

TEAC®

A-1340

4 CHANNEL SIMUL-TRAK
STEREO TAPE DECK
SERVICE MANUAL



TEAC CORPORATION

SALES OFFICE: SHINJUKU BUILDING
1-8-1, NISHI-SHINJUKU, SHINJUKU, TOKYO
TEAC HONGKONG LIMITED ROOM NO. 1105
MAIN OFFICE: MELBOURNE PLAZA, 33 QUEEN'S ROAD C.
HONG KONG

U.S. DISTRIBUTOR: TEAC CORPORATION OF AMERICA
7733 TELEGRAPH ROAD
MONTEBELLO, CALIFORNIA 90640
U.S.A.
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HOLLAND

1 GENERAL DESCRIPTION

The TEAC A-1340 is a 2-channel/4-channel Simul-Trak stereophonic tape deck. 4 independent record and playback amplifiers incorporate the latest professional circuitry. The A-1340 is a single motor tape deck utilizing a two speed hysteresis synchronous motor coupled to an efficient belt drive system. Switched bias networks provide compatibility for high bias tapes. Carefully constructed to provide high performance, convenience of operation and optimum tape handling capability, the A-1340 is highly recommended for use with high quality audio systems.

This service manual provides adjustment and alignment procedures, schematic diagrams and parts replacement information and the proper procedures for obtaining necessary repair parts.

If adjustments or repair procedures are not clear or seem difficult to accomplish or should you desire more detailed technical information, please contact your nearest TEAC dealer, TEAC Corporation or affiliated corporations, address's of which are printed in this manual.

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2 SERVICE DATA

MECHANICAL

Heads: Three, 4 track - 4 channel and 2 channel stereophonic
Erase head (Ferrite);
1.8k Ω /100kHz, erase current approx. 35mA/100kHz
Record head (Permalloy);
105 Ω /1kHz, bias current approx. 2mA/100kHz
recording current approx. 130 μ A/400Hz
Playback head (Permalloy);
1.8k Ω /1kHz -63dB/400Hz

Reel Size: 7 inch max. NAB reel

Tape Width: Standard 1/4 inch tape

Tape Speed: 7-1/2ips (19cm/s) and 3-3/4ips (9.5cm/s)

Motor: Dual speed hysteresis synchronous driving motor

Wow and Flutter: 0.22% at 7-1/2ips
0.27% at 3-3/4ips
Wow and flutter measured according to unweighted
NAB standard using TEAC flutter free tape.

Fast Winding Time: Approx. 210 seconds or less for 1,200 feet

Operating Position: Horizontal or Vertical

Power Requirements: 100/117/200/220/240 V AC 50/60Hz 55W

Weight: 40 lbs (18 kg) net

ELECTRICAL

Transistors: Semiconductors (Left channel only)
2SA666(T) \times 1 2SC1226(A) \times 2
2SC644(T) \times 4
2SC828(T) \times 4

Diodes: 1B-02-CD1 \times 1 FR2-02 \times 1 FR2-06 \times 1

Frequency Response: Overall from recording INPUT to playback
OUTPUT using SCOTCH #203 tape
7-1/2ips, 40Hz \sim 18kHz +3dB, -4dB
3-3/4ips, 50Hz \sim 10kHz +3dB, -4dB

Equalization: NAB equalization
7-1/2ips 50 μ sec 3-3/4ips 90 μ sec

Input: MIC: 0.25mV/600 Ω , -70dBm
LINE: 0.1V/50k Ω , -18dBm

Output: LINE: 0.3V/10k Ω or more -2dBm
PHONE: 0.3mW/8 Ω -24dBm

Bias Frequency: 100kHz push-pull oscillator

Signal to Noise Ratio: 7-1/2ips, 50dB or higher
3-3/4ips, 48dB or higher
at playback to unweighted noise

Stereo Chan. Separation: 45dB or more channel to channel at 1kHz

Cross Talk: 35dB or more adjacent track at 100Hz

Erase Efficiency: 60dB or more at 7-1/2ips

These specifications are indispensable information and are required to service the equipment properly. They may differ slightly from those printed in the advertising brochures or the operation manual.

3 EQUIPMENT REQUIRED

FOR MECHANICAL MEASUREMENT

SPRING SCALE: 0~4 kilo-grams (0~8 lbs) #5086025000
 0~300 grams (0~10 oz) #5086026000
 TEST TAPE: TEAC YTT-2003 (7-1/2ips)
 TEAC YTT-2002 (3-3/4ips)
 FLUTTER METER: Meguro Model MK665B (preferred) or
 Sentinel FL-3D-1
 DIGITAL FREQ. COUNTER: Capable of 0 to 5kHz indication
 TOOLS: General,
 2mm nut driver #5086014000
 Hex head, allen wrench #5086021000

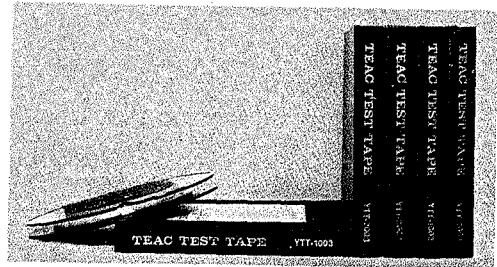
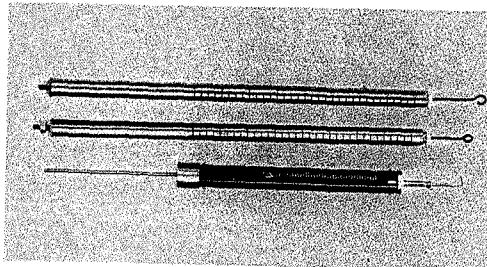


Fig. 3-1 Spring Scale, and TEAC Test Tape

FOR ELECTRICAL MEASUREMENT

TEST TAPE: TEAC YTT-1003 for 7-1/2ips
 TEAC YTT-1002 for 3-3/4ips
 SCOTCH 203 and 150 for test recording
 EMPTY REEL: TEAC RE-702 (2" hub)
 TEAC RE-701 (4" hub)
 TEST SET: TEAC M-826A test set
 BAND PASS FILTER: TEAC M-206A (1kHz)
 AC/DC VTVM: General purpose
 RESISTOR: Non inductive type 8Ω/1W
 OSCILLOSCOPE: General purpose

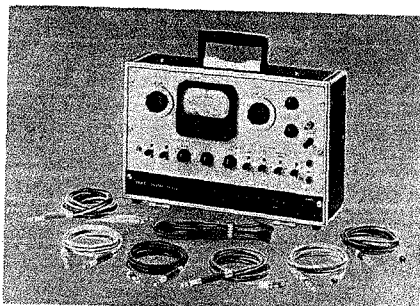


Fig. 3-2 TEAC M-826A

NOTE

Use of the TEAC M-826A test set is recommended. This set incorporates an AC VTVM, Audio Oscillator, Channel Selecting switch, Variable Attenuator, Monitor Speaker and Cables.

TEAC M-826A measures the RMS value of the Voltage (0dB=0.775V). Characteristics of this test set are similar to the standard VU meter.

4 PARTIAL DISASSEMBLY

REMOVING EQUIPMENT FROM THE CASE

1. Carefully place equipment face down on a soft, clean rubber mat or equivalent.
2. Remove 4 screws securing the rear of case. (Refer to exploded view.)
3. Remove the two screws from the top of case.
4. Carefully lift case off the mechanism.

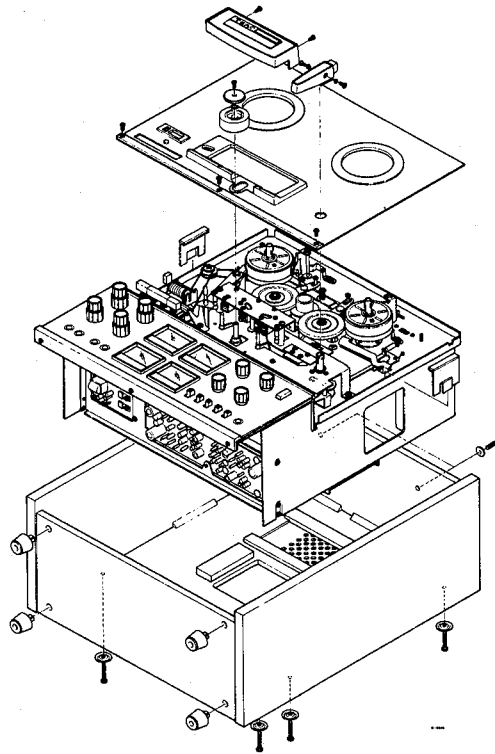
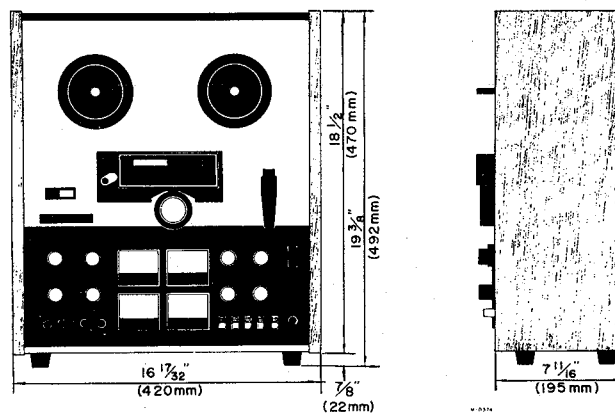


Fig. 4-1 Removing Equipment from the Case



Dimensions

FACE PLATE REMOVAL

NOTE

To remove face plate from the equipment, first remove the control lever, head assy cover and pinch roller.

1. Remove three screws at bottom of face plate.
2. Carefully lift face plate from equipment. (Refer to Fig. 4-1.)

NOTE: Top of face plate slides under lip. Slide down approx. 1/2" before lifting.

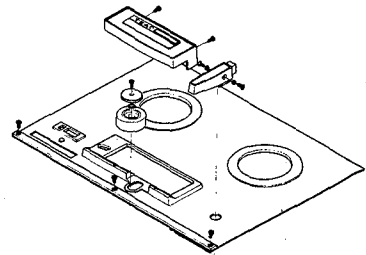


Fig. 4-2 Face Plate Removal

HEAD ASSEMBLY REMOVAL

1. Loosen thumb screws in head assy cover plate.
2. Lift the plate to expose two Phillips screws.
3. Remove the screws.
4. Pull off the head assembly.

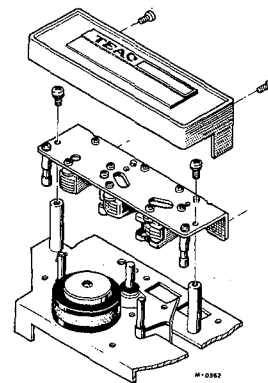


Fig. 4-3 Head Assembly Removal

CAPSTAN ASSEMBLY AND BELT REMOVAL

1. First remove the face plate.
2. Remove the rubber dust guard from capstan shaft.
3. Remove the six screws holding head base. Lift off base and set aside.
4. Slide belt from capstan pulley and drive pulley. Remove belt.
5. Grasp the defective capstan by the shaft and lift it out of the swivel type bearing.
6. To reinstall capstan assembly, reverse above procedures.

NOTE

A clearance of 0.05~0.3mm must be maintained between the capstan shaft and capstan thrust plate.

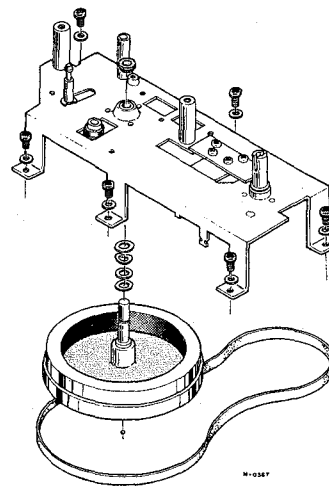


Fig. 4-4 Capstan Assembly And Belt Removal

IDLERS REMOVAL

Close tolerances in the idler assembly require that it be replaced as a unit.

To remove the idler assembly, unsnap the E clips from each of the three retaining shafts. Do not allow compressed spring on center retaining shaft to escape.

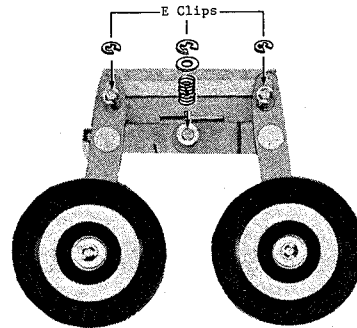
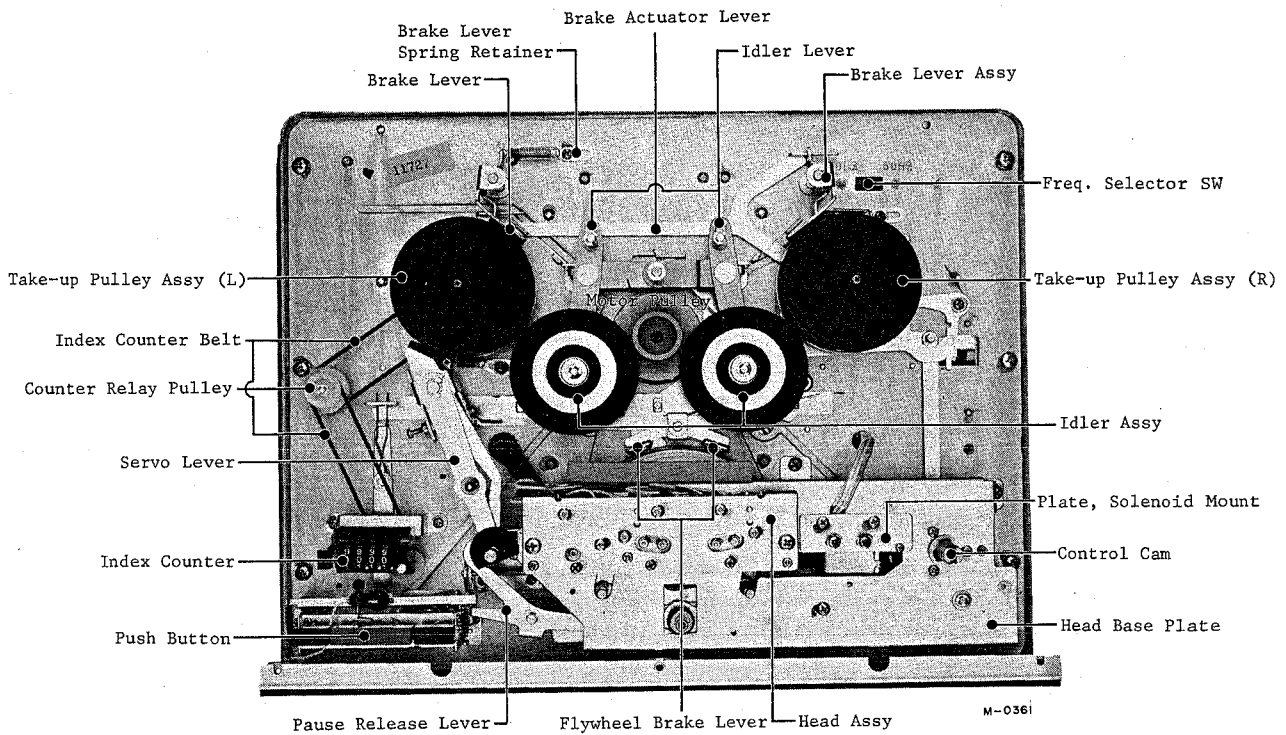


Fig. 4-5 Idlers Removal

TAPE TRANSPORT PARTS LOCATION



FRONT VIEW

NOTE

For ordering parts, refer to the exploded view of the MAIN CHASSIS. An accompanying listing provides the correct part numbers.

5 HEAD REPLACEMENT AND ALIGNMENT -MECHANICAL-

HEAD REPLACEMENT

Head alignment is adjusted at the factory to very critical tolerances. Normally HEAD ASSEMBLY replacement will require only minor alignments or adjustments. Complete readjustment will be necessary after a head is replaced. The adjustments are explained on the next page.

To replace a single head, a special 2mm nut driver is required. Remove the two nuts on the defective head through the access hole provided, this releases the head from the mounting plate. Note the position of the wires on the circuit board. Connect the new head in the same manner.

Replace the nuts securing the new head to the plate, perform head alignment before operation.

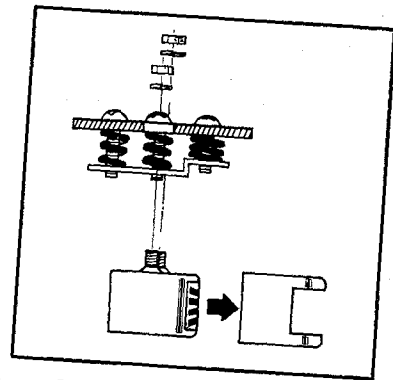
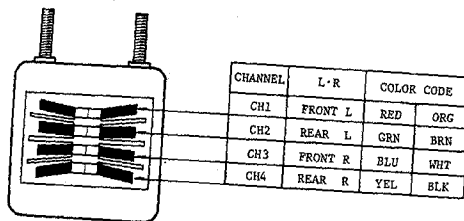
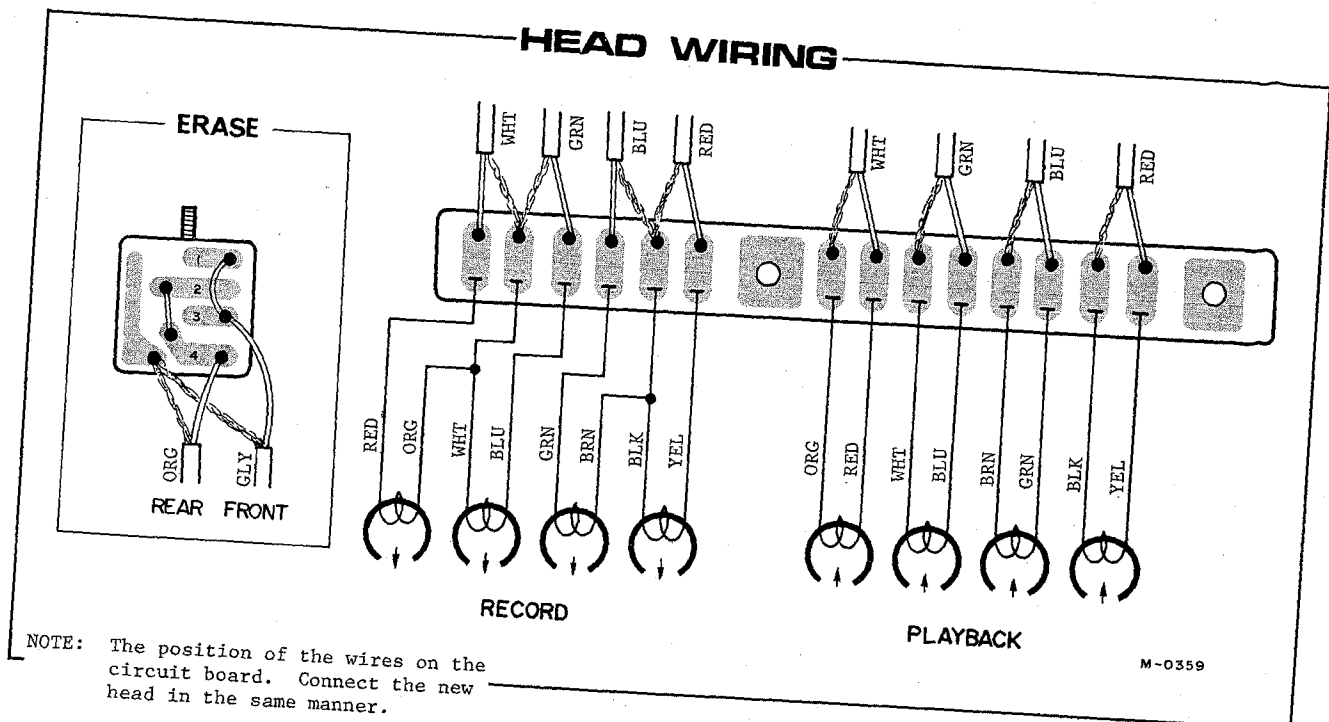


Fig. 5-1 Head Replacement



D-0736

REC and PB Head Configuration



M-0359

HEAD ALIGNMENT

HEAD ALIGNMENT

-Playback Head-

The pole of the playback head should be even with the top of a threaded tape.

