whose button has been depressed. Also, the PAUSE lamp will blink for 10 seconds after switch ON, indicating that all deck controls are inoperable until they are extinguished.

7. Memory stop

Tape will stop from rewind when the counter digits reach all "zero" by depressing (switch ON) this button.

8. Function select buttons and,

9. LED indicators

- a) During the STOP mode, when any of the FUNCTION SELECT switch is depressed, the LED for the depressed channel will blink to indicate that this channel is in "record standby." If the PLAY and RECORD buttons are depressed, the machine will immediately go into the record mode.

When it goes to the record mode, the FUNCTION SELECT LED which was blinking will change to a continuous light to indicate that this channel is recording.

- b) With all channels of FUNCTION SELECT set to "OUT" and the PLAY and RECORD buttons are depressed at the same time, the RECORD lamp will start blinking. Under this condition, when any one or several FUNCTION SELECT buttons are depressed, those channels only will go into the RECORD mode (punch in) and return to "record standby" when these buttons are "OUT," and the RECORD lamp will start blinking again.

10. OUTPUT SELECT buttons and,

11. LED indicators

- a) When the INPUT button is depressed, the source monitor signal will be output to LINE output for all channels.
- b) When any one of the FUNCTION SELECT is "IN," by depressing the NORM button this "IN" channel source monitor only will be output to LINE output, and the tape signal reproduced by the record head will be output to the remaining LINE output jacks.
- c) Tape signal picked up by the monitor head will be output to LINE out when the MONIT button is depressed.

12. CUE lever

For fast search, manually apply a slight amount of pressure upwards. Do not use the latch position for fast search cueing - it is intended for pause or stop mode cueing only.

13. Input level control

For adjusting the source input level.

14. VU type averaging meters

For visual reference of input/output signal levels.

15. LED peak overload indicators

Complements VU meter by monitoring transient peaks. The trigger is factory calibrated at +10 VU, adjustable.

16. Transport controls

Includes 6 micro switch buttons which provide complete control over all modes of tape transport motion. Remote control does not disengage the front panel controls.

17. Pinch roller

Applies proper pressure for the tape to be driven by the capstan. Engaged only in PLAY and RECORD modes.

18. Capstan

Drives the tape at a constant speed in PLAY and RECORD modes. Not engaged with the Pinch Roller during Fast Forward or Rewind, but rotation continues until electrical power is turned off.

19. Shut-off arm

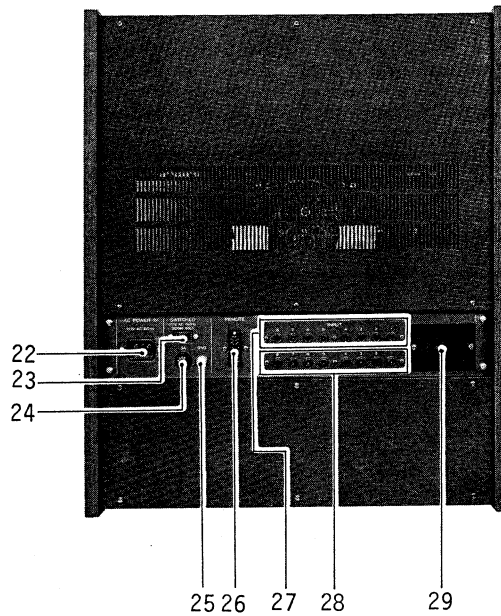
Removes electrical power from the transport section when the tape ends.

20. PAUSE lamp

This will blink for the first 10 seconds or so after POWER switch on, and all controls will be inoperable until the lamp goes out. It will, of course, light up when in PAUSE.

21. RECORD lamp

Will blink when in "record standby;" remain lit when in the RECORD mode.



22. AC power cord

Male socket. Connect power cord here.

23. AC switched

AC power supplied when the 80-8 is ON. Use no more than 300W.

24. Fuse holder

Contains 3 amp fuse for overload protection.

25. GND connection

For connecting a grounding wire between components, or to earth ground as necessary.

26. Remote control socket

For optional RC-170 Remote Control Unit. Needs no dummy plug when not in use.

27. Input jacks

Line inputs for recording are connected to these eight pin cord jacks.

28. Output jacks

Line outputs.

29. dbx interface section

Removal panel for direct integral dbx interface.

NOTE: For use with the DX-8 unit only.

## 5. MAINTENANCE

### 5.1 ROUTINE MAINTENANCE

Troubles and breakdown in the recorder can be prevented by scheduled check and maintenance. Periodically follow the check items below:

a) Cleaning the heads and tape guides

All heads and metal parts in the tape path must be cleaned after each 6 hours of operation or before starting a new session of recording.

The TEAC TZ-261A Cleaning Fluid is recommended.

b) Cleaning the pinch roller

Clean this at least once after each full day of use.

The TEAC TZ-261B Cleaning Fluid is recommended.

c) Cleaning the capstan

Clean this at the same time the head is cleaned.

The TEAC TZ-261A Cleaning Fluid is recommended.

d) Demagnetizing of heads and tape guides

All heads and tape guides should be demagnetized every morning or before starting a new session of recording. The TEAC E-1 Head Demagnetizer is recommended.

1) After cleaning, turn machine OFF!!!

2) Have all tapes at least 5 or 6 feet away when demagnetizing because the demagnetizer's magnetic field will erase them.

3) Slowly move the tip of the demagnetizer up and down in front of each head and slowly move it away (This is suggested because if you were to pull away quickly, remagnetizing of the head is possible). Like a turtle, demagnetize the second head and repeat the process, etc.

After you repeat this process for all heads, move the demagnetizer an arms-length away, turn it off, and unplug it.

e) Testing the brakes

See Item 5.2.2, b) Brake torque, page 12.

f) Testing the pinch roller pressure

See Item 5.2.2, a) Pinch roller pressure, page 11.

g) Testing the amplifier

Thread a blank tape on the Model 80-8 and record a 1KHz, OVU signal.

While the machine is in the record mode, set the OUTPUT SELECT to MONITOR and adjust the INPUT level knob for a OVU reading. On repeating the same process on each channel, the INPUT knobs should all be indicating "7" on the scale.

Rewind the above recording to the beginning, set the OUTPUT SELECT to NORM, and put the machine in the PLAY mode. The VU meters should all read 0VU.

Record a 20Hz through 20KHz signal and check the overall frequency response with the VU meter to see that it is within 2dB.

Disconnect any equipment plugged into the INPUT, record a length of no signal tape, and reproduce it to check the S/N ratio.

If it is below spec, refer to Item 5.2.4, h), page 22.

## 5.2 TESTING AND ADJUSTMENT

### 5.2.1 Test equipment required

Spring scale	0 ~ 8 lbs (0 ~ 4 kg) 0 ~ 10 ozs (0 ~ 300 g)
Flutter meter	Meguro Denpa Sokki Co., Model MK-668B (Japan), or - Mincom Division, 3M Co., Model 8155 (U.S.A.)
Audio oscillator	Hewlett Packard, Model 204C or equivalent
Frequency counter	Range: 0 ~ 1MHz; sensitivity: 0.1Vrms; imp.: >1M $\Omega$ , <25pF
Band-pass filter	TEAC M-206A or a frequency analyzer
AC voltmeter	Range: -80dB ~ +40dB; imp.: >1M $\Omega$ , <25pF (example: HP400GL)
Oscilloscope	General purpose
Test tapes	TEAC YTT-1144 (for reproduce alignment): Tape speed: 15 ips; reference fluxivity: 250nWb/m; equalization: IEC; time constant: $\infty$ & 35msec. or - MRL31J-129 (Magnetic Reference Lab.): All specs are identical with YTT-1144 except for the reference fluxivity which is 200nWb/m and thus its reproduce output level will be 2dB lower. For wow and flutter measurement: Standard Tape Lab., #62.
Blank tape	Ampex 456 or Maxell UD-50 is recommended.

### 5.2.2 Transport check and adjustment

#### a) Pinch roller pressure

Pinch roller pressure is supplied by the Pinch Roller Pressure Spring only and it is most important that the solenoid plunger be fully bottomed before taking pressure measurement.

- 1) Block the automatic shut-off arm in the ON position.
- 2) Attach a suitable spring scale to the pinch roller shaft with a short loop of twine.
- 3) Put the deck in the PLAY mode, and positioning the scale as illustrated, slowly draw it in direction opposite the capstan until the pinch roller stops rotating.
- 4) The spring scale should indicate 7 lbs.,  $\pm 10\%$ .
- 5) If the reading is off specification, loosen the 3 screws (Refer to Fig. A) and reposition the plunger solenoid. As the pressure will greatly change with only a slight shift in position, reposition the solenoid in small increments.

The pressure will increase by moving the solenoid in the direction away from the capstan motor.

After obtaining optimum pressure, securely tighten the 3 screws and make a final re-check of the pressure.

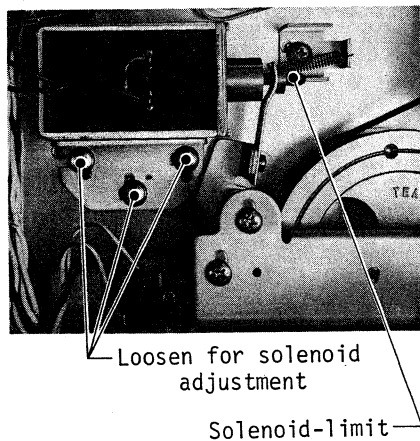


Fig. A

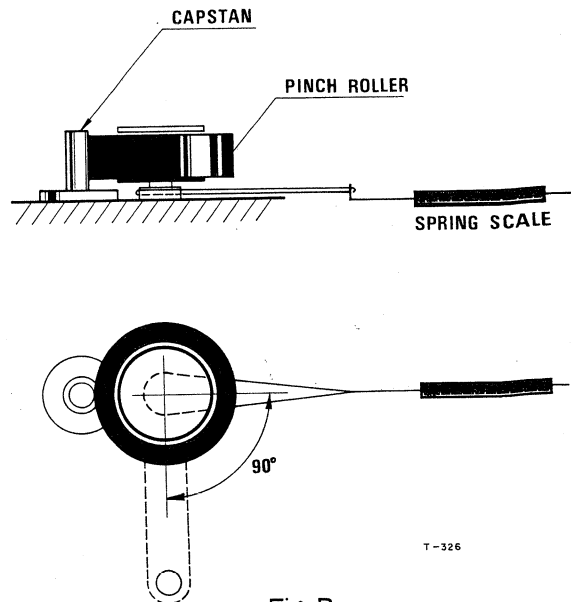


Fig. B

- 6) Adjust position of the solenoid-limit so that the gap between capstan shaft and pinch roller is approximately 7mm when solenoid is not actuated. Limit is adjusted by loosening the mounting screw (A), then sliding limit until proper gap is obtained.

b) Brake torque

Brake torque is applied mechanically. Pressure is set by the variable spring force. While making these measurements and adjustments, be careful not to bend the brake bands. As brake torque will change with cleaning, brake drums and brake shoes should be cleaned only when absolutely necessary. If cleaning is required, use TEAC cleaner TZ-261B. After cleaning, operate the machine for a month of normal operation before performing the procedures below.

Brake adjustments are made with NO power to the equipment.

- 1) Place an empty 2" hub reel on the left reel table, and fasten one end of a 30" length of string to the reel anchor.
- 2) Wind several turns of string CCW around the hub and attach a suitable spring scale to the free end of the string.
- 3) Take a reading only when the reel is in steady motion since the force required to overcome static friction will produce a false, excessively high initial reading.
- 4) The reading should be 33.5 ~ 36.5 in-oz (2400 ~ 2600 g-cm).
- 5) If adjustment is required, loosen the 2 screws shown and position the brake for optimum torque.
- 6) The adjustment of the right brake is the same, with the exception that rotations are clockwise (wind string CLOCKWISE around reel hub). The torque should be 36.5 ~ 39.5 in-oz (2650 ~ 2850 g-cm).

NOTE: The reason for the stronger brake torque than the left reel is to prevent tape slack at rewind stop.

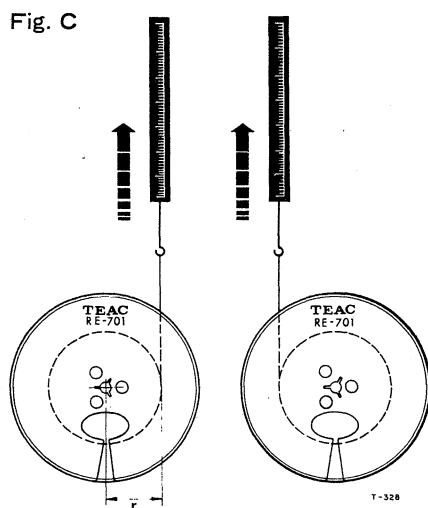
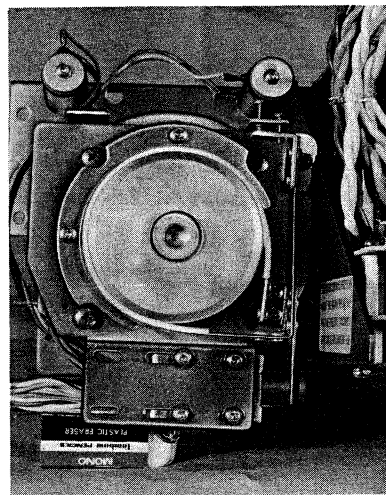


Fig. D



Formula for torque calculation:

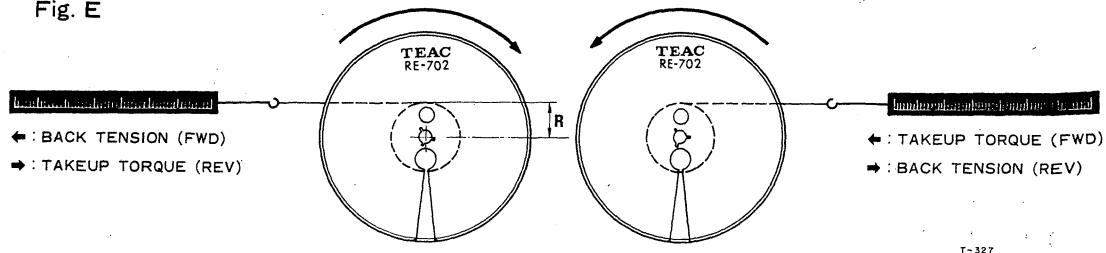
$$T \text{ (in-oz/g-cm)} = R \times W \quad \text{Whereas - } R = \text{Radius of hub (in/cm)}$$
$$W = \text{(oz/gm)}$$



c) Tape tension adjustment procedures

Tape tension is determined indirectly by measuring the torque supplied by the supply and takeup motors.

Fig. E



\* Back tension adjustment procedures \*

- 1) Block the shut-off arm in the ON position.
- 2) Place an empty NAB reel on the left reel table.
- 3) Manually rotate the reel and wind several turns of twine around the hub. Attach spring scale to other end of the twine.
- 4) Place deck in the PLAY mode.
- 5) Pull the scale away from the reel against the motor torque with a smooth, steady motion.
- 6) Read the scale while it is in steady motion and multiply this value by the hub radius to obtain the torque.
- 7) Be sure the twine is not rubbing against the reel flange when taking measurements.
- 8) The specified torque is 12 in-oz (850 g-cm),  $\pm 20\%$ .
- 9) If adjustment is required, adjust tap of power resistor R204, as required. Refer to "Tape tension resistors," page 14 for details.

\* Takeup tension adjustment procedures \*

- 1) Place an empty NAB reel, with a spring scale attached to the hub by a length of twine, on the right reel table.
- 2) Place deck in the PLAY mode.
- 3) Allow the reel to slowly wind-in the scale.
- 4) Follow the spring scale travel with enough force to allow a steady reading and multiply this value by the reel hub radius to calculate the torque.
- 5) The specified torque is 17 in-oz (1200 g-cm),  $\pm 20\%$ .
- 6) If adjustment is required, adjust tap of power resistor R203, as required. Refer to "Tape tension resistors," page 14 for details.

\* Fast wind back tension adjustment procedures \*

- 1) Block the shut-off arm in the ON position.
- 2) Place an empty NAB reel on the left reel table.

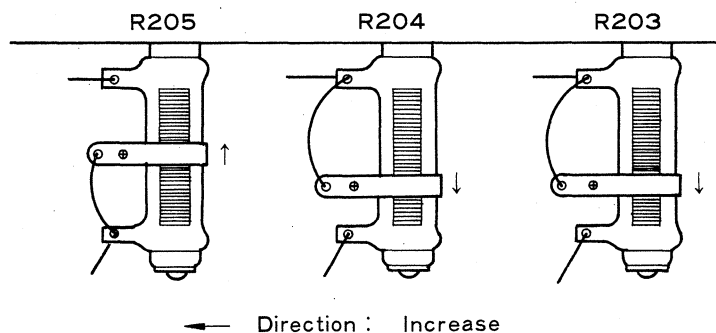
- 3) Attach one end of a length of twine to the hub, and wind several turns of it in direction of reel motor rotation when activated.
- 4) Attach a spring scale to other end of the twine.
- 5) Pull the scale to take up slack in the twine, and then place deck in the fast forward mode.
- 6) Hold the scale stationary (so that it is not pulled in) and take the reading when scale balances with tension of pull.
- 7) Torque is calculated by multiplying the reading with the hub radius.
- 8) Specified torque is between 0.7 and 1.0 in-oz (50 ~ 70 g-cm).
- 9) If adjustment is required, adjust tap of power resistor R205, as required. Refer to "Tape tension resistors," below, for details.

This one-adjustment procedure completes back tension adjustments for both the rewind and fast forward modes.

d) Tape tension resistors

Tape tension is adjusted by sliding taps on the wirewound power resistors located above the supply reel motors, looking at the transport from the rear (See Fig. H, page 17).

Fig. F



Resistor	Adjustment for -
R203	Takeup reel tension in PLAY mode.
R204	Supply reel back tension in PLAY mode.
R205	Back tension in fast winding mode.

e) Reel height

Reel height adjustment is required only if a motor has been replaced or if tape rubs excessively against the reel flanges.

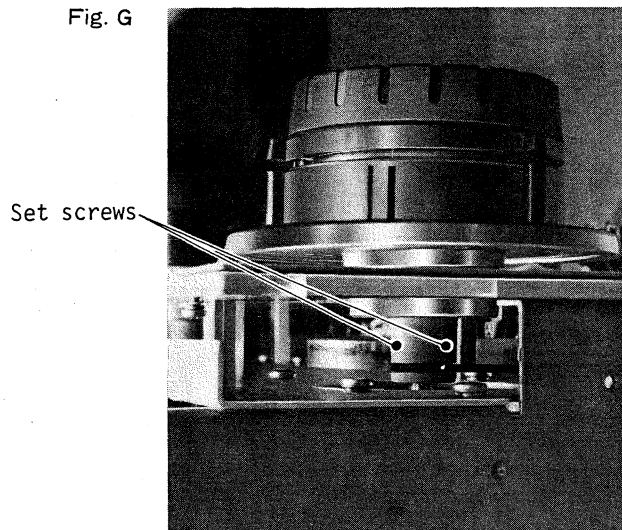
Adjustment is accomplished by loosening the reel set screws and moving the reel table on the motor shaft as shown in Fig.G.

Remove the wooden side board on the left or right of the deck for access to the Set Screw in the reel motor shaft.

Reel table should be adjusted using standard NAB 10" reels.

With a tape loaded on the machine, position the reel table height for smooth tape travel. Be sure to tighten the set screws after adjustment is made.

Fig. G



f) Wow and flutter

Wow and flutter measurements should be undertaken only after studying the following items and determining which method and standard will be employed.

A) Determine whether the Reproduce Method, or the Record/Reproduce Method, is to be employed for measurement.

If the Reproduce Method is to be employed, a flutter test tape will be required. Recommended test tape: Standard Tape Lab., #62, or equivalent.

In the Record/Reproduce Method, a 3KHz sine wave is recorded on a blank tape, rewound to beginning of the recording, and reproduced again for the measurement process.

NOTE:

When reproducing the recorded signal at measurements by the Record/Reproduce Method, adopt the maximum wow and flutter value obtained by repeated play and stop modes of operation which is necessary to be sure that wow and flutter content between record and reproduce will not be in phase to create a false reading.

B) Determine the Standard to be used.

The wow and flutter meter is set to measure either the IEC or ANSI peak value, or the NAB rms value, whichever is determined.

C) Whether the peak value or the rms value is adopted, the wow and flutter meter must be calibrated for "weighted" measurements.

D) As the measured results will vary with respect to location on tape at which it was taken, at least two points - at beginning and near the end of tape - should be selected for measurement.

NOTE:

Recommended Wow & Flutter Meters:

- 1) Meguro Denpa Sokki Co., Model MK-668B (Japan)
- 2) Mincom Div., 3M Co., Model 8100W (U.S.A.)

There will be slight differences in absolute value according to manufacturer.

	IEC/ANSI (peak value)	NAB (rms value)
Reproduce method	±0.06%	0.04%
Record/reproduce method	±0.08%	0.06%

g) Tape speed

Tape speed is measured by using Flutter Test Tape, which contain a highly accurate, continuous 3KHz tone.

Connect a digital frequency counter to either OUTPUT.

The indicated frequency should be 3KHz, ±0.5% for all speeds.

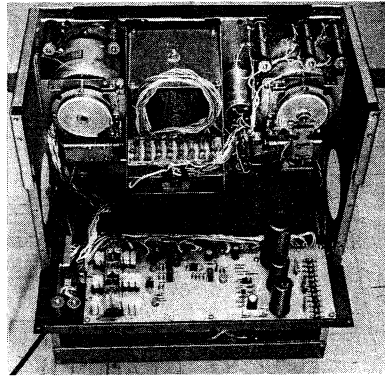
If tape speed is greatly offset from the specification, check pinch roller pressure and takeup tension for correct values, and see that the tape path is clean.

### 5.2.3 Power supply check and adjustment

Except for the power transformer and fuse holder, the 80-8 power supply components are all mounted behind the black aluminum rear panel (chassis).

The rear panel (chassis) can be swung out and down for easy access to the inner components by removing four screws on both edges of the panel.

Fig. H



\* Supply voltage check \*

- 1) Connect a voltmeter to No. 14 or 15 (plus side) and No. 11 or 12 (minus side) on the PCB wiring points. The voltage should not fluctuate beyond +27.5V and +30.5V when PLAY and STOP is quickly repeated.

When the voltage is not within this range, the fault can be quickly located by comparing the actual voltage with those indicated in the power supply schematic.

- 2) Connect a voltmeter to No. 21 (plus side) and No. 19 (minus side) of the PCB wiring points. The voltage should be within the range of +5.0V and +5.3V. If the reading is off spec, adjust R102.

