

L. S. M. PADIN



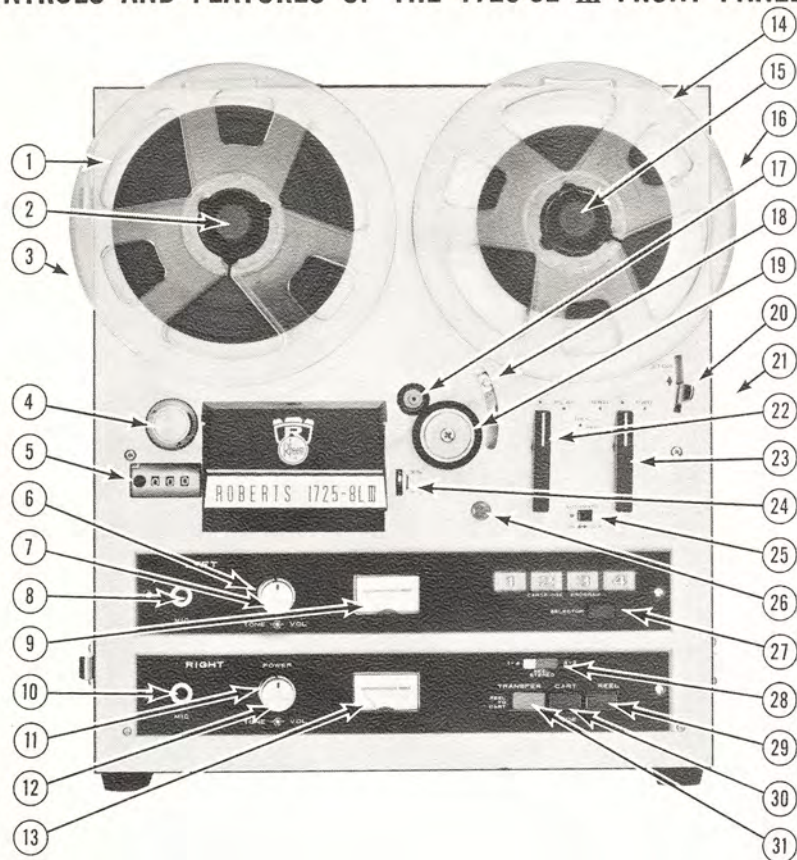
ROBERTS 1725-8L III
REEL-TO-REEL AND CARTRIDGE RECORDER



THE PRO LINE
ROBERTS

OPERATORS MANUAL

CONTROLS AND FEATURES OF THE 1725-8L III FRONT PANEL



- 1 Supply Reel
- 2 Supply Reel Holder
- 3 Speaker, Left Channel
- 4 Tape Guide Roller
- 5 Index Counter, Instant Reset
- 6 Tone Control, Left Channel
- 7 Volume Control, Left Channel
- 8 Microphone Input Jack, Left Channel
- 9 VU Meter, Left Channel
- 10 Microphone Input Jack, Right Channel
- 11 Tone Control, Right Channel
- 12 Volume Control, Right Channel & Power Switch
- 13 VU Meter, Right Channel
- 14 Take-Up Reel
- 15 Take-Up Reel Holder
- 16 Speaker, Right Channel
- 17 Drive Capstan
- 18 Automatic Shut-Off Lever
- 19 Pinch Wheel
- 20 Pause Lever
- 21 Cartridge Insert Pocket
- 22 Play-Record Control
- 23 Rewind-Fast Forward Control
- 24 Tape Speed Switch
- 25 Automatic On-Off Switch
- 26 Record Interlock Button
- 27 Cartridge Program Selector Switch
- 28 Track Selector Switch
- 29 Reel Mode Switch
- 30 Cartridge Mode Switch
- 31 Reel to Cartridge Record Transfer Switch

CONTROLS AND FEATURES OF THE 1725-8L III REAR PANEL

- 32 Phono-Radio Input Jack, Right Channel
- 33 Preamp Output Jack, Right Channel
- 34 AC Power Cord Input
- 35 Speaker Output Jack, Right Channel
- 36 Phono-Radio Input Jack, Left Channel
- 37 Preamp Output Jack, Left Channel
- 38 Speaker Mute Switch
- 39 Speaker Output Jack, Left Channel