-Erase Head-

The erase head pole should be above the edge of a threaded tape by the width of heavy pencil line.

-Record Head-

The record head pole should be above the edge of a threaded tape by the width of a thin pencil line.

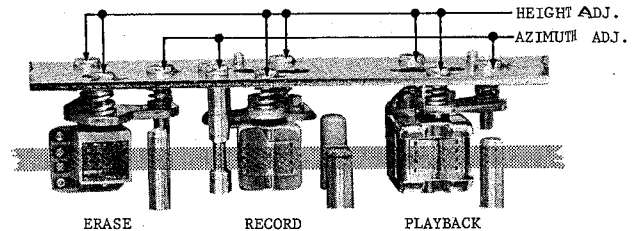


Fig. 5-2 Head Alignment And Adjustment Screws

MECHANICAL MIS-ALIGNMENT OF THE HEADS -EXAMPLES-

ALIGNMENT - The physical positioning of a tape head relative to the tape itself. Alignment in all respects must conform to rigid requirements in order for a unit to function properly.

AZIMUTH - The angle of a tape heads pole-piece slot relative to the direction of tape travel.

NOTE

In order for a tape unit to work at its best, with its own tapes as well as ones made on other units, its play and record heads must be aligned to correct the four possible errors as illustrated to the right.

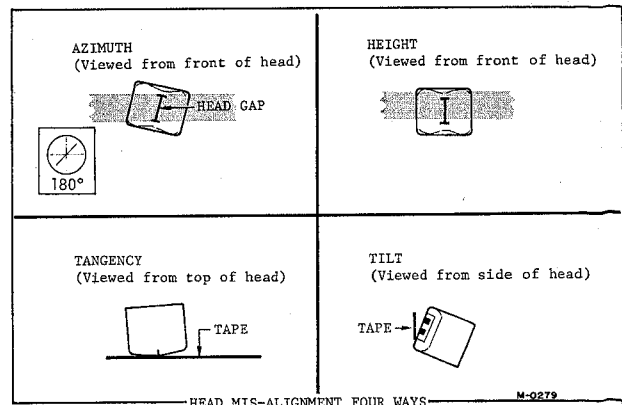


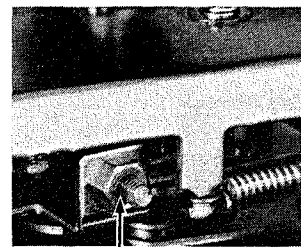
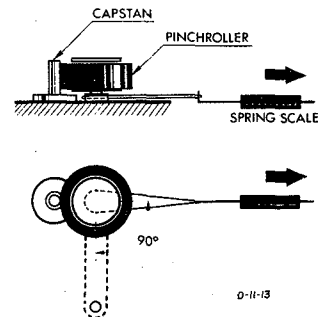
Fig. 5-3 Head Mis-Alignment Four Ways

6 MEASUREMENT AND ADJUSTMENT -MECHANICAL-

The TEAC A-1340 employs a well designed single motor, belt driven system and should require a minimum of mechanical maintenance or adjustments.

PINCH ROLLER PRESSURE

1. Connect a spring scale to pinch roller shaft as shown in the illustration.
2. Place control lever in the play position with power applied and tape threaded.
3. Pull the spring scale away from the capstan shaft.
4. Make your reading on the spring scale when the pinch roller separates from the capstan. This reading should be 1.8~2.0 kg.
5. If pressure is outside the above limits, use a 4mm nut driver to adjust the nut at the lower right side of the transport mechanism (see illustration) for optimum pressure.
6. After adjustment, secure the nut with LOCTITE.



Adjustment Nut

Fig. 6-1 Pressure Measurement and Adjustment Locations

BRAKE TORQUE

NOTE

The brake adjustments must be performed with the control lever in "STOP" position with no power applied.

1. Place the empty reel (RE-701) and spring scale on the reel as shown in Fig. 6-2.
2. Pull the scale away from the reel. The scale reading should be $900 \pm 100\text{g-cm}$. If adjustment is required, loosen the screw holding the brake spring retainer and move it backward or forward.
3. After brake torque adjustment, the loosened screws must be resecured with LOCTITE.

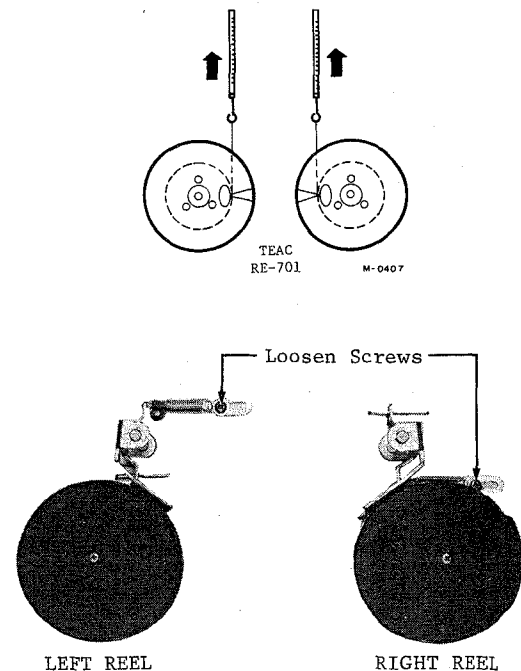


Fig. 6-2 Torque Measurement and Adjustment Locations

IMPORTANT

All Torque and Tension Measurements must be made with the automatic shut-off switch blocked to the ON position. Insert some stiff paper between the dropping arm and the two parallel fingers around it before performing the following steps.

TAKE-UP TORQUE

1. Place the empty reel (RE-702) and spring scale on right reel as illustrated.
2. Set power switch on and place the control lever in play mode.
3. Allow the rotation of the reel to slowly draw the scale toward the hub. The spring scale should read $170 \pm 10g\text{-cm}$.
4. If adjustment is required, it can be made by rotating the spring arms on the stepped bottom drum inside the back of each reel turntable. (Each step represents approx. $10g\text{-cm}$).

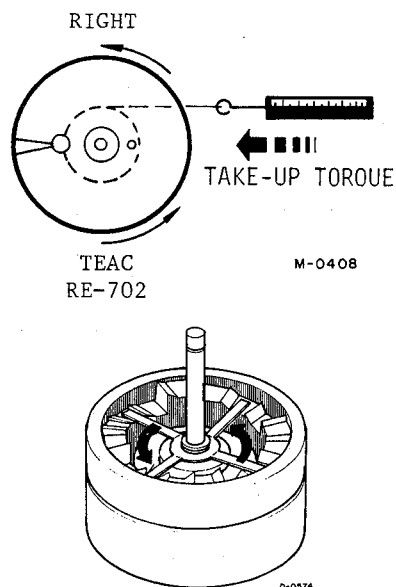


Fig. 6-3 Torque Measurement And Adjustment

BACK TENSION -FAST WINDING-

1. Place the empty reel (RE-702) and spring scale on left reel turntable as illustrated.
2. Place the control lever to fast forward mode.
3. Pull the spring scale in a counter clockwise direction. The reading should be $55 \pm 10g\text{-cm}$.
4. If adjustment is required, bend the flat spring arms that are shown in Figure 6-4. These arms have square, felt-tip pads which contact the reel drum back-brake plate.
5. To adjust the right reel back tension repeat the previous step with the exception that all directions of rotation are clockwise and the control lever is in the rewind mode.

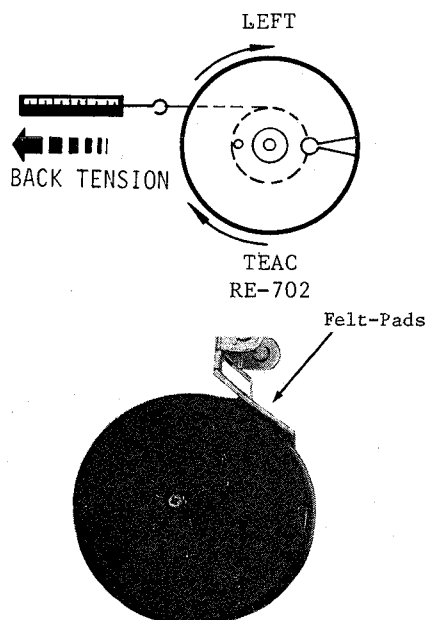


Fig. 6-4 Back Tension Measurement and Adjustment

BACK TENSION

Maximum:

1. Apply power to the unit.
2. Place the empty reel (RE-702) and spring scale on the left reel table as shown in Fig. 6-5.
3. Place the control lever to play mode.
4. Pull the scale away from the reel, the scale reading should be $350 \pm 100\text{g-cm}$.
5. If tension is not within the specified limits, adjustment can be made by loosening the securing screw (A) and moving the back lever spring hook. Then tighten the securing screw.

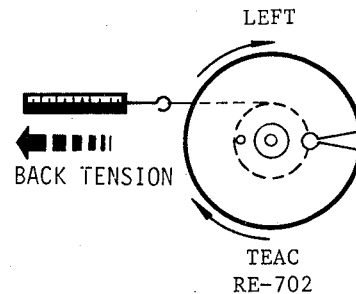


Fig. 6-5 Tension Measurement

Minimum:

1. Use a rubber band to hold tension arm in full right position.
2. Place the control lever to PLAY mode. The reading should be $80 \pm 30\text{g-cm}$.
3. If it is not within limits, adjust by turning the screw which changes the spring force (B).
4. Apply a drop of LOCTITE to the adjustment screw.

NOTE: For locations of (A) and (B) above, refer to Fig. 6-8 Tension Servo Loop.

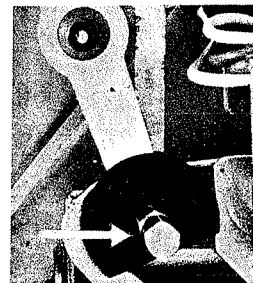


Fig. 6-6 Tension Arm

SOLENOID POSITIONING

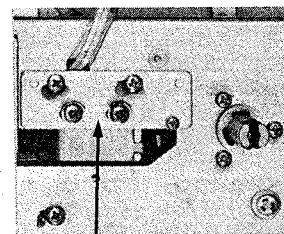
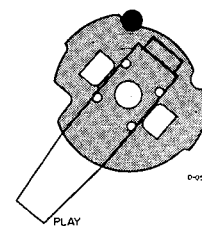
1. Apply power to the unit.
2. Place control lever in PLAY mode.
3. Loosen the two solenoid retaining screws.
4. Slide solenoid housing back and forth until plunger just bottoms in solenoid.
5. Make certain that the roller fully engages the cam detent when solenoid plunger is fully bottomed.
6. Retighten the solenoid positioning screws.

NOTE

Since the cam roller is connected to the solenoid, the control lever will not stay in PLAY position unless power is applied to the unit.

PRECAUTION

These adjustments are carefully made at the factory. Readjustment should only be required after many hours of operation or after component replacement.



Solenoid Positioning Screws

Fig. 6-7 Cam Detent And Adjustment Location

TENSION SERVO LOOP

The left tension arm is coupled to the tension servo loop and applies varying friction to the supply reel brake drum. This maintains tape tension at a constant level despite the change of diameter at the supply reel in the PLAYBACK or RECORD modes.

As tension varies, the tension arm will move either left or right. Back tension on the supply reel will be varied according to the direction of movement. The tension arm at the extreme left position will apply maximum friction to the supply reel brake drum. This in turn will increase the tape tension, tending to move the tension arm back to the right, thus maintaining optimum overall tension.

CAUTION

If servo loop tension is adjusted, the constant back tension must also be readjusted as a constant level of back tension is always applied to the supply reel in addition to that controlled by the tension servo loop. After readjusting back tension, recheck the servo loop.

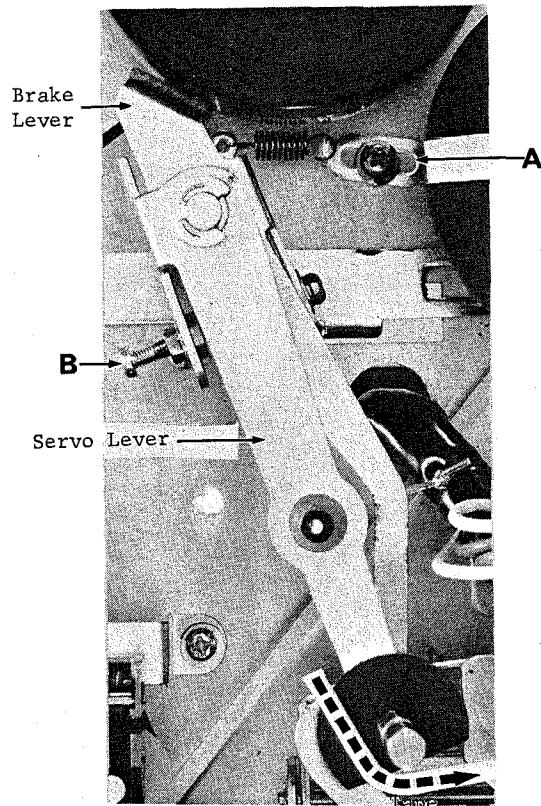


Fig. 6-8 Tension Servo Loop

REEL HEIGHT ADJUSTMENT PROCEDURES

To change reel height, remove the rubber insert from the reel turntable. Three positions of compensation are provided, M, H and L. Reinsert the rubber mat so that the desired letter shows in the cutout portion.

M - Medium H - High L - Low

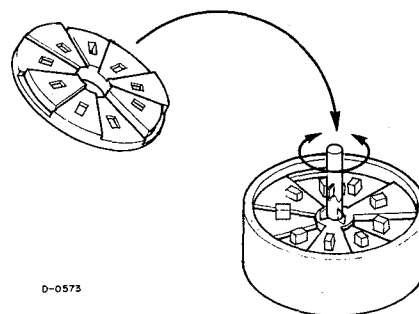


Fig. 6-9 Reel Height Adjustment

FLUTTER

Flutter should be measured in PLAYBACK mode using a TEAC flutter free tape YTT-2003-2002 and Meguro model MK665B Flutter Meter. Measurement of flutter should be made in accordance with NAB standards.

Values obtained with different standards or equipment cannot be compared.

Flutter should not exceed. 7-1/2ips: 0.22%
3-3/4ips: 0.27%

These figures apply to any tape position and direction (such as full take-up reel, full supply reel or about mid point).

TAPE SPEED

The tape speed should be measured using TEAC flutter free tape, model YTT-2003-2002. These tapes contain a highly accurate 3 kHz tone. Connect a digital frequency counter to either line OUTPUT jack. The indicated frequency should be 3 kHz \pm 0.5% for all speeds.

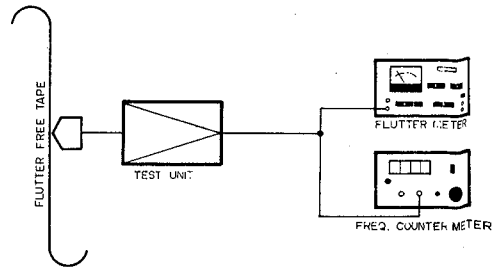
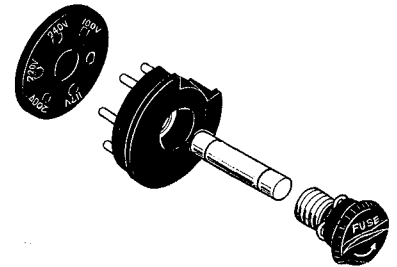


Fig. 6-10 Test Equipment Set-Up

VOLTAGE AND FREQUENCY CONVERSION

-Voltage Conversion-

The A-1340 may be set for 100,117,200,220 or 240 volts. To change the voltage, unscrew the fuse in the center of the voltage selector plug (located on the lower rear of the unit). Pull out the plug and reinsert it so the desired voltage shows in the cut-out. Reinstall the fuse.



-Frequency Conversion-

1. Position the drive belt on the proper steps for your line frequency. Outer steps are for 50 Hz, inner steps are for 60 Hz. After repositioning belt, rotate the motor pulley several turns to ascertain that belt is tracking properly. Place the frequency selector switch (located above the right reel turntable) to the position corresponding to your line frequency.
2. Replace front panel and associated hardware.

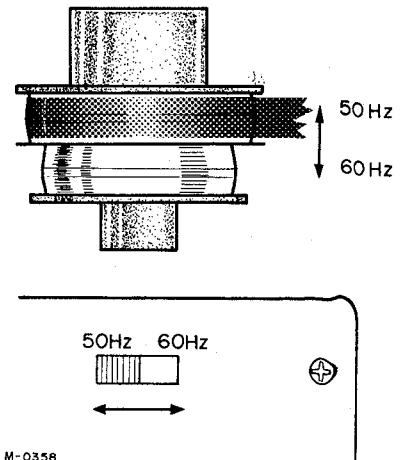


Fig. 6-11 Voltage And Frequency Conversion

7 MEASUREMENT AND ADJUSTMENT -ELECTRICAL-

GENERAL NOTICE

Before performing maintenance on this unit, thoroughly clean and demagnetize the entire tape path.

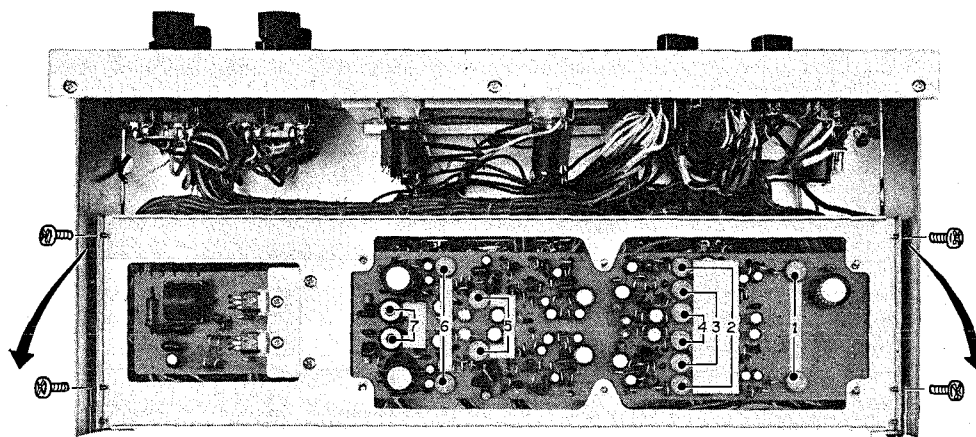
It is important that the unit be set to the proper voltage and frequency for your locality.

TEAC specified standard test tapes and test equipment must be used when performing maintenance to insure reliable results.

Procedures for checks and adjustments, unless otherwise indicated are for the left FRONT channel at a tape speed of 7-1/2ips. The same procedures are to be applied to the right FRONT channel and each REAR channel, and again for all channels at 3-3/4ips.

All controls mentioned in this book will be printed in bold letters and will be exactly as they appear on the unit.

Only FRONT adjustments are illustrated, REAR adjustments are identical.



| NO. | ADJUSTMENTS | FRONT | REAR |
|-----|-----------------|-----------|-----------|
| 1 | VU METER CAL. | VR104/204 | VR504/604 |
| 2 | PLAY EQ. (LOW) | VR102/202 | VR502/602 |
| 3 | PLAY EQ. (HIGH) | VR101/201 | VR501/601 |
| 4 | OUTPUT LEVEL | VR103/203 | VR503/603 |
| 5 | REC METER LEVEL | VR302/402 | VR702/802 |
| 6 | REC LEVEL | VR301/401 | VR701/801 |
| 7 | REC EQ. | L 301/401 | L 701/801 |

M-0365

Fig. 7-1 Adjustment Locations

NOTE: Components are identified as Left/Right (i.e., VR-104/204)

PLAYBACK PERFORMANCE

PLAYBACK HEAD AZIMUTH ADJUSTMENT

NOTE

After head replacement or if, during playback, a slight pressure on the heads results in a rise of the reading of the level meter, head azimuth adjustments should be accomplished.

