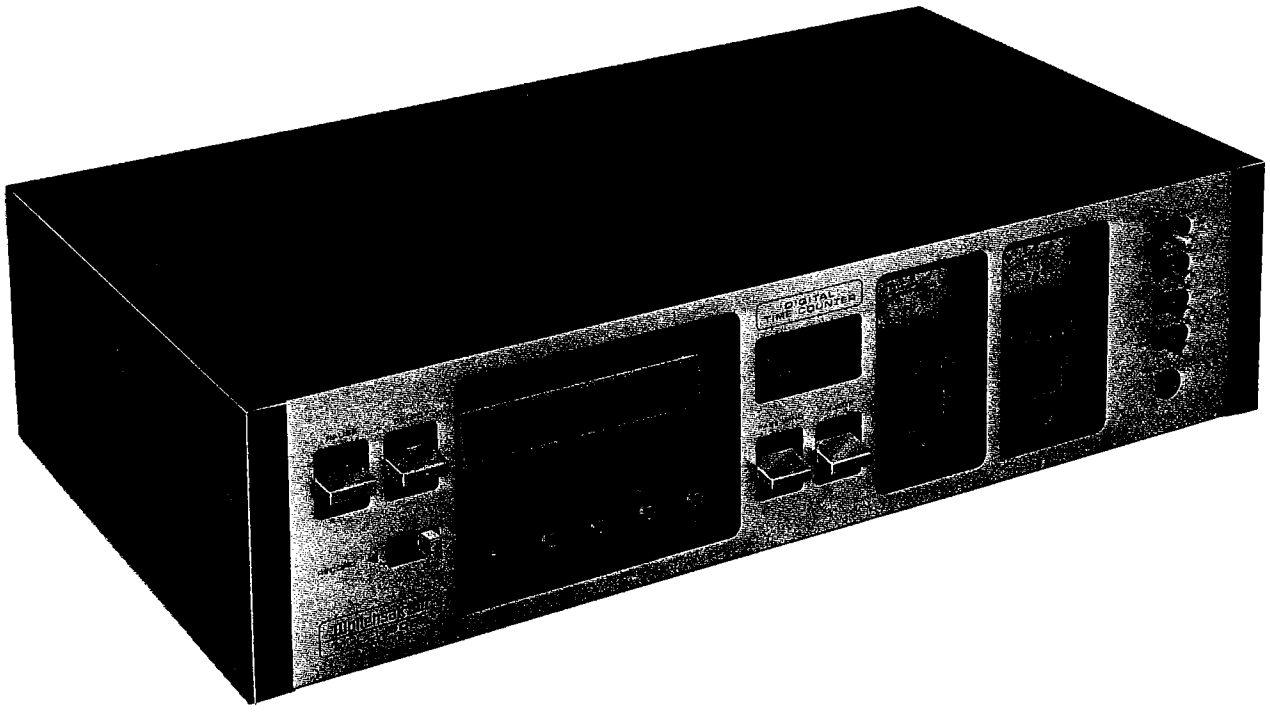
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SERVICE MANUAL

Wollensak

MODELS 8055 AND 8056

8-TRACK CARTRIDGE RECORD/PLAY BACK DECK



Mincom Division 3M COMPANY

Manual No. 81-35319600-9 Issue 2

Price $3.00

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Note: Serial number breakoff between Model 8055 Lots A and B are as follows:

Lot A – Serial number 80552000 up to 80554999
Lot B – Serial number 80555000 and above

SECTION I. GENERAL

1.1 SPECIFICATIONS

Speed	3-3/4 ips (9.5 cm per/sec)
Wow and Flutter	0.1% WTD RMS
Track System	1/4 inch standard 8-track, 2 channel stereo
Fast Wind Time	3.5 times 3 minutes for 40 minute cartridge 6 minutes for 80 minute cartridge
Frequency Response	30-15 kHz ±3 db with Scotch special high performance tape. 8056 3-12 kHz ±3 db with standard tape. 8055, 8056
Signal to Noise	Better than 50 db
Distortion	Less than 1% at 1000 Hz 0 VU
Line Output	1 volt from a 0 VU tape level
Headphone Output	Stereo either high or low impedance
Microphone Input	0.25 mV
Input Sensitivity	Microphone – 0.25 mV and will accept a low impedance 500 ohm microphone. Auxiliary input 80 mV with 50K ohm impedance.
Tape Erasure	Better than 70 db
Track to Track Crosstalk	Better than 65 db
Stereo Channel Separation	Better than 40 db at 1 kHz
Recording System	High frequency bias and erase
Power Requirements	120 volts 60 Hz 15 watts
Size	17-3/8" x 4-7/8" x 10-1/2" (44.1 cm x 12.4 cm x 26.7 cm)
Weight	15 lbs (6.8 kg)
Safety	Underwriters Laboratories Commerical Approval

IMPORTANT NOTICE TO PURCHASER

The following is made in lieu of all warranties, express or implied:

Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith.

No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

1.2 EQUIPMENT DESCRIPTION

1.2.1 Introduction

Your Wollensak® 8055 and 8056 8-Track Cartridge Recorder Deck adds new flexibility to any sound system. It provides high fidelity playback of pre-recorded 8-track cartridges, plus full fidelity recording of 8-track cartridges for playback through the 8055/8056 and any 8-track player, such as car tape players.

Beautifully styled and with advanced engineering features, the 8055/8056 is extremely simple to operate. Insert cartridge to turn on and begin playing. Eject cartridge to stop playing and turn unit off. Auto eject logic circuitry allows you to play one track and eject, or all tracks in sequence and eject, or to continue playing one track or all tracks in sequence. An Automatic Recording Level circuit provides for high-quality, distortion-free recording without the necessity of volume adjustments. A locking pause control allows you to preset recording levels without transporting tape, a helpful aid in instant cueing during recording. Rapid advancement of the tape to any point is possible with the FAST WIND control.

The 8055/8056 will operate through any standard stereo receiver or amplifier, as well as most "compact" and "console" hi-fi systems. It will record from any sound source, including microphones for "live" recording.

One additional outstanding feature on the 8056 is the new Tape Switch incorporated into this unit. The addition of the switch allows the operator the choice between using regular 8-track tape or the new Special Scotch® Classic High Performance Tape.

Designed for ease of operation and long, trouble-free performance, the Wollensak 8-track provides the fidelity of tape and the convenience of 8-track cartridges for almost any home or office music system. For the utmost enjoyment of the recorder and to gain a full understanding of its operating principles, we suggest you read the Operating Instructions thoroughly to fully familiarize yourself with its capabilities.

1.2.2 Features

● RECORDS/PLAYS 8-TRACK STEREO CARTRIDGES ● AUTOMATIC ON/OFF ● AUTO EJECT AFTER PLAYING ONE TRACK OR ALL TRACKS ● AUTOMATIC RECORDING LEVEL CONTROL (DEFEATABLE) ● FAST FORWARD ● PAUSE CONTROL ● DUAL VU METERS ● DUAL SLIDER RECORDING LEVEL CONTROLS ● PROGRAM INDICATOR LIGHTS ● HEADPHONE MONITORING ● PLAYS THROUGH ANY SOUND SYSTEM ● RECORDS FROM ANY SOUND SOURCE ● WALNUT CABINET ● AC OUTLET ● TIME COUNTER ● TAPE EQUALIZATION SWITCH – 8056

1.2.3 Operating Controls (See Figure 1.1)

(1) *AUTO EJECT SWITCH.* During PLAY mode, controls automatic eject function interdependent with REPEAT switch. In RECORD mode, the AUTO EJECT switch is inoperative and the setting of the REPEAT switch causes the cartridge to eject automatically after recording one or all tracks. (See Figure 3.1.)

PLAY mode logic is as follows:

a. AUTO EJECT ON – REPEAT ONE: Plays selected track, then ejects.

b. AUTO EJECT ON – REPEAT ALL: Plays tracks 1 through 4 in sequence, then ejects.

c. AUTO EJECT OFF – REPEAT ONE: Plays selected track only, replaying track continuously until cartridge is manually ejected.

d. AUTO EJECT OFF – REPEAT ALL: Plays all 4-tracks in sequence, replaying 1 through 4 in sequence continuously until cartridge is manually ejected.

In FAST WIND operation, if REPEAT switch is on ONE, cartridge will eject at end of track; if REPEAT switch is on ALL, cartridge will not eject until after the 4th track. If AUTO EJECT is off, FAST WIND will continue until lever is pushed up.

(2) *REPEAT SWITCH.* During PLAY mode operates interdependently with AUTO EJECT switch to provide for continuous play of one or all tracks, or automatic ejection after one or all tracks. Play logic is the same as described in 1.2.3, 1 AUTO EJECT switch. In RECORD mode, position of AUTO EJECT switch has no effect on operating logic. With REPEAT switch on ONE, the cartridge will record the selected track then eject. With REPEAT switch in ALL mode, the cartridge will record tracks 1 thru 4 in sequence then eject. (See Figure 3.1.) However in switching from track to track there will be a track switch click and a loss of signal.

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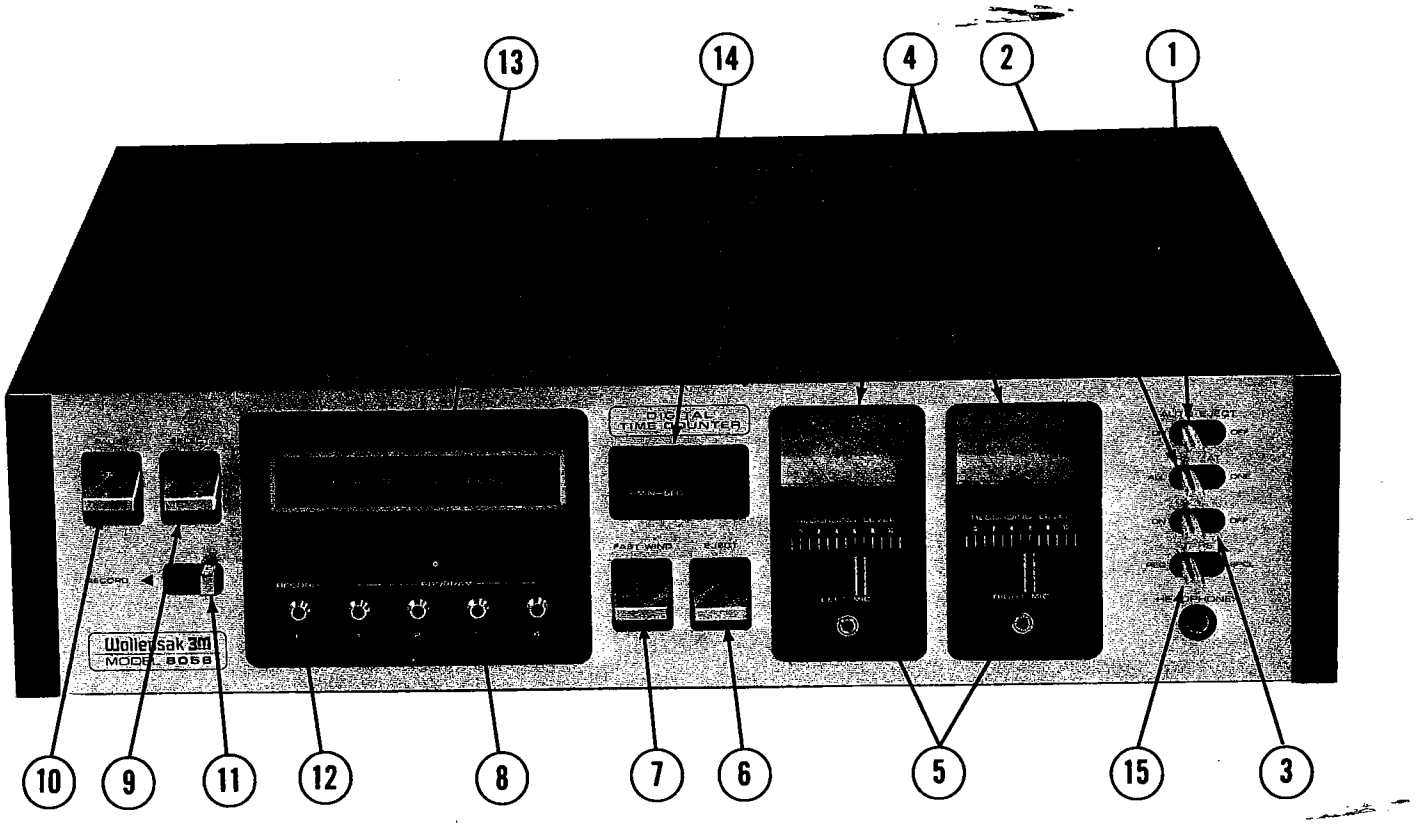


Figure 1.1. Operating Controls

(3) *AUTOMATIC RECORD LEVEL SWITCH.* Controls operation of automatic recording level (ARL) circuit. In OFF position, recording level is adjusted by RECORDING LEVEL controls. In ON position, optimum recording level is automatically set, and RECORDING LEVEL controls have no effect. Circuit is operative only during recording.

(4) *VU METERS.* Separate VU meters for each channel are specially calibrated to assure optimum recording level when not using Automatic Record Level circuit. For best results, adjust controls so that the meter needles just touch the black part of the scale (0 VU) on the loudest sounds being recorded. If the needles swing into the black area too often, the level is too high and the sound will be distorted. Too low a recording level may make it necessary to boost playback level to the point where noise and tape hiss may become objectionable. Meters are always active, indicating relative recording levels or relative tape output during playback.

(5) *RECORDING LEVEL CONTROLS.* Separate sliding controls allow independent setting of each channel's recording level. Controls have no effect on ARL recording or during playback.

(6) *EJECT LEVER.* Push down on lever to eject cartridge during recording or playback. If recording, unit automatically goes out of RECORD mode.

(7) *FAST WIND LEVER.* For rapidly advancing tape during playback; lever will not operate during recording on Lot B only. (See caution below.) During FAST WIND, amplifiers are muted. If AUTO EJECT switch is ON, the cartridge will automatically eject at end of track; if AUTO EJECT switch is off, the cartridge will continue FAST WIND until the lever is pushed up.

CAUTION

The FAST WIND lever on Model 8055 Lot A can be activated while in the RECORD mode. If FAST WIND operation is utilized, any previously recorded signal will be automatically erased. Upon ejection of the cartridge, the FAST WIND lever will remain in the DOWN position. Care should be taken at this time to push the lever back up before reinserting the cartridge.

NOTE

A 40 minute cartridge will fast wind in 4 minutes; an 80 minute cartridge will fast wind in 8 minutes.

(8) *PROGRAM INDICATOR LIGHTS.* Automatically light up to indicate which pair of stereo tracks is being played or recorded.

(9) *SELECT LEVER.* Push lever down to advance tape from track to track during playback. Track switching always operates in sequence: 1 to 2 to 3 to 4 to 1, etc. Lever is inoperative during recording.

(10) *PAUSE CONTROL.* Momentarily stops tape during recording or playback without taking unit out of OPERATING mode. To operate, push lever down until it locks. To release, push up. Pause feature is useful in adjusting recording levels before starting tape, for instant cueing in play, and for accurate cueing at the start of a recording.

(11) *RECORD LEVER.* Activates recording amplifiers, acting as a safety interlock to prevent accidental erasure of previously recorded tapes. To record, move lever to the left and hold while inserting cartridge. This starts recording. Lever will not latch into RECORD mode until a cartridge is inserted.

(12) *RECORD LIGHT.* Lights when unit is in RECORD mode.

(13) *CARTRIDGE SLOT.* Standard 8-track cartridges are inserted here; hinged door retracts. Insert cartridge firmly all the way in, with detent on right side, until it "catches". Cartridge may be removed manually or by pressing EJECT lever.

(14) *TIME COUNTER AND RESET BUTTON.* Measures tape time in minutes and seconds during both play and record operation. Reset to "000" at start of cartridge.

(15) *TAPE SELECTOR.* In the REGULAR position, the unit is equalized for standard tape (Scotch High Output-Low Noise). When using Scotch Low Noise Dynarange, a slight difference in output will be noted. If desired, this unit can be recalibrated for this tape by an authorized serviceman.

In the SPECIAL position, the unit is equalized for the new Scotch Classic 8-track cartridge.

1.2.4 Inputs, Outputs and Miscellaneous Connections (See Figure 1.2)

(16) *MICROPHONE INPUTS.* Front panel jack for microphone connection. Microphone inputs have precedance over Auxiliary inputs. A plugged-in Microphone automatically disconnects that channel's corresponding Auxiliary input. Jacks accept minuture plugs.

(17) *HEADPHONE OUTPUT.* Provides for listening in playback, monitoring during recording. Output is sufficient for any standard low or high impedance stereo headphones. Jack accepts standard 3-conductor phone plug.

(18) *AUXILIARY INPUTS.* Jacks for receiving high-level signals to be recorded. Connect Left and Right Channel inputs to corresponding Channel Tape outputs to the external sound system you are using (stereo receiver, amplifier, tuner, etc.). A microphone connected to the front panel Microphone input jack will automatically disconnect that channel's corresponding Auxiliary input. Jacks accept standard pin plugs.