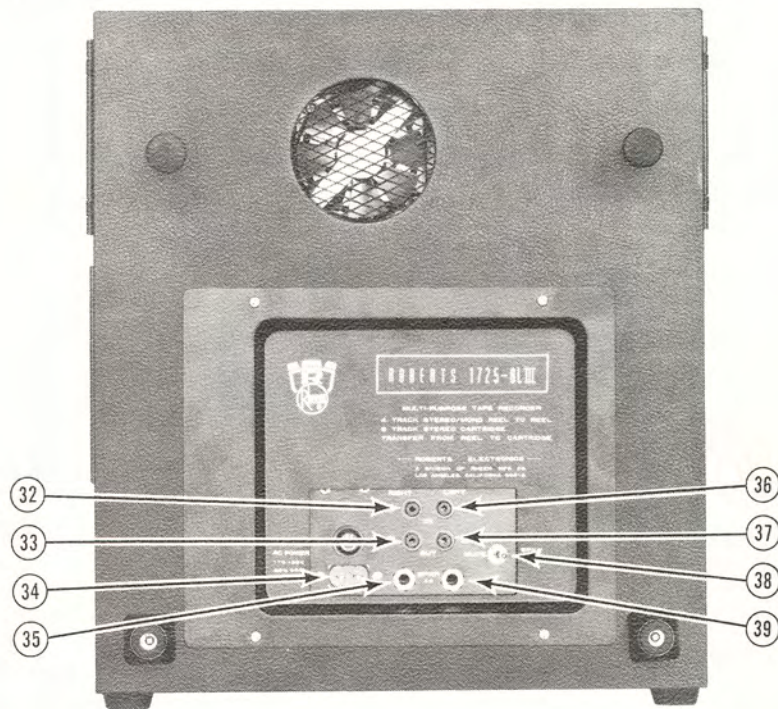


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SPECIFICATIONS

VOLTAGE AND POWER REQUIREMENTS: 110-125 Volts, 60 Cycles, 60 Watts

POWER CORD: Disconnect type, 8 ft. long

SPEEDS: 3¾ and 7½ IPS Reel-to-Reel

3¾ IPS Cartridge

PLAYING/RECORDING TIME: 4 tracks, 1200' reel.

64 minutes per track at 3¾ IPS

32 minutes per track at 7½ IPS

POWER SUPPLY: Transformer operated full-wave AC Type

CONTROLS: Automatic shut-off, digital index counter, separate left and right channel volume controls and tone controls, two VU meters, pause lever, record interlock switch, track selector switch, speaker switch, Reel/Cart/Transfer Mode switches.

FREQUENCY RESPONSE: 3¾ IPS — 50 to 10,000 CPS $\pm$ 3 db.

7½ IPS — 50 to 15,000 CPS $\pm$ 3 db.

OUTPUT POWER: 2 W RMS/Channel; 10 W Peak music power total

SPEAKERS: Two 8-ohm 4" extended range acoustic suspension type.

WOW AND FLUTTER: Less than 0.2% at 7½ IPS

Less than 0.25% at 3¾ IPS

SIGNAL-TO-NOISE RATIO: Better than 45 db.

RECORD INPUTS: 2 high impedance (100K ohm) microphone inputs, 2 high impedance (100K ohm) high level phono/radio (line) inputs.

PLAYBACK OUTPUTS: 2 HiZ (100K ohm) preamp, 2 external speakers.

BIAS OSCILLATOR FREQUENCY: FM Multiplex-ready.

RECORD AND PLAYBACK EQUALIZATION: Standard NARTB

INPUT SENSITIVITY: 80mV for "O" VU recording in phono-radio (line) input.

2mV for "O" VU recording in microphone input.

RECORDING HEADS: Laminated MU metal case. Resin-sealed and shock-resistant. Hyperbolically contoured for optimum performance.

MOTOR AND DRIVE: 2-speed, electrically-switched 24-slot wave wound dynamically balanced.

REEL SIZE: 7" maximum — cover may be closed on mounted 5" reels.

OPERATING POSITION: Horizontal or vertical.

WEIGHT: 34 lbs.

SIZE: 15"H x 13½"W x 9½"D

OPERATING FEATURES—REEL TO REEL SECTION ONLY

THE TAPE DECK contains the mechanism for moving the magnetic tape across the erase and record/play heads from Supply Reel (1) to the Take-up Reel (14). Mounted on the Tape Deck Panel are the following:

Index Counter (5), Automatic Shut Off Lever (18), Play/Record Control (22), Record Interlock Button (26), Fast Forward/Rewind Control (23), Pause Lever (20), Drive Capstan (17) and Pinch Wheel (19).

INDEX COUNTER (5). This 3-digit counter, (0-999), provides reference numbers for locating individual selections on the tape. It is always advisable to reset the counter to the "000" position at the start of a new tape. Then all or a portion of the recording can be keyed by number position on an index sheet or card.

THE AUTOMATIC SHUT OFF LEVER (18) will drop when the tape has passed through to the take-up Reel (14), causing the transport mechanism to stop if the Automatic On-Off Switch (25) is in the "ON" position. With the Automatic On-Off Switch in the "OFF" position, the automatic feature is disconnected and will not function.

