OPERATING INSTRUCTIONS

4-CHANNEL/2-CHANNEL
RECORD/PLAYBACK TAPE DECK

SANSUI QD-5500

Sansui

SANSUI ELECTRIC CO., LTD.

Thank you for selecting the Sansui QD-5500 4-track 4-channel/2-channel record/playback tape deck.
A super-precision three-motor three-head model featuring new extra hard permalloy heads, the QD-5500 records both in 4-channel and 2-channel modes, and reproduces the recorded tapes. It also offers an automatic reverse feature to reproduce a 2-channel recorded tape in both directions.
As one of the world's foremost atudio-only specialists, Sansui has spared no effort in making the QD-5500 one of the most complete, most advanced tape decks ever developed. It is now up to you to learn to appreciate its many features and superb record/playback performance. Read carefully the operating instructions and simple maintenance hints contained in this booklet, and your new QD-5500 will continue to give you professional-quality recording and playback pleasures for years to come.

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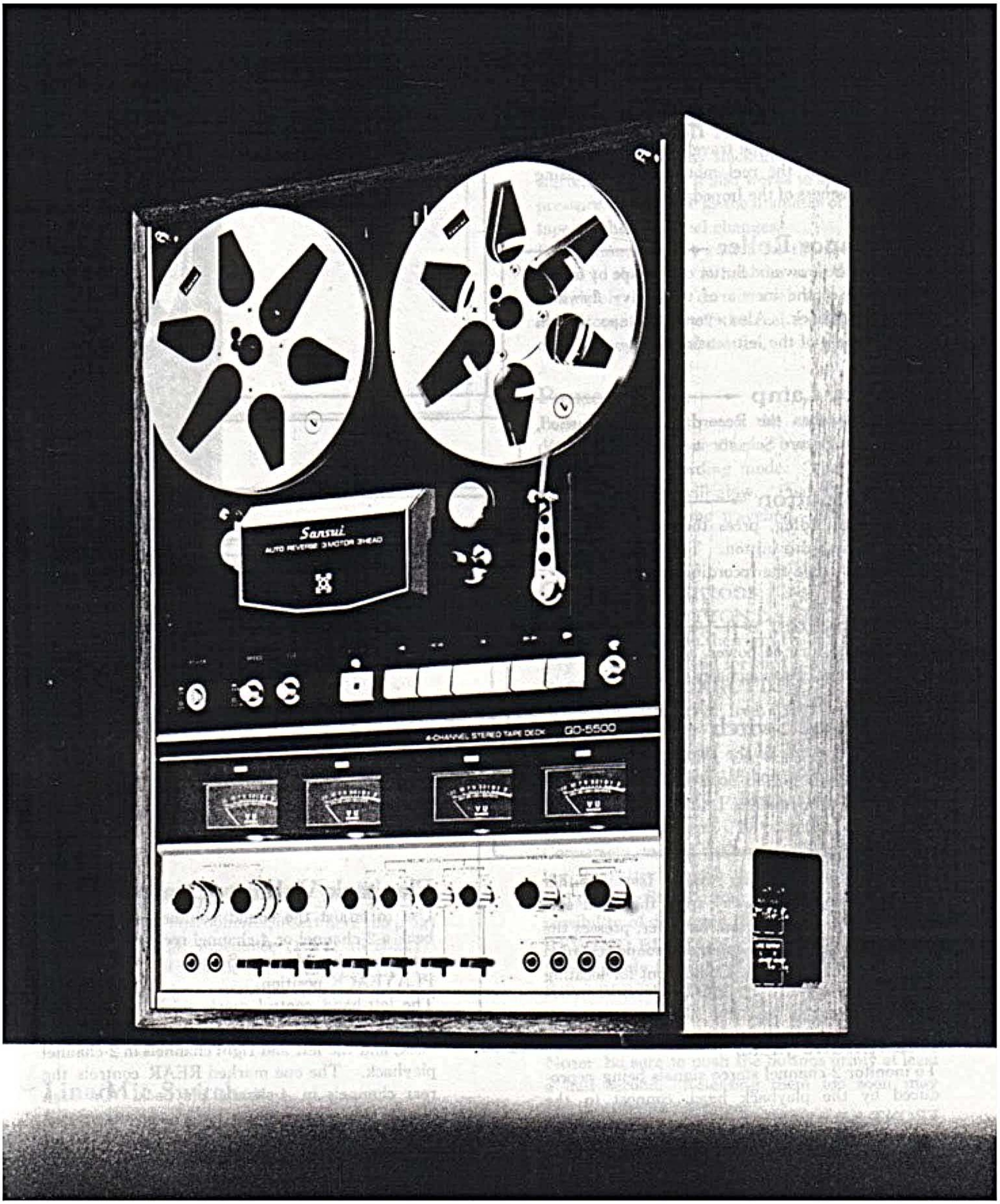
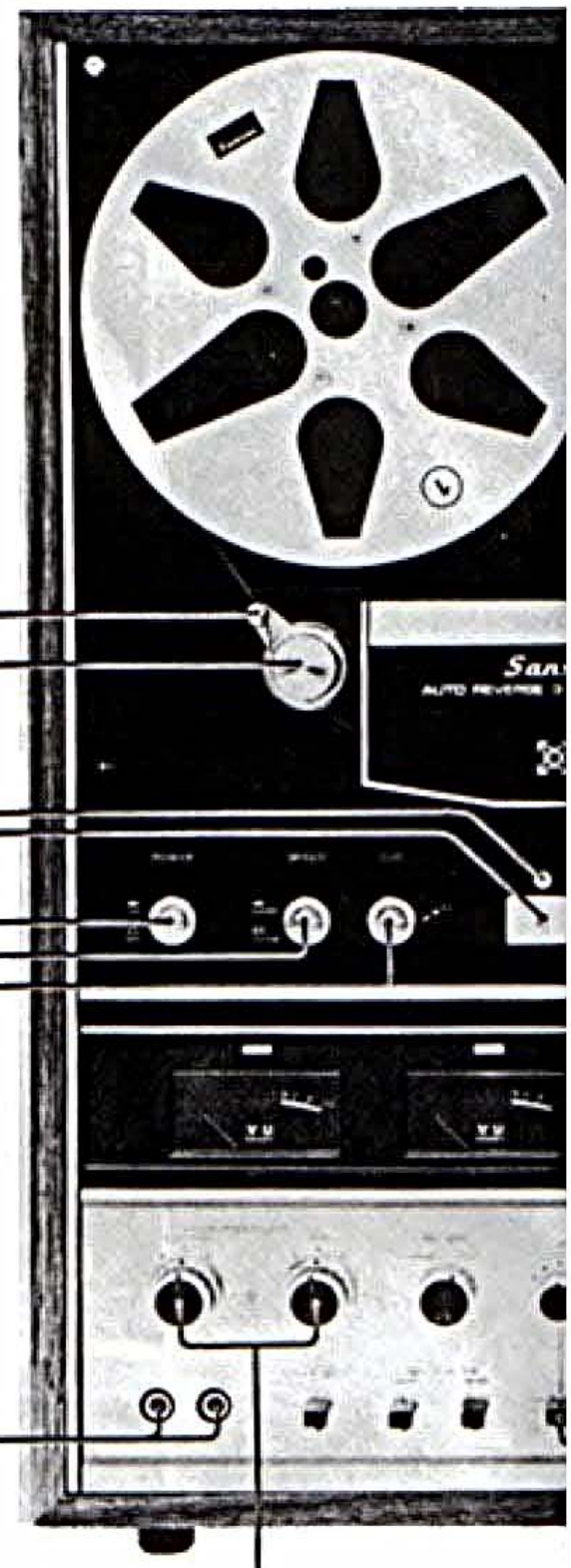