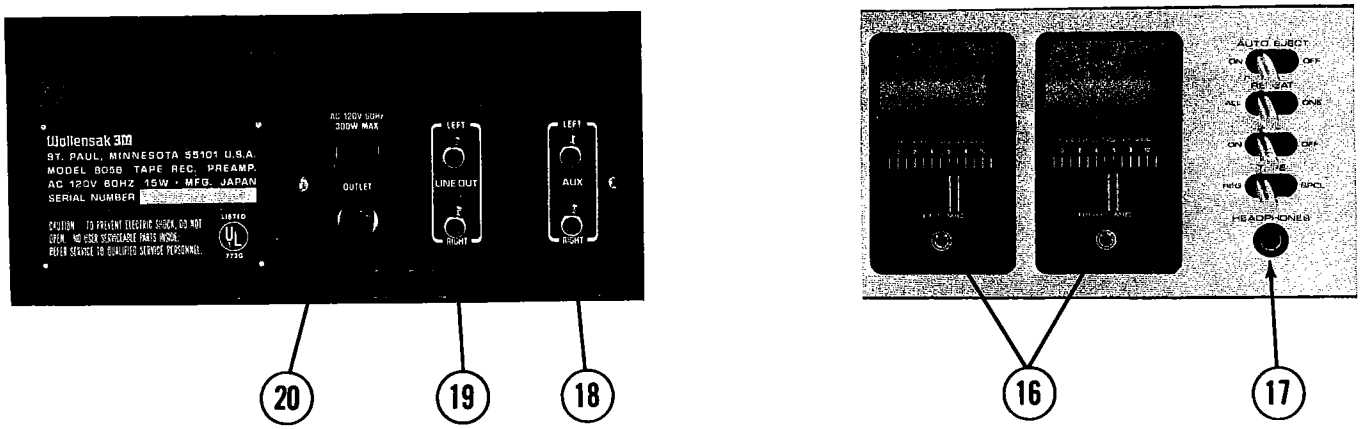


Figure 1.2. Inputs, Outputs and Miscellaneous Connections

(19) *LINE OUTPUT.* Jacks for feeding tape playback signal to external amplifier. Connect Left and Right channel outputs to corresponding channel Tape Monitor or Auxiliary inputs of stereo receiver, amplifier or other stereo system. Jacks accept standard pin plugs.

(20) *AC OUTLET.* Accessory power outlet always "live", whether unit is off or on.

(21) *AC POWER.* Unit has permanently attached AC line cord. Connect only to 120 volts, 60 Hz, AC current.

1.3 ACCESSORIES

Description	Part No.
1. Patch Cord – Black	A196-32

(1) *PATCH CORD – BLACK.* A 4 foot pin to pin black colored cable, for recording from or playback through external amplifiers.

1.4 OPTIONAL ACCESSORIES

Description	Part No.
1. Microphone 2. Microphone Stand	A-0560 A-0489

(1) *MICROPHONE.* Dynamic omnidirectional microphone. 10K ohms impedance.

(2) *MICROPHONE STAND.* Used for supporting the microphone.

1.5 OPERATING INSTRUCTIONS

1.5.1 Preparation for Recording or Playback

1. Plug the AC cord into a 110-120 VAC, 60 Hz outlet.

2. Make sure that the amplifier volume control to the speaker is turned down. Changing connections while the volume control is turned up may cause sound shock that will result in damage to speakers.

3. To connect the 8055/8056 to a stereo system, or to another recorder for recording or playback, connect the patch cords supplied as follows:

   a. Connect two patch cords from the LEFT/RIGHT aux input jacks of the 8055/8056 to corresponding LEFT/RIGHT output terminals (tape, play, aux monitor, etc.) of the external stereo system you are using. When using another recorder, this connection allows recording to be made from that recorder. (See Figure 1.3.)

   b. Connect two patch cords from the LEFT/RIGHT line out jacks of the 8055/8056 to corresponding LEFT/RIGHT input terminal (tape rec, rec, etc.) of the external stereo system you are using. When using another recorder, this connection allows recording to be made from the Model 8055/8056. (See Figure 1.3.)

NOTE

Once recording has begun, be careful not to move the RECORD LEVEL controls; otherwise, the levels recorded will vary accordingly.

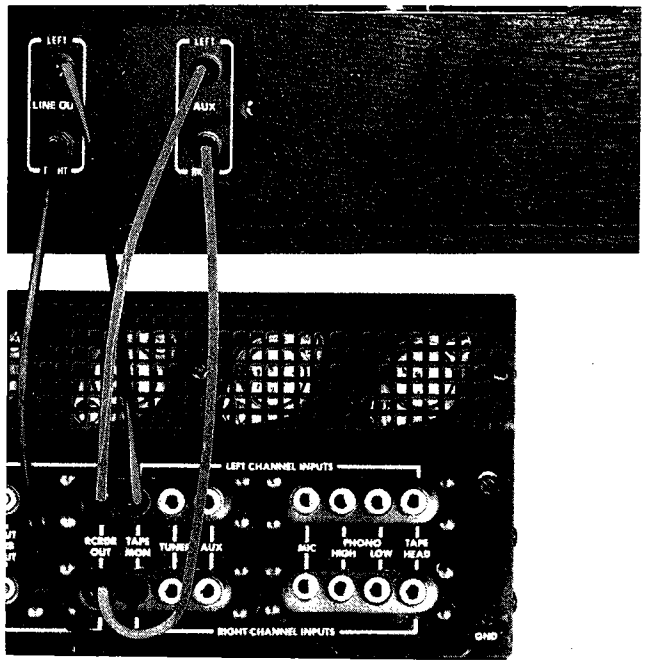


Figure 1.3. External Jack Connections

1.6 RECORDING

1.6.1 Microphone Recording

1. Insert microphone plugs firmly into the Microphone inputs on the front panel. Connections to rear panel Auxiliary inputs may remain, as a connection to the Microphone input automatically disconnects corresponding Auxiliary input.

2. Because of the variable conditions in microphone recording, the following suggestions for general application may be helpful in microphone placement as shown in Figure 1.4. Microphone should be placed a reasonable distance away depending on the volume reaching the microphones. The distance apart is dictated by the span of the sound source.

3. Check cartridge opening to determine if silver sensing tab is visible. If not, switch AUTO EJECT to ON, and repeat to ONE. Insert cartridge and push FAST WIND lever. Cartridge will eject at the beginning of the tape.

4. To record one track only, place REPEAT switch in the ONE position. To record all four tracks consecutively, place REPEAT switch in the ALL position. The cartridge will eject and unit will go out of the RECORD mode automatically upon completion of recording

5. Depress the PAUSE lever. Now set the TIME COUNTER to "000".

6. Slide the RECORD lever to the left and hold while inserting cartridge.

7. Push AUTO EJECT switch to OFF, press SELECT lever to obtain track 1 or other desired track of the cartridge you wish to record on.

> **NOTE**
>
> SELECT lever will not operate unless a cartridge is inserted or when unit is in the RECORD mode.

8. On Model 8056 the TAPE switch should be in REGULAR position except when using the new Scotch high performance tape.

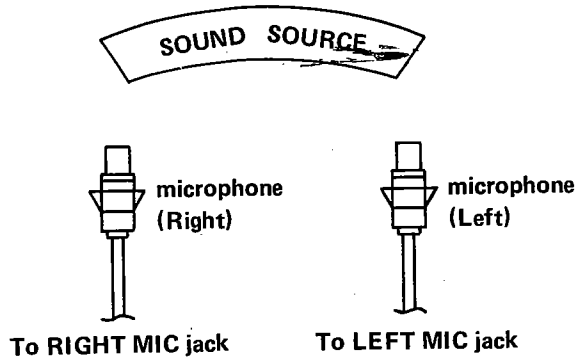


Figure 1.4. Microphone Placement

9. If you wish to record using automatic record level, set the ARL switch to ON. No further volume levels adjustments are necessary. If ARL feature is not desirable as signal is being fed to recorder, adjust the RECORD LEVEL controls so that the VU meters indicate "0" VU.

> **NOTE**
>
> Once recording has begun, be careful not to move the RECORD LEVEL controls; otherwise, the levels recorded will vary accordingly.

Refer to Paragraph 1.8.2 for further explanation.

10. To begin recording, release the PAUSE lever. When finished recording, push the EJECT button. If end of tape is reached while recording, your Model 8055/8056 will stop automatically.

11. If desired, you may monitor while recording through headphones connected to the Headphone output.

1.6.2 Direct Input Recording

1. Connect the Model 8055/8056 to the sound source being used as described in paragraph 1.5.1, 3.

2. Continue with your direct input recording preparation as described in paragraph 1.6.1, starting with step three.

1.7 PLAYBACK

1.7.1 Playback Through External Sound Source

1. Connect the Model 8055/8056 to the sound source being used as described in paragraph 1.5.1, 3.

2. Set AUTO EJECT and REPEAT switches for desired play/eject operation. AUTO EJECT switch ON if you want cartridge to eject after playback, OFF if you want continuous playback; REPEAT switch to ONE if you want to play only one track, to ALL if you want to play all 4 tracks in sequence.

3. Check cartridge opening to determine if silver sensing tab is visible. If not, switch AUTO EJECT to ON and REPEAT to ONE. Insert cartridge and push FAST WIND lever. Cartridge will eject at the beginning of the tape.

4. Press PAUSE lever; then insert cartridge. Press SELECT lever for desired track. Unit is now ready to play. Reset digital time counter to "000" if desired. Push up on PAUSE lever.

5. To stop playback and turn off unit, push EJECT lever to eject cartridge, or remove cartridge manually.

6. Stereo headphones may be connected to the Headphone output jack for private listening. Output jacks remain "live" and program can still be heard through sound system.

1.8 SOUND IDEAS

1.8.1 Optimum Recording Levels

Musical energy content can vary widely at different frequencies. Thus, it is not always desirable to set your recording levels at the same point for all recordings. For the majority of recording, 0 VU on the meters can be considered the maximum permissible level. However, on certain types of music, encompassing extremely wide dynamic ranges, it is best to use a maximum level significantly less than 0 VU to prevent overloading of the tape. Here are some tips to help you determine proper levels.

- A cassette tape overloaded at low and/or midrange frequencies produces a "gargly" sound, as if the tape had "dropouts" or bad flutter.

- A cassette tape overloaded at high frequencies will produce a much duller sound than the original material being recorded. Either case of distortion caused by overload can be solved by lowering the overall recording level.

- The best way to prevent overload is to make a short trial recording of the loudest passages to be recorded, setting your level so that the peak sounds just hit 0 VU.

- If you cannot make a trial recording, and are not sure of the peak levels in the material to be recorded, it is always preferable to underrecord.

1.8.2 Automatic Record Level

Your Wollensak 8055/8056 recorder incorporates an advanced automatic recording level circuit that allows the production of high quality, low distortion recordings without any volume adjustments. With the ARL switch in ON position, the circuit automatically compensates for an extremely wide range of sounds more rapidly and more accurately than you can do manually. The circuit is especially valuable when recording "live", unfamiliar program material, as it assures a satisfactory recording of both the loudest and the softest sounds. When recording material with a preestablished sound level (records, radio programs, etc.) manual volume control may be preferred in order to maintain the full dynamic range of the sound. In this situation, once the recording level is set, do not readjust the RECORDING LEVEL controls.

1.8.3 8-Track Cartridge Recording

8-track stereo cartridges offer the ideal combination of tape fidelity and convenience of use. Housed in a sturdy, protective plastic case is a continuous reel of tape, depending upon length, providing either 40, 80 or 100 minutes of 2-track stereo recording/playback. Each pair of stereo tracks thus provides 10, 20 or 25 minutes of continuous sound, recorded at 3-3/4 inches per second. There is no rewinding or threading required, as the tape is spliced at one point to form the continuous loop. A special sensing tape at the splice point provides for automatic switching from a track to track, in sequence. This allows for up to 100 minutes of continuous play, with only a momentary interruption as the tracks switch, as the end of one track is the beginning of the next track. As no rewinding is required, you can set your 8-track player to continuously repeat the four tracks in sequence until you eject the cartridge.

All 8-track stereo cartridges are recorded at the same speed and in the same track arrangement (see Figure 1.5) so they may be played on any 8-track player. Thus any blank 8-track cartridges recorded on your 8055/8056 will play on any other 8-track unit, such as car tape players, automatically without any adjustment.

1.8.4 Monitoring

Recording may be monitored through stereo headphones connected to the STEREO PHONE output on the front panel.

1.8.5 Automatic Erasure

Whenever recorder is in the RECORD mode, any signal previously recorded on the tape is automatically erased at the point of the tape at which the new recording is made.

1.8.6 Tape Storage

When not in use tape cartridges should be stored in the box supplied, thus protecting the tape from dust, dirt and damage. As there is practically no wear on magnetic tape, your cartridges may be played hundreds of times without loss of quality or fidelity. For optimum results and longevity, tapes should be stored at normal room temperatures, avoiding extremes of heat, cold and humidity.

1.8.7 Tape Protection

With Wollensak's superior design, heads never require demagnetization. They cannot retain permanent magnetism, which would tend to spoil previously recorded tapes.

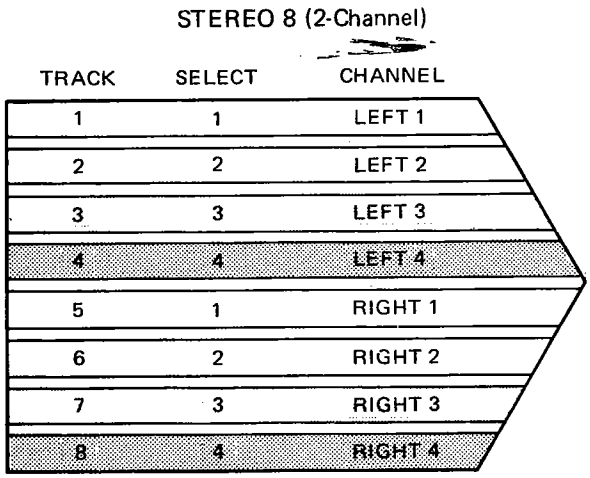


Figure 1.5. Track Location

1.9 SERVICE

The recorder you have purchased, has been carefully engineered and manufactured under Wollensak rigid quality standards, and will give you satisfactory and dependable operation. All moving mechanical levers have been factory pre-lubricated. All electrical circuits use solid state components which have extremely long life and reliability. However, like all electro-mechanical equipment it may occasionally require adjustments or maintenance. Should you ever need technical assistance, contact your Authorized Wollensak Warranty Station or Self-Servicing Consumer Dealer.

SECTION II. PRELIMINARY SERVICE

2.1 ROUTINE CLEANING AND OPERATION

2.1.1 Purpose

Accumulation of tape oxide residue and other foreign material can cause wow and flutter, impaired erasure, reduced volume, and loss of high frequency response. These deposits are found on the tape head, capstan, and tape guides. Perform the cleaning procedures outlined below, after every ten hours of operation, or as determined after frequent visual inspection.

2.1.2 Cleaning Procedures

1. To gain access to the head and capstan, remove the mechanism from the cabinet as described in paragraph 2.4.1.

2. Tape head – Use a soft, clean cloth, or a cotton swab to remove most of the residue from the head. To soften hardened residue, use a cloth or swab, moistened with alcohol or tape head cleaning solution.

CAUTION

1. Do not saturate the cloth or swab, dampening is sufficient. Use only tape head cleaning solution or methyl alcohol. Other volatile solvents can damage the tape head by dissolving the insulating compounds surrounding the head pole piece.

2. Do not touch the head with any magnetized, metallic, or abrasive material. The highly polished pole pieces and delicate tape head can be easily damaged by these materials.

3. Use a room with adequate ventilation when cleaning with volatile liquids.

3. Capstan – Move it by hand, while cleaning it with a cotton swab or cloth dampened with methyl alcohol.

4. Chassis Mechanism – Use only a soft, clean cloth dampened in a cleaning solution to remove grease from belts, rollers, flywheel rims, and other drive parts. To clean sliding bars and lever, it is helpful to use a brush saturated with cleaning solution after the surfaces have been wiped with a cloth. Make sure the surfaces are dry after cleaning is completed. Lubricate the parts which normally require lubrication.

2.2 LUBRICATION

2.2.1 Preparation

Your Wollensak Model 8055/8056 tape recorder is factory lubricated. Additional lubrication is not necessary more often than every six (6) months, or before 500 hours of operation. Before applying additional lubrication, remove excess grease that has moved away from the point of lubrication. This grease picks up dirt and grit, causing excessive wear or binding when not removed.

CAUTION

Use oil and grease sparingly – do not over lubricate. The motor is factory lubricated and designed to operate in excess of 500 hours without lubrication.

2.2.2 Procedure

1. Disassemble the recorder (refer to paragraph 2.4.1). Lubrication is applied as follows:

   a. Apply grease to slide assembly, lever assembly and sliding contact area of other parts.

   b. Reapply Lubriplate or equivalent sparingly to areas where factory applied lubrication was removed in cleaning.

   c. Never apply lightweight machine oil to Oilite bearings. If oil is ever applied to these bearings use SAE 20.

2.3 PRELIMINARY TESTS

2.3.1 Introduction

1. Verify that recorder is not operating correctly by attempting to operate equipment as described in Section I.

2. Check the power line cord for defects.

3. See that accessory equipment, such as the microphone and connecting cables are not defective.

2.3.2 Preliminary Test Procedures

1. Insert a pre-recorded cartridge of known quality into the machine.

2. Play the pre-recorded tape.

   a. How is the reproduction quality?

   b. Are there any mechanical noises from the tape mechanism?

   c. Inspect the tape and tape path.

      1) Is the tape moving smoothly over the head at a constant speed?

      2) Is there abnormal slack in the tape?