THE PLAY/RECORD CONTROL (22) controls the operation of these functions. In order to turn the switch to the "record" position, the Record Interlock Button (26), must be depressed and held. This is a safety feature which prevents accidental erasure of prerecorded selections.

FAST FORWARD/REWIND CONTROL (23) provides a method of advancing the tape rapidly to any desired location, usually indicated by the index counter. In "fast forward" position, the tape will advance at the rate of 1200 feet in 75 seconds.

To "advance" or to "rewind" the tape, turn the Fast Forward/Rewind Control (23) to the "fast forward" or "rewind" position. In this case, you don't have to release the Pause Lever (20) as it has no effect in this operation.

PAUSE LEVER (20)

To stop the tape momentarily while either recording or playing back, raise the Pause Lever (20) until it locks. To release it, lift slightly; it will drop back to Normal. Use of this lever allows you to obtain precise recording levels on the VU Meter while the Play/Record Control (22) is in the Record position, without advancing the tape.

THE DRIVE CAPSTAN (17) AND PINCH WHEEL (19) provide the driving force which advances the tape at a precise, predetermined speed. The Pinch Wheel keeps the tape in tight contact with the Drive Capstan, preventing any slippage of the tape.

VU METERS (9) (13): The professional-type VU (Volume Unit) Meters provide correct recording levels and balance for stereophonic playback. The VU Meter needles should average mid-scale when recording. (See Recording Tips.)

SELECTION OF TAPE SPEED

A bushing slides on the Drive Capstan to accomplish speed changes by moving the shift lever (24) to desired speed.

Tape Speeds are determined as follows:

BUSHING TAPE SPEED

Down 3 $\frac{3}{4}$ INCHES PER SECOND

Up 7 $\frac{1}{2}$ INCHES PER SECOND

TRACK SELECTOR SWITCH (28): This switch determines record or playback track selection. "Mono 1-4" position is used for monaural record or playback on Track 1 or 4 (left channel). "Mono 3-2" is used for either Track 3 or 2 (right channel). "Stereo" position is used for all stereo record and playback operations.

VOLUME CONTROLS (7) (12): Volume Controls control the recording levels and playback volumes for the Left and Right channels respectively.

tone Controls (6) (11): Tone Controls are used to establish the desired bass/treble balance. The tone controls are inoperative in the Record mode.

POWER SWITCH (12): This switch controls all power. Right Channel Volume knob operates on-off power switch. Pull to turn on, push to turn off.

LEFT (8) and RIGHT (10) MICROPHONE INPUTS: For live recording, simply plug microphone(s) into these jacks. Note: When recording from radio or phono, be sure to remove microphone(s). Use high impedance microphones.

PROGRAM SELECTOR SWITCH (27): Press to change cartridge from one track to the next.

PROGRAM INDICATOR (27): Illuminated numeral indicates which program is being recorded or played on cartridge.

MODE SELECTOR SWITCHES (29) (30) (31): Press REEL switch (29) to record from line or microphone inputs or to play on the reel section. Press CART. switch (30) to record from line or microphone inputs or to play on the cartridge section. (Deck Play/Record control must be in Record position to record on cartridge **except** when recording from reel-to-cartridge. Raise Pause Lever to halt tape motion.) Press TRANSFER switch (31) to record on cartridge from reels. **DO NOT PLACE DECK PLAY/RECORD CONTROL IN RECORD** in order to accomplish transfer. Place deck Play/Record control in Play position to advance master tape. One, and only one, Mode Selector switch may be depressed at any time for proper operation. Do not press or release the Transfer button unless the Play/Record control is in Stop.

REAR PANEL

INPUT CONNECTION (34) for 117 volt AC connecting cord.

LEFT AND RIGHT EXTERNAL SPEAKER OUTPUTS (39) (35):

When external speakers are plugged in, the internal speakers are not disconnected.

LEFT AND RIGHT CHANNEL PHONO/RADIO INPUTS (36) (32):

For recording from amplifier, radio, phonograph, or another tape recorder.

LEFT AND RIGHT CHANNEL PREAMP OUTPUTS (37) (33):

Direct connections from the preamplifier, used for output leads into an external power amplifier such as an existing Hi-Fi system.

SPEAKER CONTROL SWITCH (38): When in "OFF" position, the built-in speakers of the Roberts 1725-8L III are inoperative. This switch is primarily used in the "OFF" position when using external speakers.