Coarse Adjustment

1. Connect a level meter either OUTPUT jack.
2. Thread a TEAC test tape YTT-1003 on the unit.
3. Play the 15 kHz test tone in section 2 of the test tape.
4. Slowly rotate the azimuth screw until maximum indication is obtained on the level meter. (See Fig.5-2).

Fine Adjustment

It is absolutely essential to accomplish the coarse adjustment before performing the fine adjustment to avoid phase errors larger than 45° . After coarse adjustment, do not make large corrections, turn azimuth screw $1/4$ turn or less.

5. Place the PLAY switch in 4CHAN. position.
6. Connect the test equipment as shown in Fig. 7-2 below.
7. Play a 50 Hz~7.5 kHz signal and adjust the azimuth screw until the oscilloscope shows that the signals are less than 45° in phase for channels 1 and 3. Channels 2 and 4 should be less than 90° in phase.
8. Secure the screw with a drop of LOCTITE.

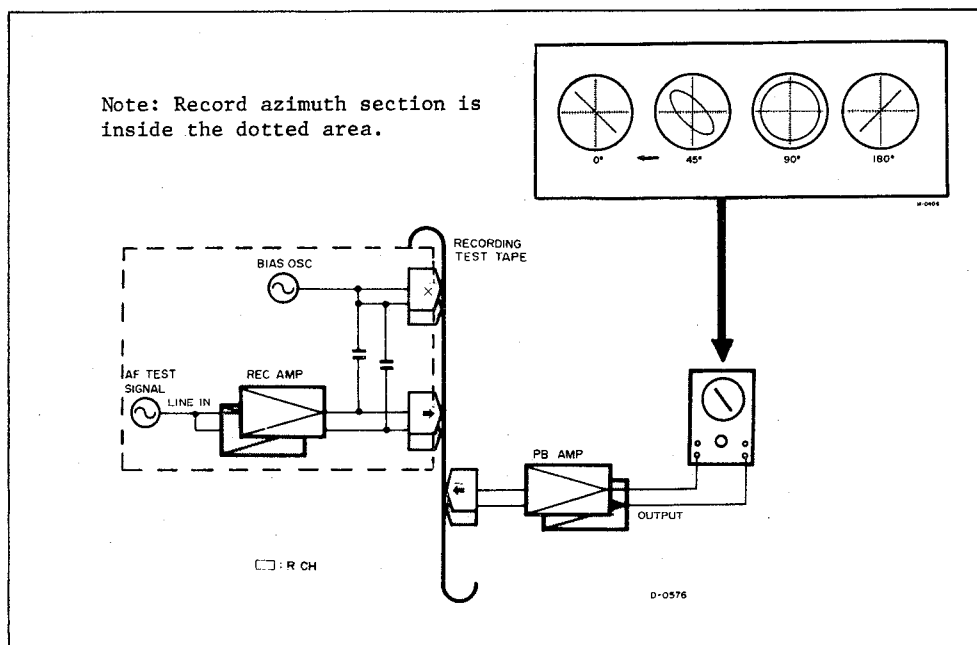


Fig. 7-2 Fine Adjustment Set-Up -Head Azimuth-

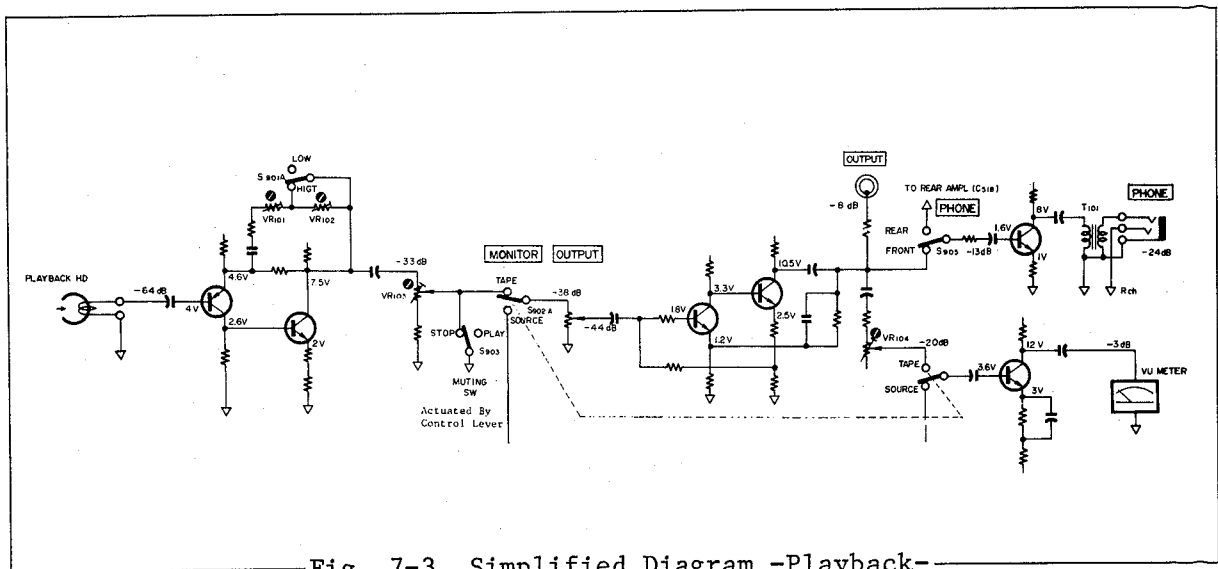


Fig. 7-3 Simplified Diagram -Playback-

SPECIFIED OUTPUT LEVEL SETTING

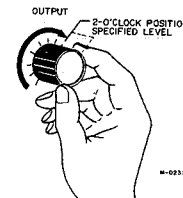
NOTE

Connect a 10 kΩ load to the OUTPUT jacks for all audio measurements when not using TEAC M-826A (0dB=0.775V) output meter.

1. Place the MONITOR switch to the TAPE position.
2. Turn the OUTPUT controls fully clockwise.
3. Thread TEAC test tape YTT-1003 on the unit. Operate at 7-1/2ips. This tape will apply a 400 Hz signal at operating reference level (1% of the THD level).
4. Adjust FRONT VR-103/203, REAR VR-503/603 to obtain an output of -2 dB at the OUTPUT jacks.
5. Align the reference marks of all 4 OUTPUT controls so that they are at the 2 o'clock position. This will give approximately -8 dB at the OUTPUT jacks.
6. Readjust FRONT VR-103/203, REAR VR-503/603 for a -8 dB output level at each OUTPUT jack.

IMPORTANT

This is the specified output level setting. Do not disturb this setting until the remaining adjustments have been completed.



VU METER CALIBRATION

1. Playback the 400 Hz tone (1% THD) in section 1 of the test tape YTT-1003.
2. With MONITOR switch in TAPE position, PHONE switch at FRONT position, adjust VR-104/204 for a reading of 0 VU on the VU meters.
3. With PHONE switch in REAR position, adjust VR-504/604 as in FRONT position (± 1 dB).

FREQUENCY RESPONSE

1. Place tape SPEED switch in HIGH position.
2. Thread a TEAC test tape YTT-1003 on the unit.
3. Compare the readings obtained on the level meter with the response limits given in Fig. 7-4.
4. If adjustment is required, adjust FRONT VR-101/201, REAR VR-501/601 at 7-1/2ips speed.
5. Place tape SPEED switch in low (3-3/4ips) position. Repeat step 3. Adjust FRONT VR-102/202, REAR VR-502/602.

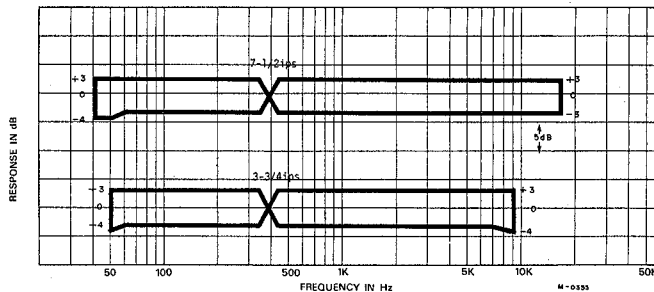


Fig. 7-4 Frequency Response Limits -Playback-

PHONE OUTPUT CHECK

1. Place OUTPUT controls at the Specified Level Setting (400 Hz signal at -8 dB).
2. Connect an 8Ω non inductive resistor across the headphone output. Connect level meter across the resistor.
3. Level meter should indicate -24 dB ± 2 dB.

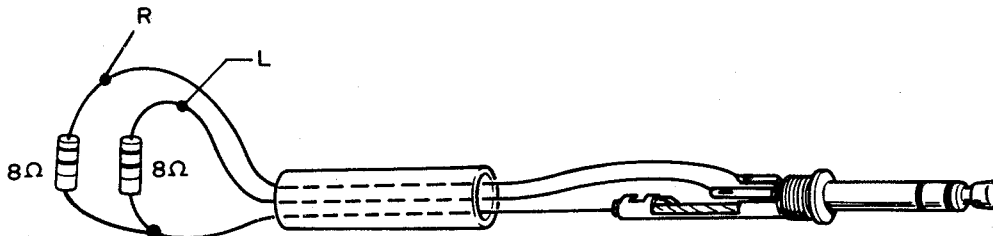


Fig. 7-5 Headphone Connecting Resistor

MONITOR PERFORMANCE

SPECIFIED INPUT LEVEL SETTING

LINE Input

1. Connect an AF oscillator to the LINE IN jacks.
2. Place MONITOR switch in SOURCE position.
3. Apply a 400 Hz signal -18 dB at LINE IN jacks.
4. Turn LINE controls fully clockwise, then retard the LINE controls to obtain the specified output level of -8 dB at the OUTPUT jacks.

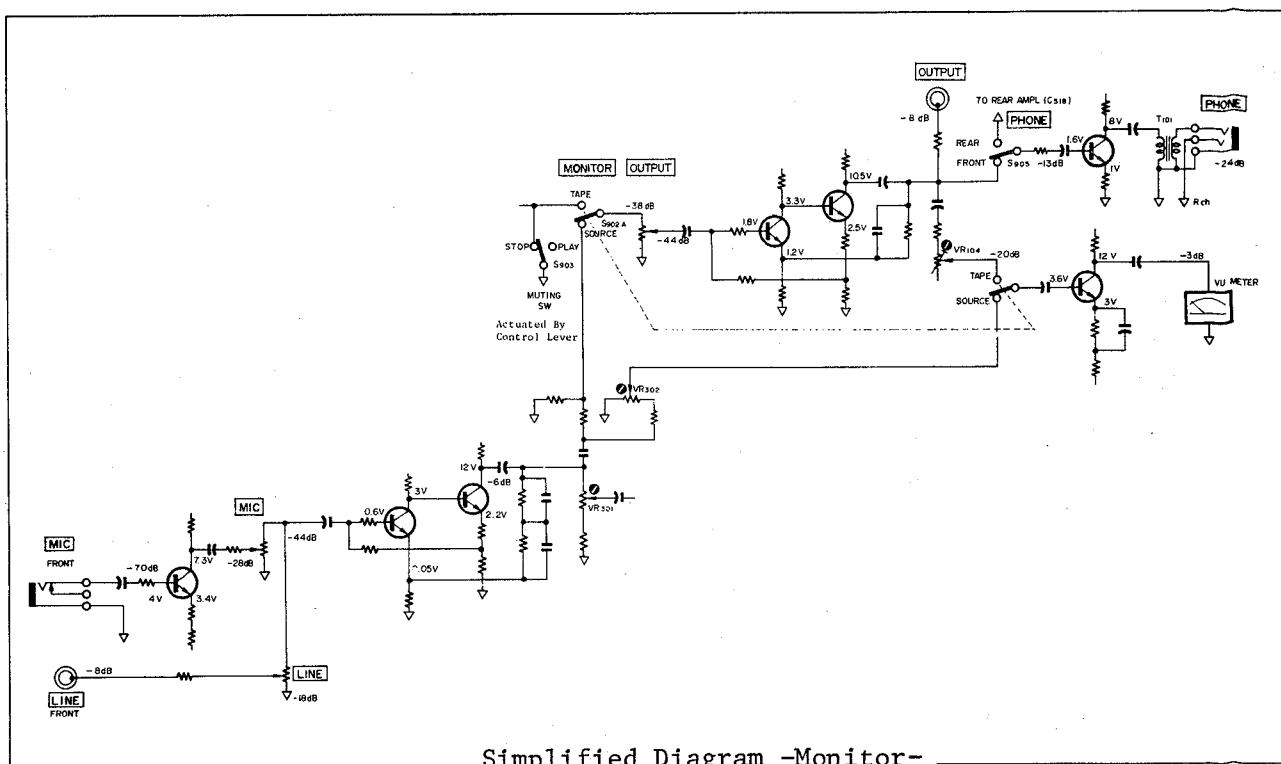
MIC Input Check

5. After adjusting LINE controls, apply a 400 Hz signal at -60 dB to the MIC IN jacks.
6. Rotate the Mic controls clockwise until they give an output of -8 dB (specified output level).
7. Return all MIC IN jacks fully counterclockwise (CCW) to prevent noise insertion.

REC METER LEVEL SET

Verify OUTPUT controls at specified output level.

1. Place MONITOR switch to SOURCE position.
2. Apply a 400 Hz signal at -8 dB to LINE IN jacks.
3. Adjust FRONT VR-302/402, REAR VR-702/802 for 0 VU (± 0.5) on the VU meters.



RECORD PERFORMANCE

Before making any adjustments on the record amplifier, be sure that all tests in the HEAD ALIGNMENT, PLAYBACK and MONITOR PERFORMANCE sections have been accomplished and that all levels are correct.

Optimum recording performance (bias levels, recording levels and frequency response) is dependent upon tape characteristics. The TEAC A-1340 is factory set with SCOTCH type 203 (HIGH) and SCOTCH type 150 (NORMAL) tape.

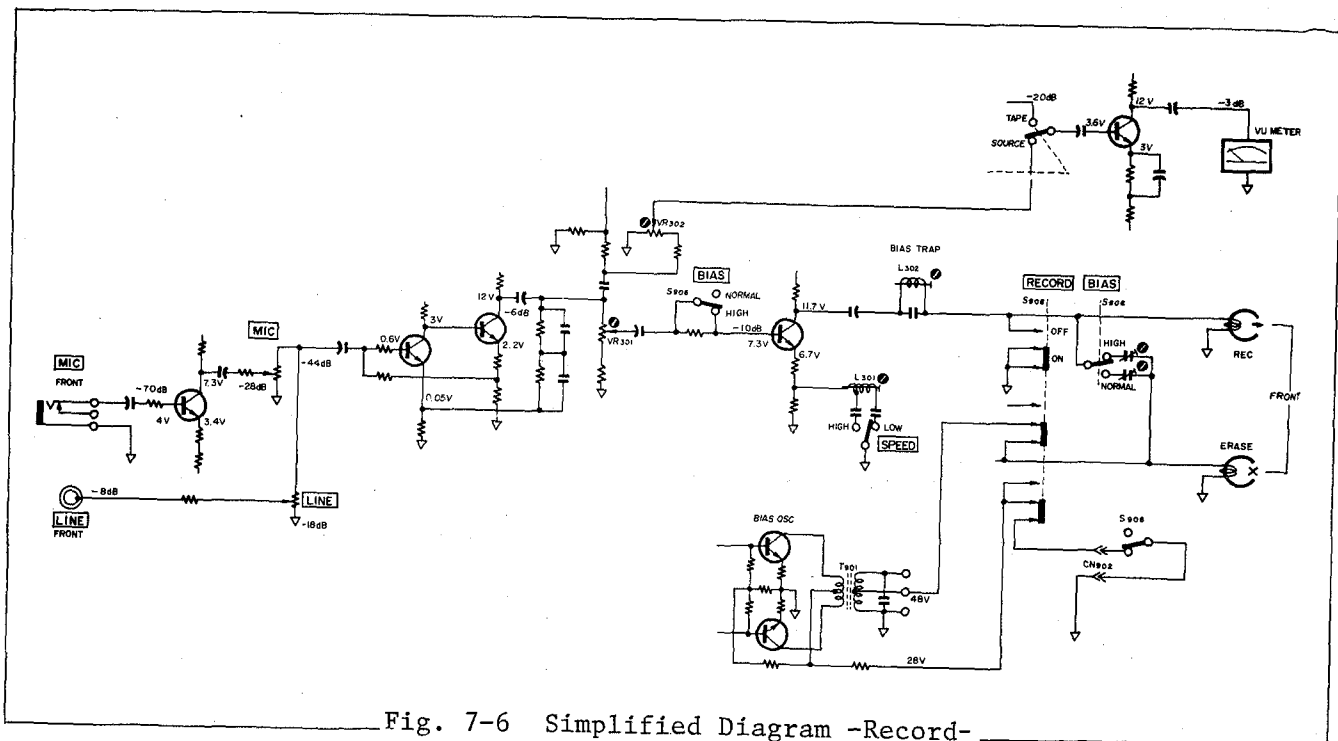


Fig. 7-6 Simplified Diagram -Record-

BIAS TRAP ADJUSTMENT

NOTE

The bias trap tank circuit keeps the bias signal from reaching the record and monitor amplifier and under normal no-signal conditions, voltage should not be present at the OUTPUT jack.

1. Thread a blank tape or block automatic shut-off arm in ON position.
2. Place the REC BIAS switch to HIGH position and place the unit in the RECORD mode.
3. Connect a VTVM or oscilloscope to junction of L-302/C-812 (FRONT); L-402/C-814 (REAR).
4. Adjust L-302/402 for a minimum reading.
5. Adjust REAR L-702/802 as in FRONT position.

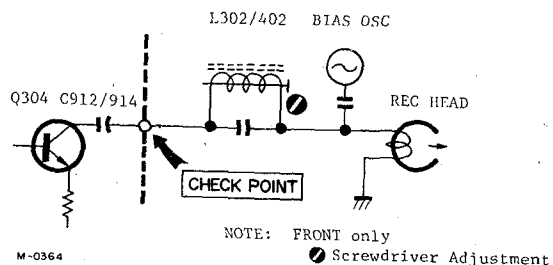


Fig. 7-7 Bias Trap Check Point

BIAS ADJUSTMENT

Perform BIAS TRAP ADJUSTMENT before proceeding.

NOTE

These adjustments are only made at 7-1/2ips tape speed. The bias oscillator frequency is 100 kHz (± 10 kHz).

HIGH position

1. Thread record test tape SCOTCH 203 on the unit.
2. Place the BIAS switch to HIGH and place the unit in the record mode.
3. Place the MONITOR switch in the TAPE position.
4. Adjust capacitor FRONT VC-901/903, REAR VC-905/907 for a peak on the level meter.
5. Turn the capacitors clockwise until a decrease of 0.5 dB is obtained.

NORMAL position

6. Thread record test tape SCOTCH 150 on the unit.
7. Place the BIAS switch to NORMAL and place the unit in the record mode.
8. Adjust capacitor FRONT VC-902/904, REAR VC-906/908 as in HIGH position.