It must be noted that this section of the supply has a current limiting circuit to prevent excess current flow caused by trouble in the load. R102 (22k $\Omega$ ) is the trim pot for setting the maximum current and is generally set to limit at 2.5A. Therefore, it is usually unnecessary to touch the trim pot but if it must be re-adjusted, connect a voltmeter, ammeter and rheostat as shown in Fig.

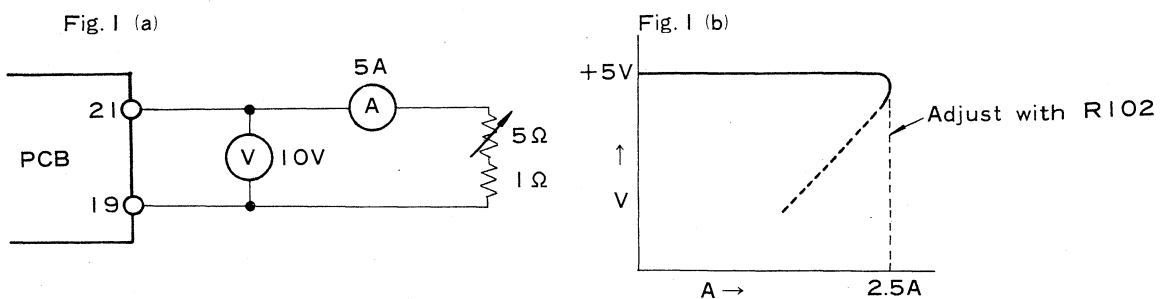
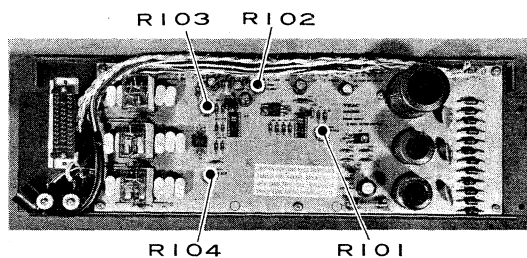


Fig. J



- 3) Connect a voltmeter to the PCB wiring points No. 30 (plus side) and No. 28 (minus side). The voltage reading should be between +23V and +25V. If it is off spec, adjust R103 (10K $\Omega$ ).

Trim pot R104 (4.7K $\Omega$ ) functions in the same way as R102 in the +5V supply.

If readjusting is necessary, set this for limiting at 1.6A.

#### 5.2.4 Record/reproduce amplifier check and adjustment

Open the service door by removing the two set screws, one in each upper corner, of the front door.

Checking and adjusting can be most efficiently expedited by successively continuing to the end each procedure in the order explained in the following.

Fig. K

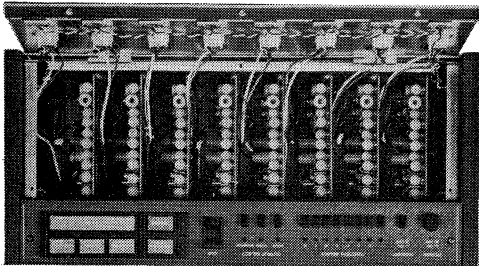
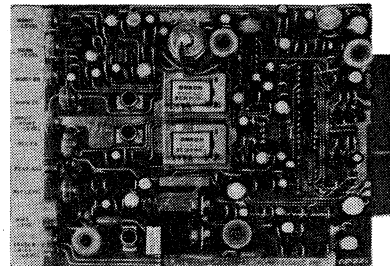


Fig. L



##### a) Setting of reproduce level

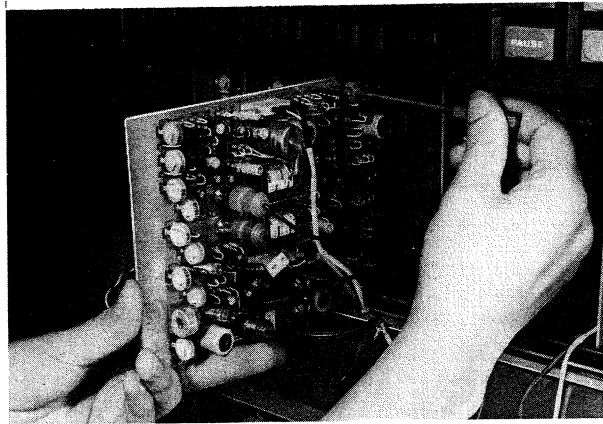
- 1) Connect the AC voltmeter to the OUTPUT 1 pin jack on rear panel.
- 2) Turn the machine ON and thread the test tape.
- 3) Play the "operating level" portion (a voice on the tape identifies each section at the beginning).
- 4) Switch the OUTPUT on the 80-8 to MONITOR. Then set output until the AC voltmeter reads -10dB (0.3V) by the trim pot marked MONIT LEVEL (R104, 10K $\Omega$ ).
- 5) Switch the OUTPUT SELECT to NORMAL. Then set output until the meter reads -10dB (0.3V) by the trim pot marked NORM LEVEL (R103, 10K $\Omega$ ).

##### b) Meter calibration

- 1) When the AC voltmeter reads -10dB (0.3V), the front panel meter should read OVU.
- 2) If it does not, then you must use the extender card (Part No. 6085 3030) to gain access to the proper control pot.
- 3) Carefully remove the Channel 1 RECORD/REPRODUCE PC card from the machine. But do not unplug the cables that are attached to it. There is just enough wire on them to allow replacing the PC card and extender combination into the proper receptacle.

NOTE: When removing or replacing card, TURN MACHINE OFF.

Fig. M



- 4) Looking at the RECORD/REPRODUCE PC card from the component side and with the edge connector to the right, the upper right corner R105 ( $22K\Omega$ ) is the meter calibration pot.
- 5) Adjust R105 to obtain a 0VU reading on the Channel 1 front panel VU meter when the AC voltmeter reads -10dB (0.3V).
- 6) After finishing the above adjustment, remove the test tape from the 80-8, turn off the power, and disconnect the card extender. Return the Channel 1 electronics to its proper receptacle.
- 7) Turn the power on and rethread the test tape. Plug the AC voltmeter into OUTPUT 2 pin jack. Play the "operating level" section of the test tape. Switch the OUTPUT SELECT to MONITOR, adjust trim pot R104 ( $10K\Omega$ ) on the Channel 2 RECORD/REPRODUCE PC card so that the AC voltmeter reads -10dB (0.3V).

Switch the OUTPUT SELECT to NORMAL, adjust trim pot R103 ( $10K\Omega$ ) on the Channel 2 RECORD/REPRODUCE PC card so that the AC voltmeter reads -10dB (0.3V). Now read the Channel 2 meter.

It should read 0VU. If not, you must repeat the previous procedure for adjusting the meter circuit (card extender, etc.).

- 8) Adjust the remaining 6 channels in the same way.

c) Reproduce frequency response

- 1) Rethread the test tape after setting up the levels in all 8 channels.

At checking and adjusting of the reproduce frequency response, it is more efficient to simultaneously check all 8 channels with the front panel VU meters instead of plugging the AC voltmeter into the OUTPUT pin jacks one channel at a time. To be able to do so, the previous Meter Calibration must have been completed.

- 2) Switch the OUTPUT SELECT to NORMAL. Reproduce the phase, azimuth, and frequency response section of the test tape and check for a flat frequency response. If

necessary, adjust the trim pot marked NORM EQ, R101 (6.8K $\Omega$ ). Trim the pot so that 10KHz will be flat with the 1KHz reference frequency. Then, see if the response is within  $\pm 2$ dB at 12.5KHz and 16KHz.

- 3) Switch the OUTPUT SELECT to MONIT. Reproduce the same sections of the test tape and check the response. If adjustment is necessary, trim the pot marked MONIT EQ, R102 (6.8K $\Omega$ ).

It must be noted, however, that the MONITOR frequency response will be slightly inferior than NORM. This is due to emphasis placed on NORM, and MONIT is provided consistently for bias adjusting and simultaneous record/reproduce monitoring.

d) Record calibration

You can use the MONITOR head as a test instrument to check and adjust the record circuits. Almost all of the following steps involve recording a tone on a tape and reading the reproduce output of the recorder.

NOTE: Do not touch trim pots set during the previous reproduce adjusting procedures.

\* Input level calibration and overload indicator adjustment \*

- 1) Begin the record adjustments with the INPUT MON LEVEL trim pot on the Record/reproduce amplifier card.

Apply a 1KHz, -10dB (0.3V) signal to INPUT 1. Rotate the front panel knob to the "2 o'clock" position and mark this with a grease pencil for later reference.

Punch the INPUT button of the front panel OUTPUT SELECT buttons. If the VU meter does not read 0VU, adjust the pot marked INPUT MONIT LEVEL, R 107, (22k $\Omega$ ).

- 2) Raise to 0dB (1V) the 1KHz signal applied to INPUT 1. The overload indicator is functioning normally if the Channel 1 LED is ignited. Should the LED ignite before reaching 0dB or not ignite at this level, adjust R106 (22K $\Omega$ ) on the Record/reproduce amplifier card.
- 3) Should it be necessary to adjust R106, the extender card must be used again. Refer to "Meter calibration" 2) and 3).
- 4) Looking at the RECORD/REPRODUCE PC card from the component side and with the edge connector to the right, R106 is the second pot from the upper right hand corner. This is adjusted so that the LED ignites when the INPUT 1 signal level is raised to 0dB (1V).

NOTE: The LED will remain ignited although the level is lowered by about 1.5dB due to hysteresis but this is normal.

- 5) Check and adjust the remaining 7 channels in the same way.



e) Bias level

- 1) Record a 10KHz test tone.
- 2) Set OUTPUT SELECT to MONITOR.
- 3) Adjust the front panel INPUT so that the VU meter indicates a conveniently read value.
- 4) The trim pot to adjust is R112 (50K $\Omega$ ) marked BIAS LEVEL.
- 5) It is first rotated fully CCW, then slowly rotated CW.
- 6) The VU meter will slowly rise, reach the peak, then begin to fall again. The trim pot is set 3dB beyond and below this peak.
- 7) Should the VU meter scale out during this procedure, retard the INPUT knob slightly and repeat the above procedure.
- 8) Repeat the same procedures on the remaining 7 channels.

f) Record level

The following adjustments are done only after the reproduce level is set and the bias level set to specification.

- 1) Put the 80-8 in the record mode and record a 1KHz, -10dB (0.3V) signal. Set the front panel INPUT level knob to the 2 o'clock position (previously marked on the panel).
- 2) Set the OUTPUT SELECT to MONITOR.
- 3) Adjust the trim pot R110 (10K $\Omega$ ) marked REC LEVEL to obtain a 0VU reading on the front panel VU meter.
- 4) An AC voltmeter plugged into the record channel OUTPUT should indicate -10dB.
- 5) If not, trim pot R105 (22K $\Omega$ ) is out of adjustment and the meter must be recalibrated (Refer to Meter Calibration, page 18).
- 6) Rewind the above recorded 1KHz signal to the beginning, set OUTPUT SELECT to NORM, reproduce the 1KHz signal and check for a 0VU,  $\pm 0.5$ VU reading on the VU meter.
- 7) If it does not read 0VU, readjust the reproduce level setting (Refer to "a) Setting of reproduce level," page 18).

g) Record equalization

There are two trim pots for Record Equalization on the 80-8. One, marked REC EQ (R108, 3.3K $\Omega$ ) is for shifting the high frequency peak, and the other, marked PEAK ADJ (R109, 470 $\Omega$ ) is for raising or lowering the peak.

- 1) Put the 80-8 in the record mode and record a 1KHz, 0VU (-10dB) signal.
- 2) For a quick check, use the front panel VU meter but for critical adjustments plug an AC voltmeter into the OUTPUT pin jack.
- 3) Set OUTPUT SELECT to MONITOR and monitor with the VU meter or the AC voltmeter.
- 4) Then, raise the record frequency to 15KHz, 0VU (-10dB) and check the difference

from 1KHz.

- 5) The difference should be within  $\pm 2\text{dB}$ .
- 6) Should it be off spec, adjust R108.
- 7) Adjust REC EQ, R108 for frequencies from 10KHz through 15KHz, and PEAK ADJ, R109 for frequencies above 15KHz.

NOTE: Please be fully aware of the difference in range between NORM reproduce and MONITOR reproduce when checking the overall frequency response by the MONITOR mode or you may do the wrong adjustment.

h) Signal-to-noise ratio measurement

Prior to measurement, demagnetize all heads and tape guides as described in Item 5.1, d), page 8.

- 1) Before signal-to-noise ratio measurement, be sure the Item 5.2.4 Record/reproduce amplifiers are checked out and if required, properly adjusted.
- 2) Connect the AC voltmeter to OUTPUT 1 pin jack on rear panel.
- 3) Record a certain length of OVU, 1KHz signal, then while still in the recording mode, unplug the oscillator to INPUT 1 pin jack on rear panel and make another length of no-signal recording.
- 4) Set OUTPUT SELECT to NORM.
- 5) Rewind the recording made in Item 3) to beginning and reproduce it.
- 6) Making sure the reproduce output of the previously recorded 1KHz, OVU signal is  $-10\text{dB}$ , then raise sensitivity of the AC voltmeter and measure the level of the no-signal portion of the tape.
- 7) With OVU as the reference level, the signal-to-noise ratio as measured by the AC voltmeter, should be larger than 48dB.
- 8) If it is off spec:
  - \* Demagnetize the head.
  - \* Check erasure [Refer to Item 5.3.3, c)]
  - \* Check and compare measurements of other channels. If they stand up to spec, correct or repair the off spec channel Record/reproduce amplifier PCB.
  - \* Check for proper adjustment of the bias trap.
  - \* Try another tape of same type No.

## 5.3 CORRECTIVE MAINTENANCE

### 5.3.1 Preliminary disassembly procedures

#### a) Power supply unit

The power supply unit can be completely detached from the frame by first removing both side boards, removing the four screws securing the power supply rear panel and tilting the panel outward, unplug the 34 pin connector on the left side, also unplugging the 7 pin round inter-cable connector, and removing one screw on each side serving as the hinge. The power supply together with the rear panel can then be lifted out.

#### b) Control unit

To remove the control unit, the dress panel is first removed by taking off the two screws, one on each side, then removing the 4 screws, two on each side just under the previously removed two screws, then pulling the unit out and forward. To completely pull out the unit, the two blue colored card-edge connectors at the back side of the unit are unplugged. Then, cables with 3 pin and 4 pin connectors plugged into receptacles amidst the PC components are unplugged, another inter-cable connector on the right hand end of the PC is unplugged. For the next step, the 12 pin REMOTE connector on the rear panel is pushed in after removing the two screws securing it, and lastly unsoldering the wires to the power switch.

#### c) Record/reproduce amplifier assembly

The record/reproduce amplifier front panel is tilted forward by removing one screw each on the left and right side of the panel, then removing the 6 screws securing the Pin Jack Board on the rear panel. The whole amplifier assembly can then be pulled out from the front after removing four screws on each side of the frame, accessible through holes in the frame.

#### d) Head assembly

- 1) Tilt forward the record/reproduce amplifier front panel by removing one screw each on the left and right side of the panel.
- 2) Unplug the 24 pin plugs inserted into jacks on the amplifier PC cards.
- 3) Remove the top cover by taking off the 9 screws securing it.
- 4) Fully tilt backward to a horizontal position by removing the 4 screws securing the power supply rear panel.
- 5) Loosen the head cable clamp on the capstan assembly thrust plate and free the cable so that it can easily be pulled out.
- 6) Remove the head housing by taking off the two screws securing it.
- 7) Take off the 4 hex screws securing the head assembly base plate and carefully lift up the head assembly from the transport.

- 8) Pull out the pin plug cables two or three at a time through the transport panel hole.
- 9) Each head can be removed from the assembly by unscrewing two hex screws for each head, from the bottom of the base plate.

### 5.3.2 Disassembly and replacement of assemblies

#### a) Capstan motor assembly (See page 36 )

- 1) Remove the 3 screws holding the capstan motor.
- 2) Unsolder the 6 wires connecting the capstan motor.
- 3) Remove the 4 screws holding the capstan motor. Watch for the Rubber Cushions.
- 4) Loosen the 2 set screws (hex head) in pulley and lift off pulley.

NOTE: \*Clean the drive belt with TZ-261B Cleaning Fluid, and the motor pulley and capstan flywheel with TZ-261A Cleaning Fluid.

\*Be sure to note the wire color codes so that you can replace them correctly to their original connections.

#### b) Capstan assembly (See page 36 )

- 1) Unscrew capstan cover (front panel).
- 2) Remove 2 screws from rear bracket, allow bracket to drop toward floor of cabinet.
- 3) Remove capstan belt.
- 4) Loosen 2 screws in capstan assembly.
- 5) Gently move capstan assembly up and down until it slides out of panel.

#### c) Reel motor assembly (See page 31 )

- 1) Disconnect the 4 motor wires from terminals and release wire harness straps.
- 2) Loosen 2 set screws (hex head) in Brake Drum and 2 in the Reel Turntable assembly. Lift off these parts.
- 3) Remove 4 screws securing the Brake Assembly to the motor. Carefully lift off the Brake Retainer with its 2 wires still connected to the Brake Solenoid.
- 4) Remove 4 screws securing Reel Motor to chassis through the front panel.

NOTE: Reel motor assemblies are mirror images of each other; these assemblies are not interchangeable.

#### d) Tension arms, left and right (See pages 40 and 42)

CAUTION: Do not over-tighten screws holding the right tension arm. Insulating spacer and micro-switch are easily broken by excess pressure.

IMPORTANT: After reassembly, check clearance to ascertain that arm moves freely.

### 5.3.3 Record/reproduce amplifier PC card adjustment

#### a) Bias trap adjustment

Bias trap adjustment is not required other than at the following:

- \* When the head is replaced
- \* When the record/reproduce PC card is replaced
- \* When there is increase in bias leakage

Bias traps L1, L2, and L3 are provided in each record/reproduce PC card.

#### L1 and L2 (Reproduce)

- 1) Plug an AC voltmeter (preferably an oscilloscope also in parallel) to the OUTPUT 1 pin jack on rear panel.
- 2) Carefully remove the Channel 1 record/reproduce PC card from the 80-8 without unplugging the cables to it, install an extender card to it, and reinsert it into the proper connector.

NOTE: When removing or replacing the PC card, TURN MACHINE OFF.

- 3) Lock the right tape tension arm so that the shut-off switch does not turn off the 80-8. Punch 'in' the FUNCTION SELECT buttons for all channels and set OUTPUT SELECT to NORM.
- 4) Turn ON the 80-8 and put in the record mode.
- 5) Raise the AC voltmeter sensitivity and check the bias leakage. It should be less than -40dB.
- 6) If it is higher than permissible, adjust L1 for minimum leakage with a non-inductive screwdriver.
- 7) Then, adjust L2, also for minimum leakage.

#### L3 (Record)

- 8) Connect the GND side of an AC voltmeter or oscilloscope to pin #4 (0V) of T3, and the HOT side to the junction between L3 and C32 (Refer to Fig. 8.8, page 83).
- 9) Put the 80-8 in the record mode and adjust L3 for minimum leakage.

#### b) Inter-stage transformer tuning

- 1) Switch OFF the 80-8.
- 2) Carefully remove the Channel 1 record/reproduce PC card from the 80-8 without unplugging the the cables to it, install an extender card to it, and reinsert it into the proper connector.

NOTE: When removing or replacing the PC card, TURN MACHINE OFF.

- 3) Connect an AC voltmeter or oscilloscope to the terminals of J3 (erase head) and adjust T2 for maximum output.

#### c) Erasure

A 1KHz band pass filter or frequency analyzer is required for measuring erasure.

- 1) A test tone (1KHz) is recorded, the tape rewound to beginning of this recording, the tape run through a second time in the record mode with the record INPUT shorted, and the residual 1KHz component measured.
- 2) It is within spec if the ratio between the initially recorded 1KHz signal and the erased portion is more than 65dB.
- 3) Should erasure be insufficient, slowly rotate CW the trim pot marked ERASE & BIAS LEVEL, R111 (1K $\Omega$ ) until a ratio of 65dB is obtained.

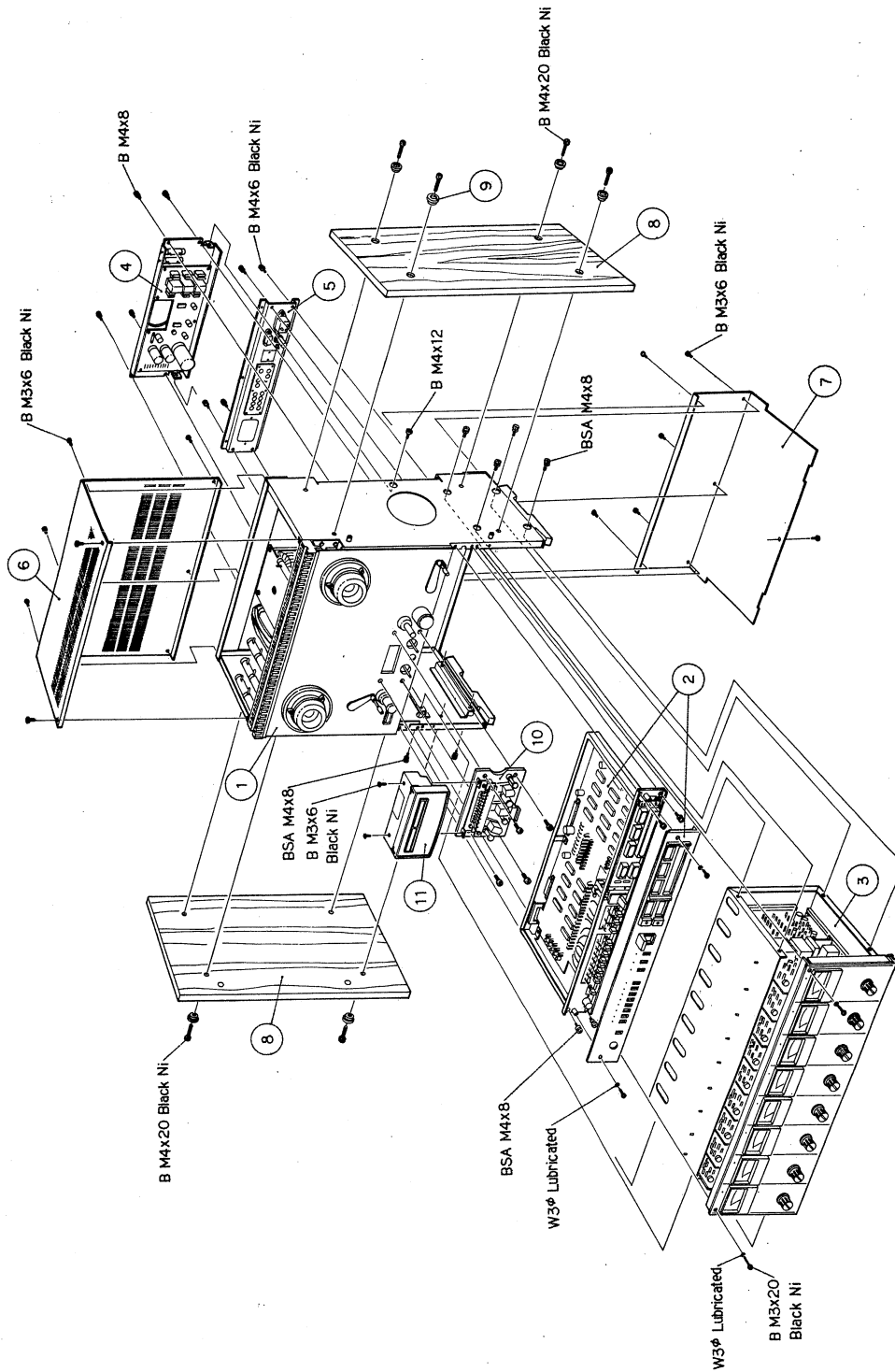
NOTE 1: Readjust the bias as bias current will also change with adjustment of the erase current.