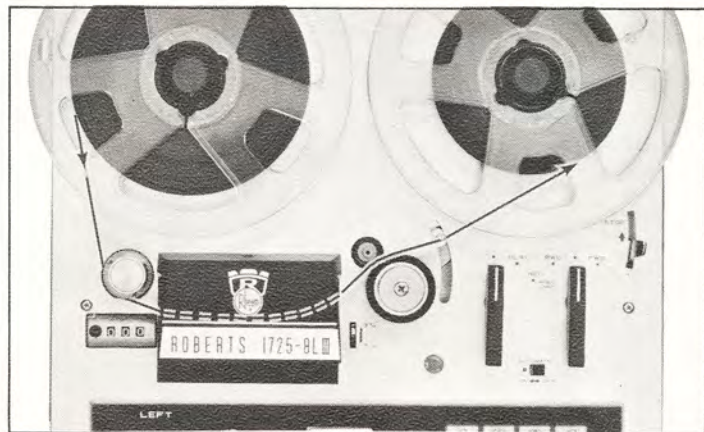
OPERATING PROCEDURE

HOW TO THREAD THE TAPE ON YOUR ROBERTS 1725-8L III:

Install a reel of tape on the Supply Reel (1) shaft. Make sure that the slots on the reel engage the 3 fins on the reel shaft. Fasten the reel in place with the rubber Reel Holder (2).

Thread the tape around the Tape Guide Roller (4) as illustrated, then under the Head Cover, between the Capstan (17) and Pinch Wheel (19), under the Automatic Shut-Off Lever (18), and finally wrap two or three turns of tape around the hub of the Take-Up Reel (14). Be sure that the oxide coated side of the tape (dull side) faces up.

The tape transport is now loaded and ready for any reel recording or playback functions.



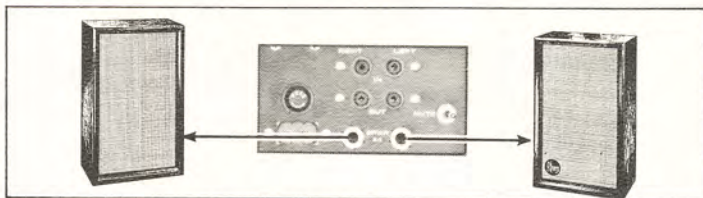
4 TRACK (REEL) STEREO PLAYBACK

Thread tape on your Roberts 1725-8L III. Select correct tape speed. Check that Speaker switch is on unless listening with headphones. Turn Left Channel and Right Channel Volume Controls (7) (12) and Tone Controls (6) (11) to desired listening levels. One quarter turn on both volume and tone controls is a good starting point. Make sure that Track Selector Switch (28) is in "Stereo" position, and check that Reel mode switch (29) is pressed. Turn Play/Record Control (22) to "Play" position. If Pause Lever (20) is locked in "Stop" position, lift slightly to release. When tape has played completely through, remove full Take-Up Reel and Transfer to Supply Reel shaft. Thread tape in machine as previously indicated. When tape has played through the second time, it will have returned to its original reel.

8 TRACK (CARTRIDGE) STEREO PLAYBACK

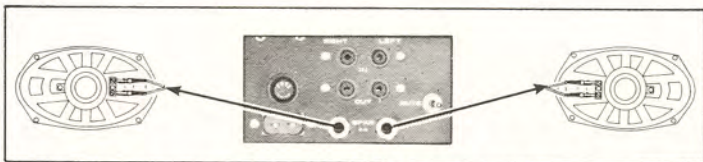
Depress CART. mode selector button (30). Check speaker switch. Insert cartridge into opening in right side of recorder case (21). Press in firmly; the cartridge will snap into place. Adjust the Volume and Tone controls to suit the listening conditions.

To change tracks, press and release the Program Selector button (27). To change cartridges, grasp the cartridge firmly and pull straight out (towards the right, exactly opposite to cartridge insertion).



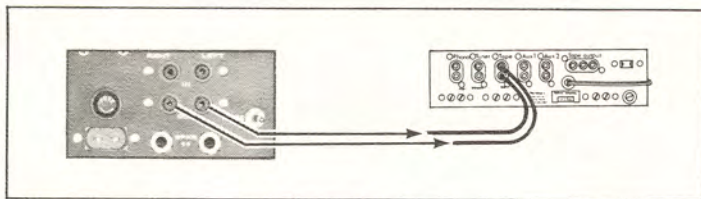
PLAYBACK THROUGH ACCESSORY SPEAKERS

For extension speakers such as the Roberts S907A, plug speaker cords into Right and Left Speaker Output Jacks (35) (39) as illustrated. You will now be playing back through the extension speakers using the 1725-8L III Power Amplifier. Best results will be obtained by using high-efficiency, extended range 8-ohm speakers like the Roberts Portable Hi-Fi Stereo Speaker Systems, S907A.