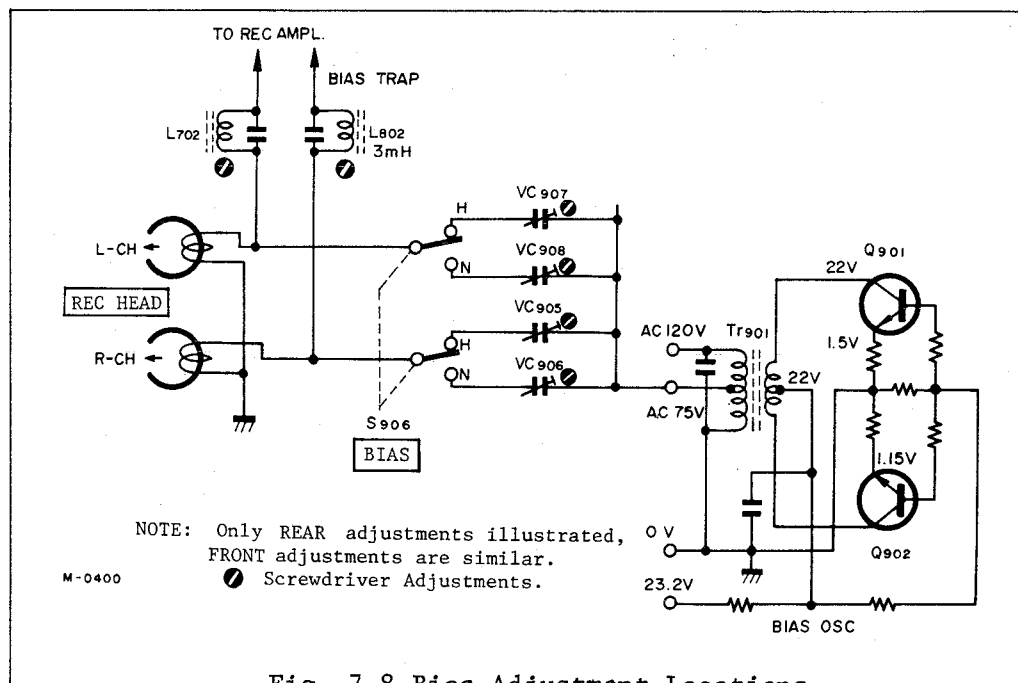


Fig. 7-8 Bias Adjustment Locations

-Diagram-

RECORD HEAD AZIMUTH ADJUSTMENT

Coarse Adjustment

NOTE

The effect of turning the azimuth screw will not immediately register on the level meter. A slight delay will be noticed. Therefore, the screw must be rotated slightly with a pause to see the effect. (Delay is caused by the distance between the Record and Playback heads.)

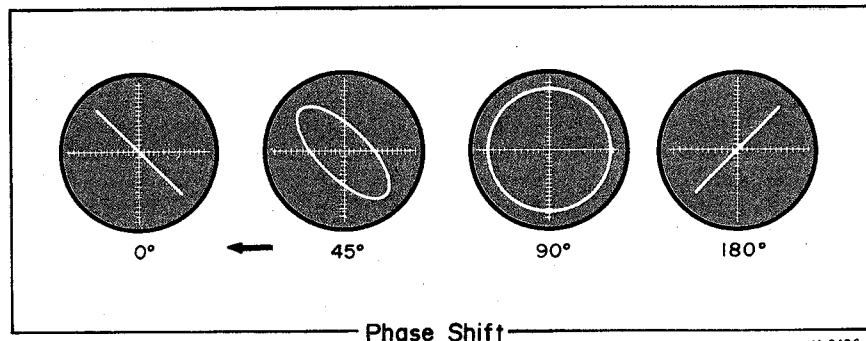
1. Connect a level meter to the OUTPUT jack and an AF oscillator to the LINE IN jack.
2. Place the MONITOR switch to SOURCE and adjust the AF oscillator to obtain a signal of 15 dB below the specified output level. (The level meter will indicate -23 dB.)
3. Make certain that the LINE control is at the specified input level position, then set the AF oscillator to 10 kHz.
4. Thread a record test tape on the unit.
5. Place the MONITOR switch in the TAPE position.
6. While recording adjust the azimuth screw for maximum indication on the level meter.

Fine Adjustment

NOTE

It is absolutely essential to accomplish the coarse adjustment before performing the fine adjustment, to avoid phase error larger than 45° (CH1 and CH3), 90° (CH2 and CH4).

7. Connect the test equipment as shown in Fig. 7-2.
8. Apply a 7.5 kHz signal at -23 dB to the LINE IN jacks and record this signal.
9. Carefully adjust the azimuth screw until the oscilloscope shows the signal to be in phase.
10. Secure the screw with a drop of LOCTITE.



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RECORD LEVEL SET

The OUTPUT controls must be at the specified output level position (-8 dB at OUTPUT jacks).

1. Apply a 400 Hz signal at -8 dB to the LINE IN jack.
2. Thread record test tape SCOTCH 203 on the unit, then set the REC BIAS switch to HIGH position.
3. Place the unit in the 4 CHAN RECORD MODE with the MONITOR switch in the TAPE position, LINE controls fully clockwise.
4. Adjust FRONT VR-301/401, REAR VR-701/801 for -8 dB signal at OUTPUT jacks.

OVERALL FREQUENCY RESPONSE

HIGH position

1. Thread a blank SCOTCH 203 tape on unit, place BIAS switch at HIGH, tape SPEED at HIGH, MONITOR switch at TAPE.
2. Apply a signal swept from 50 Hz to 15 kHz at -23 dB to LINE IN jacks and record it on the test tape.
3. Adjust FRONT L-301/401, REAR L-701/801 for best response. (Fig.7-9).
4. Repeat above procedures for 3-3/4ips using a signal swept from 50 Hz to 7.5 kHz.

NORMAL position

5. Thread a blank SCOTCH 150 tape on the unit. Place BIAS switch at NORMAL position, tape SPEED at HIGH.
6. Repeat overall response check at both speeds.

NOTE

If there is more than 2 dB difference in frequency response between 2-channel and 4-channel operation, adjust L-901/902 at 10 KHz, 7-1/2 ips.

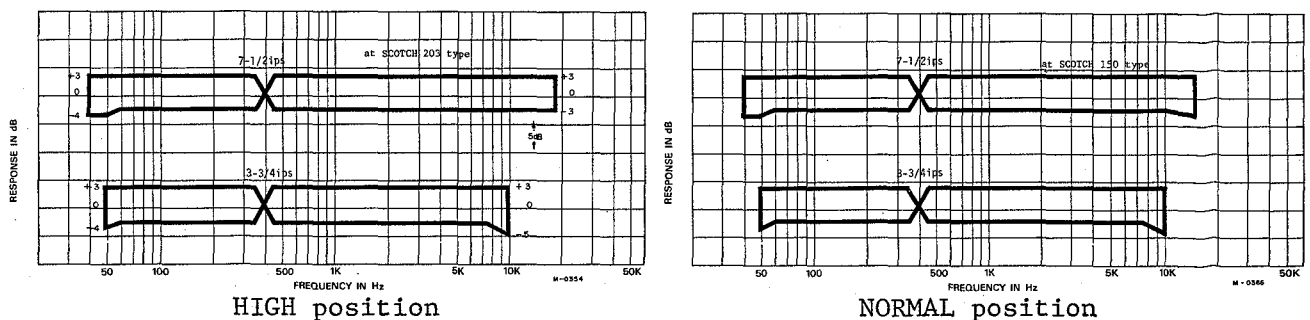


Fig. 7-9 Frequency Response limits -Record-

SIGNAL-TO-NOISE RATIO

PLAYBACK

IMPORTANT

OUTPUT controls should be at the Specified Output Level settings. The signal to noise ratio must meet factory standards. The values given are obtained using an un-weighted level meter while the motor has voltage applied but is not rotating. The values are with reference to a 3% THD peak recording level.

1. Thread a blank tape on the unit, leaving the tape outside the capstan and pinch roller.
2. Place the unit in the PLAY mode (▶). Depress and lock in PAUSE button.
3. The level meter connected to the OUTPUT jacks should indicate -58 dB or less.
4. This corresponds to a signal to noise ratio of 50 dB (difference between residual noise -58 dB and specified output level -8 dB for 1% THD). For a 3% THD signal to noise ratio, 6 dB is added, giving 56 dB (3% THD is 6 dB above 1% THD level).

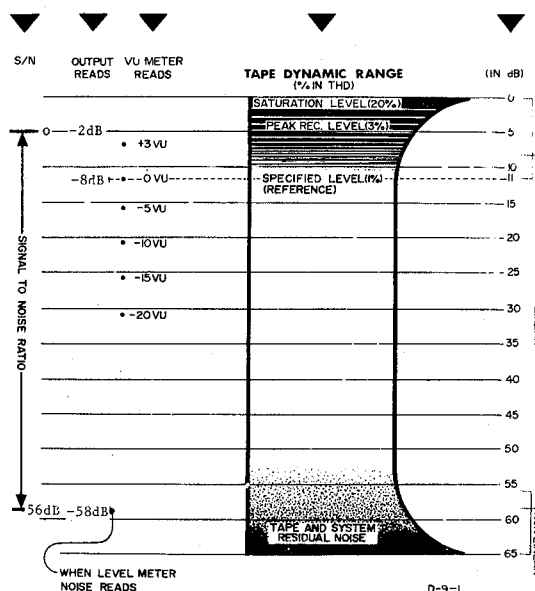


Fig. 7-10 Signal/Noise Computation

OVERALL

IMPORTANT

Clean and demagnetize the heads before proceeding. It is extremely important that all tests described in the preceding paragraphs have been completed and that all controls are left at their adjusted settings.

1. Thread a blank test tape (SCOTCH 203) on the unit.
2. Remove the AF oscillator from the LINE IN jacks.
3. Place the unit in the RECORD mode with no signal applied. Note the point on the index counter where recording begins.
4. Rewind the tape to the beginning point and play it back.
5. The noise level as indicated on the level meter should be -56 dB or less.

NOTE

Bias, erase and playback amplifier noise are all included in this measurement. All frequencies between 40 Hz and 15 kHz are measured un-weighted.

ERASE EFFICIENCY

NOTE

To measure erase efficiency, a 1 kHz Band Pass Filter (TEAC M-204 CL filter) must be used.

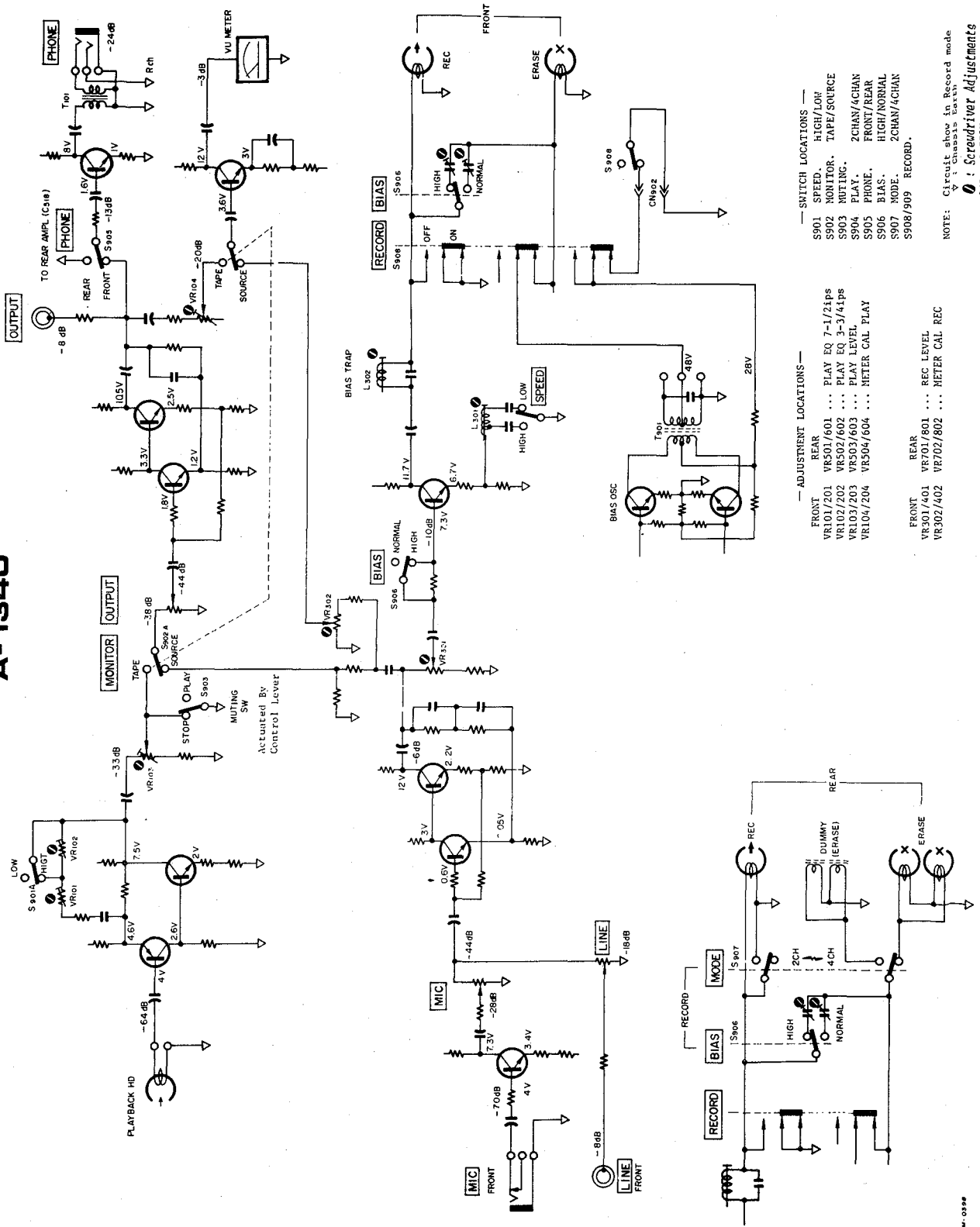
1. Apply a 1 kHz signal at 0 dB to the LINE IN jacks.
2. Place the unit in RECORD mode and record this signal.
3. Rewind the recording to the beginning and remove the AF oscillator from the LINE IN jacks.
4. Place the unit in RECORD mode and record over this portion of tape again.
5. Rewind the tape to the starting point and connect a level meter to the OUTPUT jack through the 1 kHz band pass filter.
6. Play the erased portion of the tape.
7. The level meter should indicate -60 dB or less.

LEVEL VARIATION

1. Thread a blank reel of High Output tape (SCOTCH 203), and select 7-1/2ips.
2. Record a variety of frequencies, such as 400 Hz, 2 kHz, 5 kHz, 8 kHz, 10 kHz, etc., at the specified input setting with the BIAS switch HIGH.
Record approximately 30 seconds at each frequency.
3. During playback, the output level should not vary more than 0.5 dB at 400 Hz, 1 dB at 5 kHz to 10 kHz.
4. Repeat steps 2 and 3 with the deck at 3-3/4ips. The tolerances are the same.

8 SIMPLIFIED DIAGRAM (WITH VOLTAGE READINGS)

A-1340



9 PREVENTIVE MAINTENANCE

LUBRICATION INSTRUCTIONS

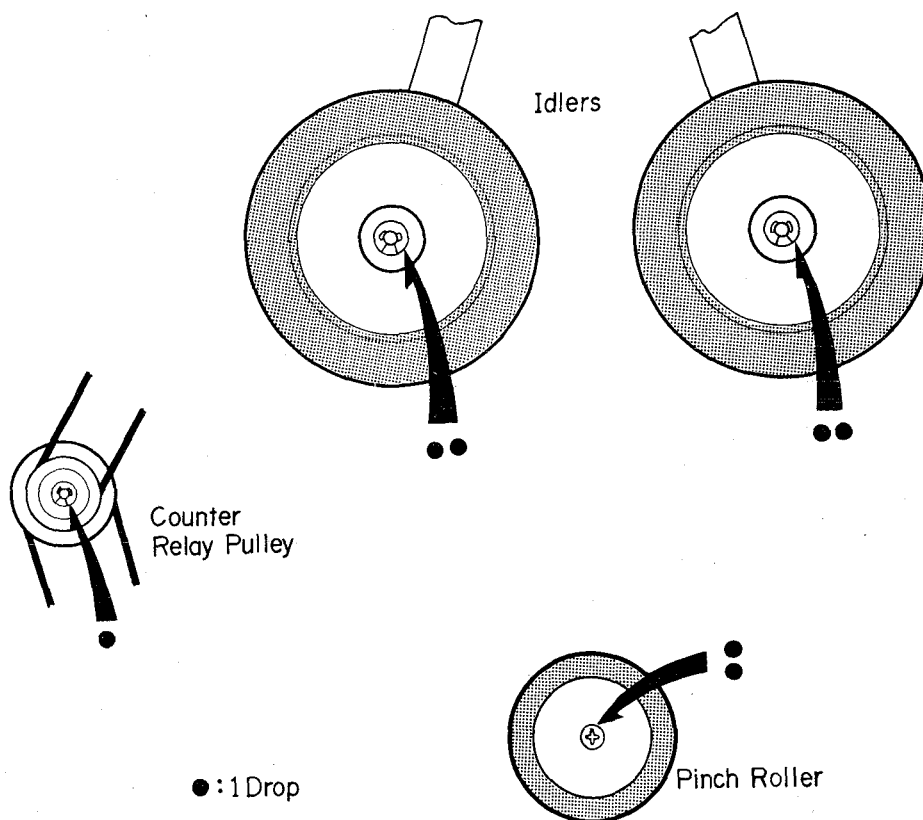
For maximum service life and optimum performance, lubricate the parts listed below after every 2,000 hours of service. Use only a light machine oil of good quality, such as TEAC'S TZ-262 or TZ-265.

1. Oil the motor through the oiling tube. Apply approximately 1cc.
2. Apply 2 drops to the Idler Shaft bearings.
3. Apply 2 drops to the Pinch Roller Shaft bearing.
4. Apply 1 drop to the Index Counter relay pulley bearing.
5. Apply a medium film of light machine grease to each roller surface on the levers and cams. Avoid lubricating the brake areas.

Any other lubrication should only be done by Factory trained engineers during major overhauls.

CAUTION

Do not over-lubricate. Wipe off all excess lubrication with a cotton swab soaked in alcohol. Excess lubricating fluids would be scattered during operation onto the rubber components which deteriorate when soaked with oil.



M-0404

Fig. 9-1 Lubrication Locations

PERIODIC MAINTENANCE

| USER MAINTENANCE | INTERVAL | MATERIAL REQUIRED |
|--|----------------------------|-----------------------|
| Head demagnetization | At least monthly | TEAC E-1 Demagnetizer |
| Cleaning capstan shaft, heads, tape lifters, etc. | Every 8 hours of operation | TZ-251A or TZ-261A |
| Cleaning pinch roller | | TZ-251B or TZ-261B |
| Lubrication of capstan shaft, tape lifters, pinch roller | Monthly | TZ-252A or TZ-262A |
| Motor lubrication | Annually | TZ-262A or TZ-265 |

Internal service and cleaning of the capstan pulley, idlers, flywheel, capstan belt and take-up pulleys should be accomplished only by factory trained technicians during overhaul after extended periods of use.

HEAD DEMAGNETIZATION

The A-1340 tape head should be periodically demagnetized to prevent loss of high frequency response. How frequently to demagnetize depends on the amount of use. Under normal home use heads should be demagnetized monthly.

Using the TEAC E-1 demagnetizer, bring the demagnetizer tip close to the head playback surfaces, slowly move it up and down several times. Gradually withdraw the demagnetizer tip from the head area. Turn off power to the demagnetizer only after it has been drawn at least 12 inches away from the head area.