NOTE 2: The voltage at J3 (for erase head), measured on an oscilloscope (Imp.>1M , <25pF), for a 65dB erasure is 110V p-p.

If sufficient erasure cannot be obtained although a higher voltage than this is applied, check the head face for accumulated tape oxide or improper tape travel and/or touch over the head face.

# 6. EXPLODED VIEWS AND PARTS LIST

## 6.1 Preliminary disassembly

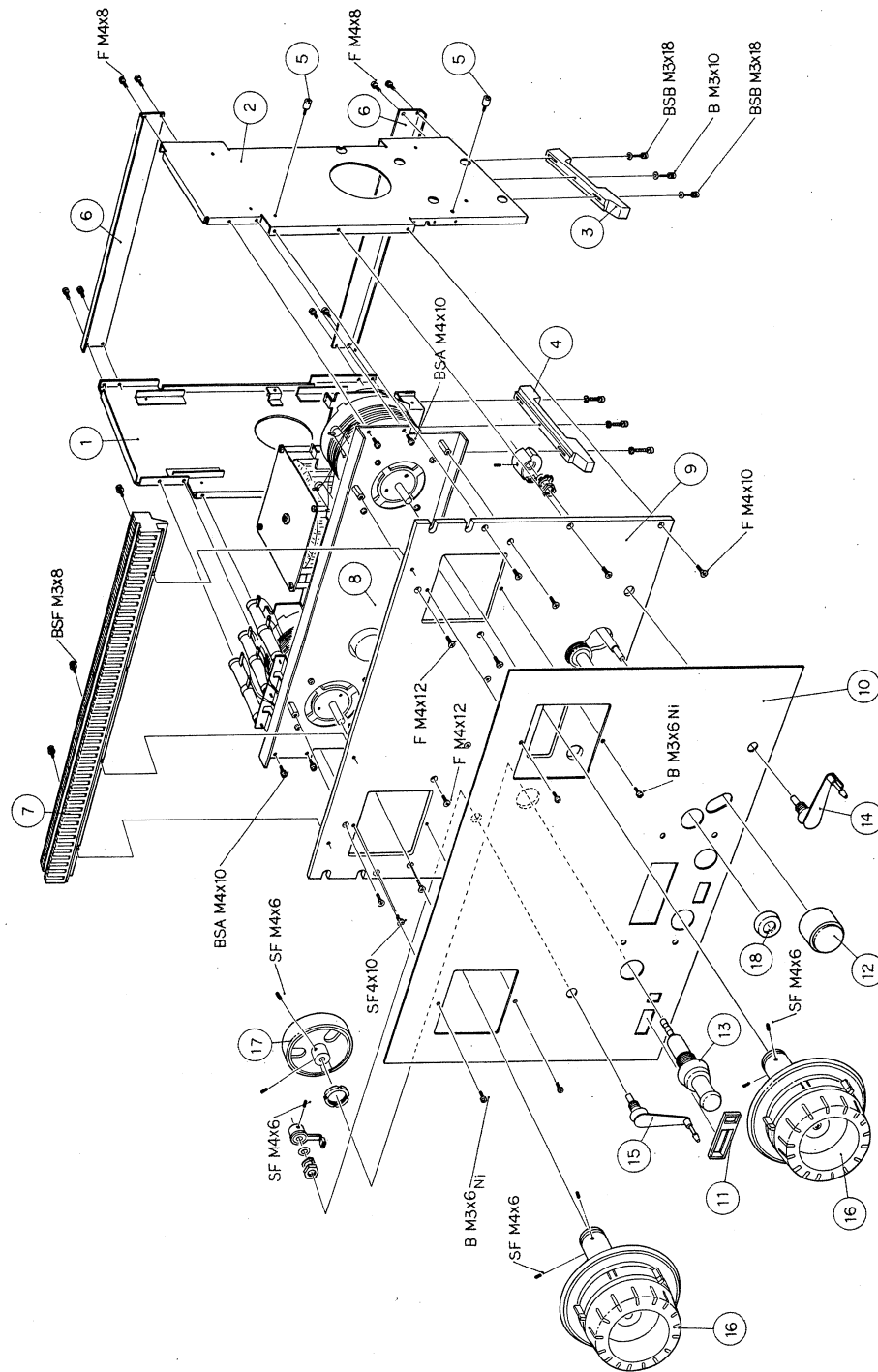


Title Preliminary Disassembly, TEAC Tascam Series 80-8		
Ref. No.	Description	Parts No.
01	Tape transport assembly (See p. 29 )	6070 0190
02	Control unit assembly (See p. 44 )	6080 0560
03	Rec/repro amplifier assembly (See p. 46 )	6085 2580
04	Power supply unit (See p. 48 )	6080 0290
05	Rear panel assembly (See p. 50 )	6085 2550
06	Cover, top	6038 2711
07	Cover, bottom	6038 2720
08	Board, side dress	6038 2740
09	Washer	5027 6931
10	Head assembly (See p. 52 )	6013 0180
11	Head housing assembly (See p. 52 )	6013 0170

PARTS LIST  
Preliminary disassembly  
REV. \_\_\_\_\_



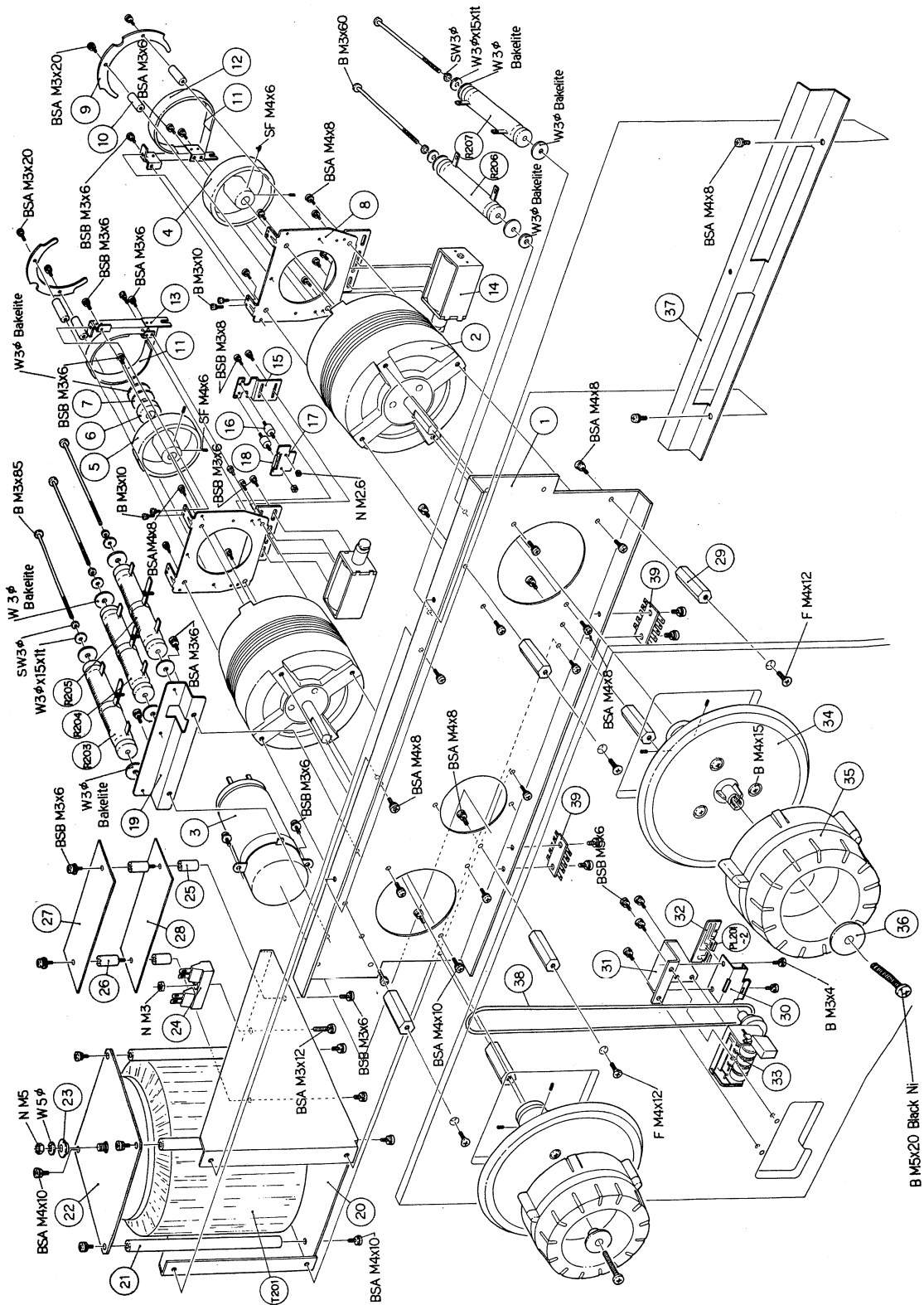
## 6.2 Tape transport assembly



Title      Tape Transport Assembly		
Ref. No.	Description	Parts No.
01	Chassis, side, left	6010 0040
02	" , " , right	6010 0050
03	Foot, plastic mold, right	5533 0180
04	" , " " , left	5533 0190
05	Screw, stud, side board positioning	5581 0370
06	Angle, rear cover mount	5023 5312
07	Grille, air vent	6038 2730
08	Reel motor ass'y (See p. 31.)	6012 0140
09	Panel, sub top	6010 2720
10	Panel, dress	6010 2730
11	Escutcheon, counter	5534 0250
12	Pinch roller ass'y (See p. 34 )	6011 0220
	Collar, ball bearing	6011 2660
	Cap, pinch roller	5014 2180
13	Impedance roller ass'y (See p. 38 )	6011 0250
14	Tension arm, right (See p. 40 )	6014 0560
15	Tension arm, left (See p. 42 )	6014 0570
16	Reel table ass'y	6012 0120
17	Flywheel, impedance roller	5530 5060
18	Cap, dust, capstan	6011 2630

PARTS LIST  
Tape transport ass'y  
REV. \_\_\_\_\_

6.3 Reel motor assembly



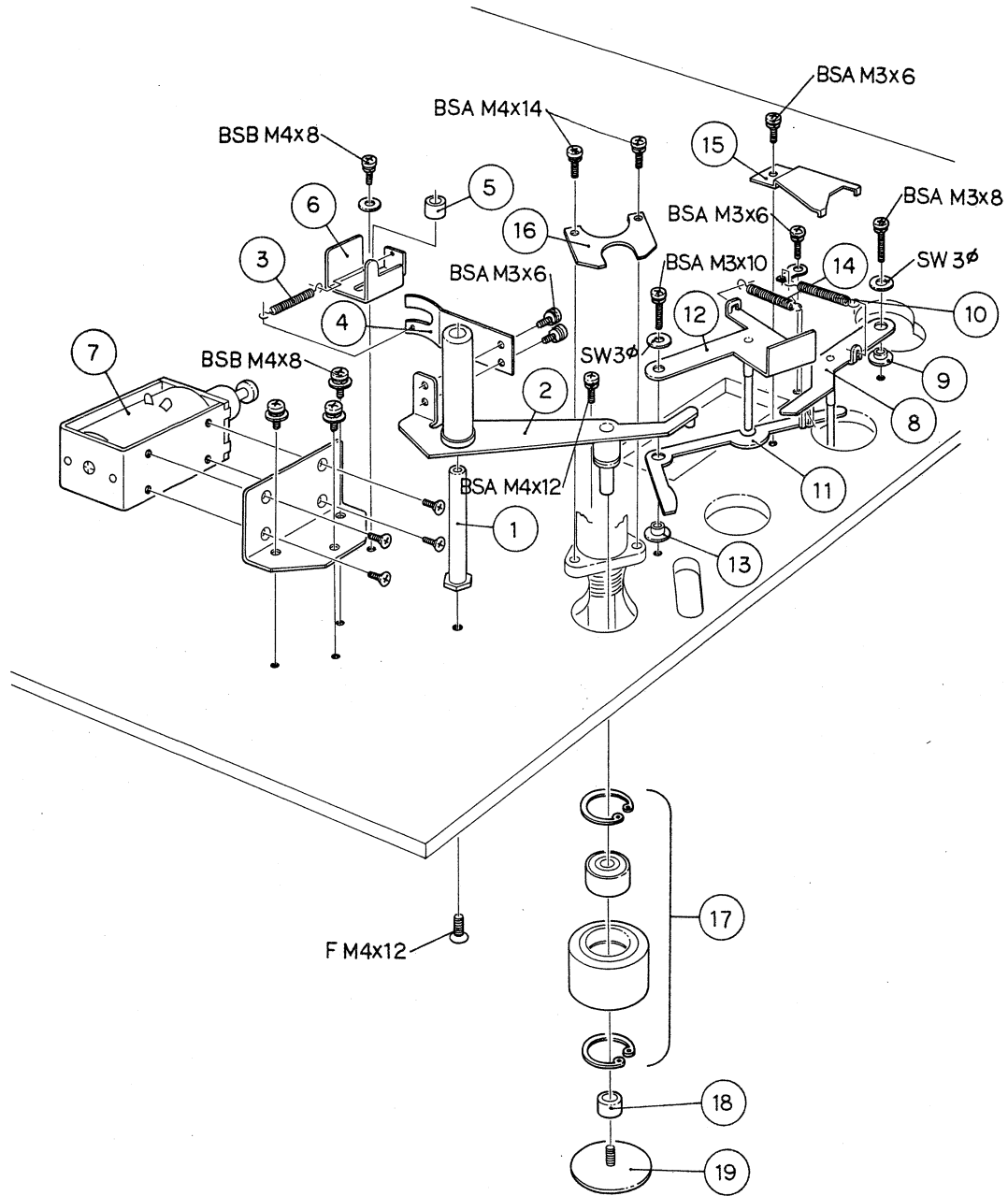
Title	Reel Motor Assembly	Assembly No. 6012 0140
Ref. No.	Description	Parts No.
01	Plate, base, reel motor	6010 2741
02	Motor, reel	7070 2283
03	Capacitor, MP (4 + 1) X 2, 250WV	5054 5800
04	Drum, brake, right	6012 0110
05	" , " , left	6012 2310
06	Magnet	5015 2392
07	Oil seal	5012 3900
08	Plate, base, brake	5017 3601
09	Brake retainer	5017 3481
10	Standoff, brake	5017 3490
11	Felt, brake	5554 1560
12	Brake band ass'y, left	5017 3332
13	" " " , right	5017 3392
14	Solenoid, brake	6047 5100
15	Bracket, reed switch	6014 4880
16	Cushion, rubber	7111 1901
17	PCB, reed switch	6050 0510
18	Switch, reed	5044 7200
19	Bracket, resistor mount	6014 4480
20	" , power transformer mount	6014 4951
21	Standoff, power transformer	6004 9420
22	Plate, power transformer	6014 4960
23	Washer, insulator	6014 4971
24	Terminal strip, 2P	5043 8350
25	Spacer, threaded	6004 8870
26	Spacer, threaded	6004 9040
27	PCB ass'y, fuse (See p. 55 )	6080 0300
28	PCB ass'y, terminal (See p. 56 )	6080 0420
29	Support, motor	5016 1950
30	Bracket, lamp	6014 5900
31	" , tape counter	6014 5890
32	PCB ass'y, lamp	6050 3220
33	Counter, tape	5058 5150
34	Reel table ass'y (w/o reel holder)	6012 0310
35	Holder, reel	6012 0130

PARTS LIST  
Reel motor ass'y  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
36	Plate, reel holder mounting	6012 2610
37	Bracket, top cover support	6014 6030
38	Belt, tape counter	5534 0110
39	Terminal, strip, 5P	6053 0160
R203, 204	Resistor, wirewound, 50 $\Omega$ , 30H	6040 2190
R205	" , " , 200 $\Omega$ , 30H	6040 2200
R206	" , " , 80 $\Omega$ , 10H	6040 2260
R207	" , " , 33 $\Omega$ , 10H	6040 2210
T201	Transformer, power, 100/117V	6046 0590
	" , " , 220/240V	6046 0610
PL201,202	Lamp, tape counter	6046 8100

PARTS LIST  
 Reel motor ass'y  
 REV. \_\_\_\_\_

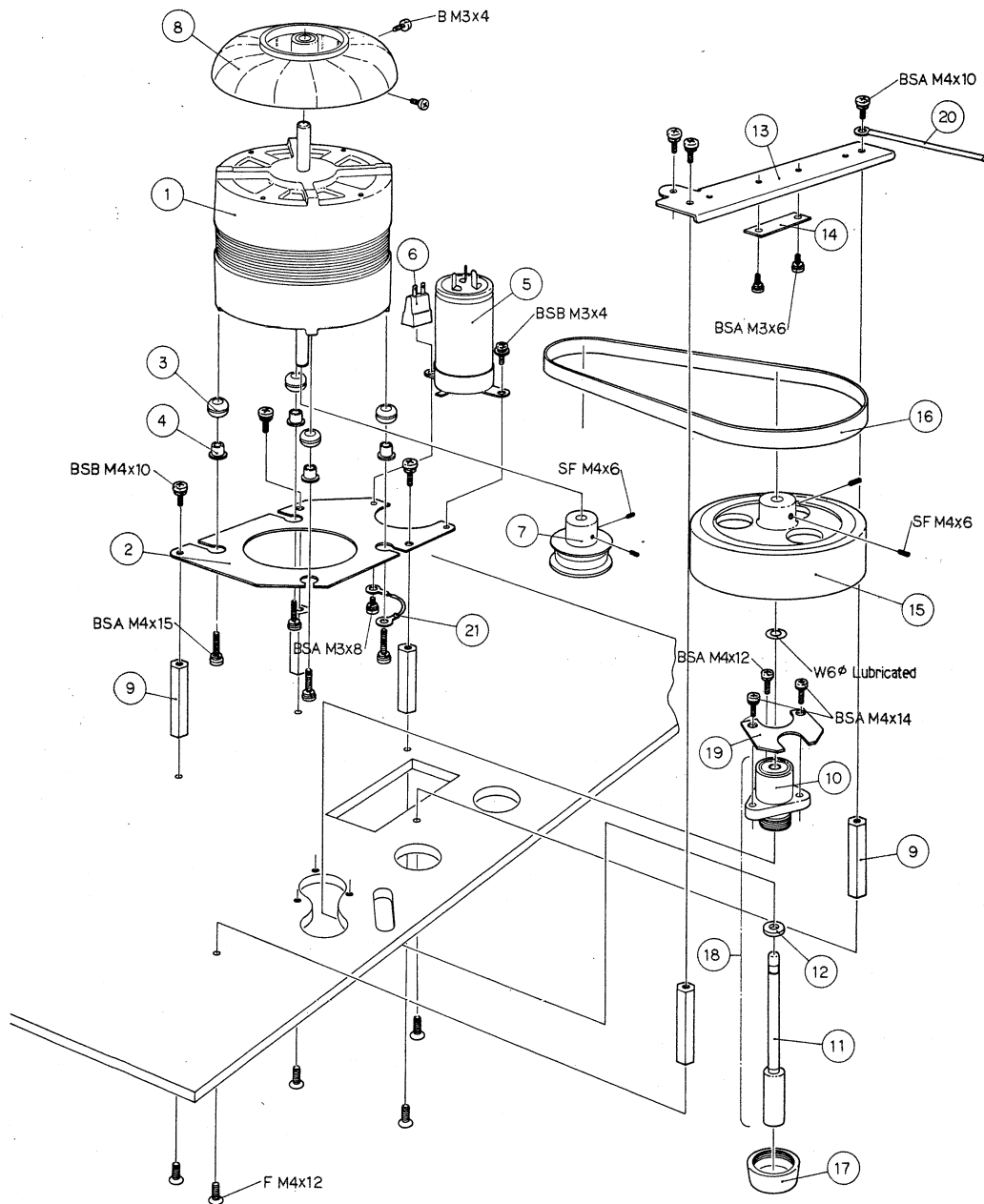
6.4 Pinch roller/ lifter section



Title Pinch Roller/Lifter Section		
Ref. No.	Description	Parts No.
01	Shaft, pinch roller arm	5014 1821
02	Arm ass'y, pinch roller	6011 0210
03	Spring, return	5524 0080
04	Spring, pressure	5520 0620
05	Rubber, cushion	5027 5690
06	Limit stop, pinch roller	5014 1842
07	Solenoid, capstan	5163 0040
08	Lifter arm ass'y, R	6014 0490
09	Shaft, lifter arm	5015 2502
10	Spring, A	5022 1100
11	Arm, cue	6014 4740
12	Cue lifter ass'y	6014 0500
13	Shaft, cue lifter arm	5544 0221
14	Spring, cue lifter	6004 0400
15	Plate, lifter, B	5554 0610
16	Plate, roller arm rest	5014 2190
17	Pinch roller ass'y	6011 0220
18	Collar, ball bearing	6011 2660
19	Cap, pinch roller	5014 2180