3. Remove the pre-recorded cartridge and insert a cartridge of blank tape to make a microphone recording. Use a microphone known to be good. Play the recording when finished.

   a. Is the reproduction quality and volume satisfactory?

   b. Are any indications of a previous recording heard?

   c. If the tape recorder produces a tape which plays satisfactorily, make a recording using the customer's (if available) microphone.

      1) While recording test the microphone cord for intermittent conductors, by running the fingers of one hand down the cord, squeezing and rotating the cord all the way down to the plug.

      2) Wiggle the microphone plug in its socket when the end is reached.

   d. Play back the recording. If scratchy noises are heard, the microphone cable is defective and should be replaced. If the noise occurs at the end of the recording when the microphone plug was handled, check the plug for cold solder joints.

4. Refer to Sections III and IV of the manual to correct any faults observed.

2.4 DISASSEMBLY INSTRUCTIONS

2.4.1 Removal of the Cabinet (Figure 2.1)

1. Pull out the cartridge from the cartridge slot.

2. Place the recorder in the OFF mode.

3. Turn the recorder upside down on a soft cloth.

4. Remove the 6 screws (Y13) from the bottom of cabinet.

5. Place the recorder in the upright position.

6. Remove the 2 screws (Y09) from the rear of cabinet.

7. Pull out the chassis (201) from cabinet (001).

2.4.2 Removal of the Chassis from Mechanism (Refer to Figure 3.4)

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Disconnect individual wires as required.

3. Remove screw (Y07) and motor shield (180).

4. Remove E-ring (Y40) and disconnect rod (116) from slide assembly (114).

5. Remove E-ring (Y39) and disconnect fast wind lever (171) from the fast wind lock lever assembly (290).

6. Remove the four screws (Y22) from the corners of the chassis (101).

7. Grasp the chassis from rear and lift it up until the bottom of the chassis will clear the top of rear subchassis (102). With the proper clearance obtained pull the chassis straight back, slowly, until all components have cleared one another.

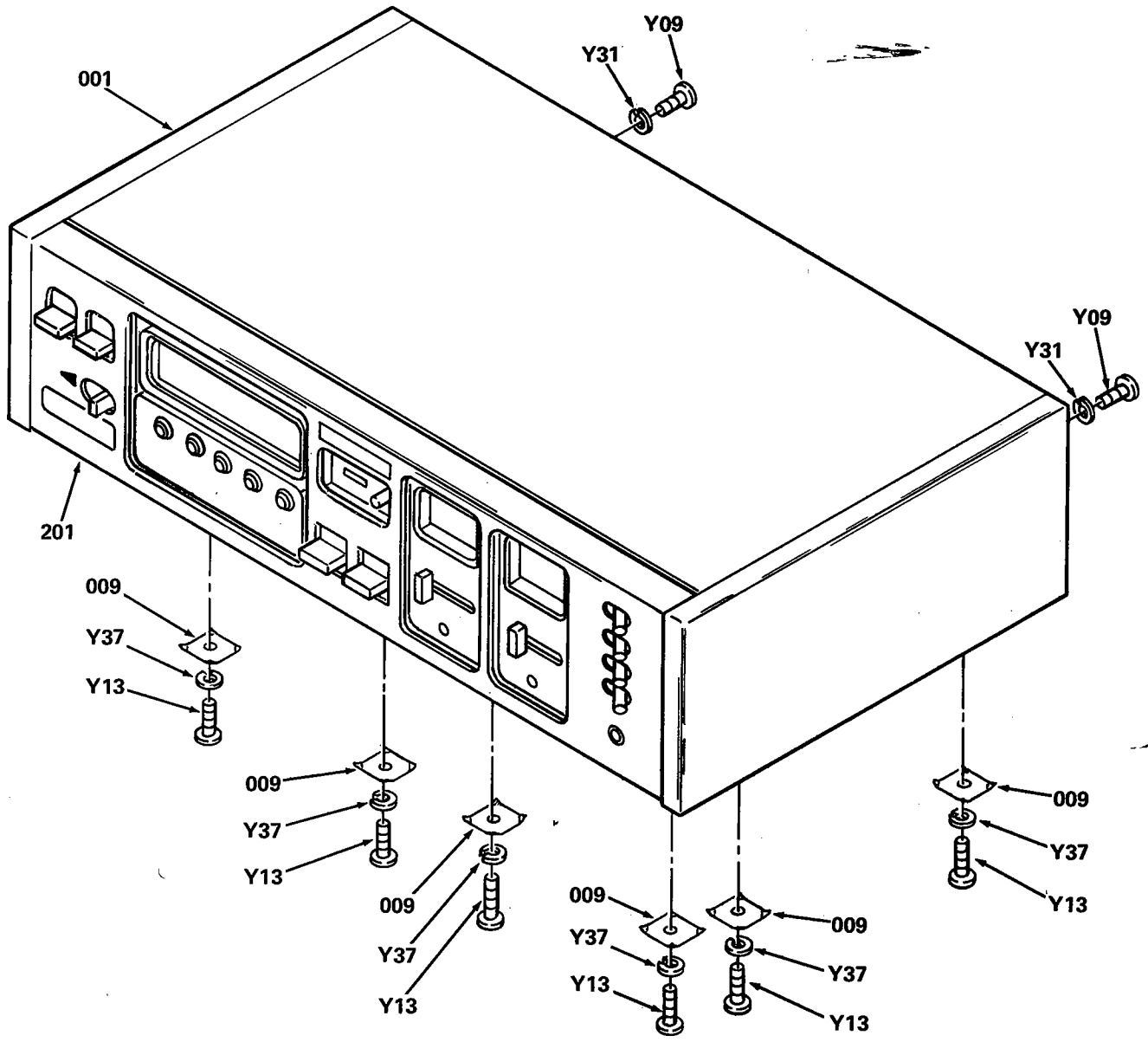


Figure 2.1. Removal of Case

2.4.3 Removal of Amplifier Board (Refer to Figure 3.3)

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Remove screw (Y07) retaining Q301 on applicable models.

3. Remove screw (Y07) retaining heat sink (160) on applicable models.

4. Remove 4 screws (Y06) retaining printed circuit board (123).

5. Disconnect individual wires as required from the printed circuit board. Disconnect no more than required to permit reaching the component desired. Record each wire disconnected by terminal and color to facilitate reassembly.

6. When remounting the amplifier board to the mounting brackets be sure the wire form (119) ends are inserted in the slide switches properly.

2.4.4 Removal of Drive Belt (Refer to Figure 3.5)

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Remove the four screws and flywheel bracket (219).

3. The main drive belt (215) can now be replaced.

> **NOTE**
>
> When the rubber belt is replaced, care should be taken not to permit oil or grease to come into contact with the belt.

2.4.5 Removal of the Capstan and Flywheel Assembly

1. Follow disassembly sequence described in paragraph 2.4.4. (Refer to Figure 3.5.)

2. From the portion of the capstan extending through the flywheel bearing assembly (207), remove E-ring (Y41).

3. Loosen set screw (Y15) and remove the pulley bearing assembly (244) from the capstan.

> **CAUTION**
>
> Damage to the flywheel and capstan assembly may result from improper handling. Caution should be exercised when handling to avoid bending the capstan. Always set this assembly down with the flywheel on the bottom.

SECTION III. TAPE TRANSPORT MECHANISM

3.1 DESCRIPTION

3.1.1 Play Operation

Inserting the cartridge will cause the slide assembly (255) and brake lever (211) to move forward simultaneously switching on SW18 and SW6-B. The record lock slide (140) and slide assembly (255) switch on the SW6-A and SW12 (8055 only). This action will retrack the plunger of the eject solenoid (250) and eject slide plate (272) lock the slide assembly (255) at the cartridge insert position. Energy from the motor (247) is transmitted to flywheel (218) through the main belt (215).

3.1.2 Fast Wind Operation

When FAST WIND button (146) is depressed, FAST WIND switch SW5 is activated. The motor is controlled without the electrical governor.

3.1.3 Eject Operation

When the EJECT button is depressed, the manual eject switch SW14 is activated. This activates the eject solenoid (250) by pulling the plunger into itself. The eject slide plate (272) will then unlock the slide assembly (255). The cartridge is ejected by spring (256).

3.1.4 Program Changing Operation

When the SELECT button (146) is pressed down, program selecting switch SW8 is activated. The track changing solenoid (251) is energized and pulls and releases the cam actuating assembly (236). By this action, the cam assembly (241) rotates clockwise 90^{o} changing the head height.

3.1.5 Pause Operation

When the PAUSE button is pressed down and locked, switch SW17 is opened, thereby de-energizing the motor.

3.1.6 Record Operation

When the record knob (145) is moved to the left, SW1, 2 and 3 (8055 only) and 4 are placed in the record position by RECORD lever (113) and R-P changing slide assembly (114). By inserting a cartridge while holding the RECORD lever (113) fully to the left, R-P changing slide assembly (114) is locked in recording position.

3.2 MECHANICAL TROUBLESHOOTING AND REPAIR

3.2.1 Unit Has Wow

1. Inspect flywheel bracket (219) position in relation to the flywheel (218). Some endshake should be present.
2. Inspect the main belt (215) on the motor.
3. Check the belt (215), capstan (218), pulley (224) for any oil on them.
4. When all of the above have been checked out, replace the motor (247).

3.2.2 Slow Forward

1. Check the belt (215) for any oil or grease on it.
2. Check the motor control circuit board (303).

3.2.3 Excessive Current Drain

This fault is usually caused by binding flywheel or defective motor. Points to check:

1. Endshake between the flywheel and capstan assembly and the flywheel bearing bracket.
2. Does it turn easily? If not, lubricate it.
3. Check the motor for excessive current drain.

REPEAT SWITCH			AUTO EJECT SWITCH: ON	AUTO EJECT SWITCH: OFF
	ONE	PLAY & F. WIND	1 → EJECT	1 → 4 → 1 → 4
		RECORD	1 → EJECT	
	ALL	PLAY & F. WIND	1 → 4 → EJECT	1 → 4 → 1 → 4 →
		RECORD	1 → 4 → EJECT	

Figure 3.1. Repeat and Auto Eject Switch Positions

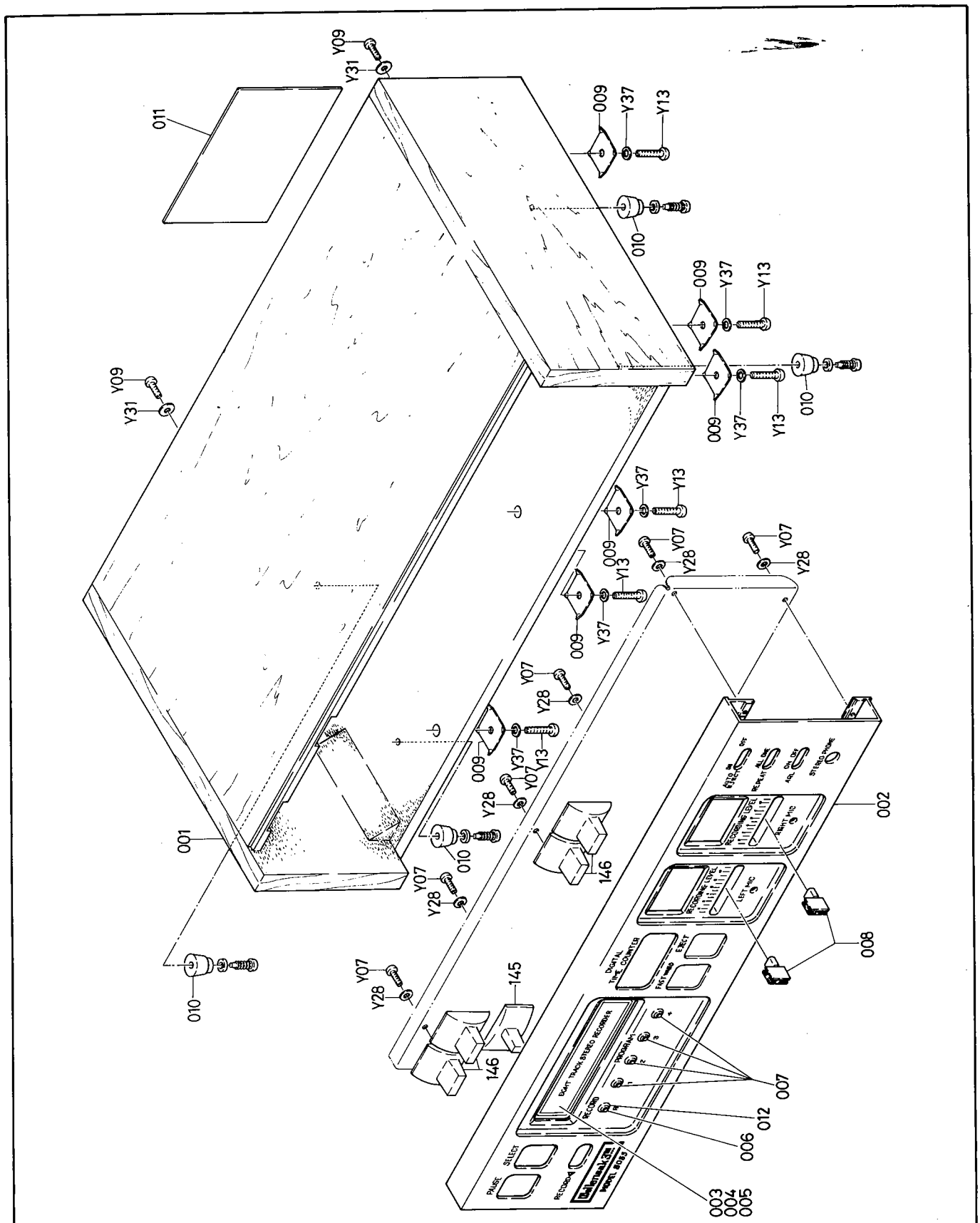


Figure 3.2. Exploded View of Case

Figure 3.2. Parts List

INDEX NUMBER	PART NUMBER	DESCRIPTION
001	81-48010302-9	Cabinet Assy. – 8055
	81-48010359-7	Cabinet Assy. – 8056
002	81-48010303-7	Front Panel Assy., Silver – 8055
	81-48030297-5	Front Panel Assy., Champagne Gold – 8055
	81-48010360-5	Front Panel Assy., – 8056
003	81-48120041-8	Lid Assy., Cartridge
004	81-48040041-5	Rod, Cartridge Lid – Not Shown
005	81-48130077-0	Spring, Cartridge Lid – Not Shown
006	81-48150046-0	Red Jewel, Record Lamp
007	81-48150047-8	Green Jewel, Track Lamp
008	81-48010112-0	Knob Assy., Slide
009	81-48030089-6	Washer, Special
010	81-48010138-5	Leg Assy.
011	81-48120120-0	Rating Plate
012	81-48120040-0	Bezel, Record and Track Lamp
145	81-48010111-2	Knob Assy., Lever, Record
146	81-48010110-4	Knob Assy., Lever
Y07	81-49713008-8	Screw, Pan Hd., 3 x 8 mm
Y09	81-49713012-0	Screw, Pan Hd., 3 x 12 mm
Y13	81-49714020-2	Screw, Pan Hd., 4 x 20 mm
Y28	81-49133080-9	Washer, 3.3 x 8 x 1 mm
Y31	81-49133130-2	Washer, 3.3 x 13 x 1 mm
Y37	81-49614000-5	Washer, Spring, 4 mm

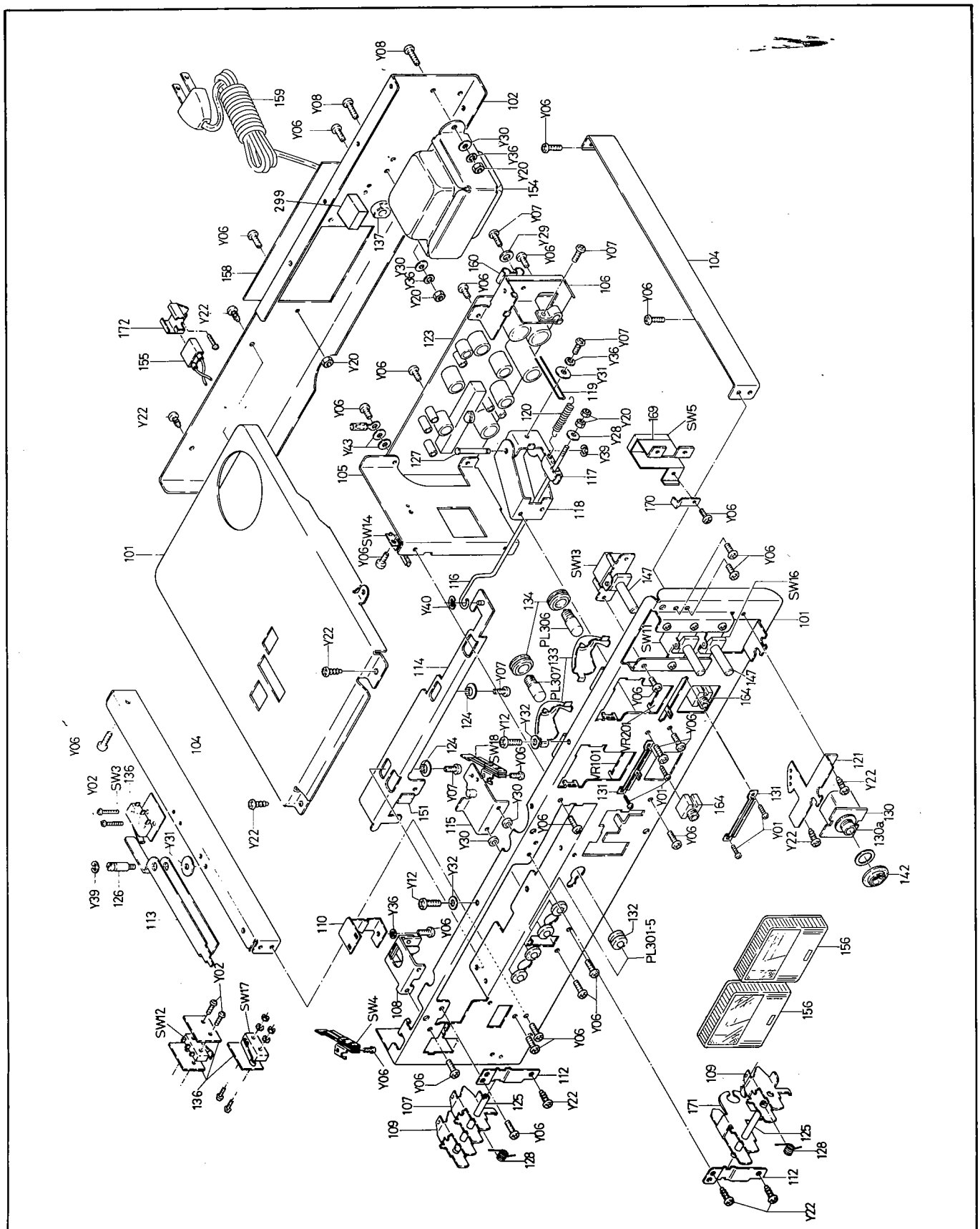


Figure 3.3. Exploded View of Chassis Model 8055 (Lot A)