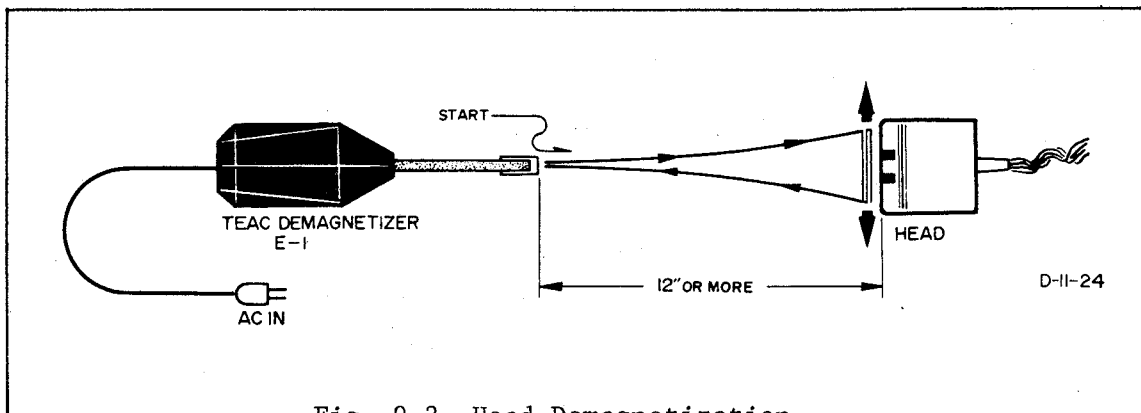


Fig. 9-2 Head Demagnetization

10 TROUBLE SHOOTING

The following guide lists specific difficulties that could occur in the A-1340. Several possible causes are listed for each malfunction. Visually inspect the unit for any damage such as broken or burned components or wiring, loose connections, etc.

| MALFUNCTION | POSSIBLE SOURCE OF TROUBLE | CORRECTIVE PROCEDURE |
|--|--|--|
| Capstan fails a turn | Belt off or slipping, line fuse, safety SW(S915), play SW(S914), rewind SW(S910), (S911), speed select SW (S901), capstan motor. | Replace the defective components. |
| Control lever does not lock | Safety SW(S915), resistor (R907), diode(D903), solenoid(SOL 901), solenoid mis-adjustment. | Replace the defective components. Adjust. |
| Fast forward or rewind mode inoperative | Rewind SW(S910), (S911). | Replace the defective components. |
| Incorrect tape speed | Dirty capstan shaft, capacitor(C918). | Clean or replace defective components. |
| Wow and flutter | Defective tape, dirty or defective pinch roller, oily or defective belt, capstan, take-up reel assy. | Clean or replace defective components. Adjust reel tension. |
| No record and/ or no erase No playback | Bias OSC, record selector SW(S908,909), head. Dirty head, head, playback ampl., muting SW(S903). | Replace the defective components. Replace the defective components. |

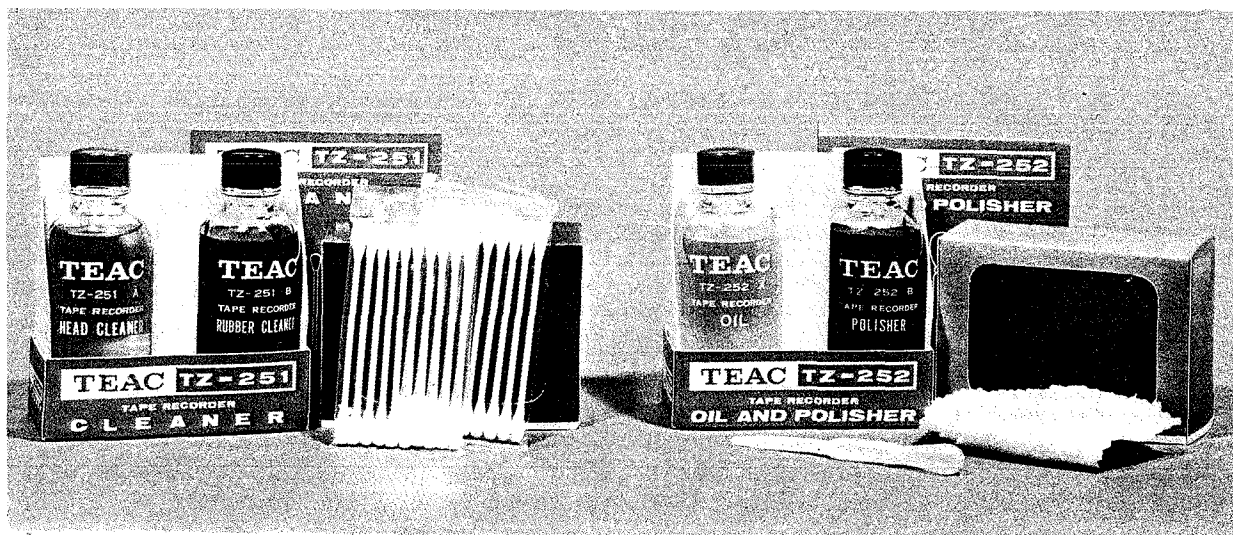
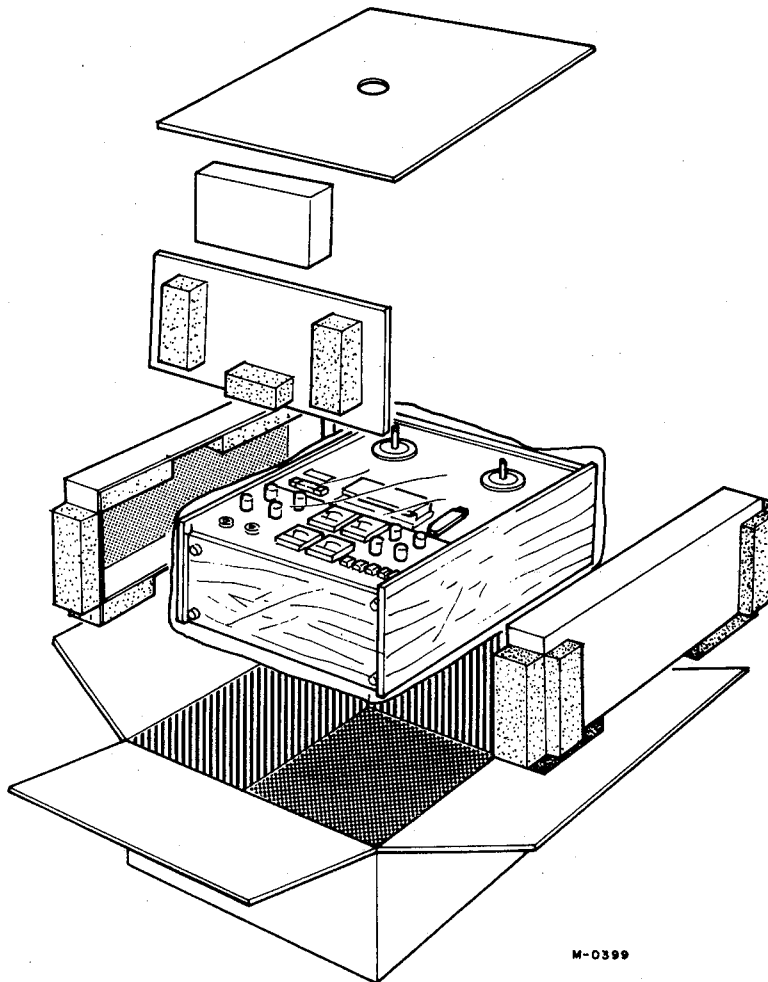


Fig. 9-3 Maintenance Equipment

11 PACKING FOR SHIPMENT AND WARRANTY

If the unit is to be sent back to the TEAC factory (Service Department) for repair, carefully pack as shown below.



WARRANTY

Your TEAC equipment has been manufactured under the strictest quality control. Its normal operation is under warranty. However, warranty terms may vary with the country (area) in which it was purchased and for different models of equipment. The warranty terms are fully described on the warranty card. Please read the card for complete details. Include a copy of the warranty in the package when you return the equipment to an Authorized Service Center.

TEAC®

A-1340

4 CHANNEL SIMUL-TRAK
STEREO TAPE DECK
PARTS LIST

REPLACEMENT INFORMATION

Replacement part are available through your nearest TEAC dealer or directly from the TEAC office.

Changes are constantly being made to make TEAC products better and more reliable.

Therefore, when ordering parts, always include the following information:

| <i>MODEL</i> | <i>SERIAL NO.</i> | <i>REF NO.</i> | <i>PART NO.</i> | <i>DESCRIPTION</i> |
|--------------|-------------------|----------------|-----------------|--------------------|
|--------------|-------------------|----------------|-----------------|--------------------|

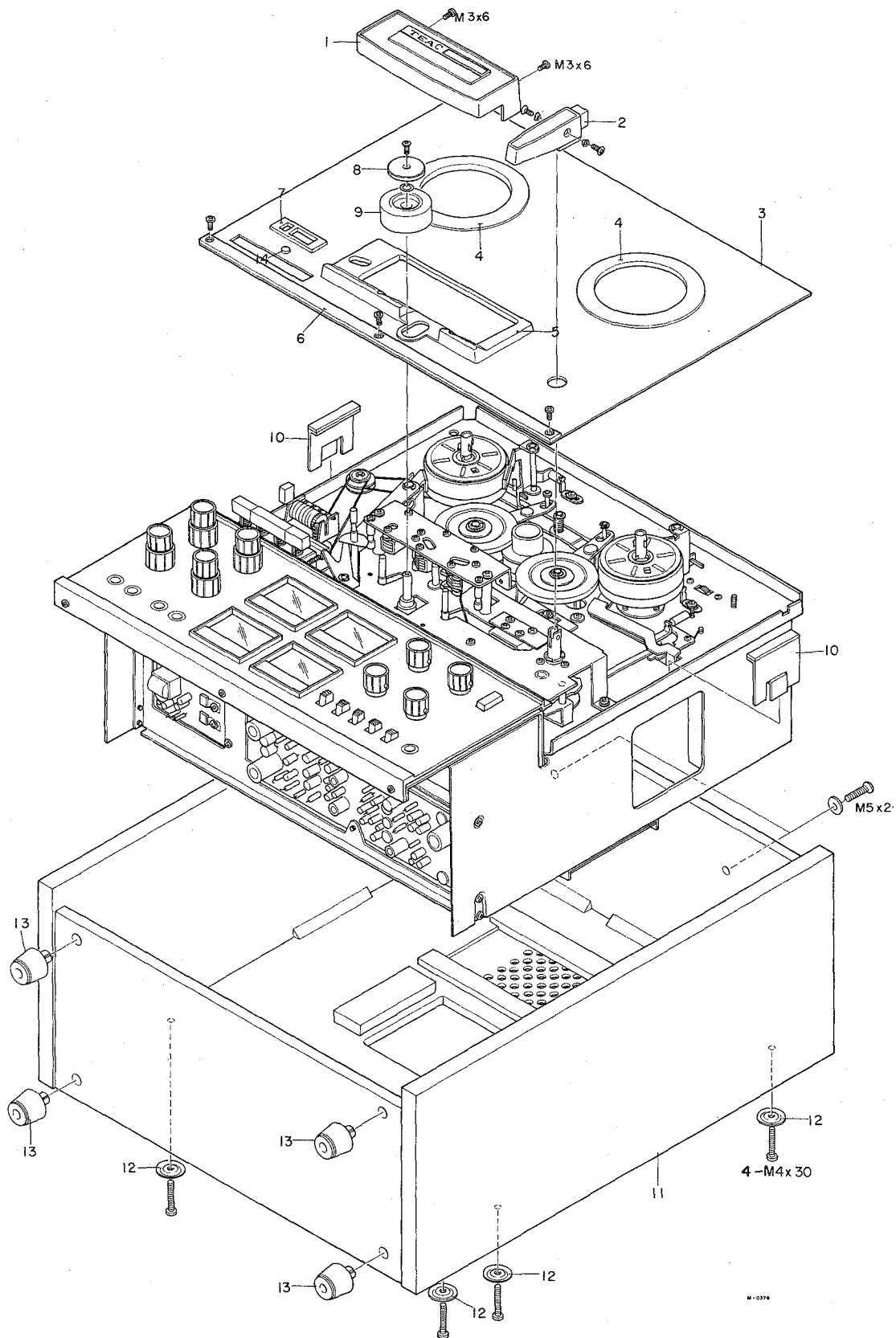
TEAC CORPORATION

MT1340E100

EXPLODED VIEW 1

A-1340

TRIM PARTS



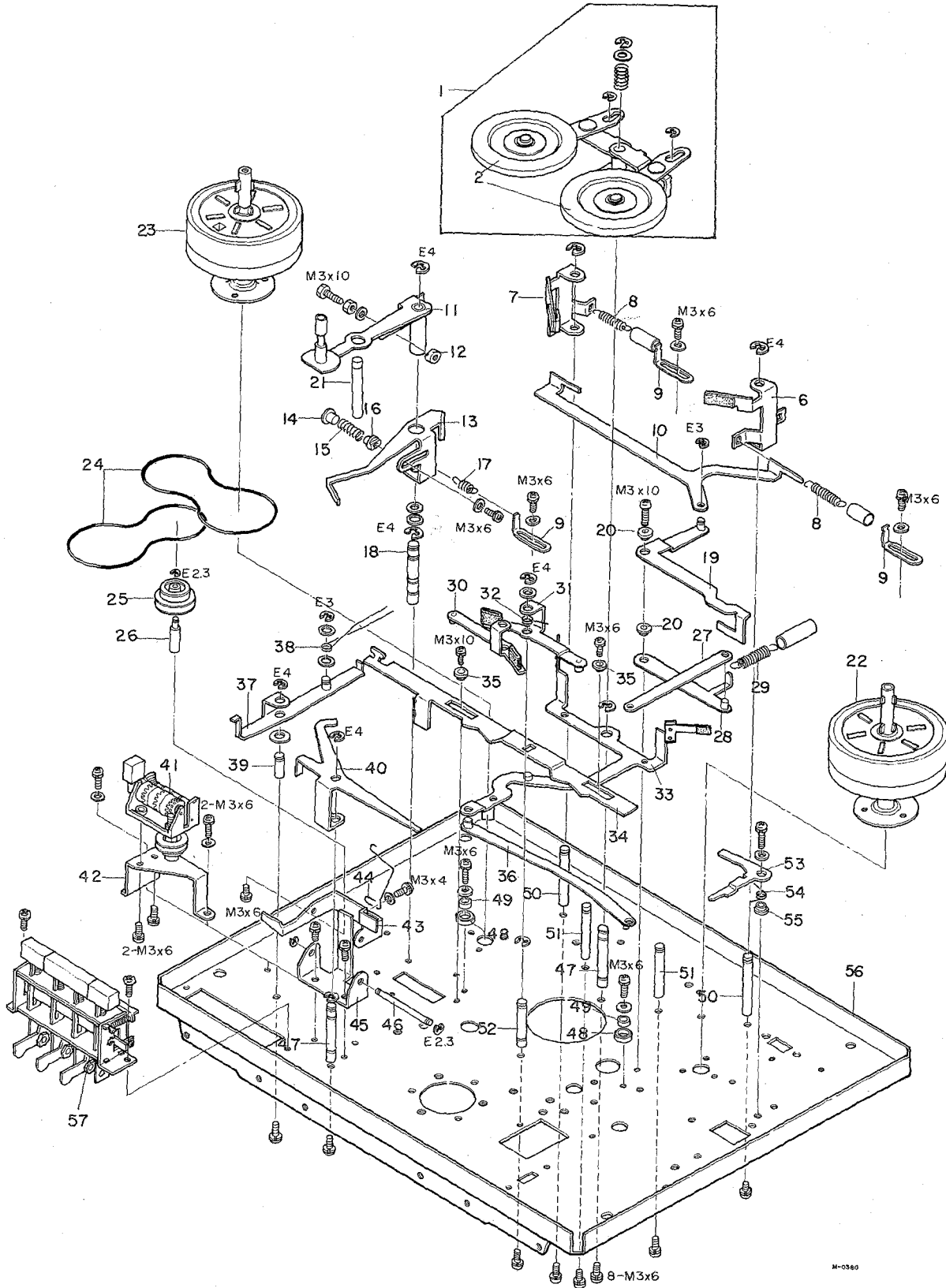
TRIM PARTS

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|---------------------|----------|-----|
| | | | 1st | 2nd |
| 1- 1 | 50136581 | Head Housing | | |
| 1- 2 | 50841540 | Control Lever Assy | | |
| 1- 3 | 50117280 | Trim Panel | | |
| 1- 4 | 50162971 | Escutcheon, Reel | | |
| 1- 5 | 50136571 | Housing Base | | |
| 1- 6 | 50117310 | Trim Sash | | |
| 1- 7 | 50162980 | Escutcheon, Counter | | |
| 1- 8 | 50142340 | Cap, Pinch Roller | | |
| 1- 9 | 50141690 | Pinch Roller | | |
| 1-10 | 50820091 | Plate, Panel Rest A | | |
| 1-11 | 50288400 | Case, Wooden | | |
| 1-12 | 50287600 | Washer | | |
| 1-13 | 50332070 | Mount Foot | | |
| 1-14 | 50277850 | Lens, Lamp | | |