PARTS LIST  
Pinch roller/lifter section  
REV. \_\_\_\_\_

6.5 Capstan motor assembly

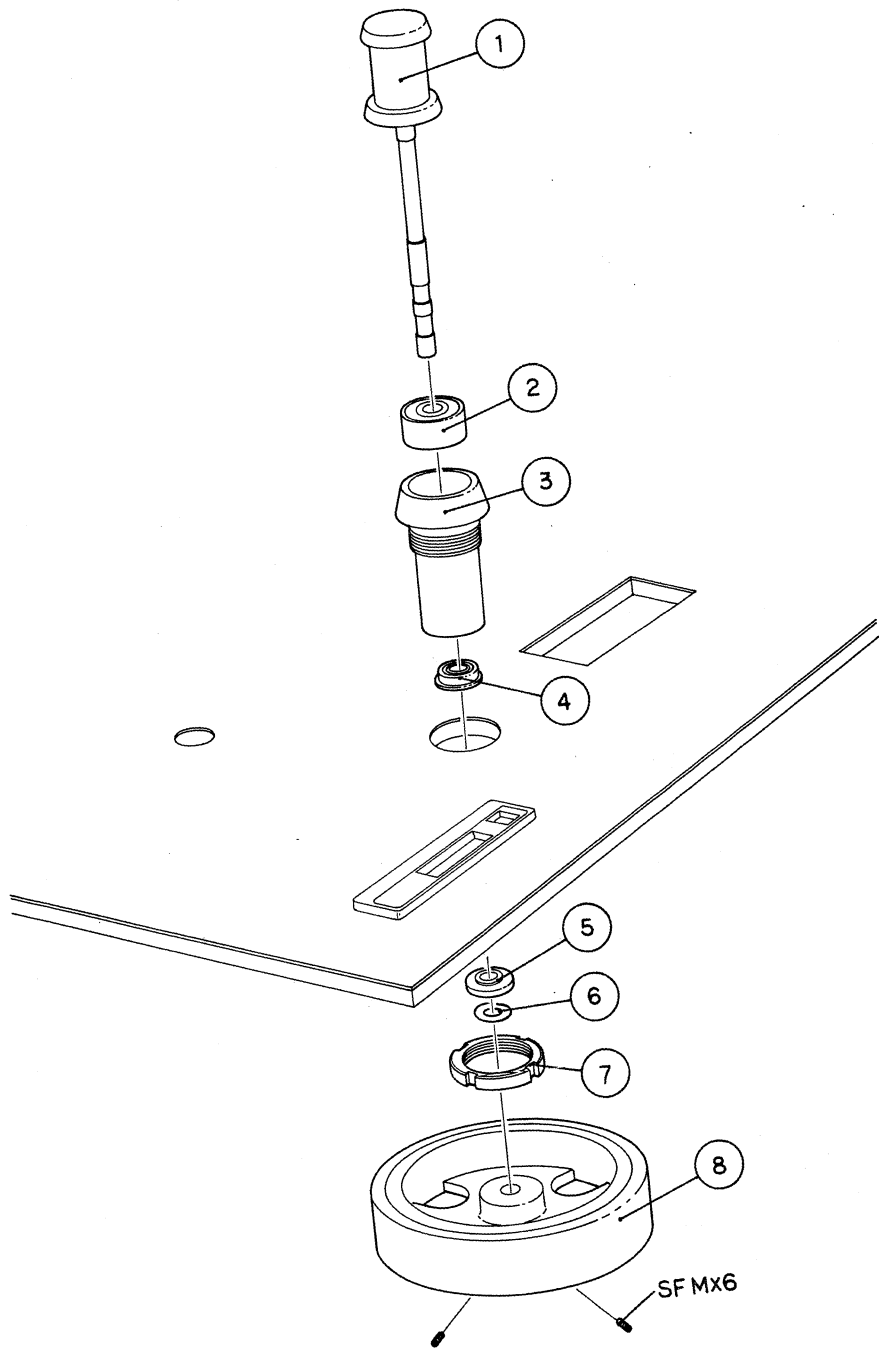




Title		Capstan Motor Assembly
Ref. No.	Description	Parts No.
01	Motor, capstan	5070 1341
02	Plate, capstan motor	6011 2730
03	Cushion, rubber	5070 6211
04	Spacer, rubber cushion	5033 2790
05	Capacitor, MP, (2+0.8)uF/250WV	5054 5650
06	Terminal strip, 1-lug	6053 0170
07	Pulley, motor, 60Hz	6011 2720
	" , " , 50/60Hz	6011 2900
08	Fan, motor cooling	5012 3984
09	Standoff, capstan motor	5012 3860
10	Bearing, capstan	5012 0211
11	Shaft, capstan	6011 2680
12	Oil pad ring	5012 3900
13	Angle, thrust plate	5554 0580
14	Plate, thrust	5027 7232
15	Flywheel, capstan	5012 3802
16	Belt, capstan	5012 5340
17	Cap, dust, capstan	6011 2630
18	Capstan ass'y	6011 0260
19	Plate, arm rest	5014 2190
20	Clamp, cable harness	6014 4890
21	Wire, motor grounding	5047 7830

PARTS LIST  
 Capstan motor ass'y  
 REV. \_\_\_\_\_

6.6 Impedance roller assembly

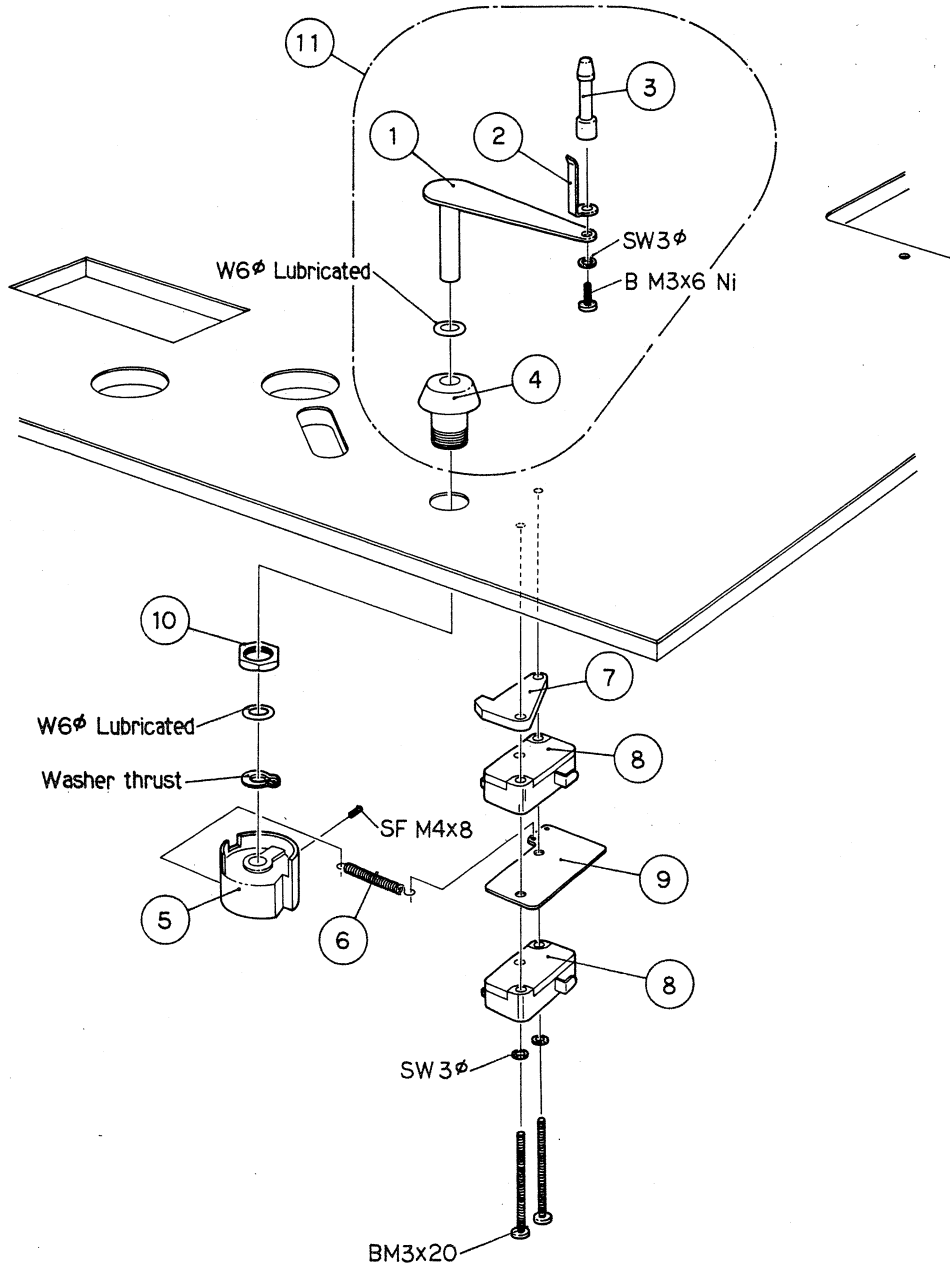


Title	Impedance Roller Assembly	Assembly No. 6011 0250
Ref. No.	Description	Parts No.
01	Roller, impedance	6011 0200
02	Bearing, ball (626VV)	5500 2160
03	Bushing, bearing	6011 2710
04	Bearing, ball (MF126ZZ)	6004 6640
05	Collar, impedance roller	5540 5070
06	Washer, spring friction	5520 2000
07	Nut, bushing mount	6011 2690
08	Flywheel, impedance roller*	5530 5060

\* Not included in Assembly No. 6011 0250.

PARTS LIST  
 Impedance roller ass'y  
 REV. \_\_\_\_\_

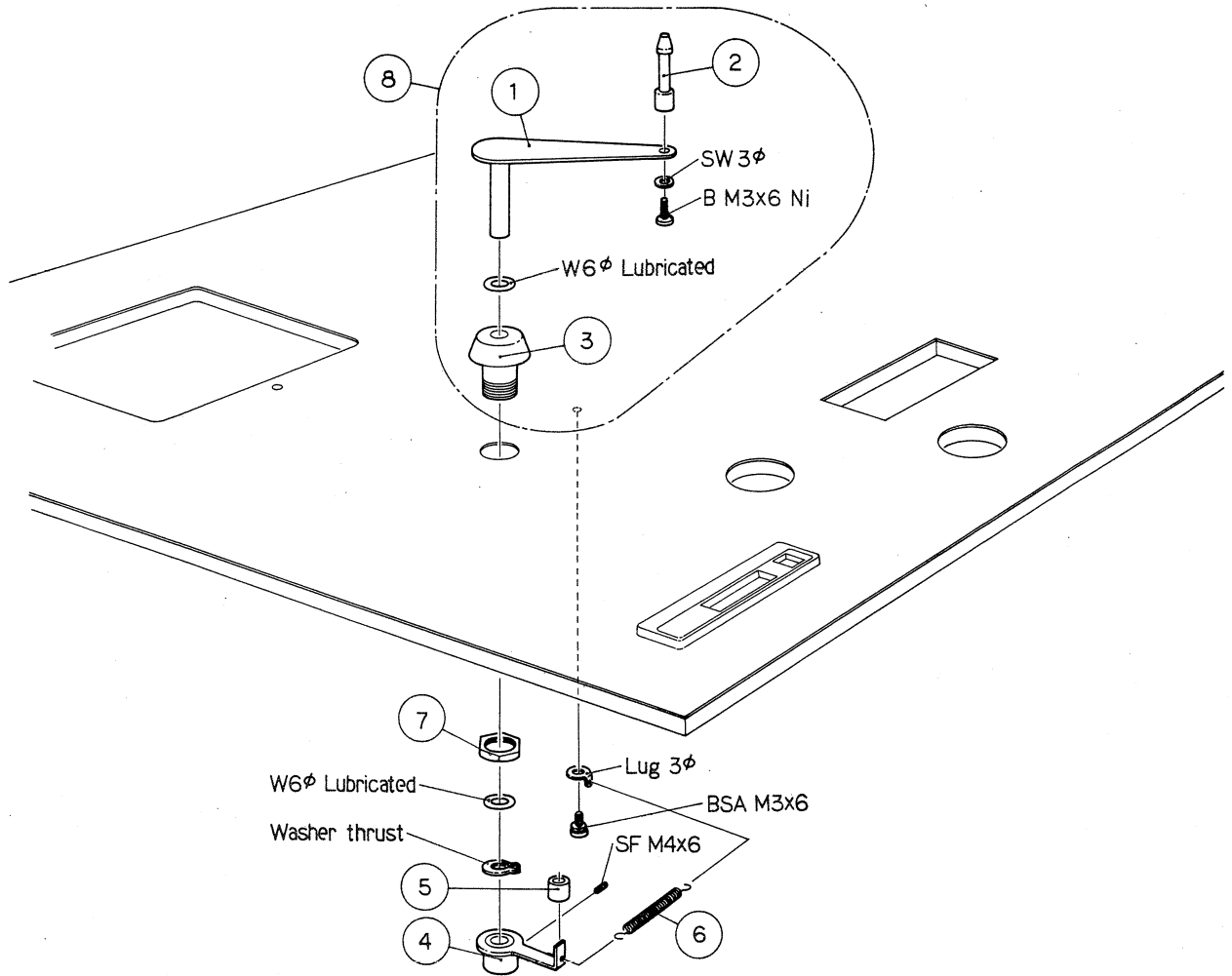
6.7 Right tension arm



Title		Right Tension Arm
Ref. No.	Description	Parts No.
01	Arm, tension	6014 0510
02	Hook, tape	6014 4830
03	Guide, tape, right	6014 4820
04	Holder, arm, C	5530 0831
05	Drum, switch OFF	5018 3821
06	Spring, C	5022 1122
07	Limiter, tension	5018 2730
08	Switch, micro	5130 0100
09	Insulator, paper	5018 3932
10	Nut, M9, tension arm	
11	Right tension arm assembly	6014 0560

PARTS LIST  
 Right tension arm  
 REV. \_\_\_\_\_

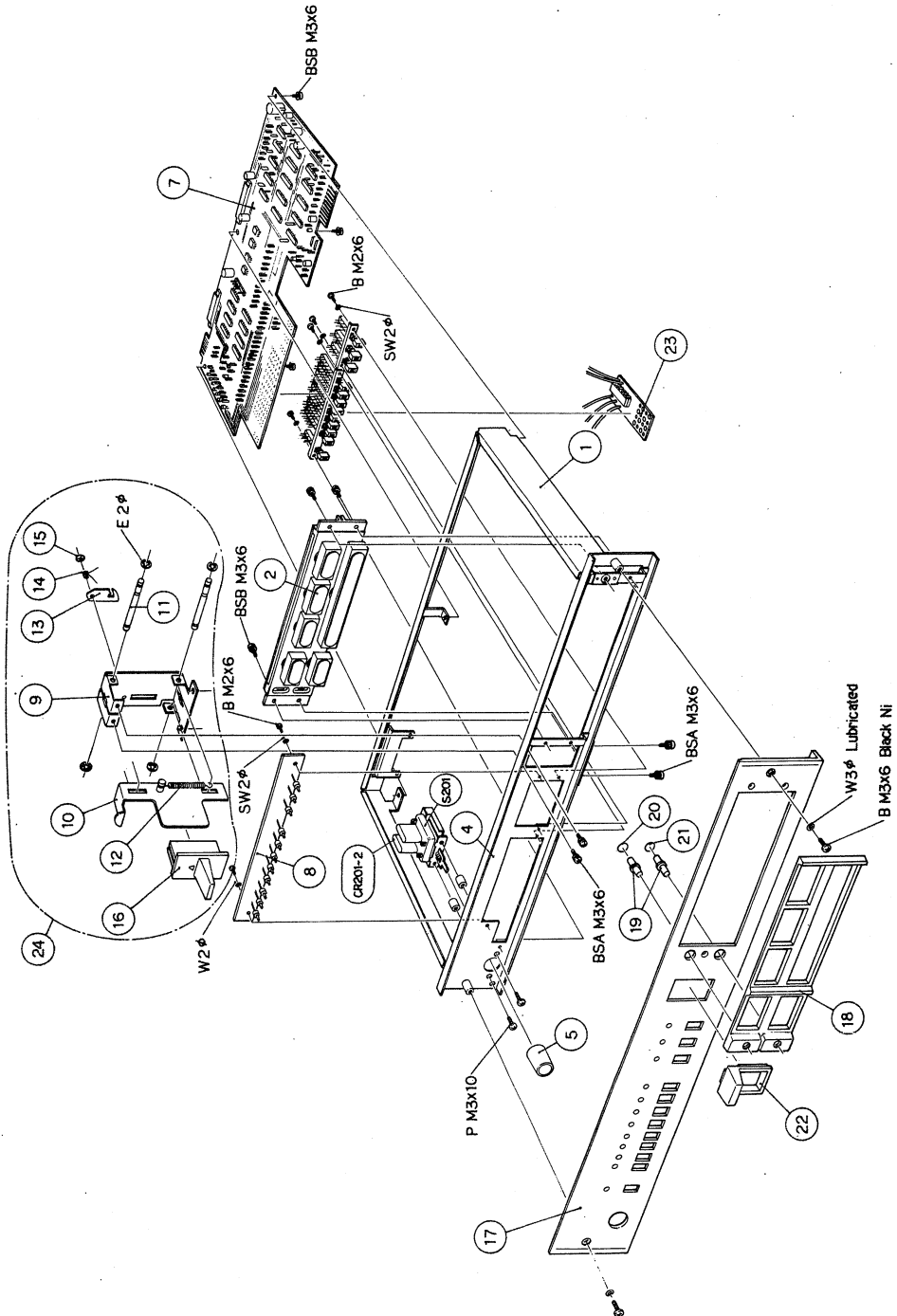
6.8 Left tension arm



Title		Left Tension Arm
Ref. No.	Description	Parts No.
01	Arm, tension	6014 0510
02	Guide, tension arm	6014 4810
03	Bushing, arm shaft, C	5530 0831
04	Limit stop, tension arm	6014 0520
05	Collar, rubber	5027 6990
06	Spring, tension arm	6004 0370
07	Nut, M-9, tension arm	
08	Tension arm ass'y	6014 0570

PARTS LIST  
Left tension arm  
REV. \_\_\_\_\_

6.9 Control unit assembly

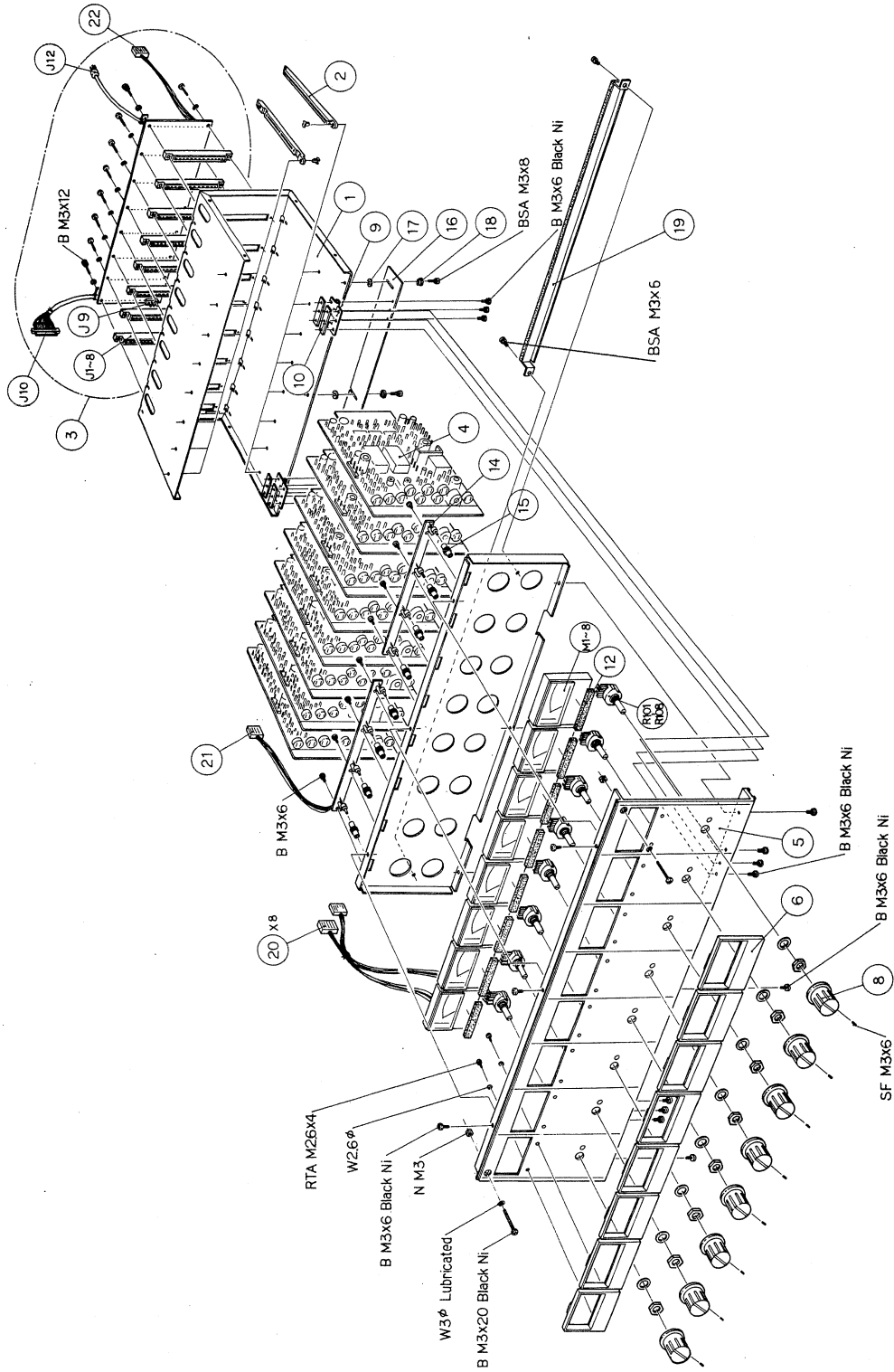




Title	Control Unit Assembly	Assembly No. 6080 0560
Ref. No.	Description	Parts No.
01	Chassis, control unit	6010 0060
02	Key board switch ass'y B	5044 8611
03	(deleted)	
04	Standoff, power switch	6004 8050
05	Button, power switch	6006 0190
06	(deleted)	
07	PCB ass'y, system control (See p. 57 )	6080 0270
08	PCB ass'y, LED indicators (See p. 64 )	6080 0310
09	Guide ass'y, cue linkage	6014 0470
10	Linkage ass'y, cue	6014 0480
11	Shaft, linkage guide	5544 0330
12	Spring, cue linkage	6004 0390
13	Plate, pause lock	5550 0270
14	Spring, lock plate	5520 0161
15	Nut, speed, M1.5	
16	Lever, cue	5530 5150
17	Panel, control	6010 2691
18	Escutcheon, tape control	5530 5310
19	Lens, lamp	5530 5260
20	Film, filter, red	5550 7270
21	Film, filter, green	5550 7280
22	Hook, cue lever	5530 5300
23	PCB ass'y, normal gate	6050 3560
24	Cue lever ass'y	6014 0530
S201	Switch, power	5044 4510
CR201, 202	Spark killer, 0.033uF+120Ω/400WV	5052 9050