Sansui
AUTO REVERSE 3-MOTOR 3-HEAD
4-CHANNEL STEREO TAPE DECK
QD-5500

NAMES AND FUNCTIONS OF VARIOUS PARTS (1)



Left Tension Arm

Helps stabilize the tape travel by eliminating any vibration from the reel motors and increasing the effectiveness of the Impedance Roller.

Impedance Roller

Reducess the wow and flutter of the tape by taking advantage of the inertia of the heavy flywheel linked to its back. Also evens the tape tension with the help of the left tension arm.

Stand-by Lamp

Illuminates when the Record Button is pushed, even if the Record Selector is set at STAND-BY.

Record Button

To start recording, press the Forward Button while pushing this button. The Stand-by Lamp illuminates while the recording continues.

Power Switch

Push once to turn on power, and the VU meters will illuminate. Push again to turn off.

Tape Speed Switch

Use to select either of the two available speeds: $7^1/_2$ ips (19cm/sec.) and $3^3/_4$ ips (9.5cm/sec.). Push to select the latter speed.

Cue Button

When the tape is being wound fast in either direction, it is moved away from the head surfaces. Pushing this button, however, presses the tape against the heads, so that any sound recorded on it is played back fast. Convenient for locating recordings.

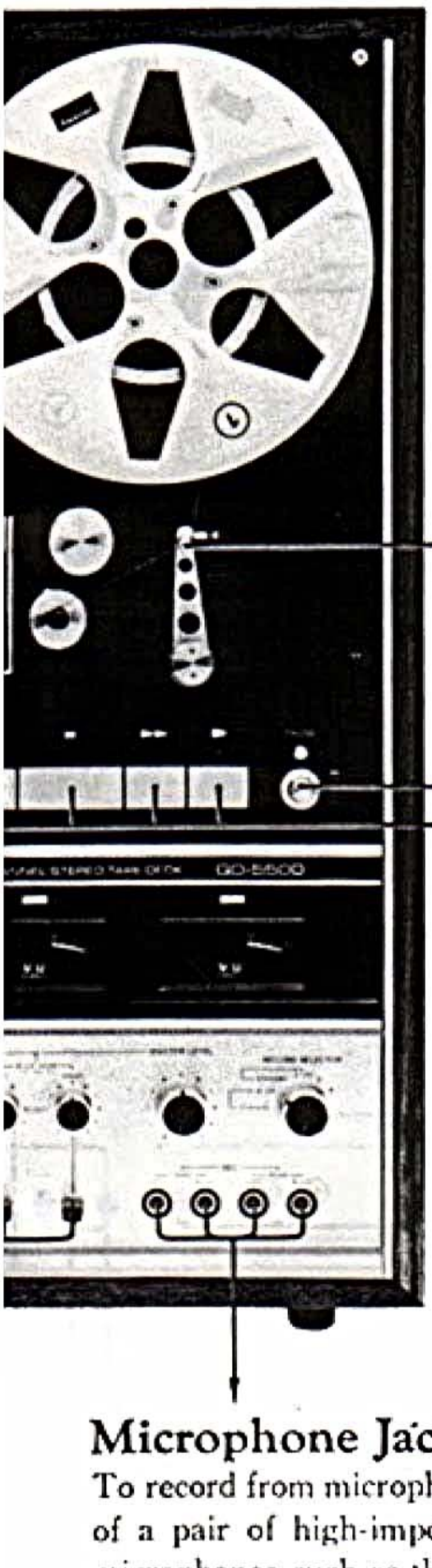
Headphone Jacks

To monitor 2-channel stereo signals being reproduced by the playback head, connect to the FRONT jack a stereo headphone set with an impedance of 8Ω, such as the Sansui SS-20, SS-10 or SS-2. If playing a 4-channel tape, connect two sets, using both the FRONT and REAR jacks.

Playback Volume Controls

Use to adjust the sound volume when playing back a 2-channel or 4-channel recorded tape. Be sure that the Monitor Switch is raised to the PLAYBACK position.

The left-hand control marked FRONT (2-CH.) regulates the front channels in 4-channel playback, and the left and right channels in 2-channel playback. The one marked REAR controls the rear channels in 4-channel playback. On each control, the outer, smaller knob part adjusts the left channel, and the inner, larger ring the right channel. Adjust the control(s) so that the VU meter pointers will swing to the red 1 or 2 mark at the loudest passages.



Right Tension Arm

This arm cancels any slack in the tape when it is started or stopped; it also works to apply constant pressure on the tape as the diameter of the wound tape on the right reel changes.
In addition, a power switch for the reel motors is linked to this arm. When the tape is taken up completely by the correct reel and the tension arm drops, it turns off the reel motors automatically to stop the reel motion.

Pause Switch

Push this switch to stop the tape temporarily during playback, or during recording without canceling the recording mode. The pilot lamp above the switch will glow. Push it again, and the tape will resume traveling, turning off the lamp.

Operating Buttons

FORWARD BUTTON ▷: The tape travels from the left reel to the right reel. This is necessary for recording and forward playback.
FAST FORWARD BUTTON ▷▷: The tape is quickly transferred from the left reel to the right reel.
STOP BUTTON □: Use this button to stop the tape. To stop the tape during rewinding, it is desirable to push the Fast Forward Button once to slow down the tape, then push the Stop Button. Conversely, to stop the tape during fast forwarding, it is btter to push the Rewind Button once and then the Stop Button. This will minimize the possibility of damaging the tape.
REWIND BUTTON ◁◁: The tape is transfered quickly from the right reel to the left reel.
REVERSE BUTTON ◁: The tape travels from the right reel to the left reel to achieve reverse playback.
Note: Be sure to push the buttons firmly at least a half second. Releasing them too soon may result in wrong operation.