EXPLODED VIEW 2

A-1340

ABOVE THE MAIN CHASSIS

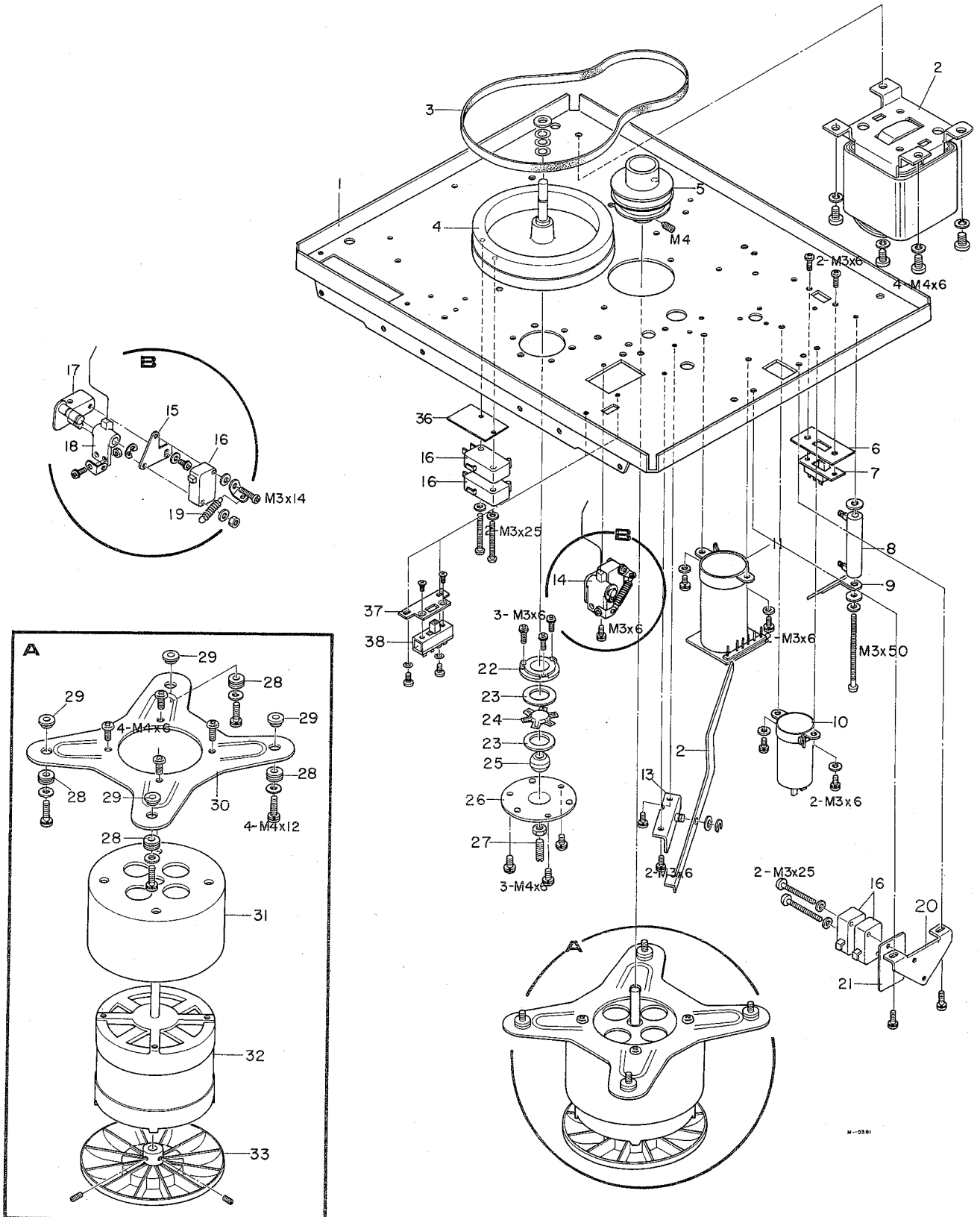


M-0380

ABOVE THE MAIN CHASSIS

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|-------------|-------------------|----------------------------------|----------|-----|
| | | | 1st | 2nd |
| 2- 1 | 50840961 | Take-up Idler Assy | | |
| 2- 2 | 50840970 | Idler Assy | | |
| 2- 6 | 50840560 | Brake Lever A Assy | | |
| 2- 7 | 50840580 | Brake Lever B Assy | | |
| 2- 8 | 50840610 | Spring, Brake Lever | | |
| 2- 9 | 50840620 | Brake Lever Spring Retainer | | |
| 2-10 | 50840550 | Brake Actuator Lever C | | |
| 2-11 | 50840520 | Servo Lever B Assy | | |
| 2-12 | 50840800 | Collar, Servo Brake Adjust | | |
| 2-13 | 50840720 | Servo Lever A Assy | | |
| 2-14 | 50840810 | Shoulder Washer, A, Brake Spring | | |
| 2-15 | 50840840 | Spring, B, Servo Brake | | |
| 2-16 | 50840820 | Shoulder Washer, B, Brake Spring | | |
| 2-17 | 50840830 | Spring, B, Servo Brake | | |
| 2-18 | 50840860 | Shaft, Servo Lever | | |
| 2-19 | 50840490 | Brake Actuator Lever B | | |
| 2-20 | 50840880 | Shaft, Operation Lever | | |
| 2-21 | 50840090 | Servo Lever Stopper | | |
| 2-22 | 50840393 | Take-up Pulley Assy, R | | |
| 2-23 | 50490821 | Take-up Pulley Assy, L | | |
| 2-24 | 50840210 | Belt, Counter | | |
| 2-25 | 50840190 | Pulley, Counter Relay | | |
| 2-26 | 50840050 | Shaft, Relay Pulley | | |
| 2-27 | 50840480 | Brake Actuator Lever A | | |
| 2-28 | 50840630 | Brake Actuator Lever D | | |
| 2-29 | 50840530 | Spring, Actuator Lever | | |
| 2-30 | 50840650 | Flywheel Brake Lever A Assy | | |
| 2-31 | 50840670 | Flywheel Brake Lever B Assy | | |
| 2-32 | 50823260 | Spring, B, Flywheel | | |
| 2-33 | 50840940 | Idler Actuator Lever Assy | | |
| 2-34 | 50840870 | Operation Lever | | |
| 2-35 | 50840880 | Shoulder Washer, Operation Lever | | |
| 2-36 | 50840930 | Coupling Lever | | |
| 2-37 | 50841610 | Push Button Lock Lever | | |
| 2-38 | 50840910 | Spring, Lock Lever Coupling | | |
| 2-39 | 50841730 | Shaft, Lock Lever | | |
| 2-40 | 50840270 | Pause Release Lever | | |
| 2-41 | 50585140 | Counter | | |
| 2-42 | 50840200 | Bracket, Counter Retainer | | |
| 2-43 | 50840240 | Pause Lever | | |
| 2-44 | 50840260 | Spring, Pause Lever | | |
| 2-45 | 50840250 | Bracket, Pause Lever Retainer | | |
| 2-46 | 50840080 | Shaft, Pause Lever | | |
| 2-47 | 50840070 | Shaft, Release Lever | | |
| 2-48 | 50840890 | Operation Lever Roller | | |
| 2-49 | 50840900 | Shaft, Operation Lever Roller | | |
| 2-50 | 50841950 | Shaft, Brake Lever | | |
| 2-51 | 50840060 | Shaft, Idler Guide | | |
| 2-52 | 50840040 | Shaft, Flywheel Brake | | |
| 2-53 | 50840540 | Brake Release Lever | | |
| 2-54 | 50840510 | Spring, Brake Release Lever | | |
| 2-55 | 50840880 | Shaft, Operation Lever | | |
| 2-56 | 50236970 | Chassis, Main | | |
| 2-57 | 50841800 | Push Switch Assy | | |

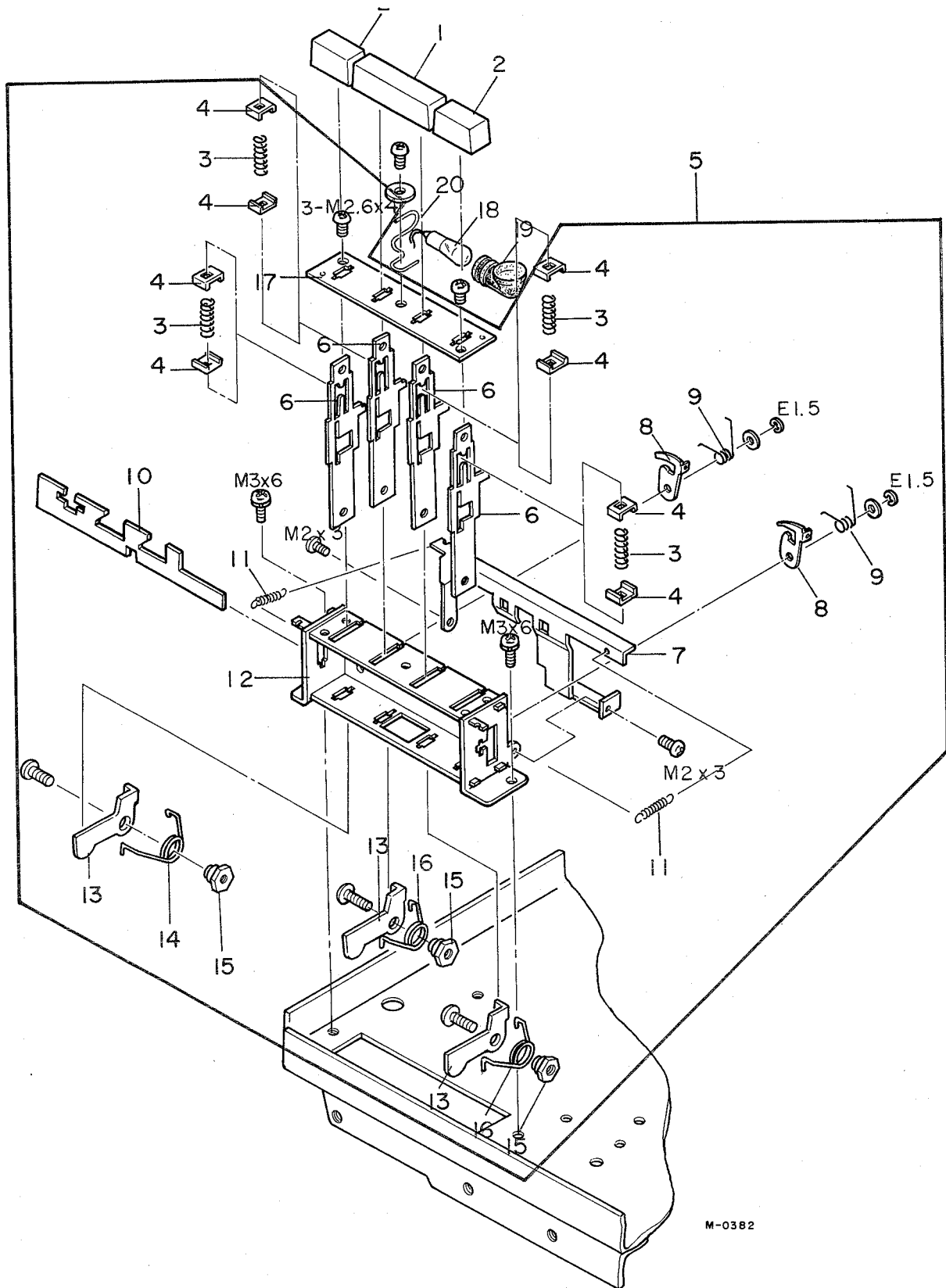
BELOW THE MAIN CHASSIS



BELOW THE MAIN CHASSIS

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|-------------|-------------------|---------------------------------------|----------|-----|
| | | | 1st | 2nd |
| 3- 1 | 50236970 | Chassis, Main | | |
| 3- 2 | 50562520 | Transformer, Power | | |
| 3- 3 | 50840310 | Belt, Capstan | | |
| 3- 4 | 50125750 | Flywheel Assy | | |
| 3- 5 | 50120560 | Motor Pulley Assy | | |
| 3- 6 | 50823610 | Washer, Capstan Thrust | | |
| 3- 7 | 50444560 | Switch, Slide | | |
| 3- 8 | 50522170 | Resistor, Wire Wound 330 Ω 10W | | |
| 3- 9 | 50452100 | Terminal Strip (1L-2P) | | |
| 3-10 | 50551331 | Cap., Elec. 470 μ F 80V | | |
| 3-11 | 50547200 | Cap., Motor Start 2.2+1 μ F(250V) | | |
| 3-12 | 50841080 | Fast Forward Lever | | |
| 3-13 | 50841090 | Bracket, F.F. Lever Retainer | | |
| 3-14 | 50840100 | Shut-off Switch Assy | | |
| 3-15 | 50840110 | Plate, A, Shut-off Switch | | |
| 3-16 | 50446130 | Switch, Micro, Shut-off | | |
| 3-17 | 50840120 | Bracket, B, Shut-off | | |
| 3-18 | 50840152 | Shut-off Switch Lever | | |
| 3-19 | | Spring | | |
| 3-20 | 50840220 | Plate, Operation Switch | | |
| 3-21 | 50820080 | Insulator Plate, Operation Switch | | |
| 3-22 | 50823560 | Metal Cover | | |
| 3-23 | 50823570 | Washer, Felt, Capstan | | |
| 3-24 | 50823580 | Star Spring, Metal | | |
| 3-25 | 50820140 | Capstan Metal | | |
| 3-26 | 50840300 | Metal Retainer | | |
| 3-27 | 50823170 | Screw, Capstan | | |
| 3-28 | 50820430 | Cushion, Rubber, Motor | | |
| 3-29 | 50840330 | Shoulder Washer, Motor Plate | | |
| 3-30 | 50840320 | Plate, Motor | | |
| 3-31 | 50040290 | Motor Shield Case | | |
| 3-32 | 71021030 | Motor | | |
| 3-33 | 50123980 | Fan | | |

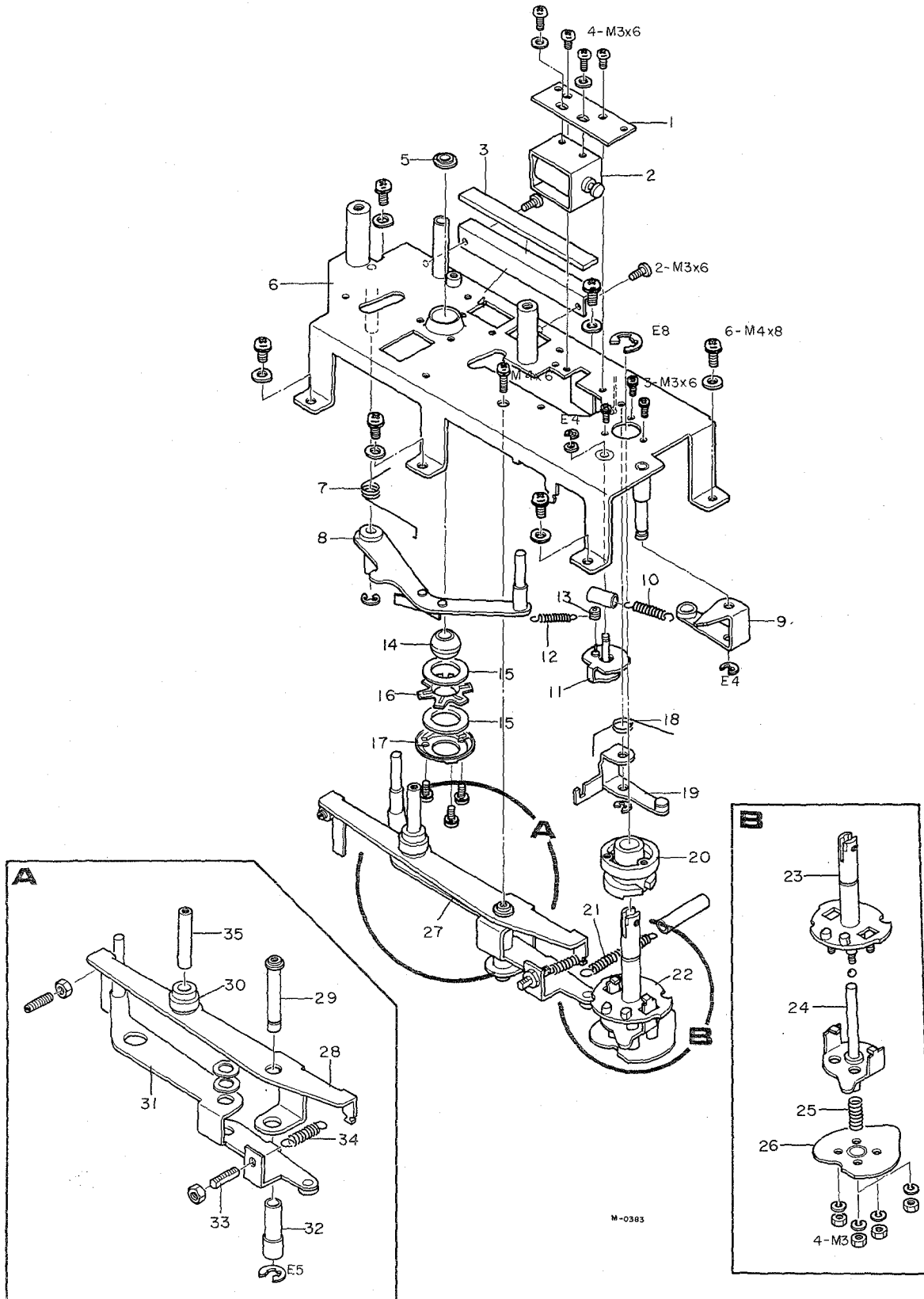
PUSH BUTTON SWITCH



PUSH BUTTON SWITCH

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|-----------------------------|----------|-----|
| | | | 1st | 2nd |
| 4- 1 | 50253800 | Push Button, Red | | |
| 4- 2 | 50253602 | Push Button, Black | | |
| 4- 3 | 50841660 | Spring, Push Button | | |
| 4- 4 | 50841640 | Push Button Spring Retainer | | |
| 4- 5 | 50841800 | Push Switch Assy | | |
| 4- 6 | 50841560 | Push Button Lever | | |
| 4- 7 | 50841690 | Lock Lever A | | |
| 4- 8 | 50841700 | Lock Lever B | | |
| 4- 9 | 50841600 | Spring, Lock Lever B | | |
| 4-10 | 50841651 | Push Button Limiter | | |
| 4-11 | 50841750 | Spring, Lock Lever A | | |
| 4-12 | 50841570 | Push Button Base Plate | | |
| 4-13 | 50331990 | Switch Push Lever B | | |
| 4-14 | 50841781 | Spring, Switch Push B Lever | | |
| 4-15 | 50841770 | Shaft, Switch Push Lever | | |
| 4-16 | 50221690 | Spring, Switch Push B Lever | | |
| 4-17 | 50841630 | Plate, Push Button | | |
| 4-18 | 50414310 | Lamp, Record | | |
| 4-19 | 50415241 | Lamp Holder | | |
| 4-20 | 50330210 | Guide, Lamp | | |

HEAD BASE ASSY



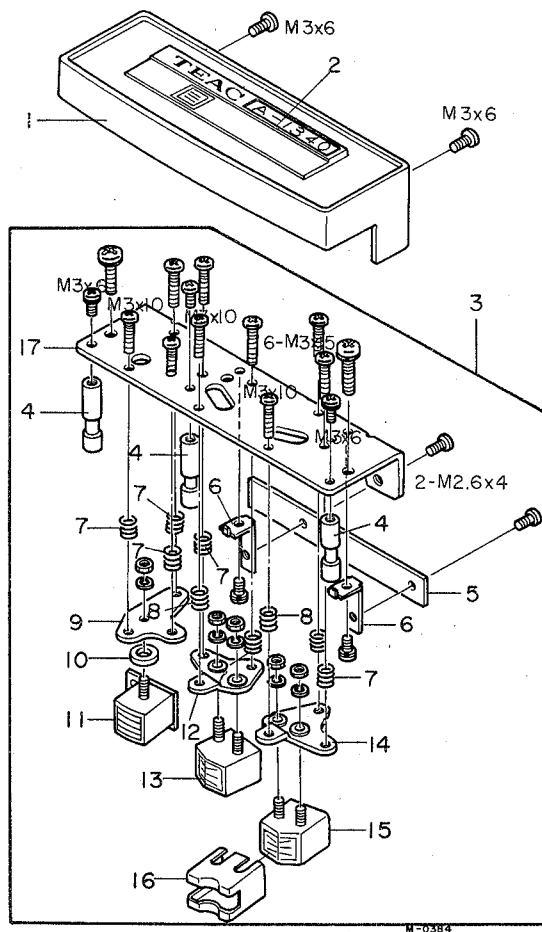
HEAD BASE ASSY

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|--------------------------------|----------|-----|
| | | | 1st | 2nd |
| 5- 1 | 50841530 | Plate, Solenoid | | |
| 5- 2 | 50616560 | Solenoid | | |
| 5- 3 | 50331940 | Cushion, Trim Panel Retainer | | |
| 5- 4 | 50130850 | Angle, Trim Panel Retainer | | |
| 5- 5 | 50823190 | Rubber Oil Seal | | |
| 5- 6 | 50130880 | Head Base Plate, B | | |
| 5- 7 | 50221680 | Spring Tape Pressure Lever | | |
| 5- 8 | 50221660 | Tape Pressure Lever Assy | | |
| 5- 9 | 50841360 | Return Lever | | |
| 5-10 | 50841390 | Spring, Return Lever | | |
| 5-11 | 50825250 | Safty Plate | | |
| 5-12 | 50823420 | Spring, Safty Plate | | |
| 5-13 | 50823410 | Roller, Safty Plate | | |
| 5-14 | 50820140 | Capstan Metal | | |
| 5-15 | 50823570 | Felt Washer, Capstan | | |
| 5-16 | 50823580 | Star Spring, Metal | | |
| 5-17 | 50823560 | Metal Cover | | |
| 5-18 | 50841920 | Spring, Click Lever | | |
| 5-19 | 50841301 | Click Lever | | |
| 5-20 | 50824601 | Control Cam Bushing | | |
| 5-21 | 50824680 | Spring, Click Lever | | |
| 5-22 | 50841192 | Control Cam A·B·C Assy | | |
| 5-23 | 50841260 | Control Cam, C | | |
| 5-24 | 50841240 | Control Cam, B | | |
| 5-25 | 50822711 | Spring, Take-up Lever Pressure | | |
| 5-26 | 50841200 | Control Cam, A | | |
| 5-27 | 50130890 | Pinch Roller Lever A·B Assy | | |
| 5-28 | 50841430 | Pinch Roller Lever, B | | |
| 5-29 | 50841480 | Shaft, Pinch Roller Lever | | |
| 5-30 | 50824510 | Cushion, Pinch Roller Shaft | | |
| 5-31 | 50130900 | Pinch Roller Lever A Assy | | |
| 5-32 | 50841470 | Collar, Pinch Roller Lever | | |
| 5-33 | 50824080 | Screw, Pinch Roller Adjust | | |
| 5-34 | 50821220 | Spring, Pinch Roller Lever A | | |
| 5-35 | 50141432 | Shaft, Pinch Roller | | |