PARTS LIST  
Control unit ass'y  
REV. \_\_\_\_\_

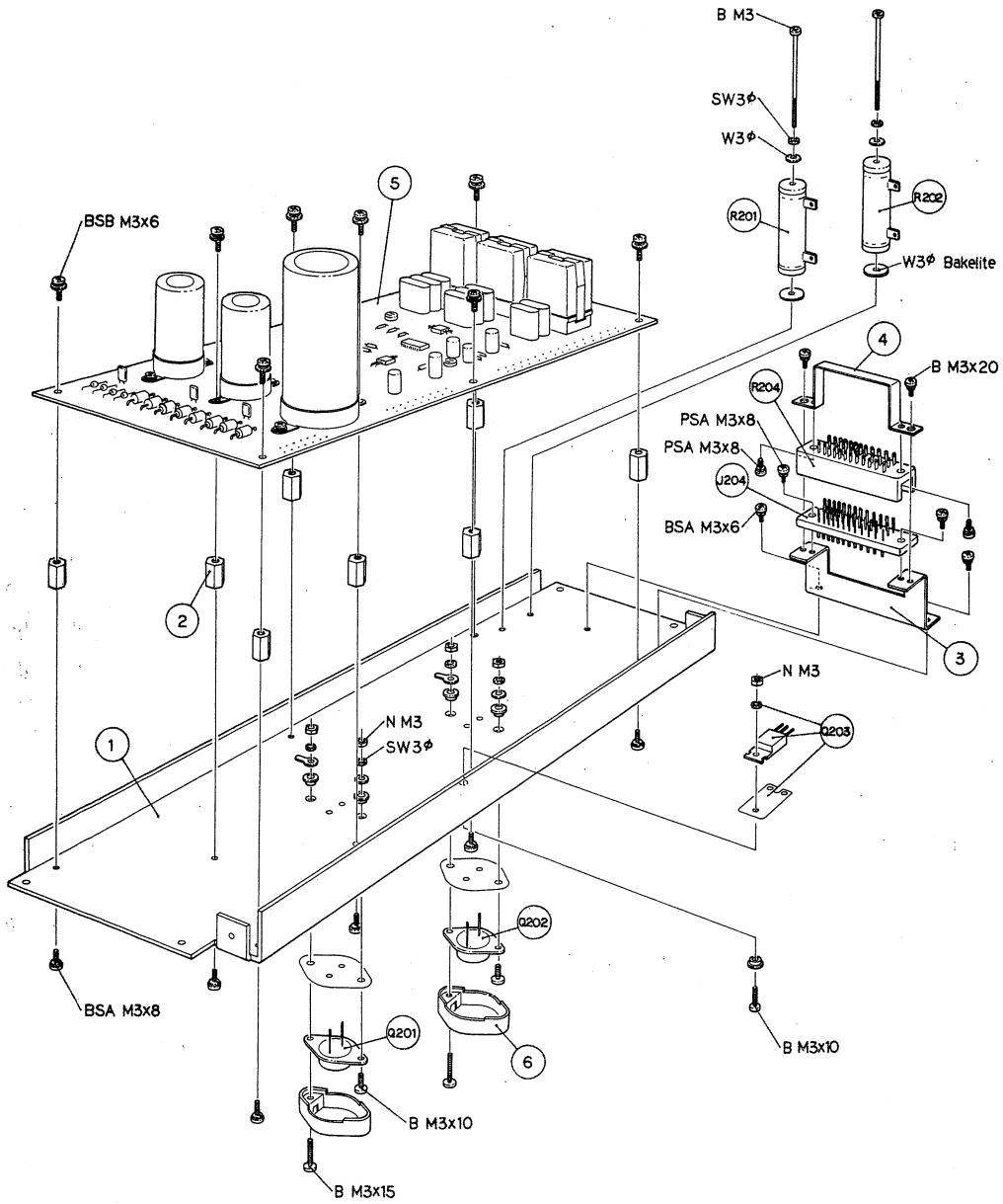
# 6.10 Record/reproduce amplifier assembly



Title	Record/Reproduce Amplifier Ass'y	Assembly No. 6085 2580
Ref. No.	Description	Parts No.
01	Chassis, amplifier	6037 2310
02	Guide, PCB	6045 0100
03	Connector board ass'y (See p. 65)	6085 2520
04	PCB, rec/repro amplifier ass'y (See p. 66)	6085 2530
05	Panel, amplifier	6036 1640
06	Escutcheon, meter	6014 4920
07	(deleted)	
08	Knob, line-in control, B-20B	5025 3750
09	Hinge	6014 4970
10	Plate, hinge	6014 4900
11	(deleted)	
12	Cushion, meter	6014 4840
13	Chassis, meter	6037 3441
14	PCB, peak indicator (See p. 72)	6085 2540
15	Cushion, lamp	5083 4240
16	Plate, sliding	6014 5940
17	Spacer (A)	6014 5950
18	Spacer (B)	6014 5960
19	Bar, PCB locking	6014 6010
20	Harness cable, meter circuit	6049 5850
21	" " , peak indicator	6049 2340-01
22	" " , mother board	6049 2340-00
R101~108	Potentiometer, rotary, 10K $\Omega$ , taper A	6042 0050
M1~8	Meter, VU	6055 0210
J1~8	Connector, PCB, M44-18-10-139M	6052 1730
J10	" " , PHC6-15S-2.5E	6052 1630
J12	" " , 7P, S-I 7302	6052 1680
J 9	Receptacle (3 pin), 48-0008, SMK	6052 1720

PARTS LIST  
 Rec/repro amp. ass'y  
 REV. \_\_\_\_\_

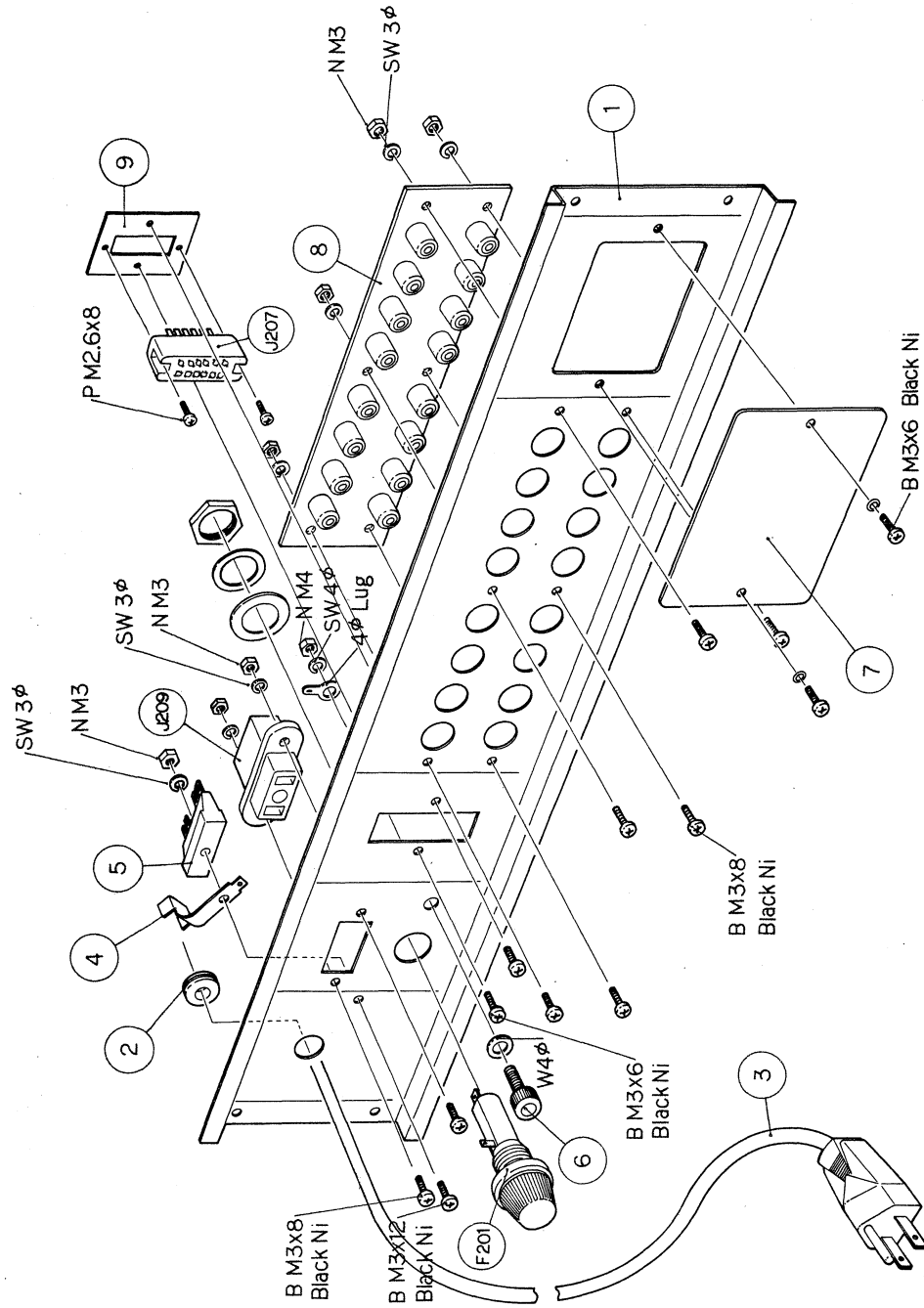
6.11 Power supply unit



Title	Power Supply Unit	Assembly No. 6080 0290
Ref. No.	Description	Parts No.
01	Chassis, power supply	6037 2340
02	Standoff, PCB	6004 8870
03	Bracket, connector	6014 4940
04	Handle, connector	5028 7490
05	PCB ass'y, power supply and reel motor control (See p.73 )	6080 0280
06	Insulating cover, transistor	6053 0150
Q201, 202	Transistor, 2SD-111	6048 0700
Q203	" , 2SD-234 (D)	6048 0680
R201, 202	Resistor, wirewound, 1 ohm, 15H	6040 2180
J204	Connector, multi, 34P receptacle, male, Hirose P-1334	5043 6390
P204	" , " , 34P plug, female, Hirose S-1334	5043 8200

PARTS LIST  
Power supply unit  
REV. \_\_\_\_\_

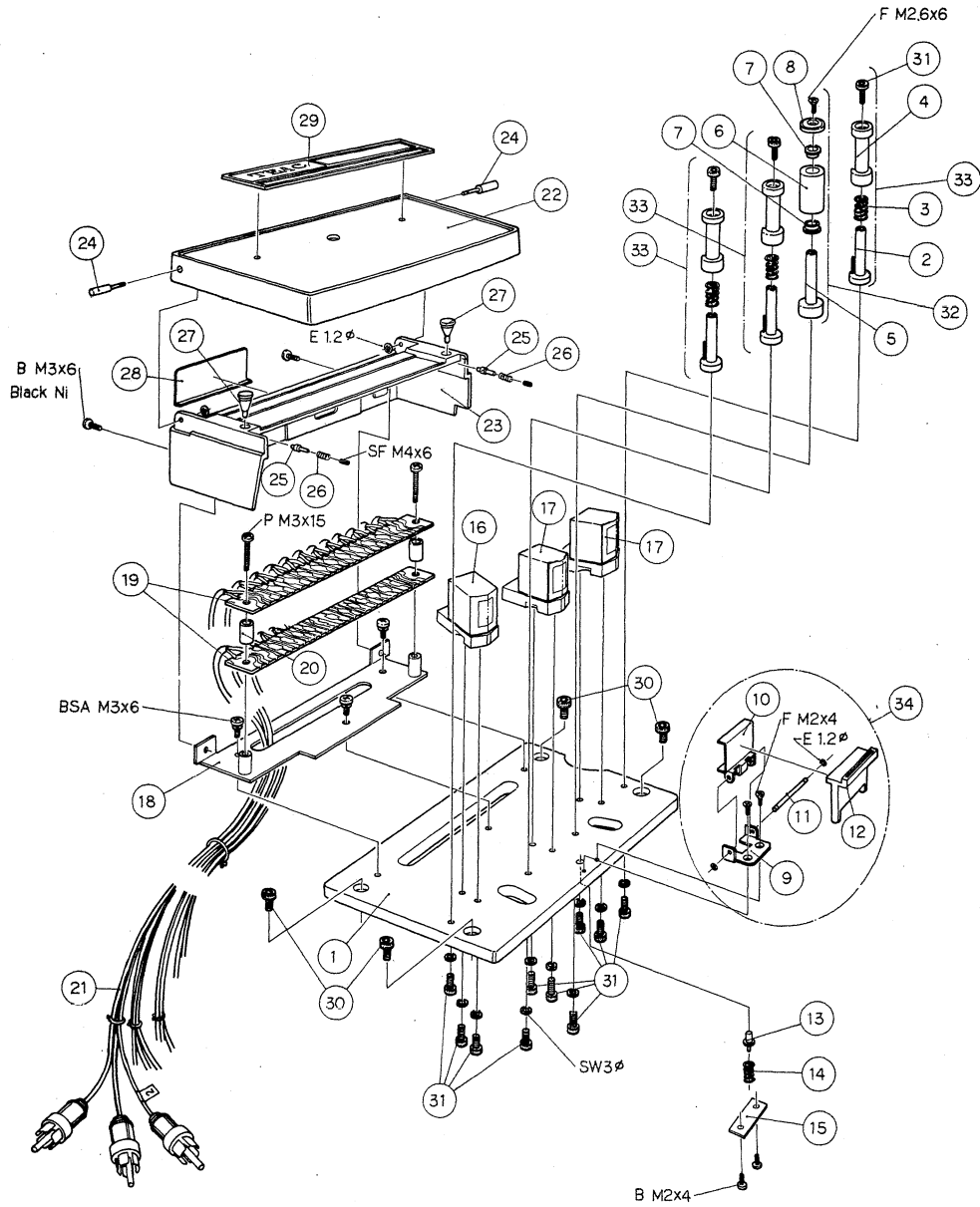
6.12 Rear panel assembly



Title	Rear Panel Assembly	Assembly No.	6085 2550
Ref. No.	Description	Parts No.	
01	Panel, rear	6037	2300
02	Grommet, AC power cord	5032	3011
03	Cord, AC power cord	6049	0960
04	Clamp, AC power cord	6037	2200
05	Terminal strip, 2P	5043	8350
06	Terminal, grounding	5045	4071
07	Plate, hole cover	6014	4850
08	Pin jack strip, 16 jack	6052	1740
09	Bracket, receptacle mount	6014	4910
F 201	Holder, fuse	5041	2280
J 207	Receptacle, 12P	5043	8410
J 209	Outlet, AC	6052	0080

PARTS LIST  
Rear panel ass'y  
REV. \_\_\_\_\_

6.13 Head assembly/head housing assembly





Title	Head Assembly Head Housing Assembly	Assembly No.	6013 0180 6013 0170
Ref. No.	Description	Parts No.	
01	Plate, housing base	6013	2380
02	Shaft, tape guide	6013	2400
03	Spring, tape guide	6004	0360
04	Tape guide	6013	2390
05	Shaft, scrape flutter roller	6013	2420
06	Roller, scrape flutter	6013	2410
07	Bearing, ball (LF-740ZZ)	6004	6650
08	Cap, scrape flutter roller	6013	2410
09	Base, magnetic shield	6013	2460
10	Plate, magnetic shield	6013	2470
11	Shaft, magnetic shield	6013	2500
12	Lever, magnetic shield	6013	2540
13	Pin, lock, magnetic shield	6013	2510
14	Spring, lock pin	6004	0380
15	Plate, spring retaining	6013	2530
16	Head, 8 track erase	5064	0820
17	Head, 8 track rec/repro.	5064	0810
18	Bracket, PCB mount	6013	2370
19	PCB, head wiring	6050	2691
20	Spacer, tubular	6004	8080
21	Cable ass'y, pin plug	6049	1080
22	Housing A, head	6013	2450
23	Housing B, head	5533	0020
24	Shaft, head housing	6013	2520
25	Pin, lock, head housing	5534	0120
26	Spring, lock pin	5520	2260
27	Cushion, rubber	5530	5390
28	Plate, hole cover	6013	2440
29	Plate, TEAC name	6007	1240
30	Screw, hex head, M4X6	5021	7190
31	" , " " , M3X6	5021	7160

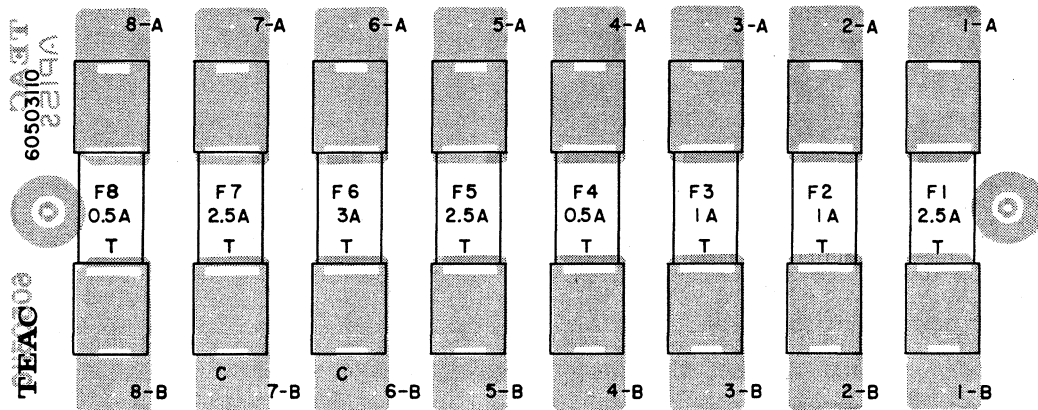
PARTS LIST  
Head ass'y  
Head housing ass'y  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
32	Scrape flutter roller assembly	6013 0190
33	Tape guide assembly	6013 0200
34	Shield cover assembly	6013 0210

PARTS LIST  
Head ass'y  
Head housing ass'y  
REV. \_\_\_\_\_

## 7. PC CARDS AND PARTS LIST

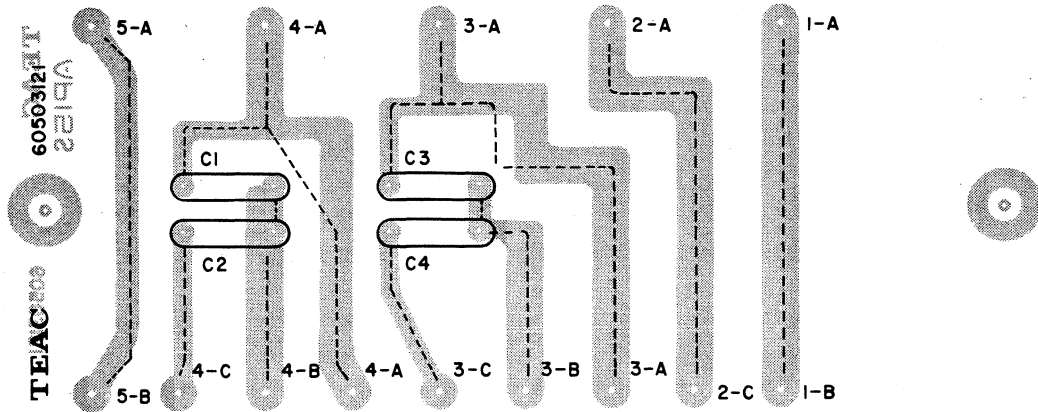
### 7.1 Fuse PCB assembly



Ref. No.	Description	Parts No.
1	PCB, fuse holder	6050 3110
F 1, 5, 7	Fuse, slow blow, 2.5A	6046 9010-03
F 2, 3	" , " " , 1A	6046 9010-01
F 4, 8	" , " " , 0.5A	6046 9010-00
F 6	" , " " , 3A	6046 9010-04
	Fuse holder, S-N5054	6052 9020

PARTS LIST, PC CARD  
 Fuse PCB Assembly  
 REV. \_\_\_\_\_

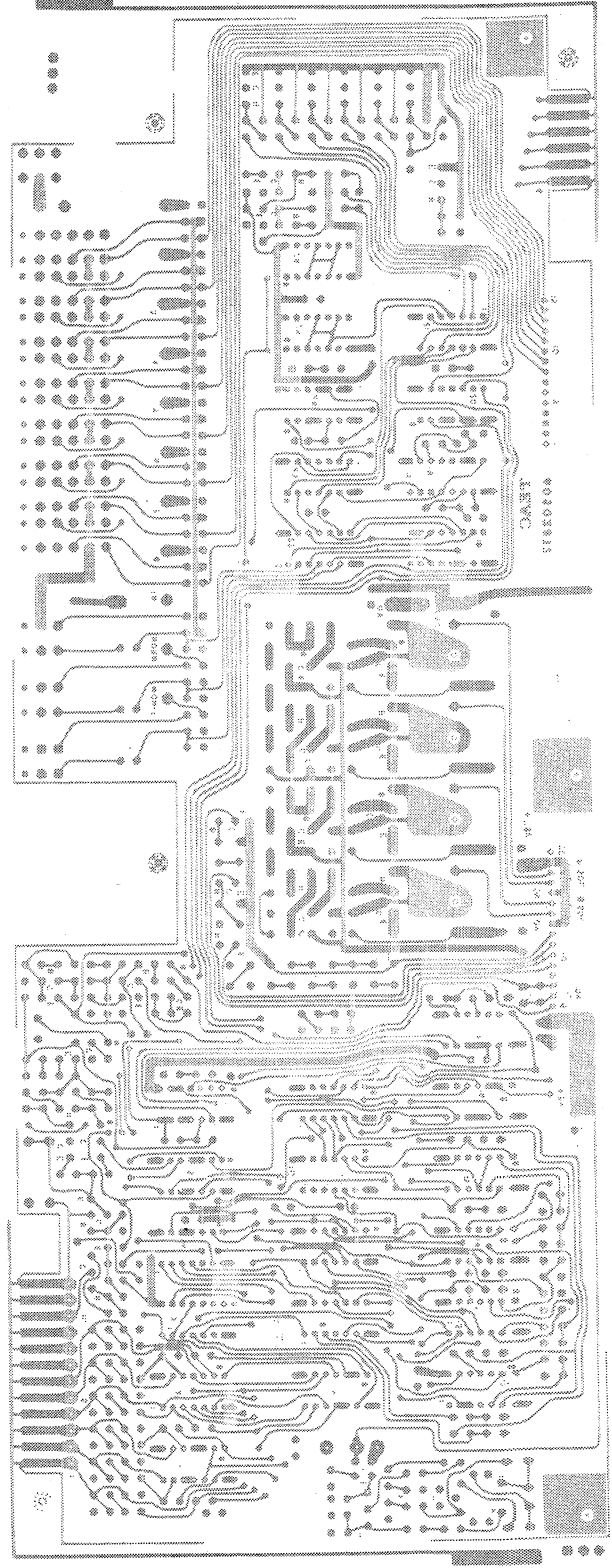
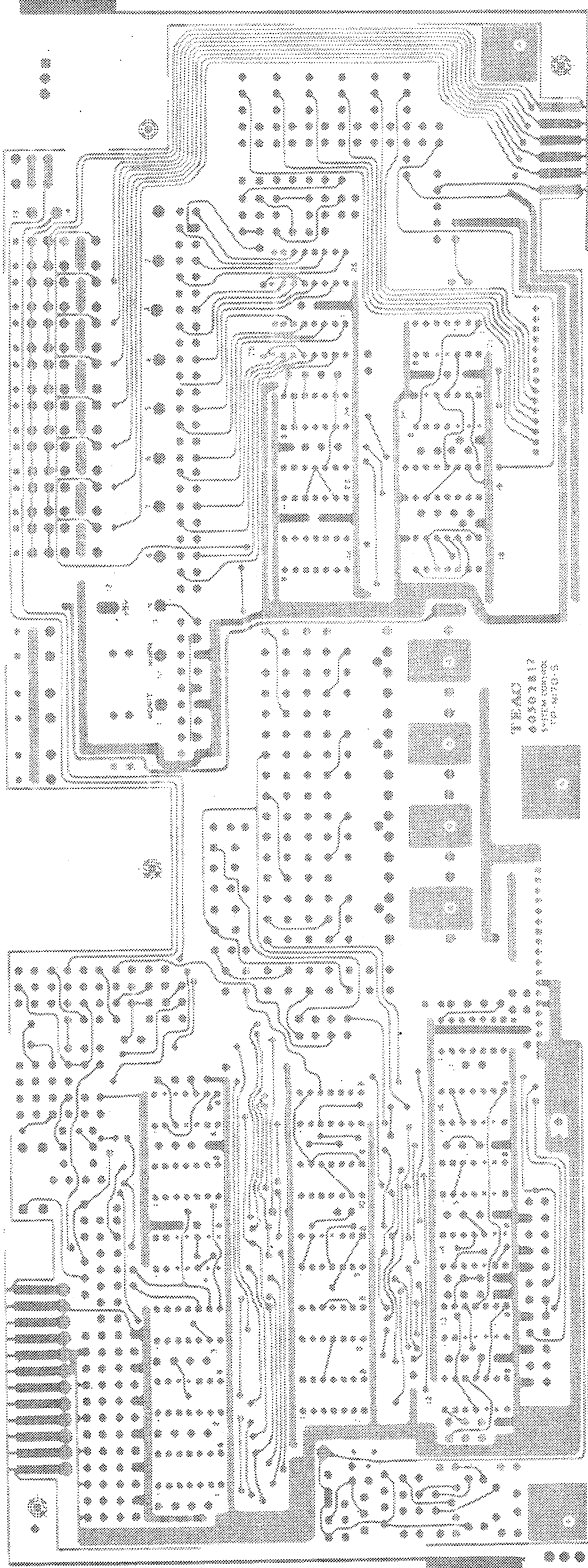
7.2 Terminal PCB assembly