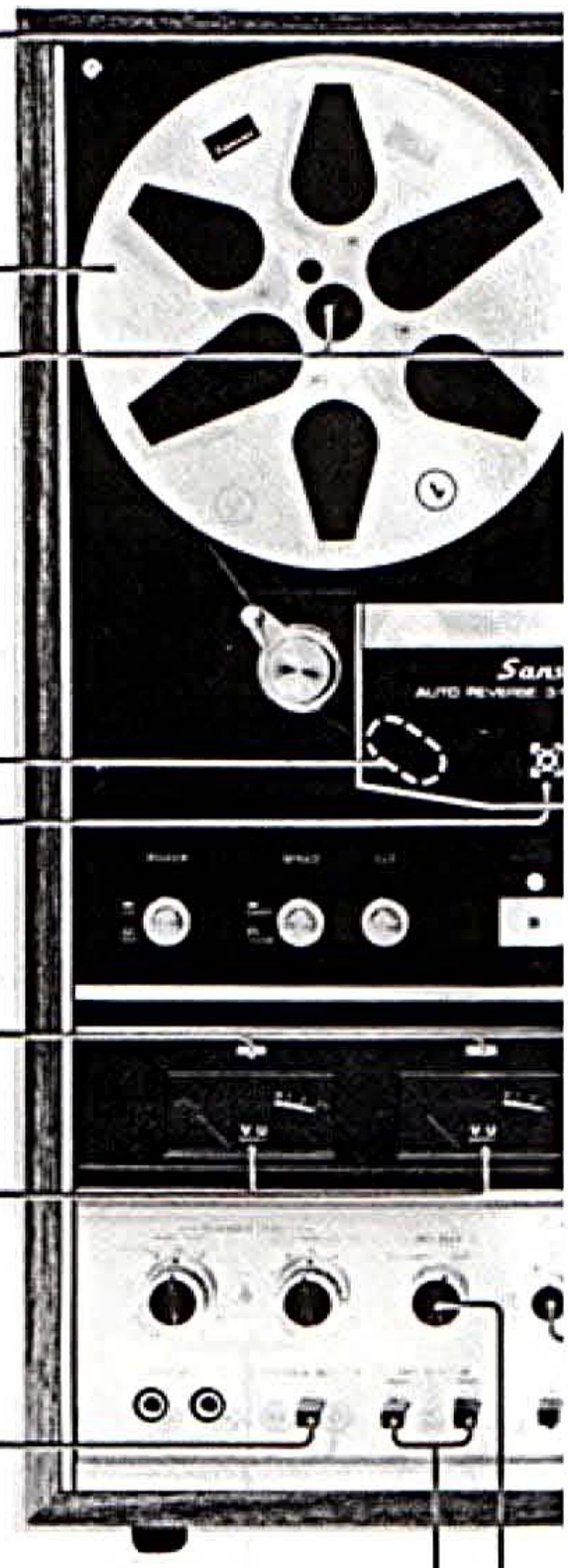
Microphone Jacks

To record from microphones, insert here the plugs of a pair of high-impedance (10kΩ to 50kΩ) microphones, such as the Sansui SDM-1's (600Ω/50kΩ compatible) or SDM-2's (10kΩ).

Line/Mic Switches

Select between the line and microphone inputs when recording. Set them to LINE to record from the line inputs, to MIC to record from microphones, and also to MIC if you are using the DIN socket to connect your stereo amplifier.

NAMES AND FUNCTIONS OF VARIOUS PARTS (2)



Tape Counter
Helps you locate any given place on a tape. Push the reset button and reset the counter to '0000' before recording or playing back.

Left Reel
Either a 5-inch or 7-inch reel may be used. But, for best results, the use of a 7-inch one is recommended.

Reel Clamps
Secure the reels by pulling the stoppers and turning them about 60 degrees.

Sensing Poles
Located inside the head housing. When the tape is being played back in the forward direction and reaches its end, the sensing foil strip, if attached to it, contacts these poles and the tape motion is automatically reversed.

Head Housing
Covers the magnetic heads, which are, from left to right: 4-track erase head, 4-track recording head and 4-track playback head.