EXPLODED VIEW AND PARTS LIST 6

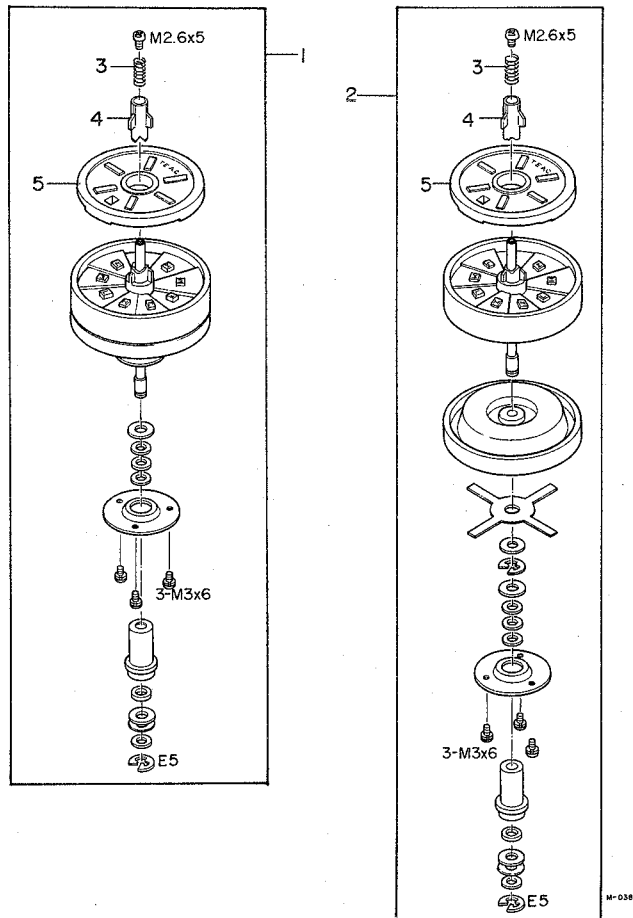
A-1340

HEAD ASSY



| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|-------------------------|----------|-----|
| | | | 1st | 2nd |
| 6- 1 | 50136581 | Head Housing | | |
| 6- 2 | 50266580 | Plate, Head Housing | | |
| 6- 3 | 50130940 | Head Assy | | |
| 6- 4 | 50841880 | Tape Guide, C | | |
| 6- 5 | 50483970 | PC Board, Head | | |
| 6- 6 | 50130840 | Bracket, Head PC Board | | |
| 6- 7 | 50823280 | Spring, Head, C | | |
| 6- 8 | 50841170 | Spring, Head, D | | |
| 6- 9 | 50130830 | Plate, Erase Head | | |
| 6-10 | 50136591 | Spacer, 4-CH Erase Head | | |
| 6-11 | 50664110 | Head, Erase | | |
| 6-12 | 50130820 | Plate, Record Head | | |
| 6-13 | 50664210 | Head, Record | | |
| 6-14 | 50841161 | Plate, Playback | | |
| 6-15 | 50664810 | Head, Playback | | |
| 6-16 | 50133900 | Head Shield, B | | |
| 6-17 | 50130810 | Plate, Head Mount Base | | |

TAKE UP PULLEY

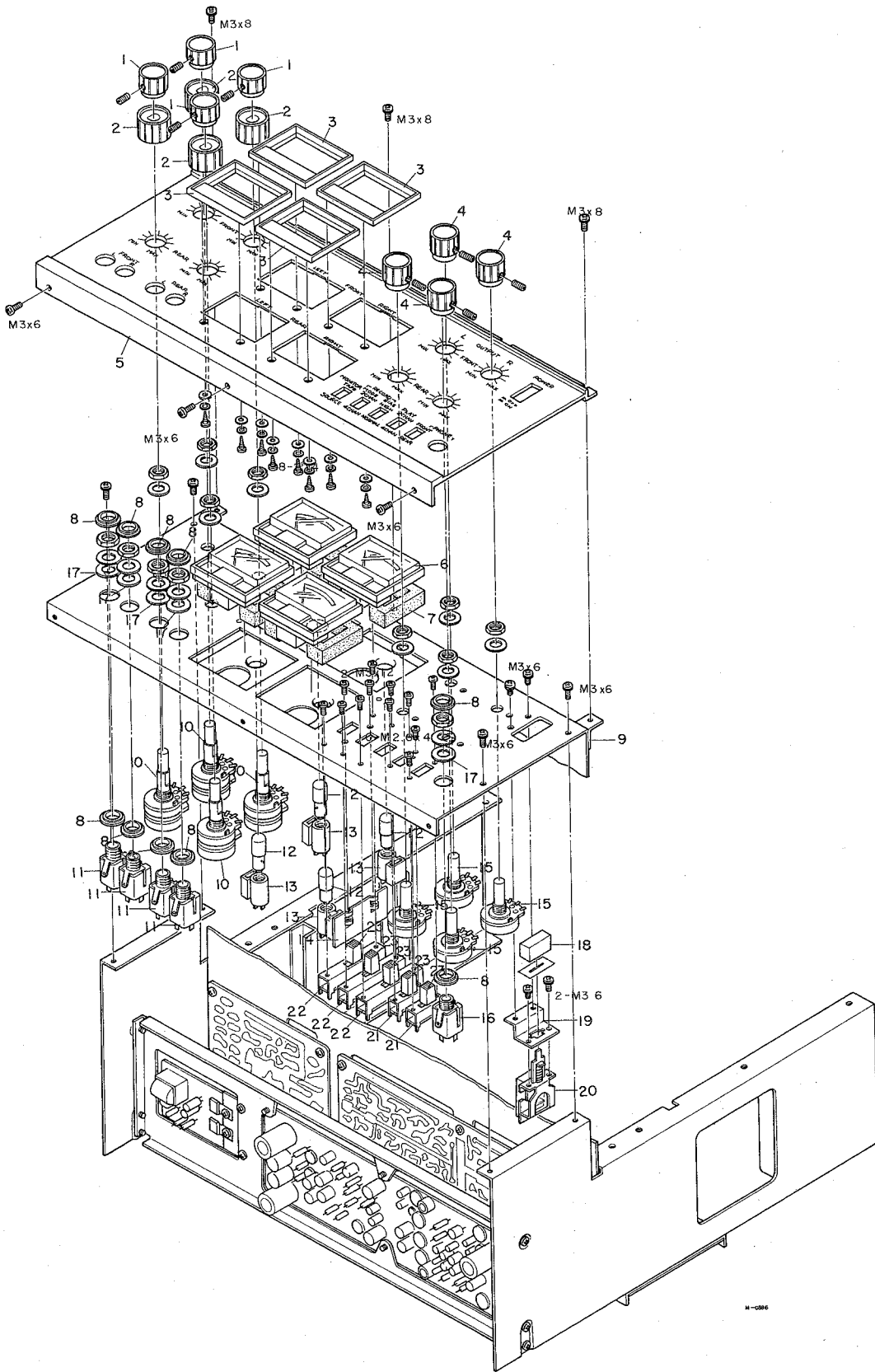


| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|----------------------------|----------|-----|
| | | | 1st | 2nd |
| 7- 1 | 50490821 | Take-up Pulley Assy, Left | | |
| 7- 2 | 50840393 | Take-up Pulley Assy, Right | | |
| 7- 3 | 50840360 | Spring, Quik-Lok | | |
| 7- 4 | 50840351 | Tip, Reel Holder Shaft | | |
| 7- 5 | 50840371 | Mat, Reel Table | | |

NOTE:

The Take-up Pulley is assembled with very accurate adjustments performed during the assembly process. We no longer list the individual pieces because separate replacement of them would be meaningless. Therefore, we ask you to order the entire assembly for replacement. An exception to the above is made in the case of Reel Table Mat, Reel Holder Shaft Tip and Spring.

PREAMPLIFIER CHASSIS-1



M-C866

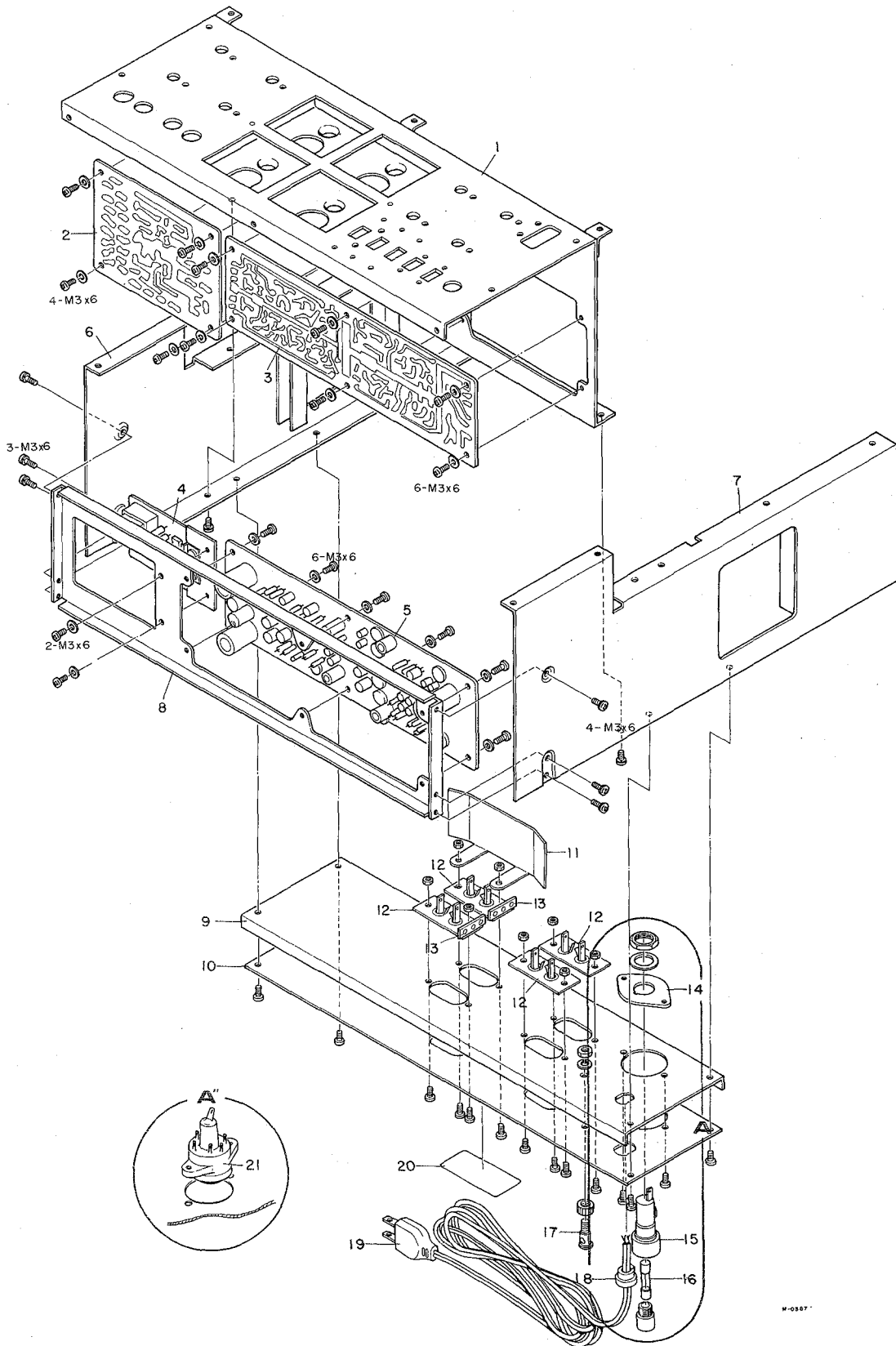
PREAMPLIFIER CHASSIS-1

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|---|----------|-----|
| | | | 1st | 2nd |
| 8- 1 | 50253300 | Knob, Upper | | |
| 8- 2 | 50253400 | Knob, Lower | | |
| 8- 3 | 50829591 | Escutcheon VU Meter | | |
| 8- 4 | 50253810 | Knob, Output | | |
| 8- 5 | 50117290 | Trim Panel, Ampl. | | |
| 8- 6 | 50581331 | VU Meter | | |
| 8- 7 | 50331950 | Cushion, VU Meter | | |
| 8- 8 | 50272610 | Insulator Washer, A | | |
| 8- 9 | 50236820 | Ampl. Chassis A Assy | | |
| 8-10 | 50535160 | Potentiometer, 2-Gang, (Outer Shaft 100k Ω , Inner Shaft 10k Ω) | | |
| 8-11 | 50430230 | Jack, Phone, Single | | |
| 8-12 | 50414510 | Lamp, 8V, Bayonet Type | | |
| 8-13 | 50415250 | Socket, 8V, Lamp | | |
| 8-14 | 50236920 | Shield Plate, Switch | | |
| 8-15 | 50535170 | Potentiometer, Single 50k Ω A | | |
| 8-16 | 50432440 | Jack, Phone, 3 cond. | | |
| 8-17 | 50230560 | Washer, Fiber | | |
| 8-18 | 50253530 | Push Button | | |
| 8-19 | 50235461 | Plate, Push Switch | | |
| 8-20 | 50443210 | Switch, Push | | |
| 8-21 | 50440000 | Switch, Slide | | |
| 8-22 | 50444460 | Switch, Slide | | |
| 8-23 | 50279991 | Cap, Slide Switch | | |

EXPLODED VIEW 9

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PREAMPLIFIER CHASSIS-2



M-0387

PREAMPLIFIER CHASSIS-2

| REF. NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|----------|----------------|---------------------------------------|----------|-----|
| | | | 1st | 2nd |
| 9- 1 | 50236820 | Ampl. Chassis A Assy | | |
| 9- 2 | 50490751 | PC Board Assy, Bias Adjust | | |
| 9- 3 | 50490761 | PC Board Assy, REC/PB Ampl. (Front) | | |
| 9- 4 | 50490730 | PC Board Assy, Oscillator | | |
| 9- 5 | 50490761 | PC Board Assy, REC/PB Ampl. (Rear) | | |
| 9- 6 | 50236870 | Side Panel L Assy | | |
| 9- 7 | 50236880 | Side Panel R Assy | | |
| 9- 8 | 50236860 | Chassis, Ampl., B | | |
| 9- 9 | 50236930 | Panel, Rear | | |
| 9-10 | 50266590 | Trim Panel, Rear | | |
| 9-11 | 50332150 | Shield Plate | | |
| 9-12 | 50434631 | Jack, Pin, 2P | | |
| 9-13 | 50452170 | Terminal Strip | | |
| 9-14 | 50419010 | Fuse Post Adaptor (DM only) | | |
| 9-15 | 50924500 | Fuse Holder (DM only) | | |
| 9-16 | 50411140 | Fuse, 2A | | |
| 9-17 | 50454071 | Post, Ground Terminal | | |
| 9-18 | 50271670 | Grommet, AC Cord | | |
| 9-19 | 50471652 | Cord, AC | | |
| 9-20 | 50266601 | Identification Plate | | |
| 9-21 | 50412143 | Voltage Selector, with Fuse (EX only) | | |

PRINTED CIRCUIT BOARD AND PARTS LIST

A-1340

REPLACEMENT INFORMATION

Replacement parts are available through your nearest TEAC dealer or directly from the TEAC office.

Changes are constantly being made to make TEAC products better and more reliable.

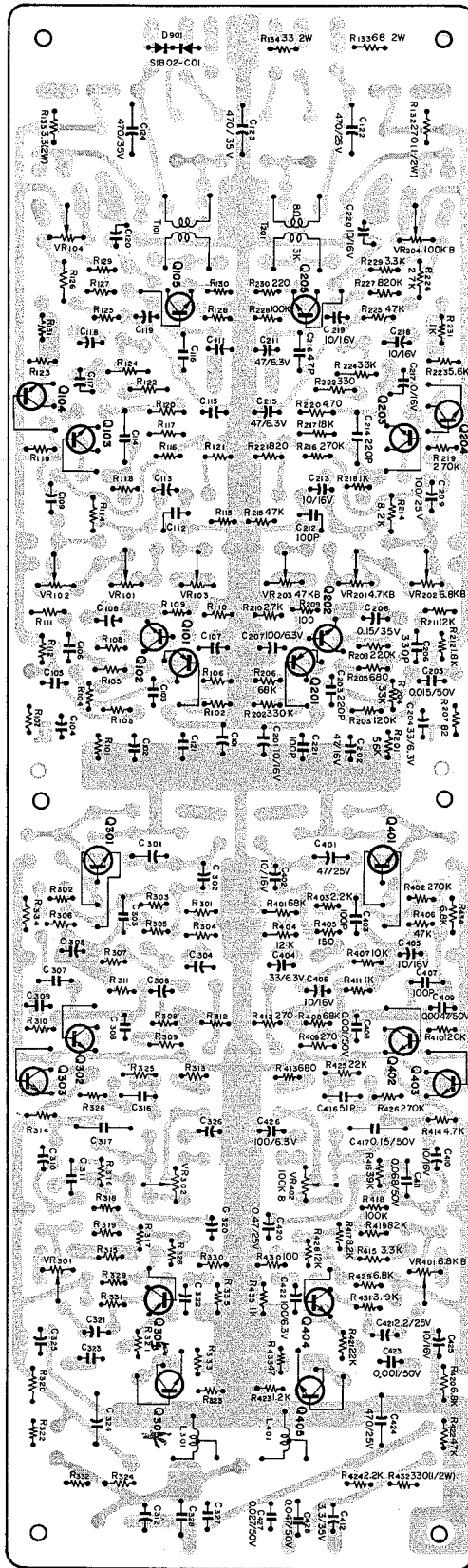
Therefore, when ordering parts, always include the following information:

| <i>MODEL</i> | <i>SERIAL NO.</i> | <i>REF.NO.</i> | <i>PARTS NO.</i> | <i>DESCRIPTION</i> |
|--------------|-------------------|----------------|------------------|--------------------|
|--------------|-------------------|----------------|------------------|--------------------|

TEAC CORPORATION

MT1340E100

RECORD / PLAYBACK AMPLIFIER



H-10403

RECORD / PLAYBACK AMPLIFIER

NOTE:

PC Board Assy for the REAR channels have components identical to the FRONT channels. Reference numbers have only the first digit changed to match the schematics. Therefore, we are listing only the FRONT channel reference numbers.

| CIRCUIT REF.NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|---|-------------------|-----------------------------|----------|-----|
| | | | 1st | 2nd |
| | 50490761 | PC Board Assy, REC/PB Ampl. | | |
| | 50483670 | PC Board, REC/PB Ampl. | | |
| SILICON TRANSISTORS | | | | |
| Q101/201 | 50424280 | 2SA666-I(T) | | |
| Q102/202 | 50423770 | 2SC644(T) | | |
| Q103/203 | 50423770 | 2SC644(T) | | |
| Q104/204 | 50424230 | 2SC828(T) | | |
| Q105/205 | 50424220 | 2SC828(S) or | | |
| | 50424230 | 2SC828(T) | | |
| Q301/401 | 50423770 | 2SC644(T) | | |
| Q302/402 | 50423770 | 2SC644(T) | | |
| Q303/403 | 50424230 | 2SC828(T) | | |
| Q304/404 | 50423620 | 2SC828(R) or | | |
| | 50424220 | 2SC828(S) | | |
| Q305/405 | 50424230 | 2SC828(T) | | |
| DIODE | | | | |
| Se101 | 50422260 | Silicon Stack SIB02-C01 | | |
| CARBON RESISTORS | | | | |
| <i>ALL RESISTORS IN OHMS, 10% TOLERANCE, 1/4 WATTS AND FIXED CARBON FILM TYPE UNLESS OTHERWISE NOTED.</i> | | | | |
| R101/201 | 50515610 | 56k | | |
| R102/202 | 50515710 | 330k | | |
| R103/203 | 50515650 | 120k | | |
| R104/204 | 50515570 | 33k | | |
| R105/205 | 50515320 | 680 | | |
| R106/206 | 50515620 | 68k | | |
| R107/207 | 50515630 | 82k | | |
| R108/208 | 50515680 | 220k | | |
| R109/209 | 50515220 | 100 | | |
| R110/210 | 50515400 | 2.7k | | |
| R111/211 | 50515500 | 12k | | |
| R112/212 | 50515370 | 1.8k | | |