Ref. No.	Description	Parts No.
1	PCB, terminal assembly	6050 3121
C 1~4	Capacitor, ceramic, 500V, 0.01uF	5054 2230
	Wire, terminal PCB	6049 1210

PARTS LIST, PC CARD  
Terminal PCB assembly  
REV. \_\_\_\_\_

7.3 System control PCB assembly



Title	System Control PCB Assembly	Assembly No.	6080 0270
Ref. No.	Description	Parts No.	
	PCB, System control	6050	2812
	Switch, push, 3 button, Alps	6051	0650
	" , " , 9 button, "	6051	0640
	Socket, IC (14P), A-4497-14, Showa Molex	6052	1790
	" , IC (16P), A-4497-16, " "	6052	1800
IC 1~3	Integrated circuit, SN7400N	6048	9000
IC 4	" " , SN7404N	6048	9040
IC 5, 6	" " , SN7400N	6048	9000
IC 7	" " , SN7404N	6048	9040
IC 8	" " , SN7400N	6048	9000
IC 9, 10	" " , SN7408N	6048	9080
IC11	" " , SN7404N	6048	9040
IC12, 13	" " , SN7410N	6048	9100
IC14	" " , SN7400N	6048	9000
IC15	" " , SN7420N	6048	9110
IC16	" " , SN7400N	6048	9000
IC17	" " , SN74122N	6048	9140
IC18	" " , SN7410N	6048	9100
IC19	" " , SN74123N	6048	9150
IC20	" " , SN7400N	6048	9000
IC21, 22	" " , SN7404N	6048	9040
IC23~26	" " , SN7400N	6048	9000
Q 1~16	Transistor, 2SC1312Y-G	6048	0450
Q17, 18	" , 2SC1211D	6048	0080
Q19~22	" , 2SB524D	6048	0490
Q23~32	" , 2SC1312Y-G	6048	0450
D 1~30	Diode, 1S953	5042	2720
D31~38	" , 1N4002	6048	3270
D39~44	" , 1S953	5042	2720
L 1	Transformer, oscillator	6046	6070
J202	Connector (20P), PCN6-20-PA-2.5DS, Hirose	6052	1650
J203	" (15P), PCN6-15-PA-2.5DS, "	6052	1640

PARTS LIST, PC CARD  
System control PCB ass'y  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
J205	Connector, PC mtg., 4 pin male, 48-0009, SMK	6052 1700
J211	" , " , 3 " " , 48-0008; "	6052 1720
R 1~4	Resistor, carbon, 1K $\Omega$	
R 5	" , " , 220 $\Omega$	
R 6	" , " , 330 $\Omega$	
R 7~18	" , " , 1K $\Omega$	
R19	" , " , 22K $\Omega$	
R20	" , " , 150K $\Omega$	
R21	" , " , 4.7K $\Omega$	
R22~26	" , " , 1K $\Omega$	
R27	" , " , 4.7K $\Omega$	
R28, 29	" , " , 180 $\Omega$	
R30	" , " , 1K $\Omega$	
R31	" , " , 100K $\Omega$	
R32	" , " , 220K $\Omega$	
R33, 34	" , " , 47K $\Omega$	
R35~46	" , " , 180 $\Omega$	
R47	" , " , 1K $\Omega$	
R48, 49	" , " , 220K $\Omega$	
R50	" , " , 1K $\Omega$	
R51	" , " , 33K $\Omega$	
R52	" , " , 180 $\Omega$	
R53	" , " , 1.2K $\Omega$	
R54	" , " , 10K $\Omega$	
R55	" , " , 330 $\Omega$ , 1/2W, $\pm 5\%$	
R56	" , " , 1.2K $\Omega$	
R57	" , " , 10K $\Omega$	
R58	" , " , 330 $\Omega$ , 1/2W, $\pm 5\%$	
R59	" , " , 47K $\Omega$	
R60	" , " , 120K $\Omega$	
R61	" , " , 33 $\Omega$	
R62	" , " , 1.2K $\Omega$	
R63	" , " , 2.2K $\Omega$	
R64	" , " , 4.7K $\Omega$	
R65	" , " , 180K $\Omega$	

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.

PARTS LIST, PC CARD  
System control PCB ass'y  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
R66	Resistor, carbon, 470K $\Omega$	
R67, 68	" , " , 2.2K $\Omega$	
R69	" , " , 4.7K $\Omega$	
R70	" , " , 68K $\Omega$	
R71	" , " , 33 $\Omega$	
R72	" , " , 680K $\Omega$	
R73, 74	" , " , 2.2K $\Omega$	
R75	" , " , 4.7K $\Omega$	
R76	" , " , 220K $\Omega$	
R77	" , " , 470K $\Omega$	
R78	" , " , 3.9K $\Omega$	
R79	" , " , 2.2K $\Omega$	
R80	" , " , 4.7K $\Omega$	
R81	" , " , 10K $\Omega$	
R82	" , " , 100K $\Omega$	
R83~85	" , " , 10K $\Omega$	
R86, 87	" , " , 100K $\Omega$	
R88	" , " , 33 $\Omega$	
R89	" , " , 10 $\Omega$	
R90	" , " , 8.2K $\Omega$	
R91	" , " , 12K $\Omega$	
R92	" , " , 390 $\Omega$	
R93	" , " , 1K $\Omega$	
R94	" , " , 68 $\Omega$	
R95	" , " , 47K $\Omega$	
R96	" , " , 68 $\Omega$	
R97~99	" , " , 180 $\Omega$	
R100	" , " , 4.7K $\Omega$	
R101	" , " , 100 $\Omega$	
R102	" , " , 4.7K $\Omega$	
R103	" , " , 100 $\Omega$	
R104	" , " , 4.7K $\Omega$	
R105	" , " , 100 $\Omega$	
R106~108	" , " , 1K $\Omega$	
R109~113	" , " , 100 $\Omega$	

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.

PARTS LIST, PC CARD  
System control PCB ass'y  
REV. \_\_\_\_\_



Ref. No.	Description	Parts No.
R114	Resistor, carbon, 18K $\Omega$	
R115	" , " , 100K $\Omega$	
R116	" , " , 1K $\Omega$	
R117, 118	" , " , 220K $\Omega$	
R119	" , " , 1K $\Omega$	
R120	" , " , 18K $\Omega$	
R121	" , " , 100K $\Omega$	
R122	" , " , 18K $\Omega$	
R123	" , " , 100K $\Omega$	
R124, 125	" , " , 180 $\Omega$	
R126, 127	" , " , 33K $\Omega$	
R128	" , " , 18K $\Omega$	
R129	" , " , 100K $\Omega$	
R130	" , " , 18K $\Omega$	
R131	" , " , 100K $\Omega$	
R132	" , " , 18K $\Omega$	
R133	" , " , 100K $\Omega$	
R134	" , " , 18K $\Omega$	
R135	" , " , 100K $\Omega$	
R136	" , " , 18K $\Omega$	
R137	" , " , 100K $\Omega$	
R138	" , " , 180 $\Omega$	
R139	" , " , 100 $\Omega$	
R140	" , " , 180 $\Omega$	
R141	" , " , 100 $\Omega$	
R142	" , " , 180 $\Omega$	
R143	" , " , 100 $\Omega$	
R144	" , " , 180 $\Omega$	
R145	" , " , 100 $\Omega$	
R146	" , " , 180 $\Omega$	
R147	" , " , 100 $\Omega$	
R148	" , " , 180 $\Omega$	
R149	" , " , 100 $\Omega$	
R150	" , " , 180 $\Omega$	
R151	" , " , 100 $\Omega$	

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.

PARTS LIST, PC CARD  
System control PCB ass'y  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
R152	Resistor, carbon, 180Ω	
R153	" , " , 100Ω	
R154	" , " , 220KΩ	
R155	" , " , 1KΩ	
R156	" , " , 220KΩ	
C 1~4	Capacitor, dipped Tantalum, 25V, 1uF	6043 1700
C 5	" , Mylar, 50V, 0.01uF	6044 5370
C 6, 7	" , dipped Tantalum, 25V, 1uF	6043 1700
C 8, 9	" , Mylar, 50V, 0.01uF	6044 5370
C10	" , electrolytic, 10V, 47uF	6043 0180
C11, 12	" , Mylar, 50V, 0.022uF	6044 5390
C13	" , dipped Tantalum, 10V, 4.7uF	6043 1900
C14~25	" , Mylar, 50V, 0.0068uF	6044 5210
C26, 27	" , dipped Tantalum, 16V, 2.2uF	6043 1710
C28	" , " , 6.3V, 47uF	6043 1920
C29	" , Mylar, 50V, 0.022uF	6044 5390
C30	" , dipped Tantalum, 10V, 10uF	6043 1750
C31	" , " , 16V, 2.2uF	6043 1710
C32	" , " , 10V, 33uF	6043 1740
C33	" , Mylar, 50V, 0.047uF	6044 5410
C34, 35	" , " , " , 0.01uF	6044 5370
C36	" , " , " , 0.047uF	6044 5410
C37	" , " , " , 0.01uF	6044 5370
C38	" , " , " , 0.033uF	6044 5400
C39	" , electrolytic, 10V, 100uF	5055 4570
C40	" , " , 50V, 47uF	5055 4580
C41	" , ceramic, 50V, 0.01uF	6044 0050
C42	" , electrolytic, 16V, 100uF	5055 4200
C43, 44	" , ceramic, 50V, 0.01uF	6044 0050
C45	" , electrolytic, 16V, 100uF	5055 4200
C46~48	" , ceramic, 50V, 0.01uF	6044 0050
C49~51	" , dipped Tantalum, 10V, 3.3uF	6043 1970
C52, 53	" , " , 16V, 2.2uF	6043 1710
C54, 55	" , Mylar, 50V, 0.022uF	6044 5390

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.

PARTS LIST, PC CARD  
System control PCB ass'y  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
C56	Capacitor, dipped Tantalum, 10V, 10uF	6043 1750
C57	" , " , " , 22uF	6043 1910
C58	" , electrolytic, 16V, 100uF	5055 4200
C59~63	" , ceramic, 50V, 0.01uF	6044 0050

PARTS LIST, PC CARD  
System control PCB ass'y  
REV. \_\_\_\_\_

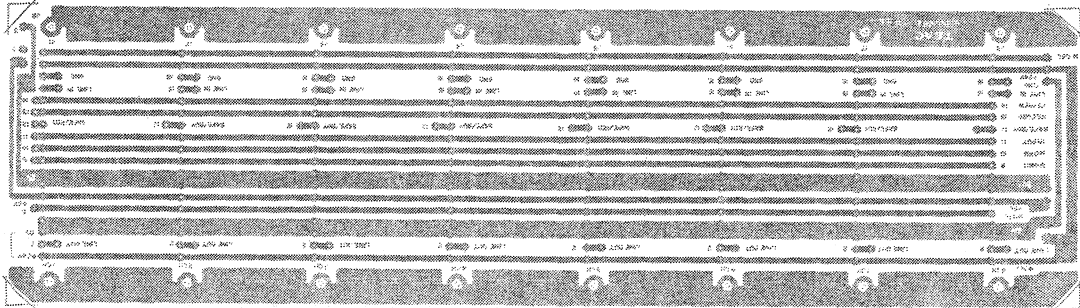
7.4 LED indicator PCB assembly



Title	LED Indicator PCB Assembly	Assembly No. 6085 0310
Ref. No.	Description	Parts No.
1	PCB. LED indicator	6050 2830
D 1~11	LED, red, GD-4-203-SRG	5042 5110
	Harness, indicator lead	6049 1220

PARTS LIST, PC CARD  
 LED indicator PCB assembly  
 REV. \_\_\_\_\_

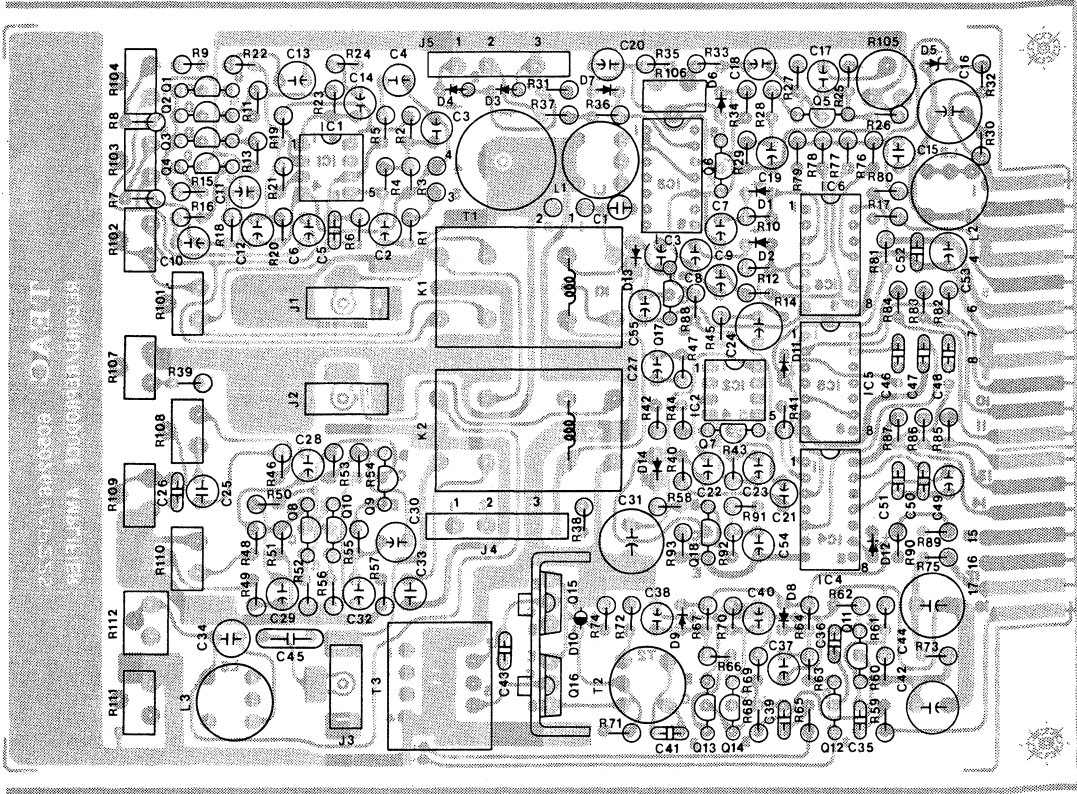
7.5 Connector board PCB assembly



Title	Connector Board PCB Assembly	Assembly No. 6085 2520
Ref. No.	Description	Parts No.
	PCB, connector board	6050 2682*
J1~J8	Receptacle, card-edge connector, Mitsumi M44-18-10-139M	6052 1730*
J9	Connector, SMK 48-0008	6052 1720*
	Harness, w/J10 connector	6049 5870
J10	Connector, Hirose PCN6-15S-2.5E	6052 1630
	Harness, w/J12 connector	6049 5860
J12	Connector (7P), SMK S-I2501	6052 1710
	Harness, wire, input/output, w/16 pin jack strip (6052 1740)	6049 5880
	Connector board, w/card-edge connector (Ass'y of * items above)	6085 2510

PARTS LIST, PC CARD  
Connector board PCB  
REV. \_\_\_\_\_

7.6 Record/reproduce amplifier PCB assembly



Title	Record/reproduce Amplifier PCB Assembly	Assembly No. 6085 2530
Ref. No.	Description	Parts No.
	Record/reproduce amplifier PCB	6050 2663
IC1~2	Integrated circuit, RC4558DN	6048 6070
IC3, 5	" " , SN7400N	6048 9000
IC4	" " , SN7404N	6048 9040
IC6	" " , SN7426N	6048 9180
Q1~4	Transistor, FET, 2N5462	6048 0710
Q5~8	" , 2SC1312Y-G	6048 0450
Q9~11	" , 2SC1211-D	6048 0080
Q12	" , FET, 2N5462	6048 0710
Q13	" , 2SC1312Y-G	6048 0450
Q14	" , 2SC1211-D	6048 0080
Q15, 16	" , 2SD361-D	6048 0560
Q17, 18	" , 2SC1312Y-G	6048 0450
D1, 2	Diode, 1S953	5042 2720
D3, 4	" , 1N60	5042 2130
D5	" , RD-11A	6048 3170
D6~9	" , 1S953	5042 2720
D10	" , Varistor, M-8513AR	6048 3450
D11, 12	" , 1N60	5042 2130
D13, 14	" , 1N4002	6048 3270
	Heat sink	6037 1660
T1	Transformer, step-up	6046 6211
T2	" , inter-stage, MC124	6046 6080
T3	" , output	6046 6182
K1, 2	Relay, 24V, LZ-2	6047 0100
L1~3	Coil, trap	5056 6560
R101, 102	Pot, trim, SR29R, 6.8K $\Omega$ , taper B	6041 0160
R103, 104	" , " , " , 10K $\Omega$ , "	5053 3910
R105	" , " , SR19R, 22K $\Omega$ , "	5053 3560
R106, 107	" , " , SR29R, 22K $\Omega$ , "	5053 3920
R108	" , " , " , 3.3K $\Omega$ , "	6041 0150
R109	" , " , " , 470 $\Omega$ , "	6041 0130
R110	" , " , " , 10K $\Omega$ , "	5053 3910

PARTS LIST, PC CARD  
 Rec/repro amp PCB ass'y  
 REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
R111	Pot, trim, SR29R, 1K $\Omega$ , taper B	5053 3950
R112	" , " , PNB04C3A-503V, 50K $\Omega$ , taper B	6041 0070
J1~3	Jack, pin, SMK S-Q3056	6052 0880
J4, 5	Plug, connector, PC mtg., SMK 48-0008	6052 1720
R 1	Resistor, carbon, 1K $\Omega$	
R 2	" , " , 47K $\Omega$	
R 3	" , " , 22K $\Omega$	
R 4	" , " , 150K $\Omega$	
R 5	" , " , 1K $\Omega$	
R 6	" , " , 820K $\Omega$	
R 7	" , " , 1.5K $\Omega$	
R 8	" , " , 1.5K $\Omega$	
R 9	" , " , 100K $\Omega$	
R10	" , " , 100K $\Omega$	
R11	" , " , 100K $\Omega$	
R12	" , " , 150K $\Omega$	
R13	" , " , 100K $\Omega$	
R14	" , " , 100K $\Omega$	
R15	" , " , 2.2K $\Omega$	
R16	" , " , 100K $\Omega$	
R17	" , " , 10K $\Omega$	
R18	" , " , 39K $\Omega$	
R19	" , " , 47K $\Omega$	
R20	" , " , 47K $\Omega$	
R21	" , " , 150K $\Omega$	
R22	" , " , 1K $\Omega$	
R23	" , " , 33K $\Omega$	
R24	" , " , 680 $\Omega$	
R25	" , " , 180K $\Omega$	
R26	" , " , 56K $\Omega$	
R27	" , " , 2.2K $\Omega$	
R28	" , " , 150 $\Omega$	
R29	" , " , 1K $\Omega$	
R30	" , " , 220 $\Omega$	

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.

PARTS LIST, PC CARD  
 Rec/repro amp PCB ass'y  
 REV. \_\_\_\_\_



Ref. No.	Description	Parts No.
R31	Resistor, carbon, 2.2K $\Omega$	
R32	" , " , 2.2K $\Omega$	
R33	" , " , 27K $\Omega$	
R34	" , " , 47K $\Omega$	
R35	" , " , 1K $\Omega$	
R36	" , " , 470 $\Omega$	
R37	" , " , 270 $\Omega$	
R38	" , " , 22K $\Omega$	
R39	" , " , 82K $\Omega$	
R40	" , " , 1K $\Omega$	
R41	" , " , 33K $\Omega$	
R42	" , " , 47K $\Omega$	
R43	" , " , 47K $\Omega$	
R44	" , " , 100K $\Omega$	
R45	" , " , 3.3K $\Omega$	
R46	" , " , 3.3K $\Omega$	
R47	" , " , 47K $\Omega$	
R48	" , " , 1K $\Omega$	
R49	" , " , 1K $\Omega$	
R50	" , " , 220K $\Omega$	
R51	" , " , 33K $\Omega$	
R52	" , " , 3.3K $\Omega$	
R53	" , " , 39K $\Omega$	
R54	" , " , 390K $\Omega$	
R55	" , " , 100 $\Omega$	
R56	" , " , 100 $\Omega$	
R57	" , " , 10K $\Omega$	
R58	" , " , 100 $\Omega$	
R59	" , " , 1K $\Omega$	
R60	" , " , 56K $\Omega$	
R61	" , " , 12K $\Omega$	
R62	" , " , 470 $\Omega$	
R63	" , " , 10K $\Omega$	
R64	" , " , 4.7K $\Omega$	
R65	" , " , 100 $\Omega$	

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.