Figure 3.3. Parts List

INDEX NUMBER	PART NUMBER	DESCRIPTION
101	81-48030245-4	Chassis, Front
102	81-48030246-2	Sub-Chassis, Rear
104	81-48030098-7	Reinforcement, Side
105	81-48030248-8	Bracket, Printed Circuit Board
106	81-48030087-0	Bracket, Printed Circuit Board
107	81-48010116-1	Lever Assy., Select Knob
108	81-46141023-5	Switch, Select Contact Assy. (SW8)
109	81-48030088-8	Lever, Pause and Eject
110	81-48130187-7	Spring Plate, Pause
112	81-48030100-3	Bracket, Lever Shaft
113	81-48030091-2	Lever, Record
114	81-48010304-5	Slide Assy., Record/Play Changing
115	81-48010305-2	Arm Assy., Slide Guide
116	81-48040081-1	Rod, Record/Play
117	81-48030092-0	Lever, Record
118	81-48030093-8	Bracket, Record/Play Lever
119	81-48130078-8	Wire Form, Record/Play Switch
120	81-48130079-6	Spring, Record Lever
121	81-48030094-6	Bracket, Headphone Jack
123	81-48230044-9	Printed Circuit Board Assy., Amplifier
124	81-48040082-9	Ring, Slide Record/Play Changing
125	81-48040039-9	Shaft, Pause, Select, Eject and Fast Wind
126	81-48040043-1	Shaft, Record Lever
127	81-48040046-4	Shaft, Record/Play Lever
128	81-48130075-4	Spring, Select and Eject
130	81-48150051-0	Plastic Bracket, Headphone Jack
130a	81-46174016-9	Jack, Headphone
131	81-48030102-9	Guide, Record Level Control
132	81-46180003-9	Grommet
133	81-48030080-5	Reflector, VU Meter Lamp
134	81-46180004-7	Grommet
136	81-46182002-9	Fiber Sheet, Micro Switch
137	81-46180005-4	Strain Relief
142	81-46180006-2	Rubber Cushion, Headphone
147	81-48040040-7	Cup Knob, ARL, Auto Eject and Repeat
151	81-48150050-2	Cushion Slide, Record/Play Changing
154	81-46130015-4	Transformer, Power
155	81-46123031-0	CR Module
156	81-46164003-9	Meter, VU
158	81-48010306-0	Terminal Board Assy.
159	81-46195002-4	Cord, Power Supply
160	81-48030009-6	Heat Sink
164	81-46174004-5	Jack, Microphone
169	81-48030258-7	Bracket, Fast Forward Switch
170	81-48130184-4	Plate Spring, Fast Forward Lock
171	81-48030257-9	Lever, Fast Forward
172	81-48030109-2	Bracket, CR Module

Figure 3.3. Parts List (Cont.)

INDEX NUMBER	PART NUMBER	DESCRIPTION
299	81-46174044-1	Socket, A.C.
PL301-PL305	81-46121010-6	Lamp, Record and Track Indicating
PL306, PL307	81-46121011-4	Lamp, VU Meter
SW3, SW12, SW17	81-46141020-1	Microswitch
SW4	81-46141027-6	Switch, Record
SW5	81-46141074-8	Switch, Fast Forward
SW11, SW13	81-46141028-4	Switch, Repeat and Auto Eject
SW14	81-46141073-0	Switch, Manual Eject
SW16	81-46141017-7	Switch, ARL
SW18	81-46141077-1	Spring Switch, Cartridge Interlock
VR101,201	81-46140049-1	Record Level Control
Y01	81-49712006-3	Screw, Pan Hd., 2 x 6 mm
Y02	81-49712010-5	Screw, Pan Hd., 2 x 10 mm
Y06	81-49713006-2	Screw, Pan Hd., 3 x 6 mm
Y07	81-49713008-8	Screw, Pan Hd., 3 x 8 mm
Y08	81-49713010-4	Screw, Pan Hd., 3 x 10 mm
Y12	81-49714006-1	Screw, Pan Hd., 4 x 6 mm
Y22	81-49733006-8	Screw, Self Tap, 3 x 6 mm
Y28	81-49133080-9	Washer, 3.3 x 8 x 1 mm
Y29	81-49133105-4	Washer, 3.3 x 10 x 0.5 mm
Y30	81-49133100-5	Washer, 3.3 x 10 x 1 mm
Y31	81-49133130-8	Washer, 3.3 x 13 x 1 mm
Y32	81-49145130-8	Washer, 4.5 x 13 x 1.2 mm
Y36	81-49613000-6	Washer Spring, 3 mm
Y39	81-49933000-9	"E" Ring, 3 mm
Y40	81-49934000-8	"E" Ring, 4 mm
Y43	81-49333105-2	Washer, Fiber, 3.3 x 10 x 0.5 mm

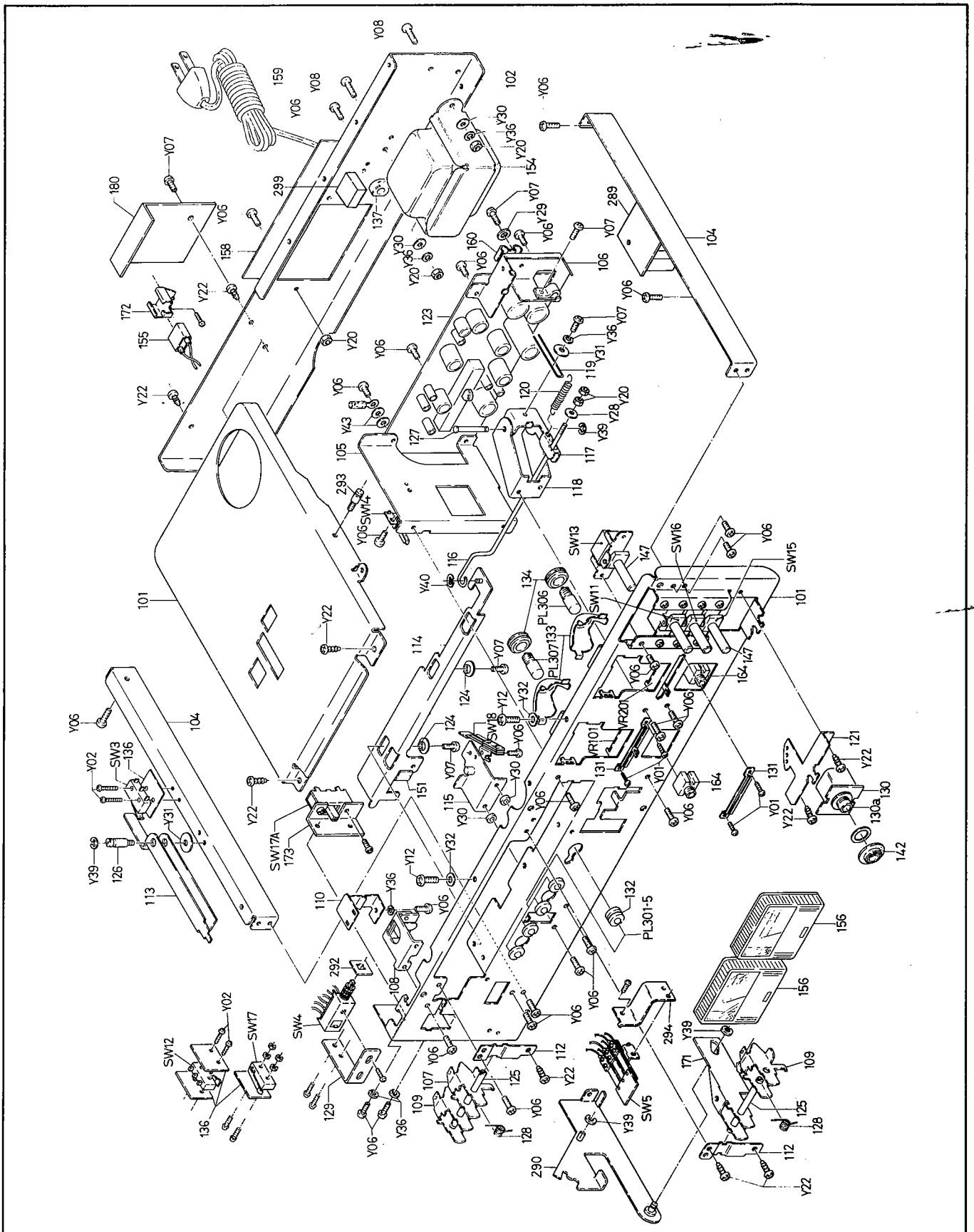


Figure 3.4. Exploded View of Chassis Model 8055 (Lot B) and Model 8056

Figure 3.4. Parts List

INDEX NUMBER	PART NUMBER	DESCRIPTION
101	81-48030245-4	Chassis, Front – 8055
	81-48030261-1	Chassis, Front – 8056
102	81-48030246-2	Sub-Chassis, Rear
104	81-48030247-0	Reinforcement, Side
105	81-48030248-8	Bracket, Printed Circuit Board
106	81-48030087-0	Bracket, Printed Circuit Board
107	81-48010116-1	Lever Assy., Select Knob
108	81-46141023-5	Switch, Select Contact Assy. (SW8)
109	81-48030088-8	Lever, Pause and Eject
110	81-48130187-7	Spring Plate, Pause
112	81-48030100-3	Bracket, Lever Shaft
113	81-48030091-2	Lever, Record
114	81-48010304-5	Slide Assy., Record/Play Changing
115	81-48010305-2	Arm Assy., Slide Guide
116	81-48040081-1	Rod, Record/Play
117	81-48030092-0	Lever, Record
118	81-48030093-8	Bracket, Record/Play Lever
119	81-48130078-8	Wire Form, Record/Play Switch
120	81-48130079-6	Spring, Record Lever
121	81-48030094-6	Bracket, Headphone Jack
123	81-48230048-0	Printed Circuit Board Assy., Amplifier – 8055
	81-48230069-6	Printed Circuit Board Assy., Amplifier – 8056
124	81-48040082-9	Ring, Slide Record/Play Changing
125	81-48040039-9	Shaft, Pause, Select, Eject and Fast Wind
126	81-48040043-1	Shaft, Record Lever
127	81-48040046-4	Shaft, Record/Play Lever
128	81-48130075-4	Spring, Select and Eject
129	81-48030255-3	Bracket MTG, Record Play Switch
130	81-48150051-0	Plastic Bracket, Headphone Jack
130a	81-46174016-9	Jack, Headphone
131	81-48030102-9	Guide, Record Level Control
132	81-46180003-9	Grommet
133	81-48030080-5	Reflector, VU Meter Lamp – 8055
134	81-46180004-7	Grommet
136	81-46182002-9	Fiber Sheet, Micro Switch – 8055
137	81-46180005-4	Strain Relief
142	81-46180006-2	Rubber Cushion, Headphone
147	81-48040040-7	Cup Knob, ARL, Auto Eject and Repeat
151	81-48150050-2	Cushion Slide, Record/Play Changing
154	81-46130015-4	Transformer, Power
155	81-46123031-0	CR Module – 8055
156	81-46164003-9	Meter, VU – 8055
	81-46164012-0	Meter, VU – 8056
158	81-48010306-0	Terminal Board Assy.
159	81-46195002-4	Cord, Power Supply
160	81-48030009-6	Heat Sink – 8056
164	81-46174004-5	Jack, Microphone – 8055
	81-46174051-6	Jack, Microphone – 8056
171	81-48030259-5	Lever, Fast Forward
172	81-48030109-2	Bracket, CR Module – 8055
173	81-48030289-2	Bracket, Pause Switch – 8056

Figure 3.4. Parts List (Cont.)

INDEX NUMBER	PART NUMBER	DESCRIPTION
180	NA	Shield, Motor
289	81-48230046-4	Printed Circuit Board Assy., (Cap) – 8055
	81-48230071-2	Printed Circuit Board Assy., (Cap) – 8056
290	81-48010314-4	Lever Assy., Fast Forward Lock
292	81-48090098-4	Spacer, Record Push Switch
293	81-48040084-5	Lever, Shaft
294	81-48030256-1	Bracket, Fast Forward Switch – 8055
299	81-46174044-1	Socket, A.C.
PL301-PL305	81-46121010-6	Lamp, Record and Track Indicating
PL306, PL307	81-46121011-4	Lamp, VU Meter
SW3, SW12	81-46141020-1	Microswitch – 8055
SW4	81-46141076-3	Push Switch, Record
SW5	81-46141075-5	Switch, Fast Forward – 8055
SW11, SW13	81-46141028-4	Switch, Repeat and Auto Eject
SW14	81-46141073-0	Switch, Manual Eject
SW15	81-46141017-7	Switch, Tape Equalization – 8056
SW16	81-46141017-7	Switch, ARL
SW17	81-46141020-1	Switch, Pause – 8055
SW17a	81-46141095-3	Switch, Pause – 8056
SW18	81-46141077-1	Spring Switch, Cartridge Interlock
VR101, VR201	81-46140049-1	Record Level Control
Y01	81-49712006-3	Screw, Pan Hd., 2 x 6 mm
Y02	81-49712010-5	Screw, Pan Hd., 2 x 10 mm
Y06	81-49713006-2	Screw, Pan Hd., 3 x 6 mm
Y07	81-49713008-8	Screw, Pan Hd., 3 x 8 mm
Y08	81-49713010-4	Screw, Pan Hd., 3 x 10 mm
Y12	81-49714006-1	Screw, Pan Hd., 4 x 6 mm
Y22	81-49733006-8	Screw, Self Tap, 3 x 6 mm
Y28	81-49133080-9	Washer, 3.3 x 8 x 1 mm
Y29	81-49133105-4	Washer, 3.3 x 10 x 0.5 mm
Y30	81-49133100-5	Washer, 3.3 x 10 x 1 mm
Y31	81-49133130-8	Washer, 3.3 x 13 x 1 mm
Y32	81-49145130-8	Washer, 4.5 x 13 x 1.2 mm
Y36	81-49613000-6	Washer Spring, 3 mm
Y39	81-49933000-9	"E" Ring, 3 mm
Y40	81-49934000-8	"E" Ring, 4 mm
Y43	81-49333105-2	Washer, Fiber, 3.3 x 10 x 0.5 mm