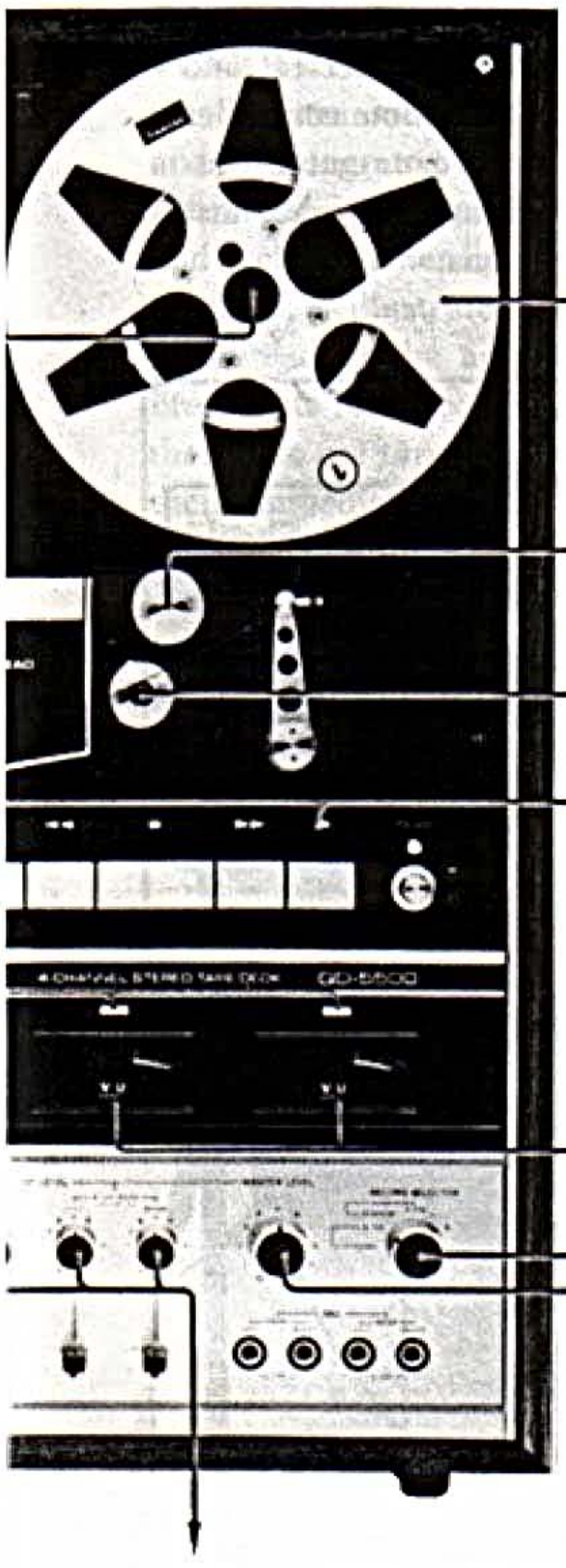
Recording Indicator Lamps
Indicate in which channels the recording is being made. When the tape deck is recording in 4-channel, all four lamps light. When it is recording in 2-channel, the FRONT LEFT and RIGHT lamps light, while only the FRONT LEFT or RIGHT one lights in the L channel only or R channel only mono recording mode.

VU Meters (Front Channels)
Indicate the recorded and reproduced signal levels. The left meter is for the left (or front left) channel, and the right meter for the right (or front right) channel. Adjust the appropriate volume control so that the meter pointers will swing to the red 1 or 2 mark at the loudest passages.

Playback Selector
Set to 2CH to reproduce a 2-channel recorded tape, to 4CH to reproduce a 4-channel recorded tape. If the Tape Monitor switch or switches are set to PLAYBACK, two or all four VU meters will light as you adjust this selector.

Tape Monitor Switches
Enable hearing the original program source sound and the recorded sound for comparison. Leave them at PLAYBACK to reproduce a recorded tape or monitor the recorded sound as you record. The left switch is for the front channels or both channels in the 2-channel recording mode, and the right switch for the rear channels.

Record Bias Selector
Permits selecting the recording bias current and signal level most appropriate for the kind of tape in use. The 'STANDARD' position is for standard tape, such as Scotch #150, and the 'HIGH' position for low-noise tape such as Scotch #203.



Right Reel

Should be of the same size as the left reel.

Pinch Roller

Presses the tape tight to the capatan.

Capstan

Drives the tape at the selected speed. It is ultra precision machined to offer accurate speeds.

Tape Travel Direction Lamps

Indicate the direction of the normal-speed tape travel.

The ▷ lamp indicates the capstan is revolving clockwise and that the tape is running or is ready to run from left to right. All four tracks are kept live in the 4-channel playback mode, and tracks 1 and 3 are kept live in the 2-channel playback mode.