PARTS LIST, PC CARD  
 Rec/repro amp PCB ass'y  
 REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
R66	Resistor, carbon, 22K $\Omega$	
R67	" , " , 100K $\Omega$	
R68	" , " , 27K $\Omega$	
R69	" , " , 2.2K $\Omega$	
R70	" , " , 150 $\Omega$	
R71	" , " , 4.7K $\Omega$	
R72	(deleted)	
R73	" , " , 390 $\Omega$	
R74	" , " , 10 $\Omega$	
R75	" , " , 10 $\Omega$	
R76	" , " , 6.8K $\Omega$	
R77	" , " , 12K $\Omega$	
R78	" , " , 12K $\Omega$	
R79	" , " , 12K $\Omega$	
R80	" , " , 12K $\Omega$	
R81~87	" , " , 4.7K $\Omega$	
R88	" , " , 33K $\Omega$	
R89	" , " , 4.7K $\Omega$	
R90	" , " , 2.2K $\Omega$	
R91	" , " , 3.9K $\Omega$	
R92	" , " , 6.8K $\Omega$	
R93	" , " , 100K $\Omega$	
C 1	Capacitor, Polystyrene, 50V, 1000pF	6043 5340
C 2	" , electrolytic, 16V, 10uF*	6043 1770
C 3, 4	" , " , " , "	5055 4050
C 5	" , Mylar, 50V, 0.012uF	6044 7330
C 6	" , electrolytic, 16V, 10uF	5055 4050
C 7, 8	" , " , 25V, 2.2uF	5055 4940
C 9, 10	" , " , " , 0.47uF	5055 4430
C11	" , " , 50V, 2.2uF*	6043 1780
C12	" , " , 16V, 10uF	5055 4050
C13	" , " , " , 22uF	5055 4880
C14	" , " , " , 10uF*	6043 1770
C15	" , Polystyrene, 50V, 1000pF	6043 5340

All resistors  $\frac{1}{4}$ W,  $\pm 5\%$  unless otherwise specified.  
 \* = Indicates low leakage capacitors.

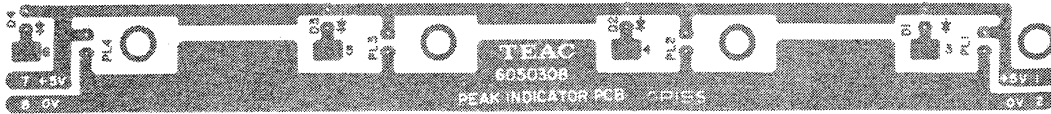
PARTS LIST, PC CARD  
 Rec/repro amp PCB ass'y  
 REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
C16	Capacitor, electrolytic, 25V, 100uF	5055 4170
C17	" , " , 16V, 10uF	5055 4050
C18	" , " , 25V, 2.2uF	5055 4940
C19	" , " , 6.3V, 47uF	5055 4030
C20	" , " , 25V, 4.7uF	5055 4530
C21	" , " , 25V, 2.2uF	5055 4940
C22	" , " , 50V, 2.2uF*	6043 1780
C23	" , " , 16V, 10uF	5055 4050
C24	" , " , " , 47uF	5055 4010
C25	" , Polystyrene, 50V, 330pF	6043 5520
C26	" , Mylar, 50V, 0.0033uF	6044 5190
C27	" , Dipped Tantalum, 35V, 0.47uF	6043 1960
C28, 29	" , electrolytic, 16V, 10uF	5055 4050
C30	" , " , 6.3V, 47uF	5055 4030
C31	" , " , 25V, 100uF	5055 4170
C32	" , " , 16V, 10uF*	6043 1770
C33	" , Polystyrene, 50V, 820pF	6043 5020
C34	" , " , 25V, 1000pF	6044 7610
C35, 36	" , Mylar, 50V, 0.01uF	6044 5370
C37	" , solid Tantalum, 16V, 22uF	6043 2070
C38	" , " , " , 10uF	5055 4050
C39	" , Mylar, 50V, 0.01uF	6044 5370
C40	" , electrolytic, 25V, 1uF	5055 4670
C41	" , Mylar, 50V, 0.047uF	6044 5410
C42	" , electrolytic, 25V, 47uF	5055 4020
C43	" , Mylar, 50V, 0.0027uF	6044 7290
C44	" , electrolytic, 25V, 100uF	5055 4170
C45	" , Mylar, 250V, 0.022uF	6044 6550
C46~48	" , " , 50V, 0.001uF	6044 5160
C49	" , electrolytic, 25V, 4.7uF	5055 4530
C50, 51	" , Mylar, 50V, 0.001uF	6044 5160
C52	" , " , " , 0.01uF	6044 5370
C53	" , electrolytic, 16V, 22uF	5055 4880
C54	" , solid Tantalum, 6.3V, 47uF	6043 1920
C55	" , " , 25V, 10uF	5055 4040
C56	" , " , 16V, 10uF	5055 4030

\* = Indicates low leakage capacitors.

PARTS LIST, PC CARD  
 Rec/repro amp PCB ass'y  
 REV. \_\_\_\_\_

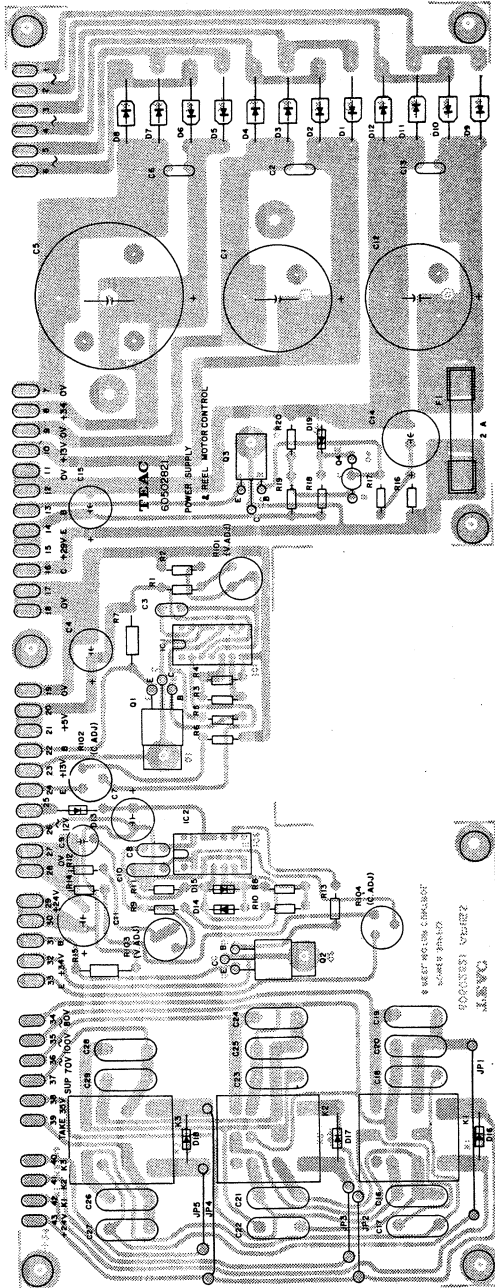
7.7 Peak indicator PCB assembly



Title	Peak Indicator PCB Assembly	Assembly No. 6085 2540
Ref. No.	Description	Parts No.
	PCB, peak indicator	6050 3080
D1~D4	LED, Stanley GD-4 203SRG	5042 5110
PL1~PL4	Lamp, sub-miniature incand., BQ041-23003A	6046 8080
	Grommet, lamp mount	5083 4240

PARTS LIST, PC CARD  
 Peak indicator PCB  
 REV. \_\_\_\_\_

7.8 Power supply and reel motor control PCB assembly



Title	Power Supply and Reel Motor Control PCB Ass'y	Assembly No. 6080 0280
Ref. No.	Description	Parts No.
	Power supply and reel motor control PCB	6050 2821
K 1, 2	Relay, w/PC mtg. socket, MY3PY-1-0, DC 24V	6047 0360
K 3	" , " " " , MY2PY-1-0, "	5061 0950
	Fuse holder, S-N5054	6052 9020
F 1	Fuse, glass tubular, 6φX30, 2A	5041 1140
IC 1, 2	Integrated circuit, uA723DC	6048 6060
Q 1, 2	Transistor, 2SD234-(0)	6048 0680
Q 3	" , 2SC495-(0)	6048 0690
Q 4	" , 2SC1312Y-G	6048 0450
D 1~12	Diode, P-300D4	6048 3290
D13	" , 1N4002	6048 3270
D14, 15	" , 1S953	5042 2720
D16~18	" , 1N4002	6048 3270
D19	" , Zener, RD-9A	6048 3350
R 1	Resistor, carbon, 750Ω	
R 2	" , " , 2.7KΩ	
R 3	" , " , 1KΩ	
R 4	" , " , 1.2KΩ	
R 5	" , " , 100Ω	
R 6	" , " , 47KΩ	
R 7	" , " , 100Ω, 1/2W, ±5%	
R 8~11	" , " , 3.3KΩ	
R12	" , " , 18KΩ	
R13	" , " , 100Ω	
R14	" , " , 47KΩ	
R15	" , " , 100Ω, 1/2W, ±5%	
R16	" , " , 1KΩ	
R17	" , " , 202Ω	
R18	" , " , 3.6KΩ	
R19	" , " , 4.7KΩ	
R20	" , " , 2.2KΩ	

All resistors  $\frac{1}{4}$ W, ±5% unless otherwise specified.

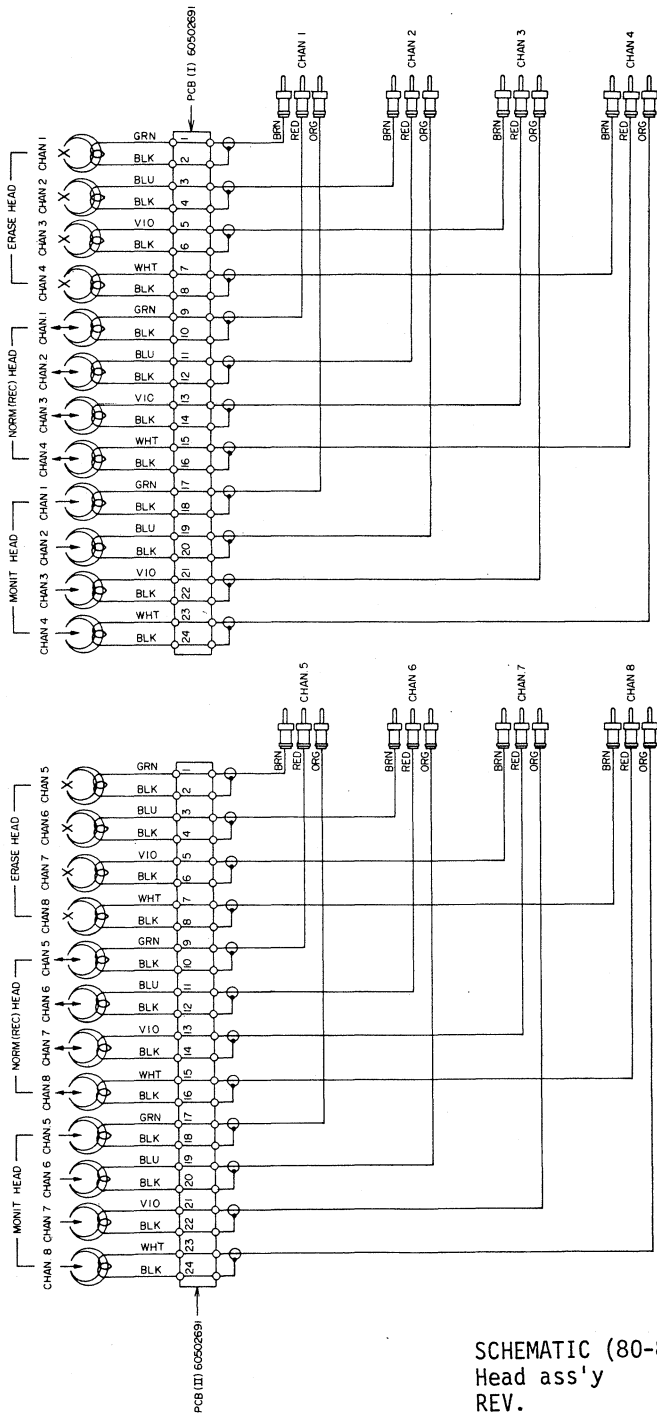
PARTS LIST, PC CARD  
Pwr supp. & reel motor cont. PCB  
REV. \_\_\_\_\_

Ref. No.	Description	Parts No.
C 1	Capacitor, electrolytic, 25V, 4700uF	6043 1930
C 2	" , ceramic, 500V, 0.01uF	5054 2230
C 3	" , Mylar, 50V, 0.01uF	6044 5370
C 4	" , electrolytic, 16V, 100uF	5055 4200
C 5	" , " , 63V, 4700uF	6043 1950
C 6	" , ceramic, 500V, 0.01uF	5054 2230
C 7	" , electrolytic, 25V, 100uF	5055 4170
C 8	" , Mylar, 50V, 0.047uF	6044 5410
C 9	" , electrolytic, 25V, 47uF	5055 4020
C10	" , Mylar, 50V, 0.1uF	6044 5550
C11	" , electrolytic, 35V, 100uF	5055 4630
C12	" , " , 50V, 2200uF	6043 1940
C13	" , ceramic, 500V, 0.01uF	5054 2230
C14	" , electrolytic, 50V, 100uF	5055 4070
C15	" , " , 50V, 47uF	5055 4580
C16~29	" , metallized Mylar, 400WV, 0.1uF	5054 9920
R101	Potentiometer, 1K $\Omega$ , taper B	6041 0120-06
R102	" , 22K $\Omega$ , "	6041 0120-14
R103	" , 10K $\Omega$ , "	6041 0120-12
R104	" , 4.7K $\Omega$ , "	6041 0120-10

PARTS LIST, PC CARD  
Pwr supp. & reel motor cont. PCB  
REV. \_\_\_\_\_

# 8. ELECTRONICS SCHEMATICS

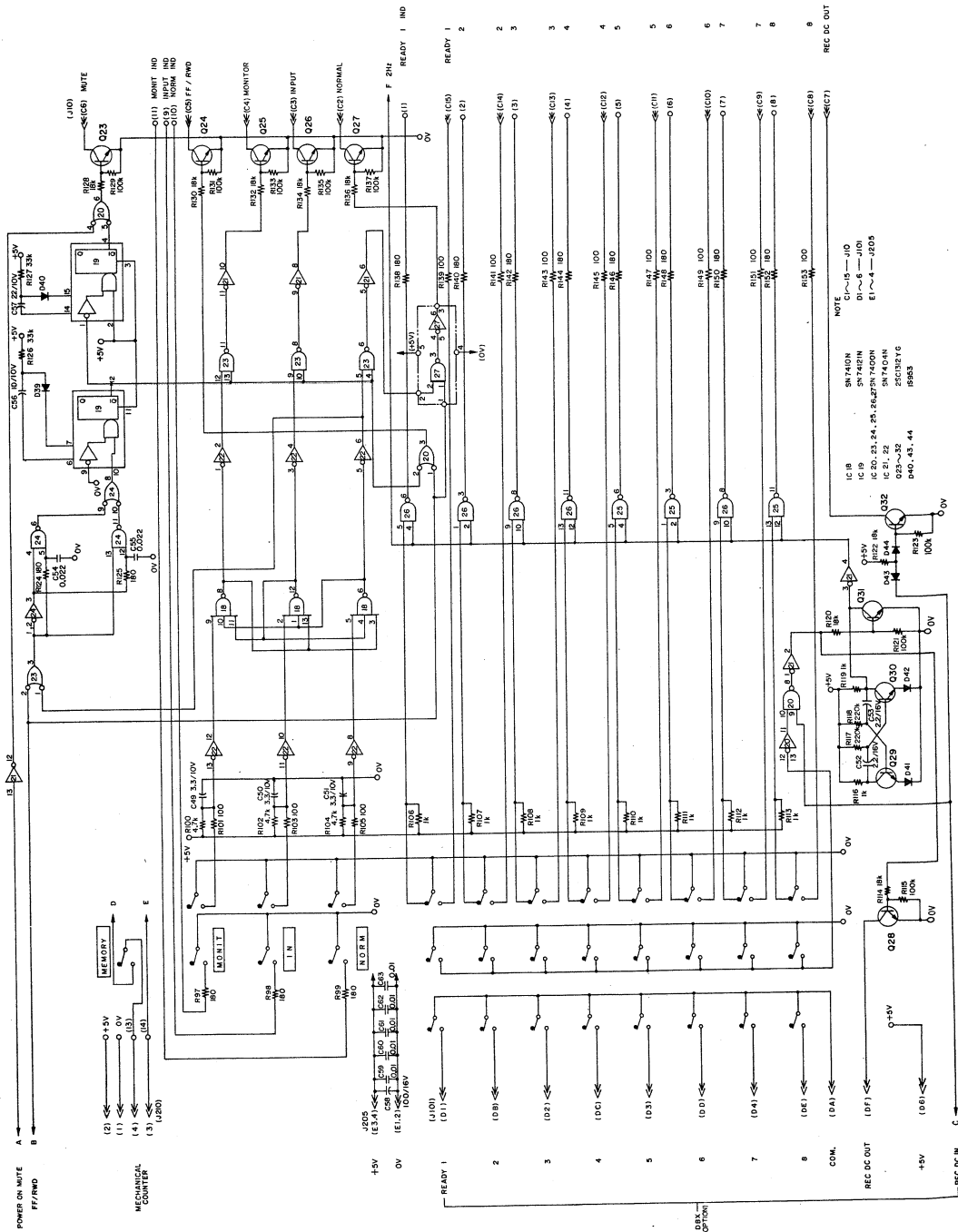
## 8.1 Head assembly



SCHMATIC (80-8)  
Head ass'y  
REV. \_\_\_\_\_

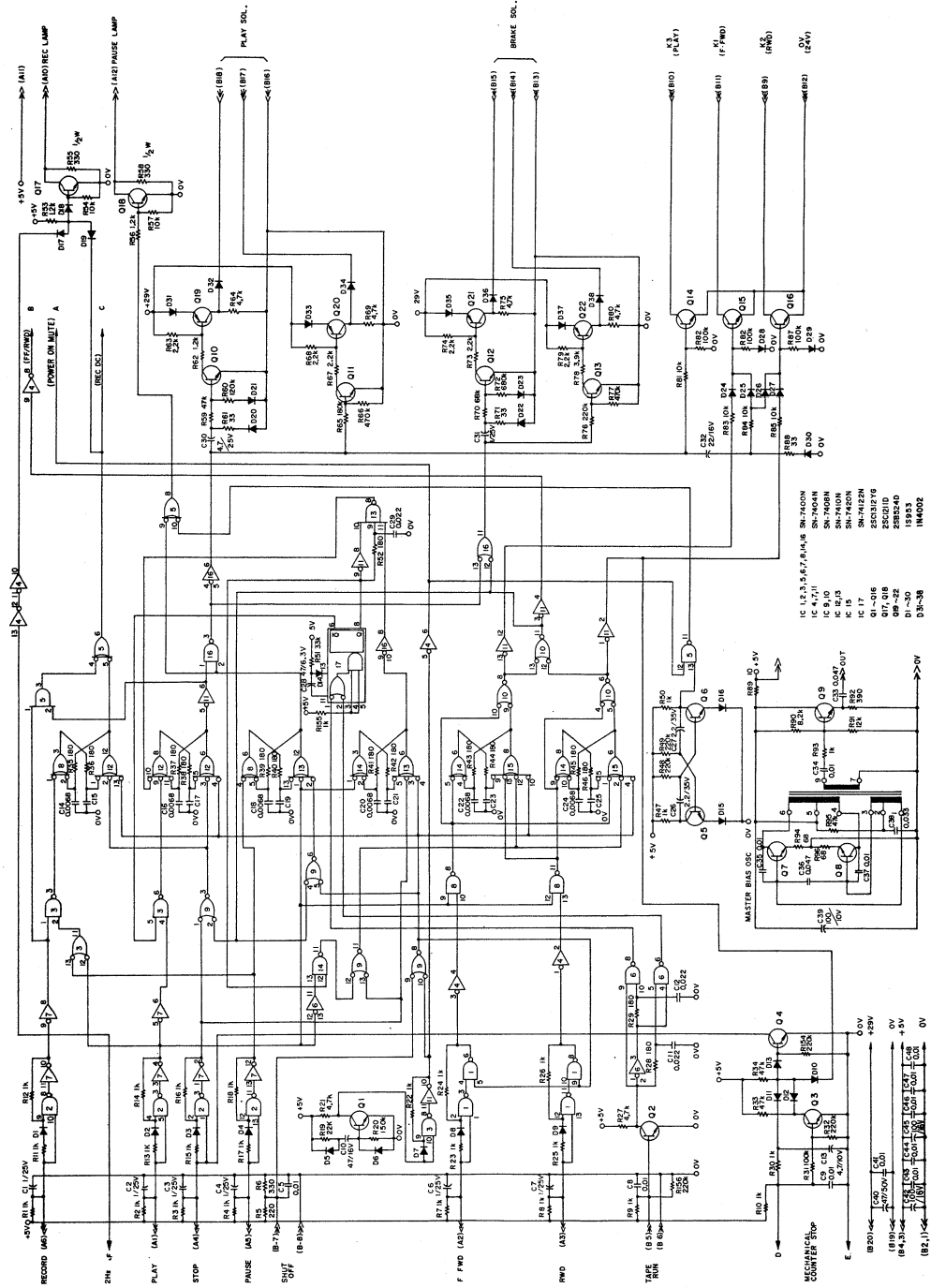


## 8.2 System control (Function select)



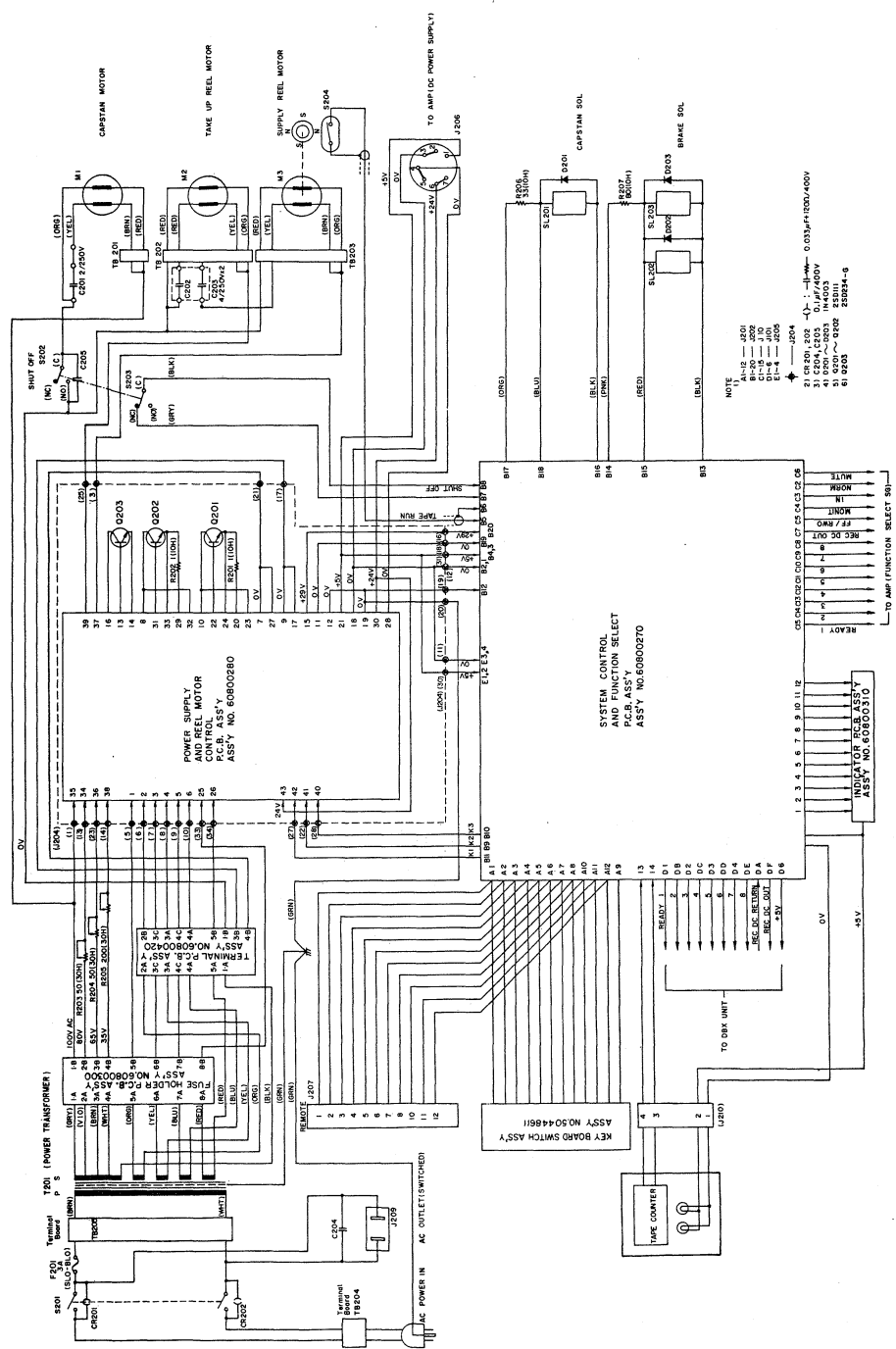
SCHEMATIC (80-8)  
System control (Function  
select) PCB ass'y  
REV.