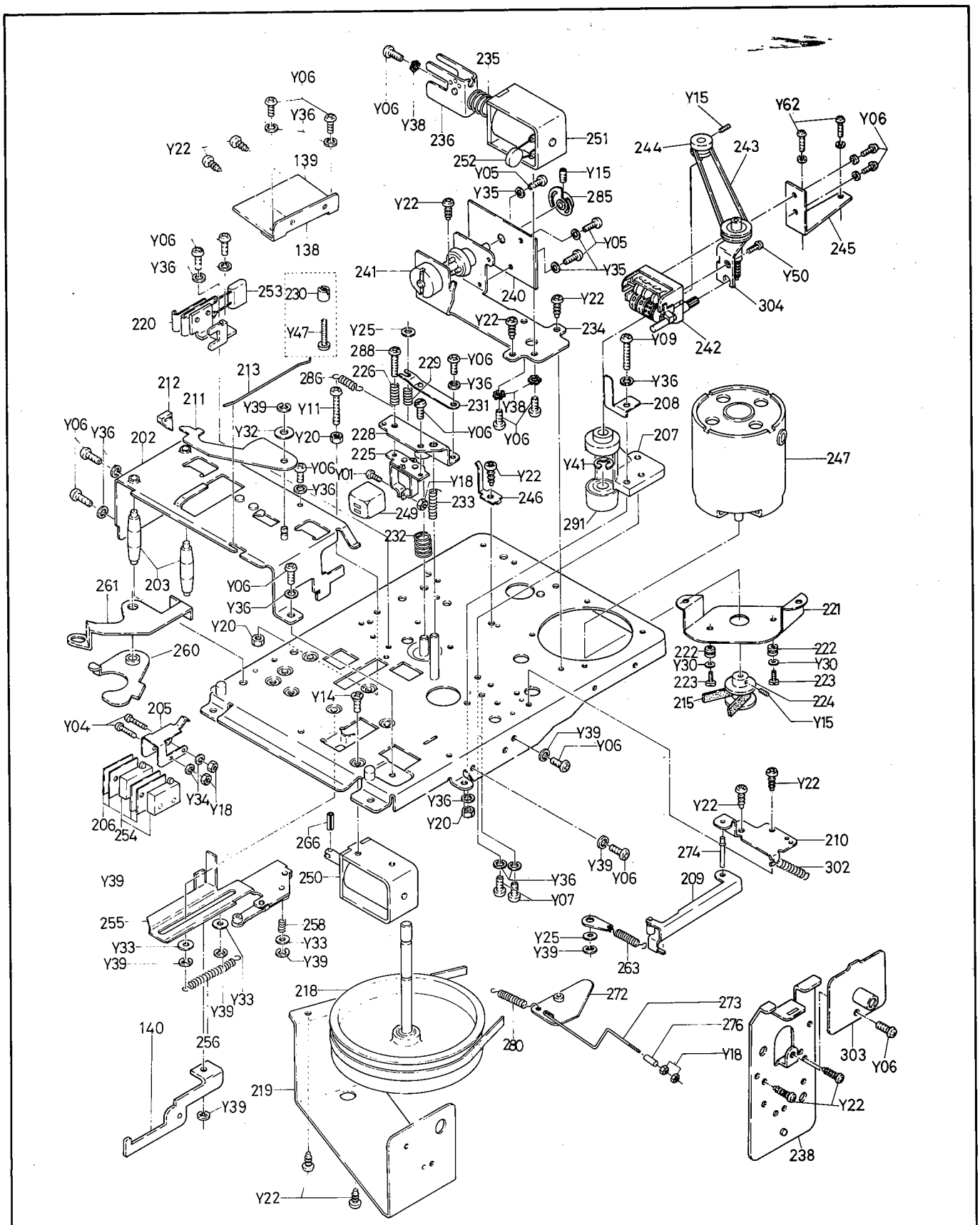


Figure 3.5. Exploded View of Tape Transport Model 8055 (Lot A)

Figure 3.5. Parts List		
INDEX NUMBER	PART NUMBER	DESCRIPTION
138	81-48030095-3	Bracket, Eject Printed Circuit Board Mtg.
139	81-48230045-6	Printed Circuit Board Assy., Eject
140	81-48030249-6	Slide, Record Lock
202	81-48010308-6	Sub-Chassis Assy.
203	81-48150052-8	Roller, Side
205	81-48130183-6	Plate Spring
206	81-46182001-1	Insulator
207	81-48010125-2	Bearing Assy., Flywheel
208	81-48030101-1	Bracket, Tape Rolling Stopper
209	81-48010320-9	Roller Assy., Locking
210	81-48010260-3	Bracket, Roller Assy.
211	81-48030096-1	Brake Lever, Cartridge Holding
212	81-48300023-8	Brake Shoe, Cartridge Holding
213	81-48130080-4	Spring Wire, Cartridge Holding
215	81-48300074-1	Belt, Main Drive
218	81-48010312-8	Flywheel Assy.
219	81-48010311-0	Bracket Assy., Flywheel
220	81-46141025-0	End of Tape Switch (SW7)
221	81-48030250-4	Bracket, Motor
222	81-46180003-9	Rubber Cushion, Motor
223	81-49790035-7	Screw, Motor
224		Pulley Assy., Motor (Included with Item 247)
225	81-48010119-5	Bracket, Head Assy.
226	81-48130085-3	Spring, Head Azimuth Adjust
228	81-48010120-3	Bracket, Head Assy.
229	81-48130085-3	Spring, Head Height Adjust
230	81-48040047-2	Stud, Nut
231	81-48130083-8	Plate Spring, Head Height Adjust
232	81-48130086-1	Spring, Head Height
233	81-48130087-9	Spring, Under Head Mount
234	81-48030104-5	Bracket, Cam
235	81-48130081-2	Spring, Solenoid Plunger
236	81-48010128-6	Cam Actuating Assy.
238	81-48030251-2	Bracket, Motor Printed Circuit Board
240	81-48230015-9	Printed Circuit Board Assy., Cam Switch
241		Cam Assy. (Included with Item 234)
242	81-48090097-6	Tape Counter
243	81-48300075-8	Belt, Tape Counter
244	81-48010317-5	Pulley, Bearing Assy.
245	81-48030253-8	Bracket, Tape Counter
246	81-48130082-0	Plate Spring, Cam Shaft
247	81-48090096-8	Motor, D.C.
249	81-46161008-1	Head, Record/Play and Erase
250	81-46134002-8	Solenoid, Eject
251	81-46134001-0	Solenoid, Track Change
252	81-46123011-2	Diode, FR-2
253	81-46114020-4	Capacitor Mylar .01 ufd ±20% 50V
254	81-46141026-8	Micro Switch (SW6)
255	81-48010316-7	Slide Assy.
256	81-48130088-7	Spring, Eject
258	81-48130089-5	Spring, Stop Lever

Figure 3.5. Parts List (Cont)		
INDEX NUMBER	PART NUMBER	DESCRIPTION
260	81-48010319-1	Cam Assy., Eject
261	81-48030252-0	Lever, Eject
263	81-48130185-1	Spring
266	81-49950015-5	Spring Pin, 3 x 10 mm
272	81-48010309-4	Plate Assy., Eject Slide
273	81-48090099-2	Rod, Pressure Roller
274	81-48040048-0	Shaft, Roller Assy.
276	81-48040083-7	Spacer, Rod
280	81-48130186-9	Spring, Plate Assy.
285	81-48010135-1	Cam Assy.
286	81-48130094-5	Spring, Head Guide
288	81-49790011-8	Screw, Azimuth Adjust
291	81-48150139-3	Bearing Cap, Flywheel
302	81-48130093-7	Spring, Fast Forward Lever
303		Printed Circuit Board Assy., Motor (Included with Item 247)
304		Pulley Assy., Tape Counter (Included with Item 242)
Y01	81-49712006-3	Screw, Pan Hd., 2 x 6 mm
Y04	81-49712020-4	Screw, Pan Hd., 2 x 20 mm
Y05	81-49712606-0	Screw, Pan Hd., 2.6 x 6 mm
Y06	81-49713006-2	Screw, Pan Hd., 3 x 6 mm
Y07	81-49713008-8	Screw, Pan Hd., 3 x 8 mm
Y09	81-49713012-0	Screw, Pan Hd., 3 x 12 mm
Y11	81-49713035-1	Screw, Pan Hd., 3 x 35 mm
Y14	81-49743006-6	Screw, Flat Hd., 3 x 6 mm
Y15	81-49773004-4	Screw, Head-Less, 3 x 4 mm
Y18	81-49912000-4	Nut, Hex, 2 mm
Y20	81-49913000-3	Nut, Hex, 3 mm
Y22	81-49733006-8	Screw, Self Tap, 3 x 6 mm
Y25	81-49130065-3	Washer, 3 x 6 x 0.5 mm
Y30	81-49133100-5	Washer, 3.3 x 10 x 1 mm
Y32	81-49145130-8	Washer, 4.5 x 13 x 1.2 mm
Y33	81-49140108-9	Washer, 4 x 10 x 0.8 mm
Y34	81-49612000-7	Washer, Spring, 2 mm
Y35	81-49612600-4	Washer, Spring, 2.6 mm
Y36	81-49613000-6	Washer, Spring, 3 mm
Y38	81-49633000-2	Lockwasher, Ext. Tooth, 3 mm
Y39	81-49933000-9	"E" Ring, 3 mm
Y41	81-49935000-7	"E" Ring, 5 mm
Y47	81-49713016-1	Screw, Pan Hd., 3 x 16 mm
Y62	81-49713004-3	Screw, Pan Hd., 3 x 4 mm

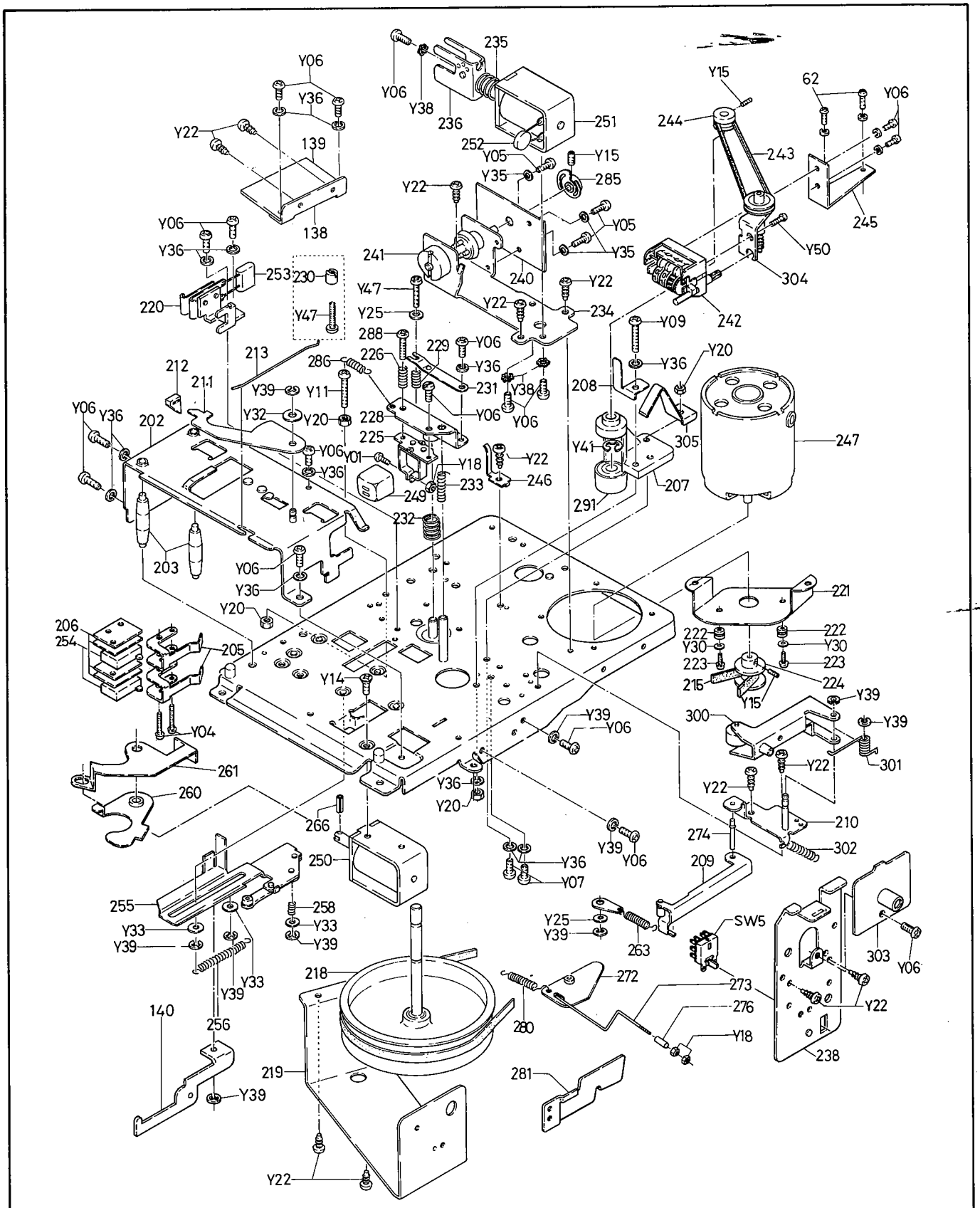


Figure 3.6. Exploded View of Tape Transport Model 8055 (Lot B) and Model 8056

Figure 3.6. Parts List

INDEX NUMBER	PART NUMBER	DESCRIPTION
138	81-48030095-3	Bracket, Eject Printed Circuit Board Mtg.
139	81-48230045-6	Printed Circuit Board Assy., Eject – 8055
	81-48230070-4	Printed Circuit Board Assy., Eject – 8056
140	81-48030249-6	Slide, Record Lock
202	81-48010308-6	Sub-Chassis Assy.
203	81-48150052-8	Roller, Side
205	81-48130183-6	Plate Spring
206	81-46182001-1	Insulator
207	81-48010125-2	Bearing Assy., Flywheel
208	81-48030101-1	Bracket, Tape Rolling Stopper
209	81-48010320-9	Roller Assy., Locking
210	81-48010127-8	Bracket Assy., Roller Lever
211	81-48030096-1	Brake Lever, Cartridge Holding
212	81-48300023-8	Brake Shoe, Cartridge Holding
213	81-48130080-4	Spring Wire, Cartridge Holding
215	81-48300074-1	Belt, Main Drive
218	81-48010312-8	Flywheel Assy.
219	81-48010311-0	Bracket Assy., Flywheel
220	81-46141025-0	End of Tape Switch (SW7)
221	81-48030250-4	Bracket, Motor
222	81-46180003-9	Rubber Cushion, Motor
223	81-49790035-7	Screw, Motor – 8055
	81-49790040-7	Screw, Motor Mtg. – 8056
224		Pulley Assy., Motor (Included with Item 247)
225	81-48010119-5	Bracket, Head Assy.
226	81-48130085-3	Spring, Head Azimuth Adjust
228	81-48010120-3	Bracket, Head Assy.
229	81-48130085-3	Spring, Head Height Adjust
230	81-48040047-2	Stud, Nut
231	81-48130083-8	Plate Spring, Head Height Adjust
232	81-48130086-1	Spring, Head Height
233	81-48130087-9	Spring, Under Head Mount
234	81-48030104-5	Bracket, Cam
235	81-48130081-2	Spring, Solenoid Plunger
236	81-48010128-6	Cam Actuating Assy.
238	81-48030251-2	Bracket, Motor Printed Circuit Board
240	81-48230015-9	Printed Circuit Board Assy., Cam Switch
241		Cam Assy., (Included with Item 234)
242	81-48090097-6	Tape Counter
243	81-48300075-8	Belt, Tape Counter
244	81-48010317-5	Pulley, Bearing Assy.
245	81-48030253-8	Bracket, Tape Guide
246	81-48130082-0	Plate Spring, Cam Shaft
247	81-48090096-8	Motor, D.C.
249	81-46161008-1	Head, Record/Play and Erase – 8055
	81-46161024-8	Head, Record/Play and Erase – 8056
250	81-46134002-8	Solenoid, Eject
251	81-46134001-0	Solenoid, Track Change
252	81-46123011-2	Diode, FR-2 – 8055
	81-46123043-5	Diode, IN4001 – 8056
253	81-46114020-4	Capacitor, Mylar .01 ufd ±20% 50V – 8055
	81-46116046-7	Capacitor, 1 mfd, 50V Electrolytic – 8056

Figure 3.6. Parts List (Cont.)

INDEX NUMBER	PART NUMBER	DESCRIPTION
254	81-46141026-8	Micro Switch (SW6)
255	81-48010321-7	Slide Assy. – 8055
	81-48010316-7	Slide Assy. – 8056
256	81-48130088-7	Spring, Eject
258	81-48130089-5	Spring, Stop Lever
260	81-48010319-1	Cam Assy., Eject
261	81-48030252-0	Lever, Eject
263	81-48130185-1	Spring
266	81-49950015-5	Spring Pin, 3 x 10 mm
272	81-48010309-4	Plate Assy., Eject Slide
273	81-48090099-2	Rod, Pressure Roller
274	81-48040048-0	Shaft, Roller Assy.
276	81-48040083-7	Spacer, Rod
280	81-48130186-9	Spring, Plate Assy.
281	81-48030321-3	Lever, Fast Wind Switch – 8056
285	81-48010135-1	Cam Assy.
286	81-48130094-5	Spring, Head Guide
288	81-49790011-8	Screw, Azimuth Adjust
291	81-48150139-3	Bearing Cap, Flywheel
300	81-48010133-6	Roller Assy.
301	81-48130092-9	Spring, Roller Assy.
302	81-48130093-7	Spring, Fast Forward Lever – 8055
	81-48130189-3	Spring, Fast Forward Lever – 8056
303		Printed Circuit Board Assy., Motor (Included with Item 247)
304		Pulley Assy., Tape Counter (Included with Item 242)
305	81-48130195-0	Spring Plate, Eject – 8056
SW5	81-46141101-1	Switch, Fast Wind – 8056
Y01	81-49712006-3	Screw, Pan Hd., 2 x 6 mm
Y04	81-49712020-4	Screw, Pan Hd., 2 x 20 mm
Y05	81-49712606-0	Screw, Pan Hd., 2.6 x 6 mm
Y06	81-49713006-2	Screw, Pan Hd., 3 x 6 mm
Y07	81-49713008-8	Screw, Pan Hd., 3 x 8 mm
Y09	81-49713012-0	Screw, Pan Hd., 3 x 12 mm
Y11	81-49713035-1	Screw, Pan Hd., 3 x 35 mm
Y14	81-49743006-6	Screw, Flat Hd., 3 x 6 mm
Y15	81-49773004-4	Screw, Head-Less, 3 x 4 mm
Y18	81-49912000-4	Nut, Hex, 2 mm
Y20	81-49913000-3	Nut, Hex, 3 mm
Y22	81-49733006-8	Screw, Self Tap, 3 x 6 mm
Y25	81-49130065-3	Washer, 3 x 6 x 0.5 mm
Y30	81-49133100-5	Washer, 3.3 x 10 x 1 mm
Y32	81-49145130-8	Washer, 4.5 x 13 x 1.2 mm
Y33	81-49140108-9	Washer, 4 x 10 x 0.8 mm
Y34	81-49612000-7	Washer, Spring, 2 mm
Y35	81-49612600-4	Washer, Spring, 2.6 mm
Y36	81-49613000-6	Washer, Spring, 3 mm
Y38	81-49633000-2	Lock Washer, Ext. Tooth, 3 mm
Y39	81-49933000-9	"E" Ring, 3 mm
Y41	81-49935000-7	"E" Ring, 5 mm
Y47	81-49713016-1	Screw, Pan Hd., 3 x 16 mm
Y62	81-49713004-3	Screw, Pan Hd., 3 x 4 mm

SECTION IV. ELECTRICAL OPERATION

4.1 CIRCUIT DESCRIPTION

4.1.1 Amplifier Circuit

The amplifier circuit is a conventional record/playback unit consisting of the following stages (see schematic diagram).