PARTS LIST

A-1340

RECORD/PLAYBACK AMPLIFIER (CONTINUED)

| CIRCUIT REF.NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|--------------------|-------------------|-------------------|----------|-----|
| | | | 1st | 2nd |
| R114/214 | 50515480 | 8.2k | | |
| R115/215 | 50515590 | 47k | | |
| R116/216 | 50515700 | 270k | | |
| R117/217 | 50515520 | 18k | | |
| R118/218 | 50515340 | 1k | | |
| R119/219 | 50515700 | 270k | | |
| R120/220 | 50515300 | 470 | | |
| R121/221 | 50515330 | 820 | | |
| R122/222 | 50515280 | 330 | | |
| R123/223 | 50515460 | 5.6k | | |
| R124/224 | 50515570 | 33k | | |
| R125/225 | 50515590 | 47k | | |
| R126/226 | 50515560 | 27k | | |
| R127/227 | 50515770 | 820k | | |
| R128/228 | 50515640 | 100k | | |
| R129/229 | 50515410 | 3.3k | | |
| R130/230 | 50515260 | 220 | | |
| R131/231 | 50515340 | 1k | | |
| R132/232 | 50515270 | 270 | | |
| R133 | 50525770 | 68 2W | | |
| R134 | 50526050 | Wire Wound 33 2W | | |
| R135 | 50525440 | Wire Wound 3.3 1W | | |
| R301/401 | 50515620 | 68k | | |
| R302/402 | 50515700 | 270k | | |
| R303/403 | 50515380 | 2.2k | | |
| R304/404 | 50515500 | 12k | | |
| R305/405 | 50515240 | 150 | | |
| R306/406 | 50515590 | 47k | | |
| R307/407 | 50515490 | 10k | | |
| R308/408 | 50515620 | 68k | | |
| R309/409 | 50515270 | 270 | | |
| R310/410 | 50515650 | 120k | | |
| R311/411 | 50515340 | 1k | | |
| R312/412 | 50515270 | 270 | | |
| R313/413 | 50515320 | 680 | | |
| R314/414 | 50515440 | 4.7k | | |
| R315/415 | 50515410 | 3.3k | | |
| R316/416 | 50515580 | 39k | | |
| R317/417 | 50515480 | 8.2k | | |
| R318/418 | 50515640 | 100k | | |
| R319/419 | 50515480 | 8.2k | | |
| R320/420 | 50515470 | 6.8k | | |
| R321/421 | 50515540 | 22k | | |
| R322/422 | 50515590 | 47k | | |
| R323/423 | 50515350 | 1.2k | | |
| R324/424 | 50515380 | 2.2k | | |
| R325/425 | 50515540 | 22k | | |
| R326/426 | 50515700 | 270k | | |

RECORD / PLAYBACK AMPLIFIER (CONTINUED)

| CIRCUIT REF.NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|---|-------------------|--|----------|-----|
| | | | 1st | 2nd |
| R328/428 | 50515500 | 12k | | |
| R329/429 | 50515470 | 6.8k | | |
| R330/430 | 50515220 | 100 | | |
| R331/431 | 50515430 | 3.9k | | |
| R332/432 | 50516280 | 330 1/2W | | |
| R333/433 | 50515170 | 47 | | |
| R334/434 | 50515640 | 100k | | |
| R335/435 | 50515340 | 1k | | |
| R532 | 50516310 | 560 (Rear Channels only) | | |
| TRIMMER RESISTORS | | | | |
| VR101/201 | 50533520 | 4.7k Ω B | | |
| VR102/202 | 50533580 | 6.8k Ω B | | |
| VR103/203 | 50533520 | 47k Ω B | | |
| VR104/204 | 50533440 | 100k Ω A | | |
| VR301/401 | 50533580 | 6.8k Ω B | | |
| VR302/402 | 50533440 | 100k Ω B | | |
| VR501/502 | | 50k Ω (Rear Channel VR503/504) | | |
| VR905/906 | 50533580 | 10k Ω A (Rear Channel VR907/908) | | |
| VR909/910 | 50533440 | 100k Ω A (Rear Channel VR911/912) | | |
| CAPACITORS | | | | |
| <i>ALL CAPACITORS IN MICRO FARADS UNLESS OTHERWISE NOTED.</i> | | | | |
| C101/201 | 50554050 | Elec. 10 16V | | |
| C102/202 | 50554010 | Elec. 47 6.3V | | |
| C103/203 | 50543650 | Polyst. 220pF 50V | | |
| C104/204 | 50554240 | Elec. 33 6.3V | | |
| C105/205 | 50548870 | Mylar 0.015 50V | | |
| C106/206 | 50543670 | Polyst. 330pF 50V | | |
| C107/207 | 50554230 | Elec. 100 6.3V | | |
| C108/208 | 50546650 | Dipped Tantalum 0.15 35V | | |
| C109/209 | 50554170 | Elec. 100 25V | | |
| C110/210 | | | | |
| C111/211 | 50554010 | Elec. 47 6.3V | | |
| C112/212 | 50543610 | Polyst. 100pF 50V | | |
| C113/213 | 50554050 | Elec. 10 16V | | |
| C114/214 | 50543650 | Polyst. 220pF 50V | | |
| C115/215 | 50554010 | Elec. 47 6.3V | | |
| C116/216 | 50544110 | Mica 47pF 50V | | |
| C117/217 | 50554050 | Elec. 10 16V | | |
| C118/218 | 50554050 | Elec. 10 16V | | |
| C119/219 | 50554050 | Elec. 10 16V | | |

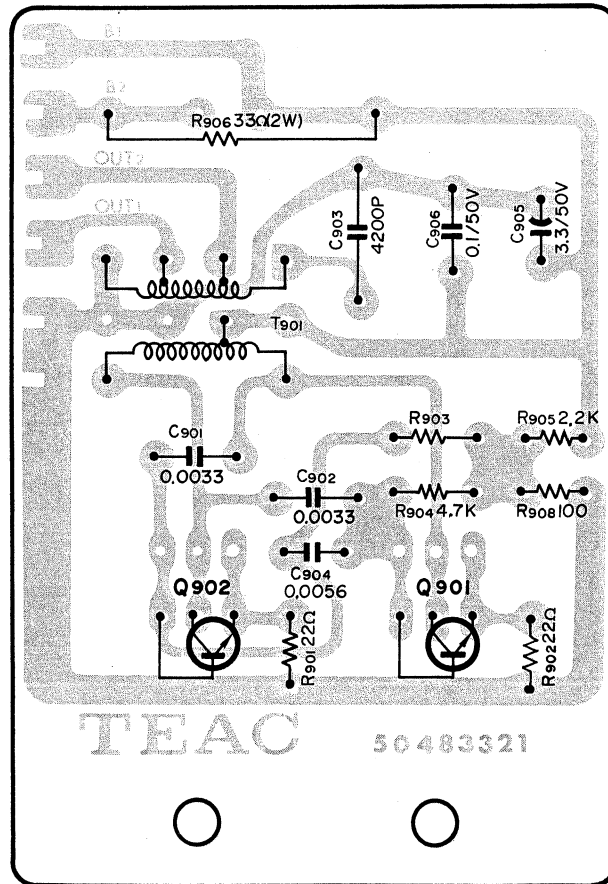
PARTS LIST

A-1340

RECORD/PLAYBACK AMPLIFIER (CONTINUED)

| CIRCUIT REF.NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|--------------------|-------------------|---|----------|-----|
| | | | 1st | 2nd |
| C120/220 | 50554050 | Elec. 10 16V | | |
| C121/221 | 50543610 | Polyst. 100pF 50V | | |
| C122/222 | 50554420 | Elec. 470 25V | | |
| C123/223 | 50554620 | Elec. 470 35V | | |
| C124/224 | 50554620 | Elec. 470 35V | | |
| C301/401 | 50554490 | Elec. 47 25V | | |
| C302/304 | 50554050 | Elec. 10 16V | | |
| C303/403 | 50543410 | High Q 100pF 50V | | |
| C304/404 | 50554240 | Elec. 33 6.3V | | |
| C305/405 | 50554050 | Elec. 10 16V | | |
| C306/406 | 50554050 | Elec. 10 16V | | |
| C307/407 | | 1000pF 50V | | |
| C308/408 | 50548320 | Mylar 0.001 50V | | |
| C309/409 | 50548130 | Mylar 0.0047 50V | | |
| C310/410 | 50554050 | Elec. 10 16V | | |
| C311/411 | 50549510 | Mylar 0.068 50V | | |
| C312/412 | 50546631 | Dipped Tantalum 3.3 35V | | |
| C316/416 | | 51pF 50V | | |
| C317/417 | 50548310 | Mylar 0.15 50V | | |
| C320/420 | 50549650 | Elec. 0.47 16V | | |
| C321/421 | 50554940 | Elec. 2.2 25V | | |
| C322/422 | 50554230 | Elec. 100 6.3V | | |
| C323/423 | 50548320 | Mylar 0.001 50V | | |
| C324/424 | 50554420 | Elec. 470 25V | | |
| C325/425 | 50554050 | Elec. 10 16V | | |
| C326/426 | 50554230 | Elec. 100 6.3V | | |
| C327/427 | 50548330 | Mylar 0.027 50V | | |
| C328/428 | 50548270 | Mylar 0.047 50V | | |
| C522 | 50554420 | Elec. 470 25V (Rear Channels only) | | |
| T101/201 | 50562141 | Transformer, Output $3k\Omega:8\Omega$ | | |
| | 50566370 | Coil, 2.4~4.2mH Record Record Compensation | | |

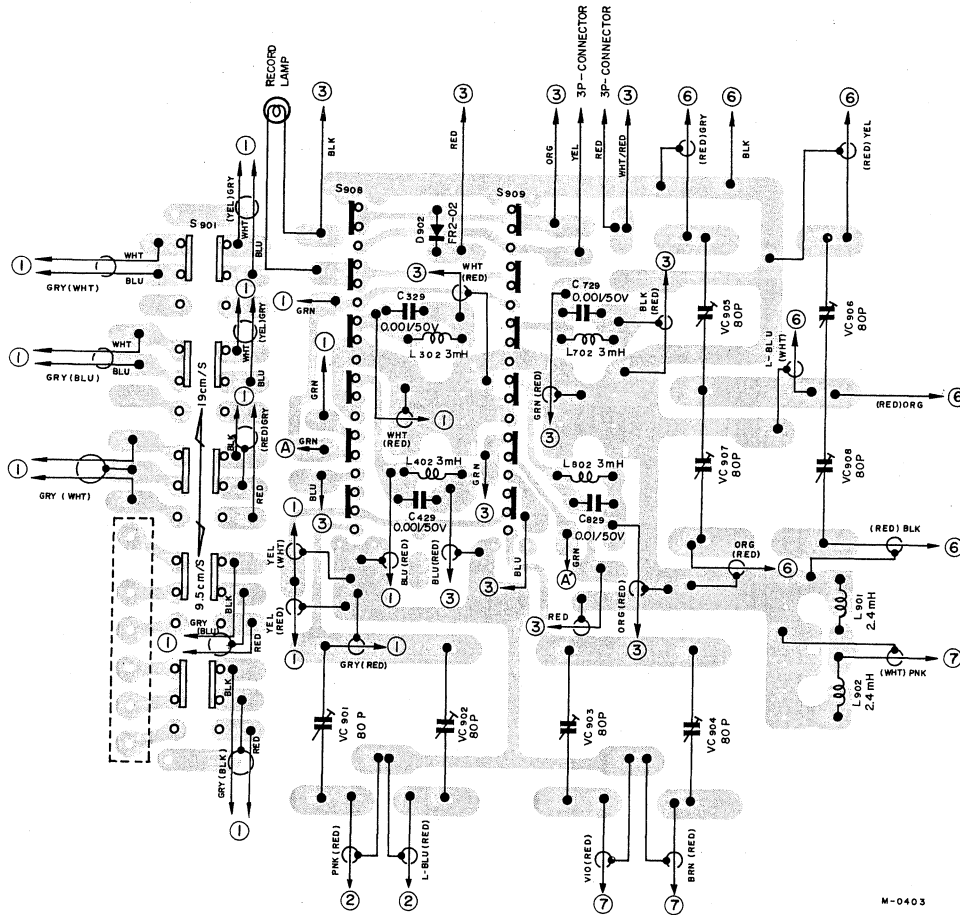
BIAS OSCILLATOR



M-0275-1

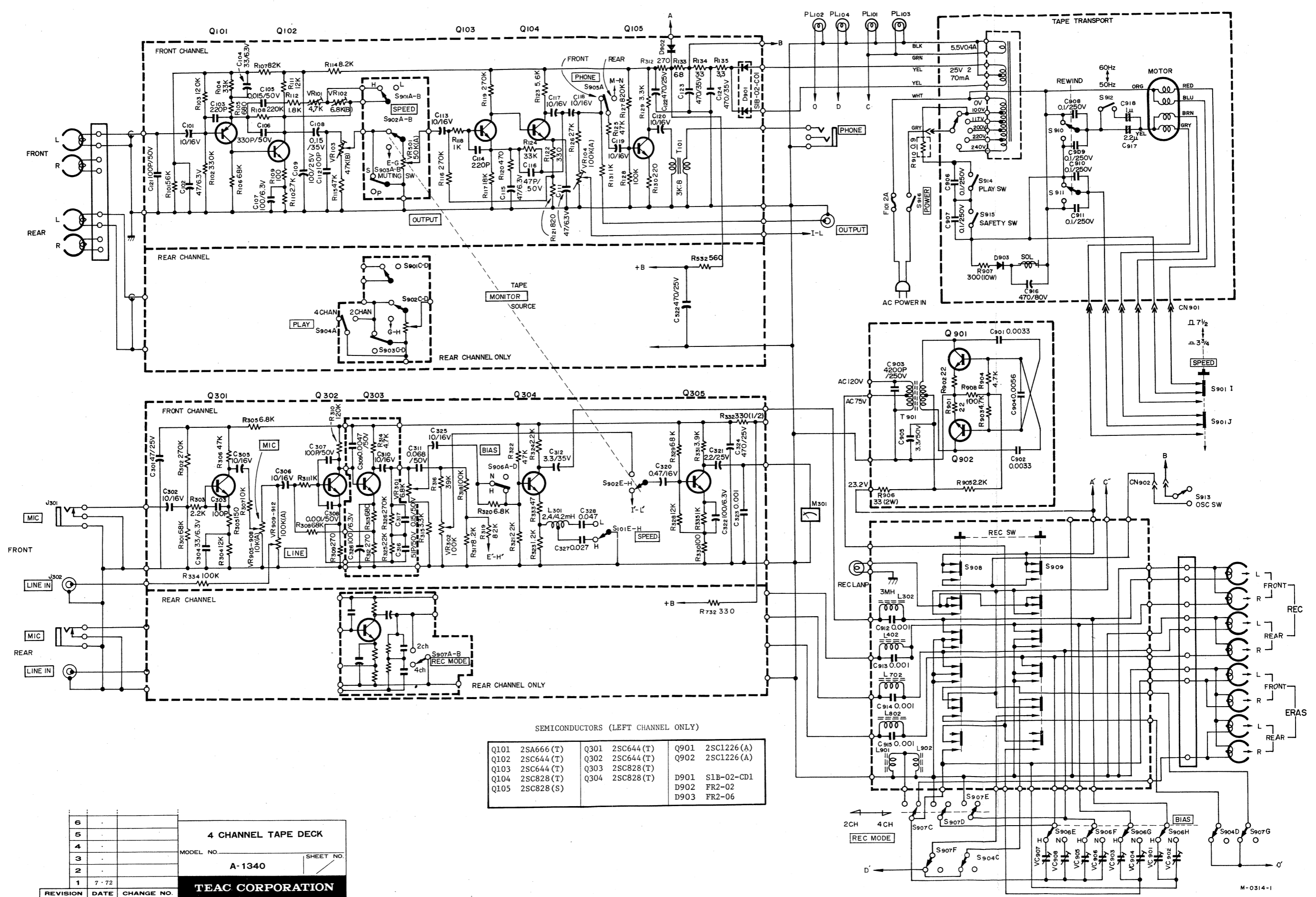
| CIRCUIT REF.NO. | TEAC PARTS NO. | DESCRIPTION | REVISION | |
|-----------------|----------------|-----------------------------------|----------|-----|
| | | | 1st | 2nd |
| | 50490730 | PC Board Assy, Oscillator | | |
| | 50483321 | PC Board, Oscillator | | |
| T901 | 50563280 | Coil, Oscillator | | |
| Q901·902 | 50424450 | Transistor, 2SC1226A-R | | |
| C901·902 | 50548810 | Capacitor, Mylar 0.0033μF | | |
| C903 | 50544040 | Capacitor, Mica 4200pF 250V | | |
| C904 | 50548920 | Capacitor, Mylar 0.0056μF | | |
| C905 | 50555000 | Capacitor, Elec. 3.3μF 35V | | |
| R901·902 | | Resistor, Carbon 22Ω 1/4W | | |
| R903·904 | 50516440 | Resistor, Carbon 4.7kΩ 1/4W | | |
| R905 | 50515380 | Resistor, Carbon 2.2kΩ 1/4W | | |
| R906 | 50527070 | Resistor, Metal Oxide Film 33Ω 1W | | |
| R908 | 50515220 | Resistor, Carbon 100Ω | | |

BIAS ADJUST ASSY



M-0403

| | | | REVISION | |
|-----------------|----------------|------------------------------|----------|-----|
| CIRCUIT REF.NO. | TEAC PARTS NO. | DESCRIPTION | 1st | 2nd |
| | 50490751 | PC Board Assy, Bias Adjust | | |
| | 50483960 | PC Board, Bias Adjust | | |
| L302-402 | 50566300 | Coil, Trap 3mH | | |
| L702-802 | | | | |
| L901-902 | 50566620 | Coil, Dummy 2.4mH | | |
| | 50444540 | Switch, Slide (6PDT), ×2 | | |
| | 50444550 | Switch, Slide (10PDT), ×1 | | |
| VC901~908 | 50547070 | Trimmer Capacitor, 80pF | | |
| C912~915 | 50547600 | Capacitor, Mylar 0.001μF 50V | | |
| | 50422340 | Diode, Silicon FR2-02 | | |
| CN102 | 50436400 | Plug, Miniature 6P | | |
| | 50414310 | Lamp, Pilot | | |



SEMICONDUCTORS (LEFT CHANNEL ONLY)

| | | | | | |
|------|------------|------|------------|------|-------------|
| Q101 | 2SA666 (T) | Q301 | 2SC644 (T) | Q901 | 2SC1226 (A) |
| Q102 | 2SC644 (T) | Q302 | 2SC644 (T) | Q902 | 2SC1226 (A) |
| Q103 | 2SC644 (T) | Q303 | 2SC828 (T) | | |
| Q104 | 2SC828 (T) | Q304 | 2SC828 (T) | D901 | S1B-02-CD1 |
| Q105 | 2SC828 (S) | | | D902 | FR2-02 |
| | | | | D903 | FR2-06 |

| | | | |
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4 CHANNEL TAPE DECK
MODEL NO. A-1340
SHEET NO. _____

TEAC CORPORATION

REVISION DATE CHANGE NO.