The ◁ lamp indicates the opposite of the above condition, with only tracks 2 and 4 kept live. Instant starting is possible in the direction of the lit lamp.

VU Meters (Rear Channels)

Indicate the recorded and reproduced signal levels. The left meter is for the rear left channel, and the right meter for the rear right channel.

Use in the same manner as the front-channel ones to monitor the recorded and reproduced signal levels.

Record Selector

For selecting the desired recording or stand-by mode—L channel only mono, R channel only mono, 2-channel, 2-channel stand-by, 4-channel, or 4-channel stand-by. In either of the two stand-by modes, the tape deck will not record even if the Forward and Record Buttons are engaged. Also permits interesting 'add-on' recording techniques (see page 16).

Master Record Level Control

After the individual level controls are properly adjusted, the over-all record level may be controlled with this control.

Record Level Controls

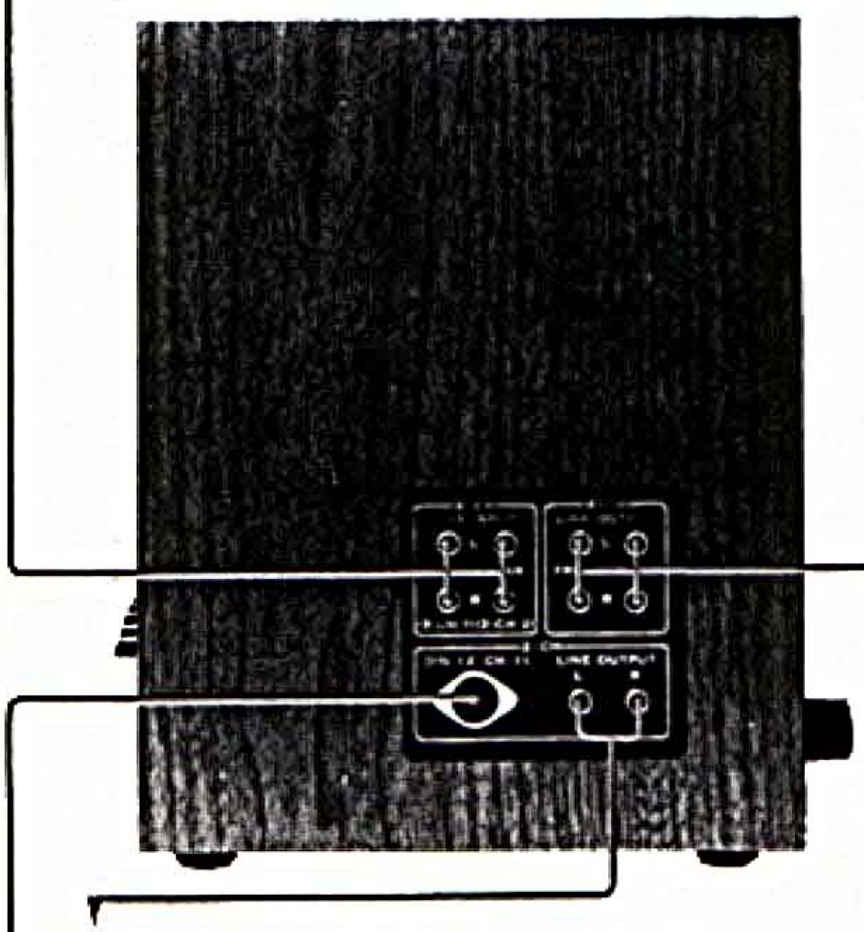
Adjust the record levels when recording from the 2CH-1 line inputs, 2CH-2 line inputs, DIN connector, microphones or 4-channel line inputs. Inserting microphones into the 2CH-1 microphone jacks automatically cuts off the DIN inputs. Be sure to adjust the controls after setting the Tape Monitor switches to SOURCE.

NAMES AND FUNCTIONS OF VARIOUS PARTS 3

〈SIDE〉 〈REAR〉

Line Input Jacks
Connect here your input program source, such as a 4-channel amplifier, another 4-channel tape deck, 2-channel amplifier, tape deck or tuner. A 2-channel source may either be connected to the 2CH-1 or 2CH-2 jacks. Use the pin plug cables supplied to make the connections.

4-Channel Output Jacks
To reproduce a 4-channel recorded tape, connect these jacks with the front and rear tape monitor jacks of your 4-channel amplifier (or with the tape monitor jacks of the two 2-channel amplifiers you are using to amplify the front and rear channels). Be sure that the amplifier's tape monitor switch is turned on.