Q101 (201)	1st Preamplifier
Q102 (202)	ARL Control Transistor
Q103 (203)	2nd Preamplifier
Q104 (204)	3rd Preamplifier
Q105 (205)	Power Stage for Headphone
Q301	Bias Oscillator
Q302	Voltage Stabilizer

4.1.2 Power Supply (See schematic diagram)

The power supply provides the required AC voltage to operate the amplifier circuits, solenoid and drive motor. The unit is operated from 117 volt, 60 Hz line voltage. When operated from the AC line voltage the step down transformer provides power to a full wave rectifier circuit. Negative ground is used to provide positive DC potential to operate the amplifier circuits and motor.

4.1.3 Automatic Record Level (ARL) Description (See schematic diagram)

The ARL circuit serves to automatically adjust the record level of the input signal, bypassing any previous setting of the manual RECORD LEVEL control. To accomplish this, feedback from the output stage is rectified D101, filtered C303, R303 and applied to the base of Q102. Transistor Q102 is thus forward baised in direct proportion to the amplitude of the signal at the output stage. Q102 operates as a shunt between Q101 and Q103, thereby operating in the same manner as the manual RECORD LEVEL control. The result is the louder the signal at the output stage, the greater the DC bias applied to Q102, which results in lowering its collector to emitter impedance, which bypasses more of the signal to ground.

4.2 ELECTRICAL TROUBLESHOOTING

4.2.1 Dead in Record or Playback

Check for the following conditions:

1. When a cartridge is inserted, the meter lamps should light. If they do not, check the Power Supply circuit.
2. If the meter lamps are lit and the motor is energized, check for proper connection of the head wires to both the amplifier and the Record/Play head.
3. Inspect the Amplifier Printed Circuit Board for both open and delaminated foils. Check for cold solder joints and broken wire connections.
4. Upon verification of the points as stated in Steps 1 through 3 and the unit still fails to operate, using a DC VTVM, check for correct operating voltages as indicated on the schematic diagram. Start at the output stage and work toward the input stage.

4.2.2 Playback is Present, But Record is Distorted

Check the following:

1. Microphone and audio cables.
2. RECORD/PLAY SLIDE switches (SW1 and SW2) for poor or dirty contacts.
3. Check for proper bias voltage as described in paragraph 4.3.4.
4. Open or cold solder joints on the amplifier board as described in paragraph 4.2.1, 3.
5. Correct Record/Play head azimuth as described in paragraph 4.3.1, or by direct replacement.

4.2.3 Noisy Playback, Weak or High Frequencies Missing

1. At the Record/Play head check for the following:
   a. Cold solder joints.
   b. Grounded leads.
   c. Open or intermittent Record/Play head.
   d. Oxide buildup on the face of the head.
   e. Condition of the face of the head. The Record/Play head should be smooth, with no scratches or pits.
2. RECORD/PLAY SLIDE switches (SW1 and SW2) for poor or dirty contacts.
3. Verify the azimuth as described in paragraph 4.3.1.

4.2.4 Troubleshooting ARL

1. In case of quick and strong effect of ARL:

   a. Check C303 and R303

2. No ARL:

   a. Check ARL switch SW16 for proper operation.

   b. Check Diode D101, Q102 and Q202 for proper operation.

4.2.5 Recorded Material Will Not Erase

1. Visually check for broken head leads.

2. Check for cold solder joints.

3. Test for open head:

   a. Measure the bias oscillation voltage across the head with an AC VTVM. It must read 9 volts RMS ±0.5 volts. The model 8055 bias voltage can be adjusted by SVR301 and SVR302.

4.3 ELECTRICAL TEST AND ADJUSTMENTS

4.3.1 Head Azimuth and Height Adjustment (Refer to Figure 3.6)

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Connect a VTVM to the line output jacks.

3. To adjust head height:

   a. Insert a head height alignment cartridge, or cross talk test tape.

   b. Adjust the head height screw (Y47) for a maximum indication on the VTVM for both the left and right channels.

4. To adjust a head azimuth:

   a. Insert a head azimuth alignment cartridge.

   b. Adjust head azimuth screw (288) for a maximum indication on the VTVM for both the left and right channels.

4.3.2 VU Meter Adjust

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Connect a signal oscillator to the auxiliary input jacks. Adjust the oscillator to a setting to 400 Hz,-10 db.

3. Using a VTVM, connect the probe to the emitter of Q105 (left channel) or Q205 (right channel).

4. Put the recorder in the record mode. Adjust the record level controls to nominal indication of 0 db (780 mv) on the VTVM.

5. Adjust the meter variable resistors SVR 102 (left channel) or SVR 202 (right channel) until you obtain a 0 VU level indication of the VU meters.

4.3.3 Amplifier Playback Gain Adjust

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Connect a VTVM to the line output jacks.

3. At this point, one of the two following methods can be used:

   Method A.

   Disconnect the head lead wires from the Record/ Play head, and reconnect them to a signal oscillator. Adjust the oscillator to a setting of 1 kHz, -60 db.

   Method B.

   Insert a 400 Hz (185 nWb/m) Dolby test tape.

4. Put the recorder in the PLAY mode.

5. Adjust the play gain variable resistor SVR101 (left channel) or SVR201 (right channel) until a 1V indication is obtained on the VTVM if you used method A, or 1.1V if method B was used.

4.3.4 Bias Check

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. Connect the probe of a VTVM in parallel with C306 and the erase head lead wire.

3. Put the unit in RECORD mode.

4. The correct bias voltage indication on the VTVM must be 34V RMS ±10%.

4.3.5 Record Sensitivity Check

1. Follow disassembly sequence as described in paragraph 2.4.1.

> NOTE
>
> Before proceeding further, verify that the VU meters are properly aligned. Refer to paragraph 4.3.2.

2. Connect a signal oscillator to the Auxiliary Line Input jacks. Adjust the oscillator to a setting of 1 kHz.

3. Insert a blank cartridge. Put the unit in RECORD mode, and adjust the record level controls until both meters indicate 0 VU.

4. Record a short passage on the tape.

5. Put the recorder in PLAYBACK mode, and play back the passage you just recorded.

6. Both channels must play back at ± 1 db from 0 VU.

4.3.6 ARL Adjust

1. Follow disassembly sequence as described in paragraph 2.4.1.

2. ARL switch OFF, and volume control for maximum gain.

3. Short base to emitter of Q301 to disable the oscillator.

4. Place machine in RECORD mode.

5. Connect two VTVM's across the headphone jacks. Jacks should be loaded with 8 ohms.

6. Feed 1 kHz into both auxiliary inputs simultaneously at a level of -16 db.

7. Set the ARL switch to ON. The VTVM's should read 0 VU.

8. If both do not read the same level adjust SVR103 to achieve a balance.

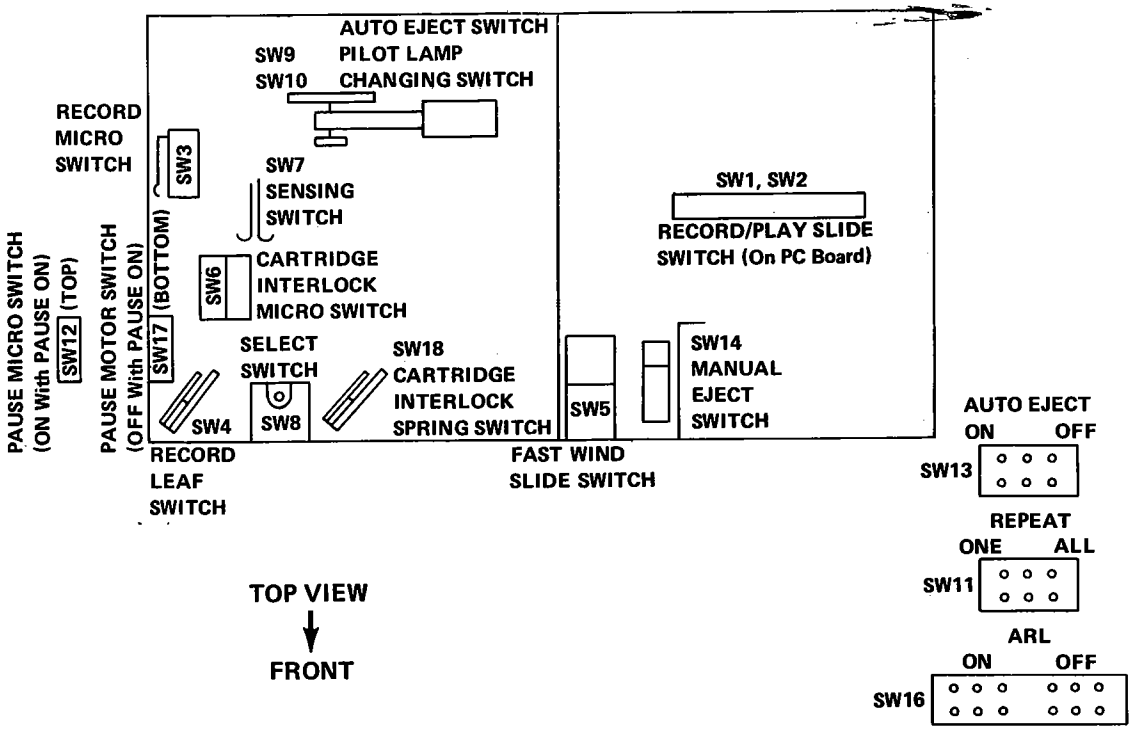


Figure 4.1. Switch Location 8055 (Lot A)

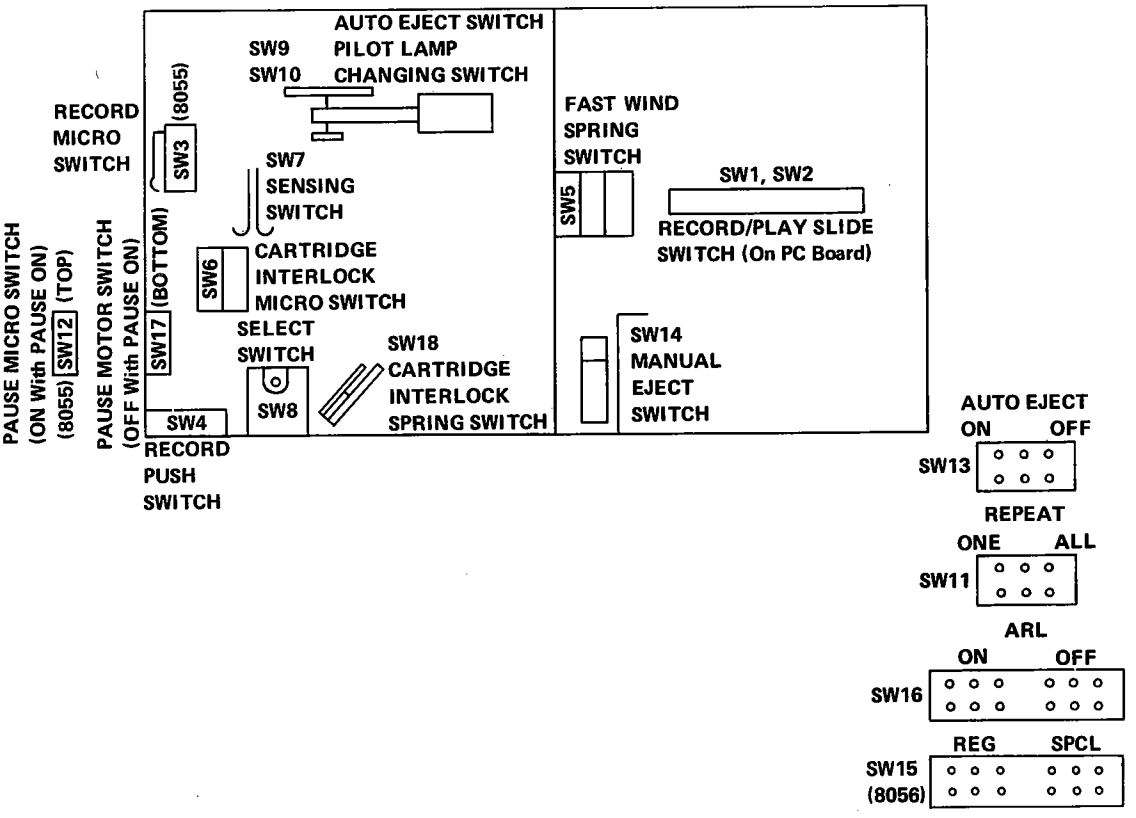


Figure 4.2. Switch Location 8055 (Lot B) and 8056

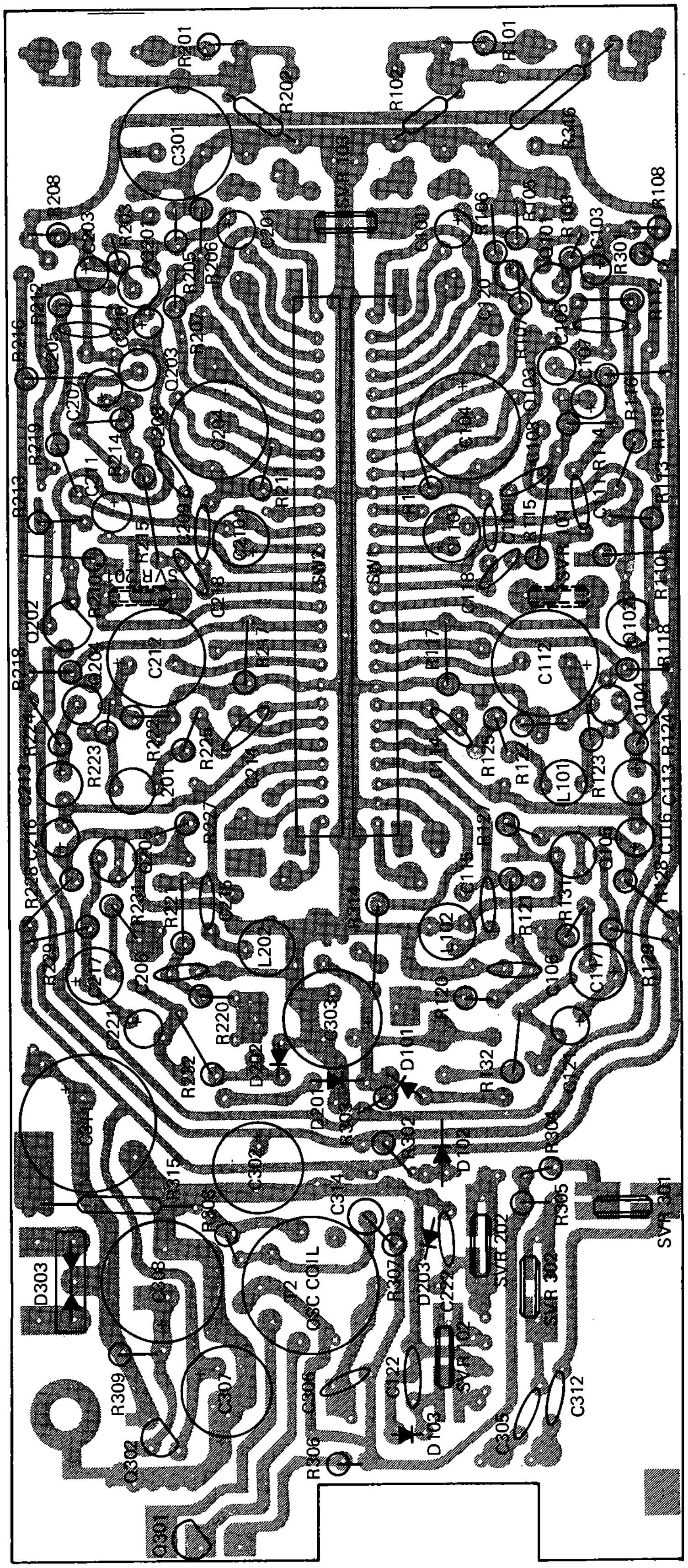


Figure 4.3. Amplifier Board Layout – Model 8055 – Component Side

Figure 4-3. Parts List (Cont.)