PLAYBACK THROUGH SPEAKERS IN OTHER SOUND SYSTEMS

The speaker(s) in your radio, phono, or TV may be utilized by connecting directly to the voice coils of the speakers as illustrated, using "patch cords" equipped with alligator clips. (See "Recording Tips"). CAUTION: Do not connect to voice coils of any but permanent magnet type speakers. If in doubt, consult your sound technician.

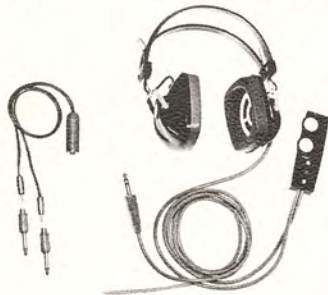


PLAYBACK THROUGH EXISTING HI-FI STEREO SYSTEM

Connect Left and Right Channel Preamp Outputs (37) (33) to your Hi-Fi amplifier as illustrated. Note: Turn volume controls approximately one quarter turn, then control volume by adjusting volume controls on your Hi-Fi system amplifier.

THE TOTAL SOUND OF ROBERTS STEREO HEADPHONE ACCESSORY MODEL 3850

A thrilling new experience is yours when you listen to stereophonic sound through a Roberts Stereophonic Dynamic Headset. All external sound interference is eliminated and you hear and enjoy every slight inflection of the recorded sound.



RECORDING STEREO FROM REELS TO CARTRIDGE

To Record on a Cartridge from Tape on Reels (Transfer):

Select the correct capstan bushing for the speed of the tape on reels. (3 $\frac{3}{4}$ IPS, small shaft, bushing down. 7 $\frac{1}{2}$ IPS, bushing up.) Thread the pre-recorded tape in the normal manner. Press the TRANSFER Mode Selector button (31). Place the Play/Record control (22) in Play. Adjust the Volume controls so that the VU meters read between mid-scale for average program material. Stop and Rewind to beginning of program. Raise Pause Lever and place Play/Record control in Play again. Insert cartridge just far enough to illuminate Program Indicator. Press the Program Selector switch (27) until the desired program is indicated. (Generally, this will be Program One). To begin recording, insert the cartridge fully and release Pause Lever. Be sure to halt recording after the fourth track, in order to avoid erasing material just recorded. To play back the cartridge recording, press the CART. Mode Selector switch and re-insert the cartridge.

CAUTION: Do not place Play/Record control on deck in Record position for Transfer function to avoid erasing pre-recorded reel tape. To avoid putting a "blip" on the master tape, do not press or release the Transfer button unless the Play/Record control is in the stop position.

4 TRACK (REEL) STEREO RECORDING

Install and thread tape as previously indicated. Turn on recorder and select Tape Speed. Depress REEL mode switch.

Connect microphones to L. Ch. and R. Ch. Microphone Inputs (8) (10). For best results, microphones should be spaced from 6 to 7 feet apart to obtain true stereo effect. Place Selector Switch (28) in "Stereo" position. Push Pause Lever (20) to "Stop" (locked) position. Push in Record Safety Interlock Button (26) and turn Play/Record Control (22) to "Rec" position. Adjust Volume Controls (L. Ch. and R. Ch.) making a test run, if possible, before Pause Lever is released. (Tone Controls are inoperative while recording.)

For a test run, you proceed exactly as you do for a recording, except that the Pause Lever is placed in "Stop" position. This procedure permits you to establish your recording levels without actually recording on tape.

Recording volume, as indicated on the VU Meter (9) (13), should hover around mid-scale on the meters. Only in the case of infrequent peaks should the VU Meter needles pass beyond "0" into the upper part of the dial.

After test run is completed, start your recording over again. To start tape motion, release Pause Lever (20).

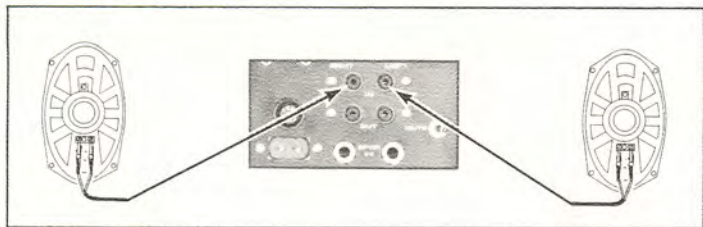
When tape has been recorded completely through, remove full Take-up Reel and transfer to Supply Reel shaft. Thread tape on machine as previously indicated.

NOTE: The first recording will be made on tape Tracks 1 and 3. When reels are reversed, Tracks 4 and 2 will be recorded.