8.3 System control



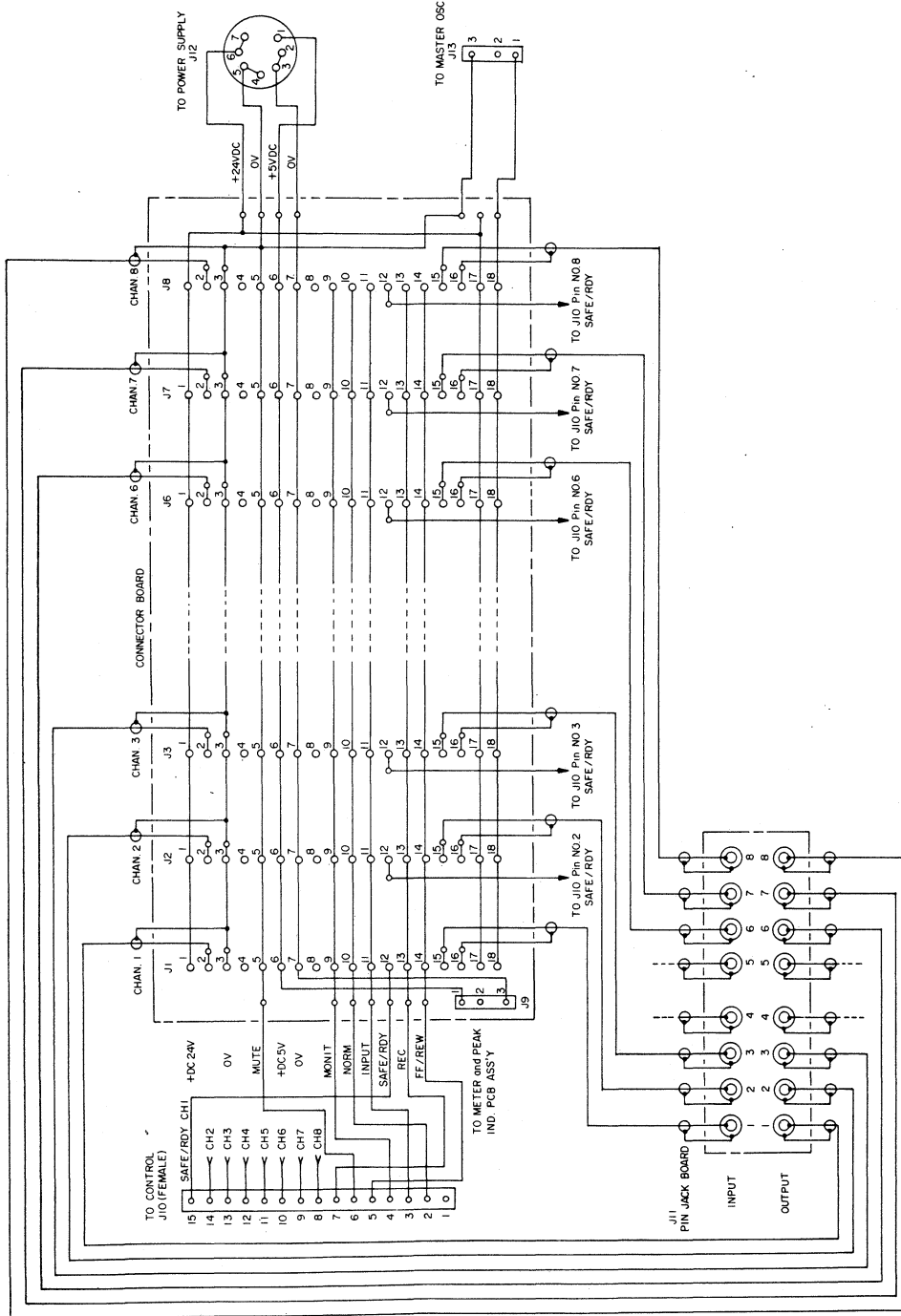
SCHEMATIC (80-8)  
System control PCB ass'y  
REV.

8.4 Transport control



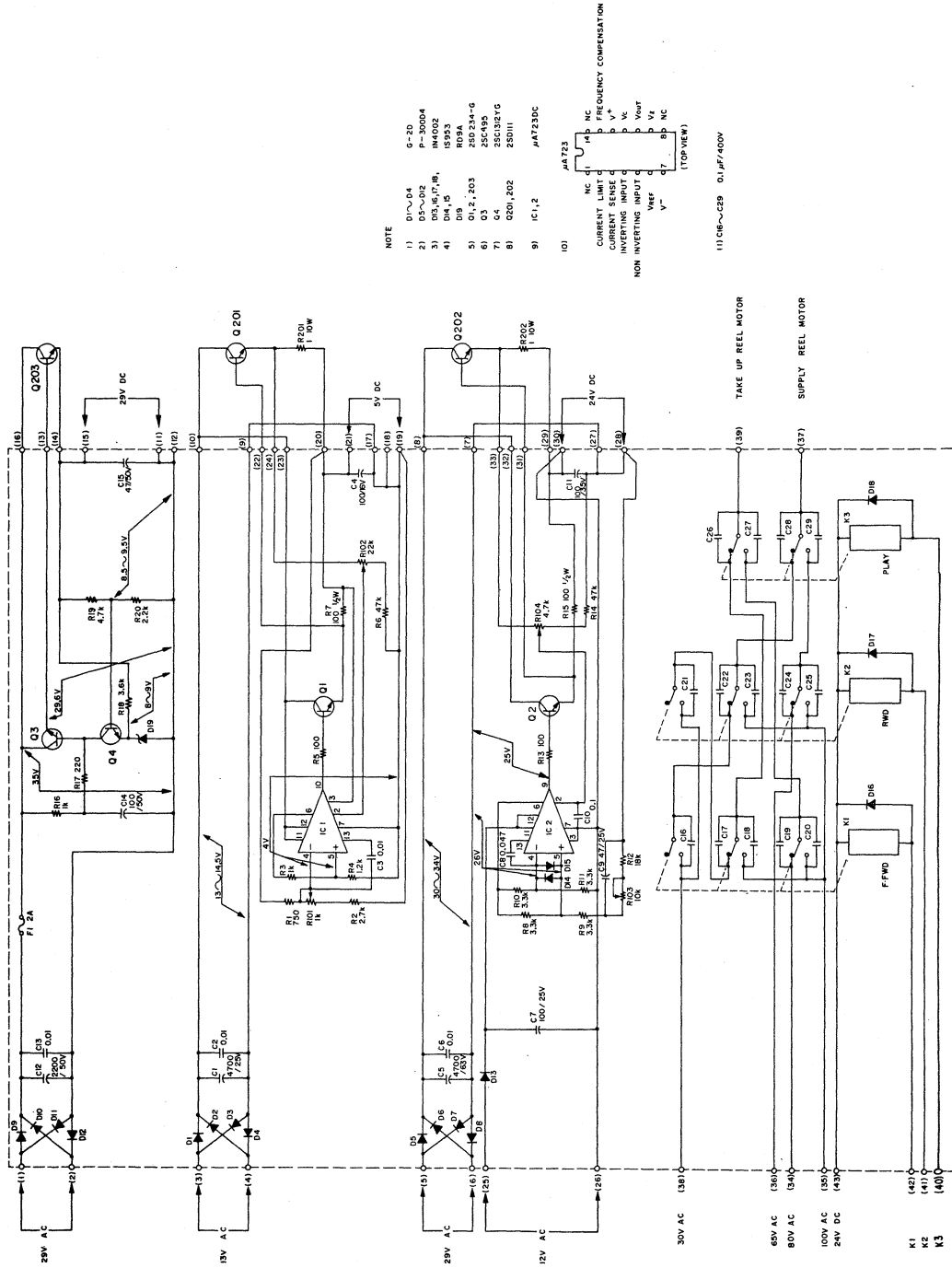
SCHEMATIC (80-8)  
Transport control electronics  
REV.

8.5 Connector board



SCHEMATIC (80-8)  
Connector board ass'y  
REV.

8.6 Power supply and reel motor control



NOTE

11	D1~D4	G-20
21	D5~D12	P-300D4
31	D13~D17	IM4002
41	D18, D19	IS953
51	D1, 2, 203	285 234-G
61	D3	255 493
71	D4	255 382 YG
81	Q201, 202	235011
91	IC1, 2	JA723DC

IC3

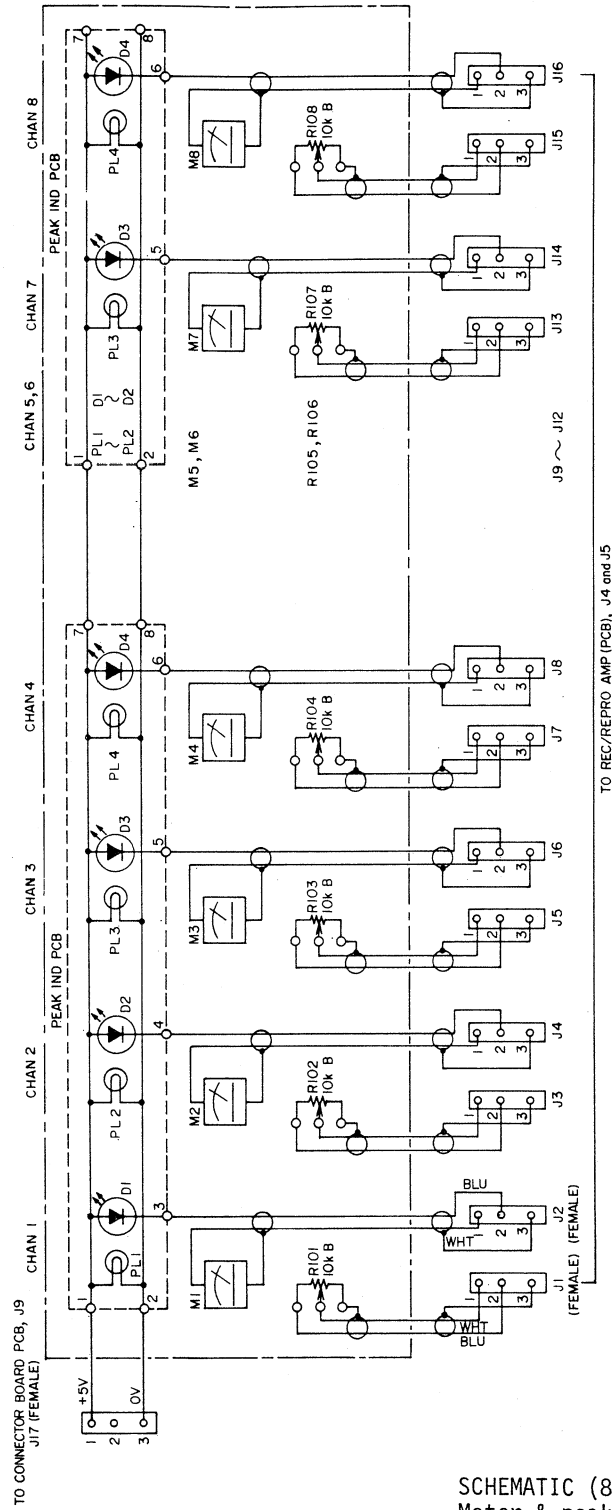
NC	NC	NC	NC	NC
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

IC3 PINOUT (TOP VIEW)

11) IC6~IC9 01/AF/400V

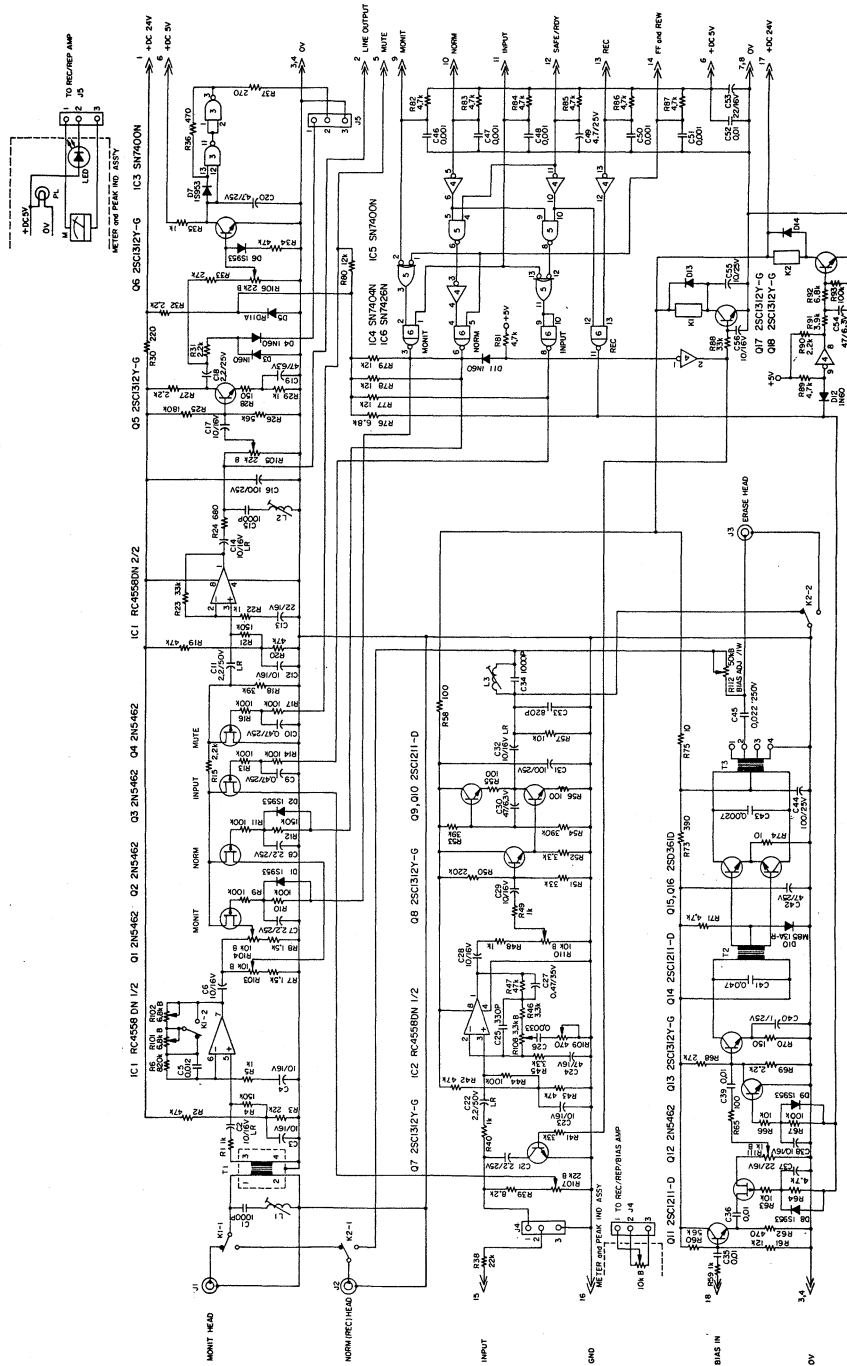
SCHEMATIC (80-8)  
Power supply & reel  
motor control  
REV.

8.7 Meter and peak indicator



SCHEMATIC (80-8)  
Meter & peak indicator ass'y  
REV. \_\_\_\_\_

8.8 Record/reproduce amplifier

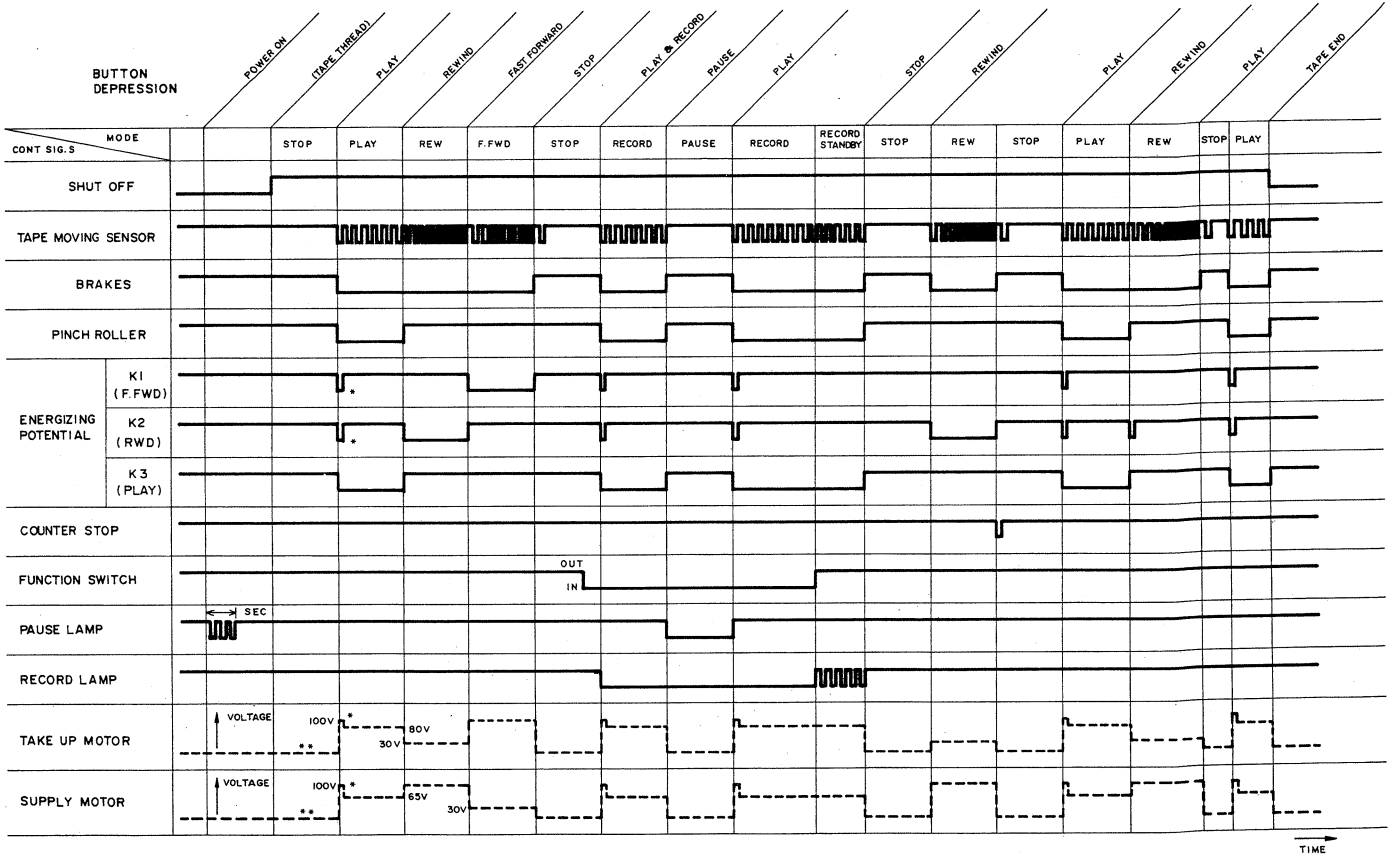


SCHEMATIC (80-8)  
Rec/Repro Amp. PCB ass'y  
REV.

# 9. SYSTEM CONTROL AND SWITCHING SIGNAL TIME CHART

## 9.1 Tape logic control signal

### TAPE LOGIC CONTROL SIGNAL



NOTE: \* APPROXIMATELY 0.2 SECOND. \*\* --- INDICATES MOTOR VOLTAGE.



9.2 Audio switching control signal

AUDIO SWITCHING CONTROL SIGNAL