INDEX NUMBER	PART NUMBER	DESCRIPTION
C118, 218, 305, 312	81-46114003-0	0.0022 μf, 20%, 50V, Mylar
C120, 220	81-46116084-8	0.47 μf, 10V, Electrolytic
C112, 222	81-46116013-7	0.33 μf, 6.3V, Electrolytic
C301	81-46116014-5	220 μf, 10V, Electrolytic
C302	81-46116033-5	100 μf, 16V, Electrolytic
C303	81-46116034-3	330 μf, 6.3V, Electrolytic
C306	81-46114023-8	0.0022 μf, 10%, 50V, Mylar
C307	81-46116035-2	100 μf, 25V, Electrolytic
C308	81-46116036-8	200 μf, 25V, Electrolytic
C311	81-46116037-6	1000 μf, 25V, Electrolytic
C314	81-46116038-4	1 μf, 16V, Electrolytic
D101, 201, 102, 202	81-46123008-8	Diode, DS-38
D103, 203	81-46123001-3	Diode, 1S188AM
D303	81-46123034-4	Rectifier, DS-131
L101, 201	81-46133020-1	Choke Coil, 3.9 mh
L102, 202	81-46133021-9	Choke Coil, 6.8 mh
Q101, 201	81-46125053-2	Transistor, 2SC644S
Q102, 202	81-46125021-9	Transistor, 2SD327
Q103, 203	81-46125054-0	Transistor, 2SC644R
Q104, 204	81-46125024-3	Transistor, 2SC537FG
Q105, 205	81-46125022-7	Transistor, 2SB187R W/Fin
Q301	81-46125023-5	Transistor, 2SD261Q
Q302	81-46125025-0	Transistor, 2SD72 - Lot A
	81-46125055-7	Transistor, 2SC1383 - Lot B
SVR101, 201	81-46140001-2	Variable Resistor, 50K, Gain
SVR102, 202	81-46140014-5	Variable Resistor, 5K, Meter
SVR103	81-46140050-9	Variable Resistor, 20K, ARL Balance
SVR301, 302	81-46140013-7	Variable Resistor, 2K, Bias
SW1, 2	81-46141012-8	Slide Switch, Record/Play
T2	81-46132018-6	Transformer, Oscillating
	81-48230044-9	Amplifier Board, Complete - Lot A
	81-48230048-0	Amplifier Board, Complete - Lot B

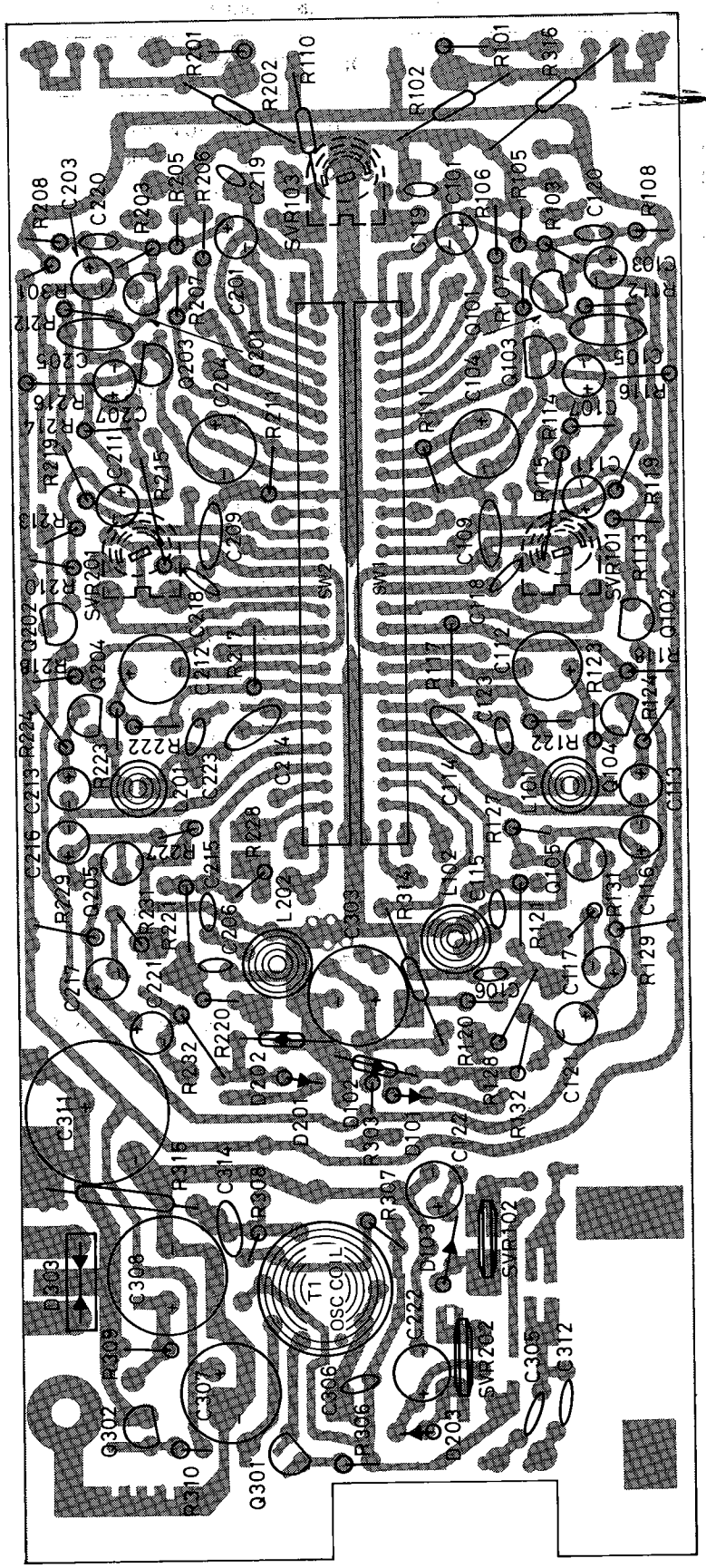


Figure 4.4 Amplifier Board Layout – Model 8056 – Component Side

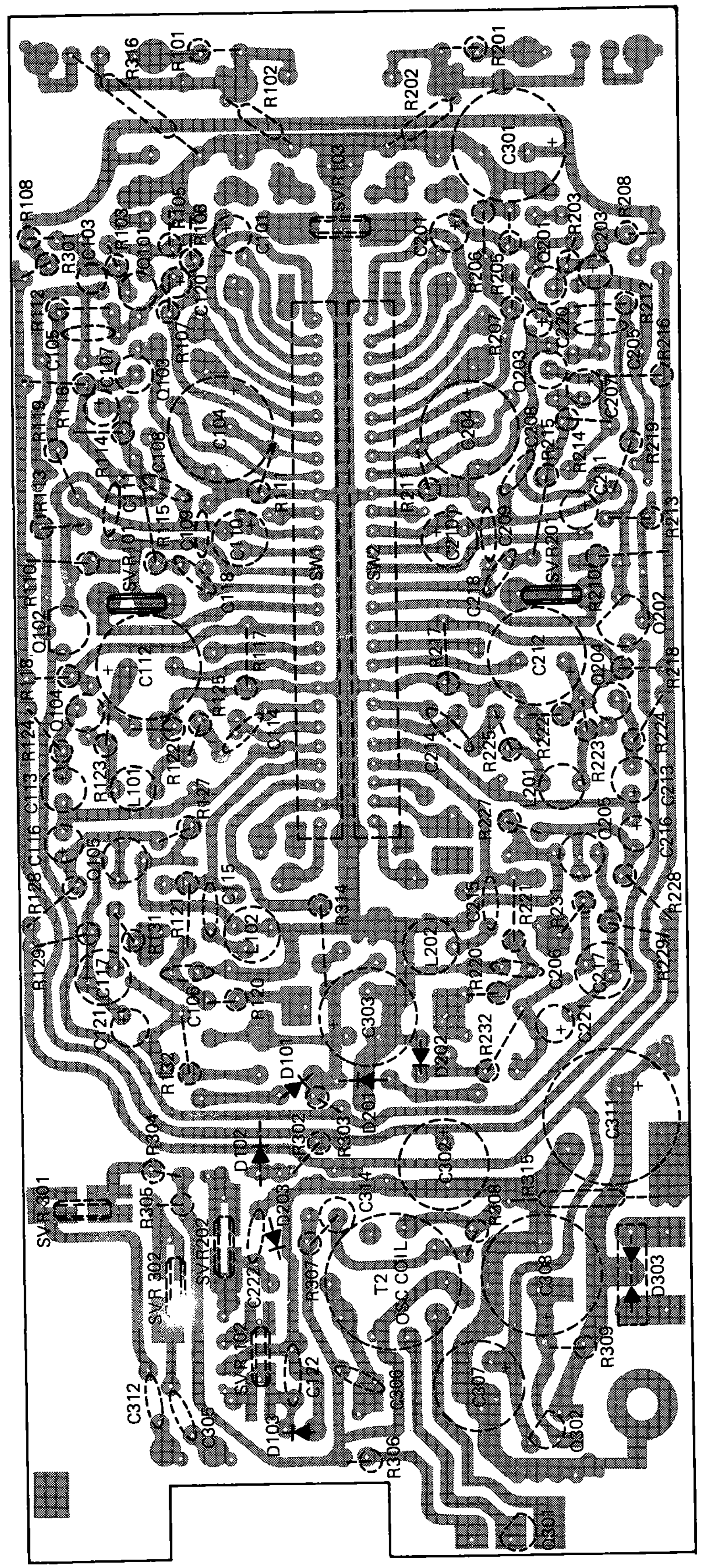


Figure 4.3 Amplifier Board Layout – Model 8055 – Foil Side

Figure 4-3. Parts List

All Resistors are 1/4 Watt, ±10% Carbon unless noted.

INDEX NUMBER	PART NUMBER	DESCRIPTION
R101, 201	N/A	150K Ohm
R102, 202, 122, 222	N/A	470 Ohm
R103, 203	N/A	1.8 Meg Ohm
R105, 205	N/A	1.0 Meg Ohm
R106, 206	N/A	82 Ohm
R107, 207, 125, 225	N/A	15 Ohm
R108, 208	N/A	8.2K Ohm
R110	N/A	47K Ohm
R111, 211	N/A	2.2K Ohm
R112, 212	N/A	100K Ohm
R113, 213, 118, 218	N/A	120K Ohm
R114, 214	N/A	680K Ohm
R115, 215	N/A	390K Ohm
R116, 216	N/A	12K Ohm
R117, 217, 121 221, 314	N/A	15K Ohm
R119, 219	N/A	2.7K Ohm
R120, 220	N/A	15K Ohm - Lot A 27K Ohm - Lot B
R123, 223	N/A	330 Ohm
R124, 224, 301	N/A	5.6K Ohm
R127, 227, 128, 228	N/A	27K Ohm
R129, 229	N/A	330 Ohm, 1/2 Watt, 10%, Solid
R131, 231	N/A	270 Ohm
R132, 232	N/A	100 Ohm
R210	N/A	56K Ohm
R302	N/A	560 Ohm
R303	N/A	18K Ohm
R304, 305	N/A	10 Ohm
R306	N/A	15 Ohm, 1/2 Watt, 10%, Solid
R307, 309	N/A	1.2K Ohm
R308	N/A	4.7K Ohm
R315	N/A	39 Ohm, 1/2 Watt, 10%, Solid - Lot A 27 Ohm, 1/2 Watt, 10%, Solid - Lot B
R316	N/A	80 Ohm - Lot A 18 Ohm - Lot B
C101, 201	81-46116085-5	2.2 μf, 16V, Electrolytic
C103, 203, 107, 207	81-46116031-9	1 μf, 10V, Electrolytic
C104, 204, 112, 212	81-46116008-7	220 μf, 6.3V, Electrolytic
C105, 205	81-46114011-3	0.047 μf, 20%, 50V, Mylar
C106, 206	81-46114033-7	0.001 μf, 50V, Mylar
C108, 208	81-46110023-2	330 pf, 20%, 50V, Ceramic
C109, 209	81-46114022-0	0.0033 μf, 20%, 50V Mylar
C110, 210	81-46116027-0	10 μf, 6.3V, Electrolytic
C111, 211, 116 216, 121, 221	81-46116030-1	2.2 μf, 25V, Electrolytic
C113, 213	81-46116004-6	4.7 μf, 16V, Electrolytic
C114, 214	81-46114070-9	0.068 μf, 10%, 50V, Mylar
C115, 215	81-46110026-5	820 pf, 10%, 50V, Mylar
C117, 217	81-46116015-2	10 μf, 16V, Electrolytic

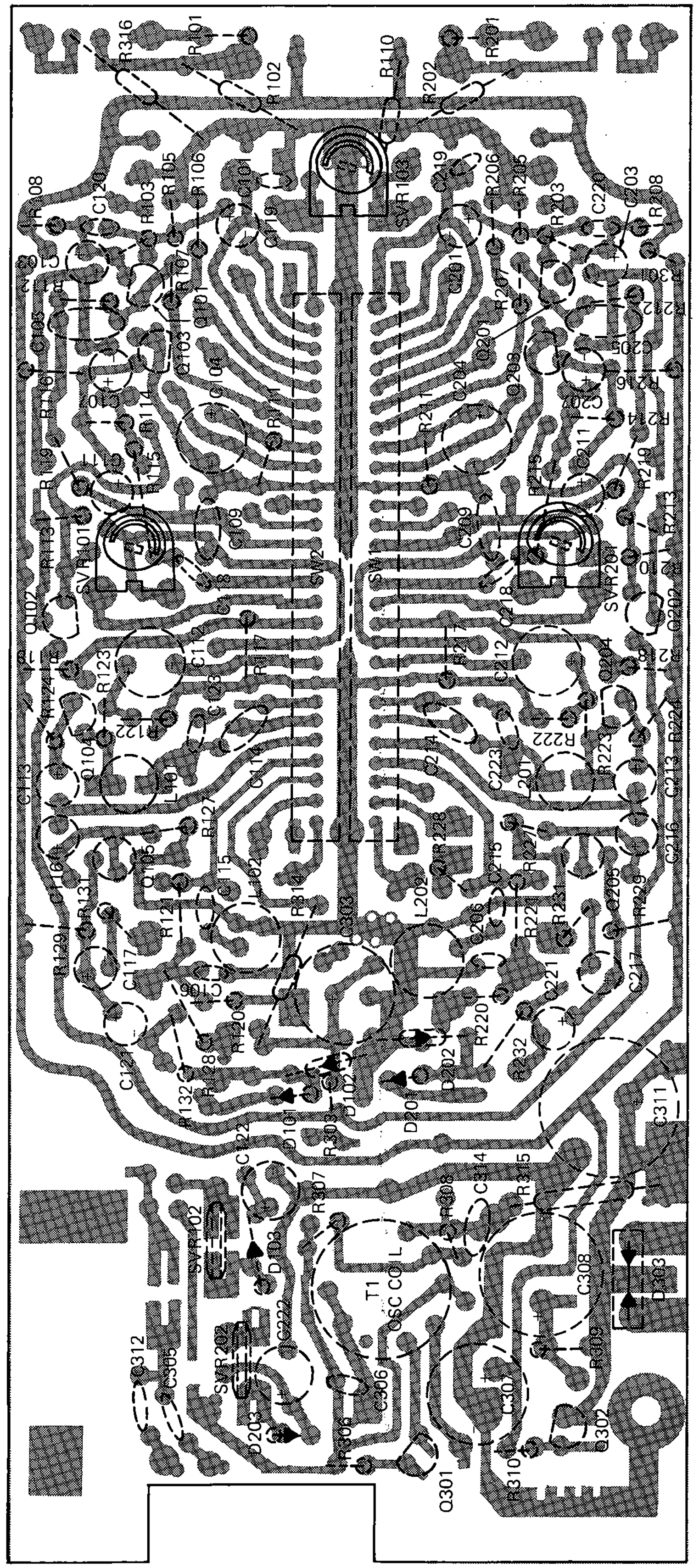


Figure 4.4 Amplifier Board Layout – Model 8056 – Foil Side

Figure 4.4. Parts List

All Resistors 1/4 W, ±10% unless otherwise noted

INDEX NUMBER	PART NUMBER	DESCRIPTION
R101, 201	N/A	150K Ohm
R102, 202	N/A	470 Ohm
R103, 203	N/A	1.8M Ohm
R105, 205	N/A	1M Ohm
R106, 206	N/A	82 Ohm
R107, 207	N/A	15 Ohm
R108, 208	N/A	8.2K Ohm
R110	N/A	15K Ohm
R111, 211	N/A	2.2K Ohm
R112, 212	N/A	100K Ohm
R113, 213	N/A	120K Ohm
R114, 214	N/A	1M Ohm
R115, 215	N/A	470K Ohm
R116, 216	N/A	12K Ohm
R117, 217	N/A	22K Ohm
R118, 218	N/A	120K Ohm
R119, 219	N/A	2.7K Ohm
R120, 220	N/A	27K Ohm
R121, 221	N/A	15K Ohm
R122, 222	N/A	820 Ohm
R123, 223	N/A	470 Ohm
R124, 224	N/A	5.6K Ohm
R127, 227	N/A	27K Ohm
R128, 228	N/A	33K Ohm
R129, 229	N/A	1K Ohm, Solid type, ±10%, 1/2W
R131, 231	N/A	330 Ohm
R132, 232	N/A	100 Ohm
R210	N/A	56K Ohm
R301	N/A	10K Ohm
R303	N/A	18K Ohm
R306	N/A	15 Ohm, Solid type, ±10%, 1/2W
R307, 309	N/A	1.2K Ohm
R308	N/A	4.7K Ohm
R315	N/A	120 Ohm, Metal oxide film, ±10%, 1/2W
R316	N/A	18 Ohm
C101, 201	81-46116030-1	2.2 µf, 25V, Electrolytic
C103, 203	81-46116031-9	1 µf, 10V, Electrolytic
C104, 204	81-46116006-1	100 µf, 6.3V, Electrolytic
C105, 205	81-46114011-3	0.047 µf, ±20%, 50V, Mylar
C106, 206	81-46114033-7	0.001 µf, ±20%, 50V, Mylar
C107, 207	81-46116031-9	1 µf, 10V, Electrolytic
C109, 209	81-46114003-0	0.0022 µf, ±20%, 50V, Ceramic
C111, 211	81-46116030-1	2.2 µf, 25V Electrolytic
C112, 212	81-46116006-1	100 µf, 6.3V Electrolytic
C113, 213	81-46116079-1	1 µf, 25V Electrolytic
C114, 214	81-46114016-2	0.033 µf, ±10%, 50V, Mylar
C115, 215	81-46110026-5	820 pf, ±10%, 50V, Mylar
C116, 216	81-46116030-1	2.2 µf, 25V, Electrolytic
C117, 217	81-46116093-9	10 µf, 16V, Electrolytic
C118, 218	81-46114025-3	0.0015 µf, ±20%, 50V, Mylar

Figure 4.4. Parts List (Cont.)