8 TRACK (CARTRIDGE) STEREO RECORDING

To Record on a Cartridge from Line or Microphone Inputs:

Connect external signal source to appropriate input jack. Press CART. Mode Selector switch (30). Raise Pause Lever (20) to STOP position. Place Play/Record control (22) in RECORD. Adjust Volume controls so that VU meters read mid-scale on average program material. Insert a cartridge just far enough to illuminate the Program Indicator. Press the Program Selector switch until the desired program is indicated (generally, this will be Program One). Check that the Automatic Shutoff switch (25) is in the OFF position. Insert the cartridge fully to begin the actual recording. To pause while recording on the cartridge, merely pull the cartridge partially out of the slot (approximately one inch). Re-insert to resume recording. Be sure to halt the recording after the fourth track, in order to avoid erasing material just recorded. Most cartridges will record approximately 15 minutes per track (program), permitting a total recording period of 60 minutes per cartridge at the standard $3\frac{3}{4}$ IPS.



RECORDING FROM PHONO/RADIO SPEAKERS

For this and following recording applications, the Roberts Universal patch cord Kit Accessory #3854 will be found most convenient and helpful. Using this kit, the cables with the alligator clips are used to clip directly to the voice coil terminals on the speakers as shown. The other ends of these cables are equipped with standard phono-type plugs which are inserted in the Phono/Radio input jacks.

(CAUTION: In no instance should any attempt be made to connect to electro-dynamic speakers. Most modern-day speakers are of the permanent magnet type. However, if there is any question, first consult your sound technician.)

TO RECORD FROM HI-FI PREAMP OUTPUT

Connect patch cords from the output jacks on your Hi-Fi pre-amplifier to Phono/Radio input jacks (32) (36). Follow basic instructions as previously outlined.

RECORDING FROM ANOTHER TAPE RECORDER

If it is desired to make a duplicate of a pre-recorded tape, proceed as follows: Connect patch cords from the preamp outputs of another tape recorder to the Phono/Radio input jacks (32) (36). Follow basic instructions as previously outlined. You may convert a tape recording from one speed to another in this manner, or make "same speed" duplicates. Be sure that the originating tape recorder is in "Play" mode.

MONAURAL RECORDING AND PLAYBACK

MONAURAL RECORDING

Install and thread tape as previously indicated. Pull Power Switch (12) "On" and adjust to desired speed.

Turn Selector Switch (28) to 1-4 "Monaural" position.

Connect microphone to Left Channel (8) Microphone Input.

Push Pause Lever (20) to "Stop" (locked position).

Push Record Interlock Button (26) and turn Play/Record Control (22) to "Rec" position.

Tone Control is inoperative during recording. Adjust Left Channel Volume Control (7), making a "test run" before Pause Lever (20) is released (tape not in motion).

Recording mid-volume should be such that the VU Meter needle hovers around mid-scale. Only on infrequent peaks should the needle go into the RED portion of the VU Meter. After establishing your recording volume level, start tape moving by releasing Pause Lever. (Your first recorded track will be Track 1.)

When Track 1 is completed, remove full Take-Up Reel and transfer to Supply Reel shaft. Follow threading procedures outlined previously. Your second recording will be on Track 4.

AFTER FIRST TWO RECORDINGS ARE COMPLETE (Tracks 1 and 4), turn Track Selector Switch (28) to 3-2 "Monaural" position. Remove full Take-Up Reel and again transfer to Supply Reel Shaft. Thread tape as previously indicated. Connect microphone to Right Channel Microphone Input (10). The subsequent completed recording will be on Track 3. After recording is completed again, remove full Take-Up Reel and transfer to Supply Reel shaft. Thread tape as previously indicated. This final recording will be on Track 2 and all four tracks will have been recorded. **PLAYBACK OF 4 MONAURAL TRACKS FOLLOWS "RECORD" SEQUENCE EXCEPT THAT PLAY/RECORD CONTROL (22) IS TURNED TO "PLAY" MODE.**

When recording from sound sources other than a microphone, follow the connecting procedures as outlined on "Stereo Recording" but using one channel only, as indicated above, for microphone recording.

OPERATING SUGGESTIONS

RECORDING TIPS

You can make direct recordings (no microphones used) on your ROBERTS by utilizing "patch" cords such as the ones available in the Roberts Universal Patch Cord Kit #3854. These connect the PHONO/RADIO inputs of your recorder to the tape outputs of the radio or phonograph. If tape outputs are not provided, "patch" cords equipped with "alligator" clamps are placed on speaker terminals (or voice coil connection).