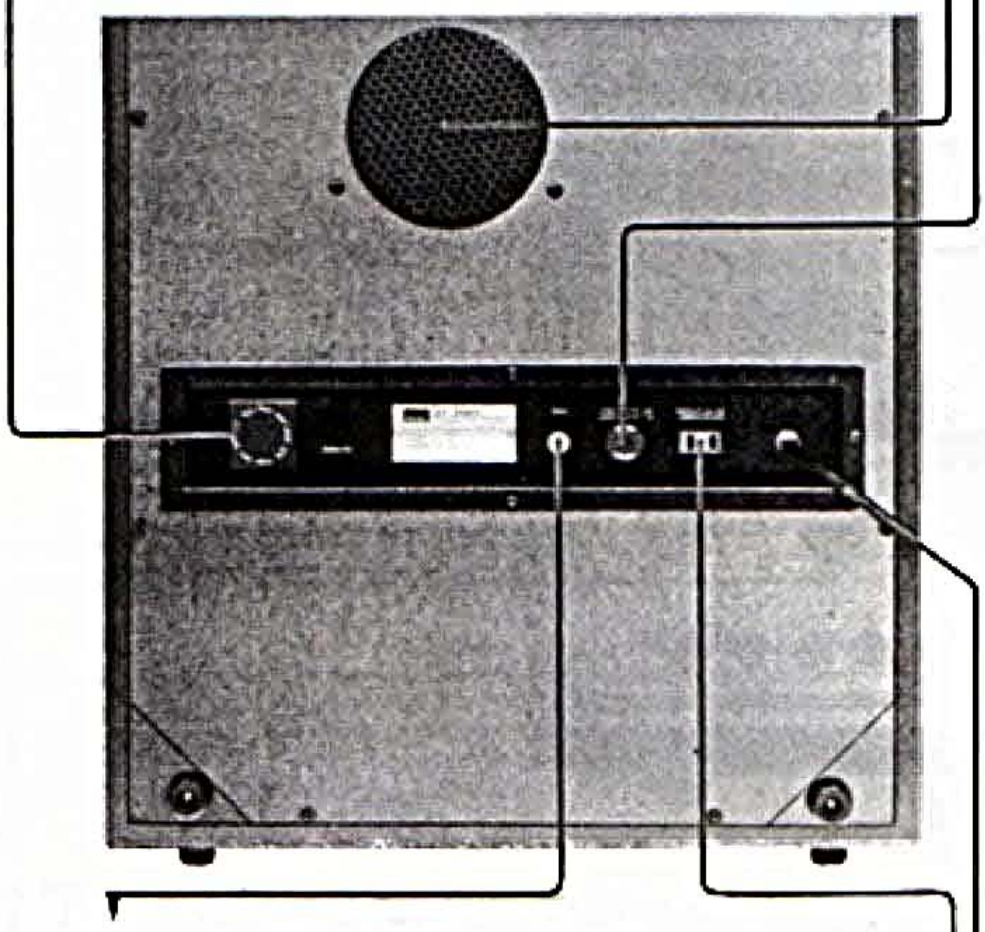
2-Channel Output Jacks
To reproduce a 2-channel recorded tape, connect these jacks with the tape monitor jacks of your stereo amplifier.
Do not forget to turn on the tape monitor switch of your amplifier.

DIN Connector Socket
An integrated record/playback connector manufactured to the German DIN standard. Enables a single cord with a 5-pin plug on each end to connect a tape deck and a stereo amplifier for both recording and playback operations.

Remote Control Connector
By removing the dummy plug inserted and connecting the Sansui SRC-2 remote controller unit (available at option), you can remote control the tape deck for forward, reverse, fast forward and rewind operations.

Power Fuse

Ventilation Opening
Designed to permit room air inside. Should be left free of any obstruction.



Grounding Terminal
If loud hum is heard, connect this terminal with the grounding terminal of your amplifier, utilizing PVC wire.

AC Outlet (Unswitched)
Connect the power cord of your amplifier or tuner here. Maximum capacity is 300 watts.

Power Cord
After making certain the voltage and frequency settings are correct, insert into an AC outlet in your room.