INDEX NUMBER	PART NUMBER	DESCRIPTION
C119, 120 219, 220	81-46110021-6	47 pf, ±20%, 50V, Ceramic
C121, 221	81-46116030-1	2.2 μf, 25V, Electrolytic
C122, 222	81-46116013-7	47 μf, 6.3V, Electrolytic
C132, 223	81-46114017-4	0.0047 μf, ±20%, 50V, Mylar
C303	81-46116034-3	330 μf, 6.3V, Electrolytic
C305, 312	81-46114003-0	0.0022 μf, ±20%, 50V, Ceramic
C306	81-46114060-0	0.0022 μf, ±10%, 50V, Mylar
C307	81-46116035-0	100 μf, 25V, Electrolytic
C308	81-46116036-8	220 μf, 25V, Electrolytic
C311	81-46116037-6	1000 μf, 25V, Electrolytic
C314	81-46116038-4	1 μf, 16V, Electrolytic
C319, 320, 321	81-46114088-1	0.005 μf, +80, -20%, 50V, Ceramic
D101, 102, 201, 202	81-46123038-5	Diode – DS-442
D103, 203	81-46123001-3	Diode, IS188
L101, 201	81-46133020-1	Coil 3.9mH
L102, 202	81-46133021-9	Coil 6.8mH
Q101, 201	81-46125053-2	Transistor, 2SC644S
Q102, 103, 202, 203	81-46125021-9	Transistor, 2SD327
Q104, 204, 302	81-46125024-3	Transistor, 2SC945
Q105, 205	81-46125022-7	Transistor, 2SB187R with Fin
Q301	81-46125072-2	Transistor, 2SD400
SVR101, 201	81-46140001-2	Semi-Variable Resistor, 50K, Gain
SVR102, 202	81-46140014-5	Semi-Variable Resistor, 5K, Meter
SVR103	81-46140050-9	Semi-Variable Resistor, 20K, ARL
SW1, SW2	81-46141012-8	Switch, Record/Play
T2	81-46133051-6	Transformer, Oscillator
	81-4823-0069-6	Amplifier Board, Complete

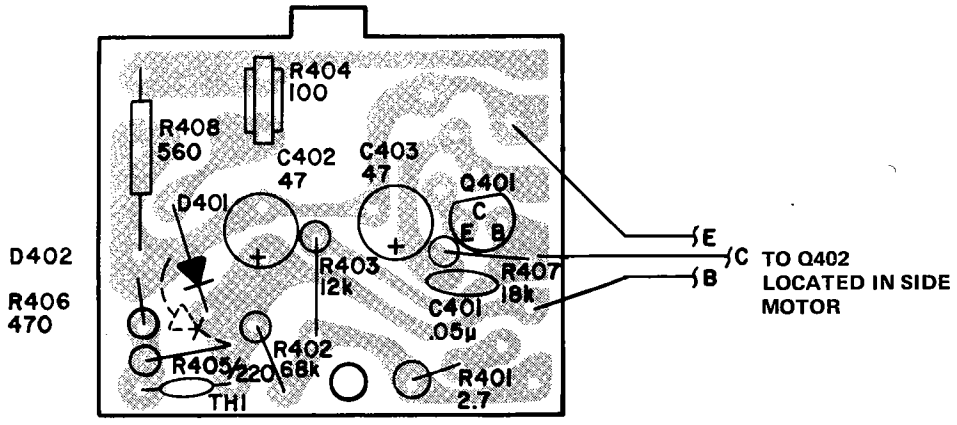


Figure 4.5. Motor Governor Board Component Layout

Figure 4.5. Parts List		
All Resistors are 1/4 Watt, ±10% Carbon unless noted.		
INDEX NUMBER	PART NUMBER	DESCRIPTION
R401	N/A	2.7 Ohm
R402	N/A	68K Ohm
R403	N/A	12K Ohm
R404	81-46140051-7	Variable Resistor, 100 Ohm, Speed
R405	N/A	220 Ohm
R406	N/A	470 Ohm
R407	N/A	18K Ohm
R408	N/A	560 Ohm (Varies per machine)
C401	81-46114071-7	0.05 µf, 10%, 50V
C402, 403	81-46116078-0	47 µf, 16V, Electrolytic
D401	81-46123036-9	Diode
D402	81-46123037-7	Diode
Q401	81-46125056-5	Transistor, 2SC711
Q402	81-46125016-9	Transistor, 2SC536
TH1	81-46143012-6	Thermistor, SDT-20
	81-48230047-2	Motor Governor Board, Complete

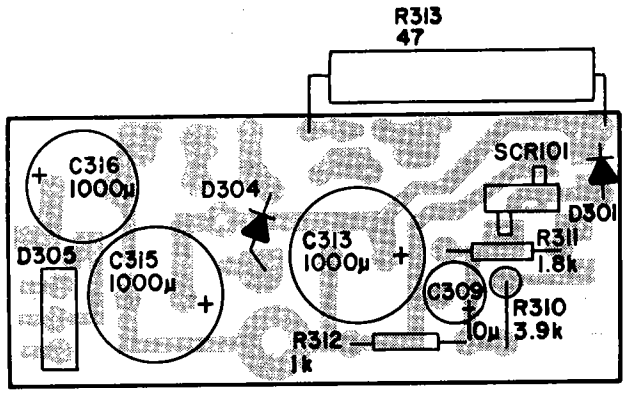


Figure 4.6. Eject Board Component Layout

Figure 4.6. Parts List		
All Resistors are 1/4 Watt, ±10% Carbon unless noted.		
INDEX NUMBER	PART NUMBER	DESCRIPTION
R310	N/A	3.9K Ohm
R311	N/A	1.8K Ohm
R312	N/A	1K Ohm
R313	N/A	47 Ohm, 5 Watt, 10%, Metal Oxide
C309	81-46116015-2	10 µf, 16V, Electrolytic
C313, 315	81-46116039-2	1000 µf, 35V, Electrolytic
C316	81-46116037-6	1000 µf, 25V, Electrolytic
D301	81-46123033-6	Diode, 10D-2
D304	81-46123012-0	Rectifier, 10D-1
D305	81-46123035-1	Rectifier, DS-17
SCR101	81-46123010-4	Rectifier, IRC-05
	81-48230045-6	Eject Board, Complete

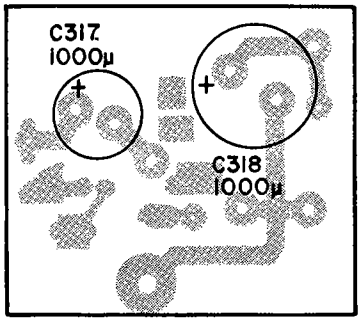


Figure 4.7. Capacitor Board Components Layout – Model 8055 (Lot B only)

Figure 4.7. Parts List

INDEX NUMBER	PART NUMBER	DESCRIPTION
C317	81-46116011-1	1000 µf, 10V, Electrolytic
C318	81-46116037-6	1000 µf, 25V, Electrolytic
	81-48230046-4	Capacitor Board, Complete

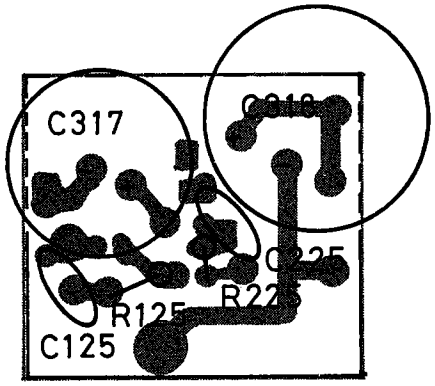


Figure 4.8. Capacitor Board Components Layout – Model 8056

Figure 4.8. Parts List

INDEX NUMBER	PART NUMBER	DESCRIPTION
R125, 225	N/A	390 ohms, 1/4 W, 10%
C125, 225	81-46114080-8	0.012 µf, ±20%, 50V, Mylar
C317	81-46116011-1	1000 µf, 16V, Electrolytic
C318	81-46116037-6	1000 µf, 25V, Electrolytic
	81-48230071-2	Capacitor Board, Complete

SW 1	RECORD/PLAY SWITCH CHANNEL ONE
SW 2	RECORD/PLAY SWITCH CHANNEL TWO
SW 3	RECORD MICRO SWITCH
SW 4	RECORD PUSH SWITCH
SW 5	FAST FORWARD SWITCH
SW 6	CARTRIDGE INTERLOCK MICRO SWITCH
SW 7	SENSING SWITCH
SW 8	SELECT SWITCH
SW 9	AUTO EJECT SWITCH
SW 10	PILOT LAMP CHANGING SWITCH
SW 11	TRACK SELECT SWITCH
SW 12	PAUSE SWITCH
SW 13	EJECT ON-OFF SWITCH
SW 14	MANUAL EJECT SWITCH
SW 16	ARL SWITCH
SW 17	ON/OFF AT PAUSE SWITCH
SW 18	CARTRIDGE INTERLOCK SPRING SWITCH

NOTES:

1. VOLTAGES INDICATED ARE DC TO CHASSIS. UPPER VOLTAGE IN PLAYBACK, LOWER IN RECORD MODE.
2. ALL RESISTOR VALUES ARE IN OHMS 1/4 WATT 10% CARBON UNLESS NOTED.
3. ALL CAPACITORS VALUES ARE IN mfd UNLESS NOTED.
4. THIS SCHEMATIC IS SUBJECT TO CHANGE TO ACCOMMODATE IMPROVEMENTS IN DESIGN.

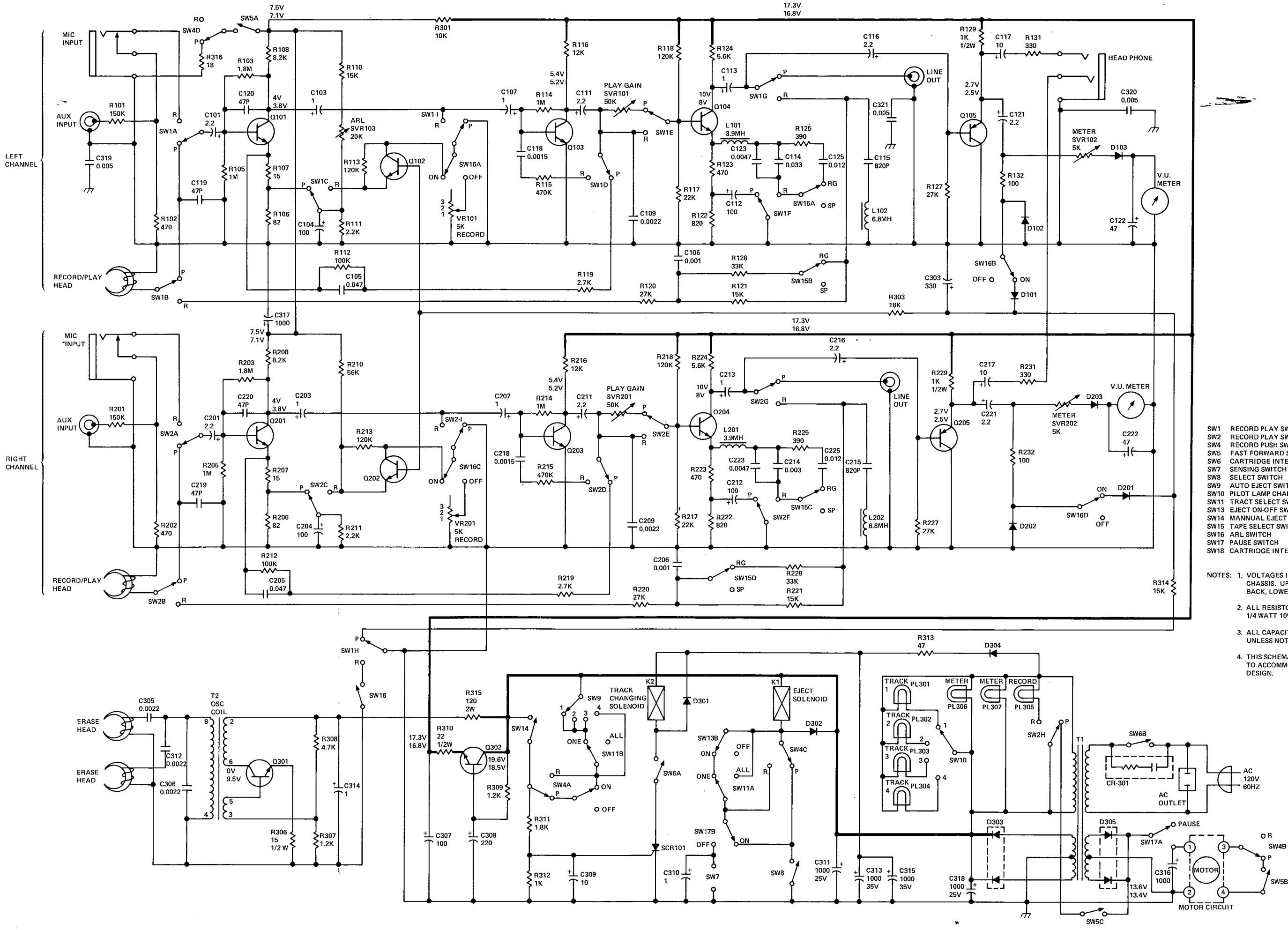
Figure 4.10. 8055 Electrical Schematic Lot B – Serial Number 80555000 and above

SW 1	RECORD/PLAY SWITCH CHANNEL ONE
SW 2	RECORD/PLAY SWITCH CHANNEL TWO
SW 3	RECORD MICRO SWITCH
SW 4	RECORD PUSH SWITCH
SW 5	FAST FORWARD SWITCH
SW 6	CARTRIDGE INTERLOCK MICRO SWITCH
SW 7	SENSING SWITCH
SW 8	SELECT SWITCH
SW 9	AUTO EJECT SWITCH
SW 10	PILOT LAMP CHANGING SWITCH
SW 11	TRACK SELECT SWITCH
SW 12	PAUSE SWITCH
SW 13	EJECT ON-OFF SWITCH
SW 14	MANUAL EJECT SWITCH
SW 16	ARL SWITCH
SW 17	ON/OFF AT PAUSE SWITCH
SW 18	CARTRIDGE INTERLOCK SPRING SWITCH

NOTES:

1. VOLTAGES INDICATED ARE DC TO CHASSIS. UPPER VOLTAGE IN PLAYBACK, LOWER IN RECORD MODE.
2. ALL RESISTOR VALUES ARE IN OHMS 1/4 WATT 10% CARBON UNLESS NOTED.
3. ALL CAPACITORS VALUES ARE IN mfd UNLESS NOTED.
4. THIS SCHEMATIC IS SUBJECT TO CHANGE TO ACCOMMODATE IMPROVEMENTS IN DESIGN.

Figure 4.9. 8055 Electrical Schematic Lot A – Serial Number 80552000 up to 80554999



SW1 RECORD PLAY SWITCH LEFT CHANNEL
SW2 RECORD PLAY SWITCH RIGHT CHANNEL
SW4 RECORD PUSH SWITCH
SW5 FAST FORWARD SWITCH
SW6 CARTRIDGE INTERLOCK MICRO SWITCH
SW7 SENSING SWITCH
SW8 SELECT SWITCH
SW9 AUTO EJECT SWITCH
SW10 PILOT LAMP CHANGING SWITCH
SW11 TRACT SELECT SWITCH
SW13 EJECT ON-OFF SWITCH
SW14 MANNUAL EJECT SWITCH
SW15 TAPE SELECT SWITCH
SW16 ARL SWITCH
SW17 PAUSE SWITCH
SW18 CARTRIDGE INTERLOCK SPRING SWITCH

NOTES:
1. VOLTAGES INDICATED ARE DC TO CHASSIS. UPPER VOLTAGE IN PLAY-BACK, LOWER IN RECORD MODE.
2. ALL RESISTOR VALUES ARE IN OHMS 1/4 WATT 10% CARBON UNLESS NOTED.
3. ALL CAPACITORS VALUES ARE IN mfd UNLESS NOTED.
4. THIS SCHEMATIC IS SUBJECT TO CHANGE TO ACCOMMODATE IMPROVEMENTS IN DESIGN.

Figure 4.11. 8056 Electrical Schematic