CAUTION: Do not connect to voice coil terminals of any but permanent magnet type speakers. Electro-Dynamic speakers are usually identified by the presence of more than two connecting speaker wires. Dangerous voltages are present in these speakers. Whenever possible, make a "test run" before actually recording. To do this, make all necessary tape recorder connections (PHONO-RADIO or MICROPHONE) to sound source. Then raise PAUSE LEVER, stopping tape. Place machine in RECORD MODE and, for example, start phonograph record playing. Adjust volume control(s) according to correct VU METER readings (see following). Then start phonograph record at beginning, release PAUSE LEVER and start recording.

NOTE: Tone Controls are always inoperative while recording. Correct recording volume levels are accurately gauged on the professional-type VU Meters provided on the ROBERTS. In either "line" (phono-radio or microphone) recording, the following "rules of thumb" should be observed:

1. The VU METER needle should "hover" around center scale.
2. It is alright for the VU METER to occasionally "dart" into the red portion of the meter scale at volume peaks.

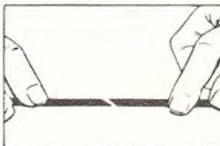
3. Do not "ride the gain" (make adjustment of volume controls while recording or copying music from radio or phonograph). Play the first recording on the disc, for example, through the tape recorder (PAUSE LEVER "UP", machine in RECORD MODE). Set volume, watching VU METER as described above. Average setting of VOLUME-CONTROLS for the first selection will apply to the entire balance of recordings of the album.

TAPE SPLICING

Cut tape diagonally with an overlap so ends will line up. [Cutting tape on a diagonal will eliminate noise (click or pop) of splice on recording.]

Align both ends of tape, uncoated (shiny) side up, on a desk or other surface. Cover aligned ends with Splicing Tape. DO NOT USE HOUSEHOLD CELLOPHANE TAPE. Press firmly, exerting pressure, to secure ends evenly and securely.

Trim off excess splicing tape. (Cut into the recording tape backing very slightly as illustrated by dotted lines.) This eliminates possibility of a sticky splice.



TAPE ERASING

To erase pre-recorded tape, simply run tape through recorder in Record mode, VOLUME CONTROLS at "0" and PLUGS REMOVED FROM ALL INPUTS on the recorder. Place tape to be erased on the left spindle and thread conventionally. Run tape through, erasing Tracks 1 and 4, then reverse reels and repeat procedure (erasing Tracks 3 and 2).

For more complete erasure the Roberts Model 3885 Bulk Tape Eraser is recommended.

ROBERTS EXCLUSIVE AUTOMATIC BUILT-IN HEAD DEMAGNETIZER

Five "Easy-to-Do" Steps for Perfect Results — Every Time!

1. Turn ON amplifier and allow to warm up for 60 seconds.
2. Turn Volume and Tone controls to zero.
3. Remove tape and adjust controls for Stereo Record operation.
4. Turn Power Switch OFF. Leave off for about 30 seconds.
5. Return Record Controls to neutral position.

Recorder heads are now demagnetized. (We recommend that the heads be demagnetized at least each week.) Tape guides and capstan should occasionally be demagnetized. This may be accomplished with the Roberts Model 3863 Demagnetizer. Felt may be renewed when dirty by removing head cover, loosening screw on cleaner housing, rotating felt to clean portion and tightening screw. Replacement felt is part No. 88-718.

ROBERTS PERFORMANCE "CHECK-UP" PROCEDURE

The following is a list of symptoms which — although they do not indicate mechanical failure of your ROBERTS Tape Recorder — can affect or impair the performance of your machine. Always check these symptoms first if you have trouble with your machine.

1. LOSS OF SENSITIVITY, TONE QUALITY OR "NO PLAY" may be due to:

- A. Dirty RECORD/PLAY HEAD. This affects perfect playback of recorded material and recording new material.
- B. Reversed tape. Check to see that the dull side of the tape lies closest to the heads.

2. FAILURE TO COMPLETELY ERASE TAPE

- A. DIRTY ERASE HEAD. This will prevent complete erasure of material recorded previously.

NOTE: Both ERASE and RECORD/PLAY HEADS should be cleaned regularly if the recorder is used frequently. The ROBERTS HEAD CLEANER AND TAPE OXIDE REMOVER KIT Accessory #3852 provides cotton-tipped swabs which are recommended for the head cleaning process. CAUTION: Do not use Carbon Tetrachloride.

3. IRREGULARITY IN TAPE ADVANCE may be due to:

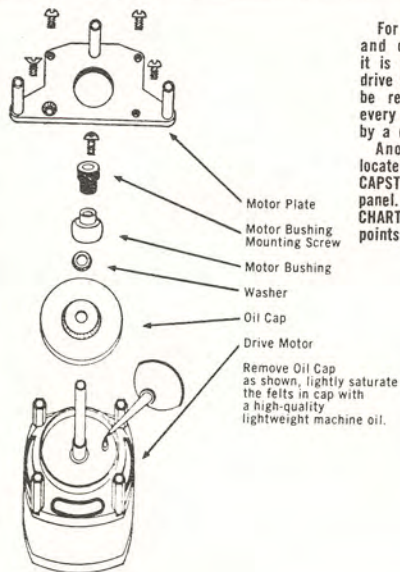
- A. Heavy dust adhering to the heads.
- B. Oil on the drive capstan.
- C. Sticky or dusty tape surface.

4. IF YOUR MACHINE WILL NOT RECORD, check to see that the following are in correct position:

- A. Play/Record Switch is in Record position.
- B. MICROPHONE or PHONO-RADIO plugs are pushed completely into JACKS.
- C. Mode Selector switches are correctly set.

NOTE: For Phono-Radio recording, microphone should be removed.

NOTE: Before operating your recorder for the first time, clean the heads as described above. Unused tape (in storage) may become soft and sticky. It is advisable to run the tape once from the Feed Reel to the Take-Up Reel before threading.



For maximum service life and optimum performance, it is recommended that the drive motor of your recorder be removed and lubricated every 600 hrs. (as illustrated) by a qualified technician.

Another oil aperture is located at the base of the CAPSTAN SHAFT on the front panel. Refer to LUBRICATION CHART for other lubrication points.

LUBRICATION CHART

LUBRICATION POINT	LUBRICANT	AMOUNT OF LUBRICANT	INSTRUCTIONS
Supply and Take-up Reel Spindle Shafts	#1	2 drops on each shaft	Lubricate from bottom of transport mechanism. Depress springs, flow oil down shaft.
Rewind Idler Bearing, Wind Take-up Idler Bearing	#1	2 drops on each idler bearing	Remove top panel, remove idler retaining rings and composition washers; lift idlers slightly, oil. Allow oil to soak into bearings and to flow down shaft before reassembly. Wipe off excess immediately.
Pinch Roller Bearing	#1	See instructions	Remove metal cap and retaining screw. Remove roller. Apply coating of lubricant to bearing bore, replace roller on shaft. When lubricating pinch roller do not replace roller until capstan bearing has been oiled. Do not oil any rubber components.
Drive Capstan Shaft	#1	Saturate felt retaining washer in chrome cup	Remove speed change bushing, flow 2-5 drops of oil between shaft and retaining cap, clean shaft with alcohol soaked cloth.
Roller on all levers and cams	#2	See instructions	Apply a film of lubricant to each roller surface only as needed.

LUBRICANTS: #1—Light machine oil. #2—Light machine grease. Lubricate recorder every 3 months in heavy duty service, each 6 months in moderate service, or annually in light service.

CAUTION: Do not over-lubricate. Do not oil rubber components.

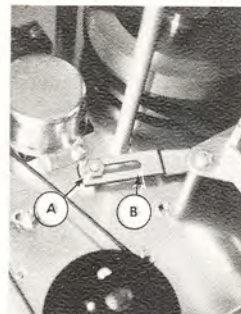
POWER CYCLE CHANGE

ROBERTS Tape Recorders travel all over the world. In many places outside of the United States, the standard frequency of electric current is 50 cycles, in contrast to the American standard of 60 cycles, for which your Roberts Recorder is designed. As it is presumed that you will eventually bring your Roberts Recorder back into a 60-cycle region, and also because you will undoubtedly be playing standard 60-cycle pre-recorded tapes on your recorder, Roberts has provided for a simple conversion so that the tapes which you record in the 50-cycle areas will match in tape speed with your 60-cycle recorded tapes.

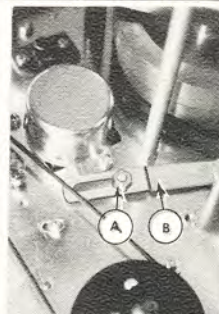
The following instructions should be followed for converting to 50-cycle recording or playback. Your tape speed will then match the 60-cycle recorded tapes. REMEMBER, when you return to a 60-cycle area, your Roberts Recorder must be changed back to its original arrangement.

INSTRUCTIONS FOR CONVERSION TO 50 CYCLE BY SERVICE TECHNICIAN

1. Disconnect power cable from 117V wall outlet.
2. Remove rear case vent panel.
3. Loosen screw (A) and slide lever (B) away from motor for 50 cycle. Tighten screw.
4. Place belt on front pulleys. (Those nearest deck plate.)
5. For 60-cycle operation, lever should be toward motor and belt should be on rear pulleys. (Center of flywheel.)



60 CYCLE



50 CYCLE



THE PRO LINE

ROBERTS

A DIVISION OF RHEEM MANUFACTURING CO., LOS ANGELES, CALIFORNIA 90016

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