CONNECTIONS FOR 2-CHANNEL

Connections for 2-Channel Recording & Playback

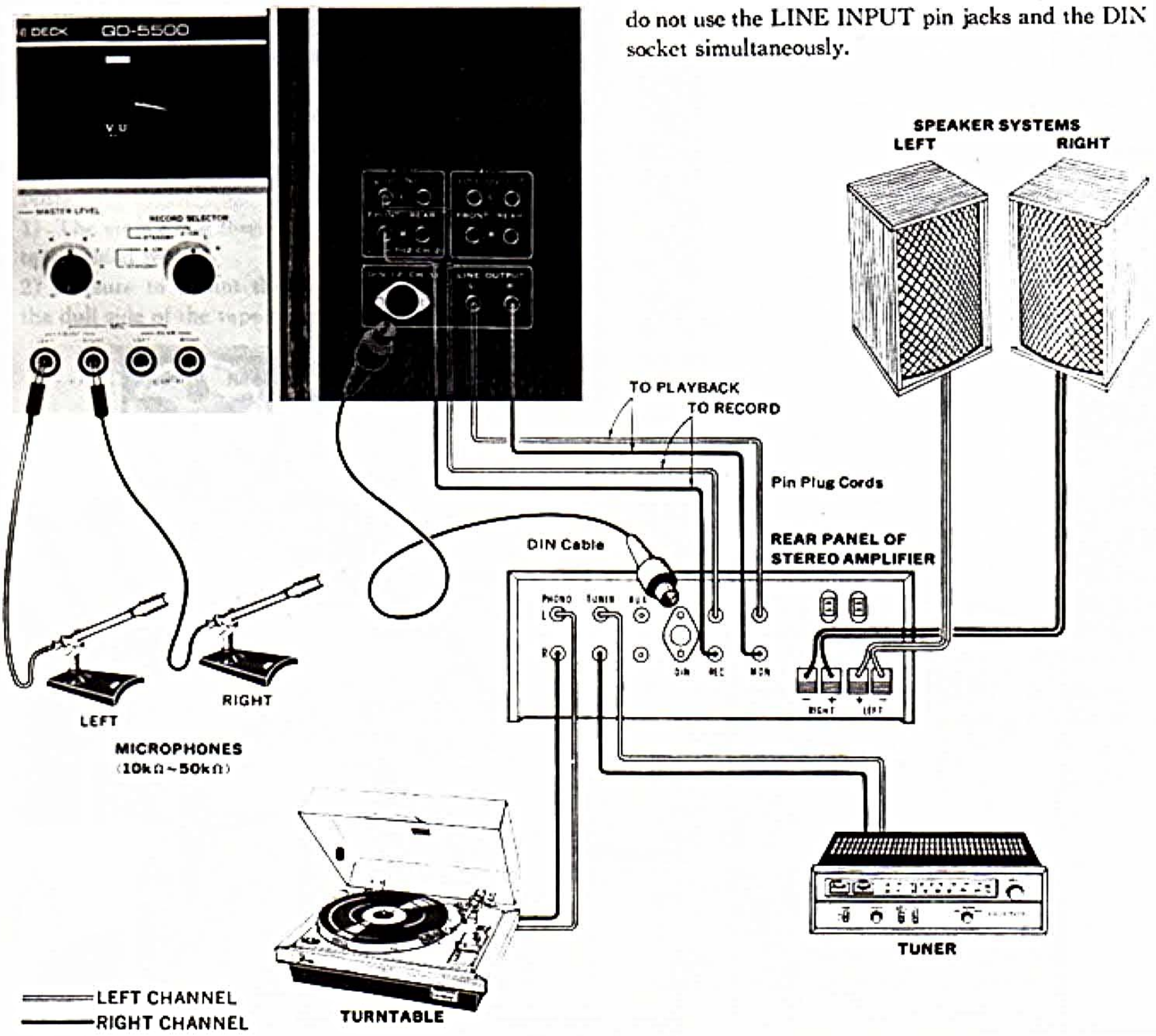
Connections must be made between the QD-5500 and an integrated stereo amplifier or stereo receiver for recording and playback. Connect your QD-5500 and such amplifier by the use of the pin plug cables supplied, as illustrated below. If a tuner or turntable is coupled to the amplifier, you can hear AM/FM broadcasts or records and simultaneously record them into the tape deck. And, of course, reproduce them immediately from the speaker systems.

Note:

1) Be sure that power supply is turned off for all appliances before interconnecting them.

2) Depending on the quality of the amplifier used, the volume and tone quality may be somewhat impaired if the DIN connector is used to connect the tape deck and amplifier. For better results, connect the tape deck's line input and output jacks with approriate jacks on the amplifier, using the pin plug cables supplied.

3) Except when you wish to mix the 2CH-2 LINE INPUT source with the 2CH-1 DIN input source, do not use the LINE INPUT pin jacks and the DIN socket simultaneously.

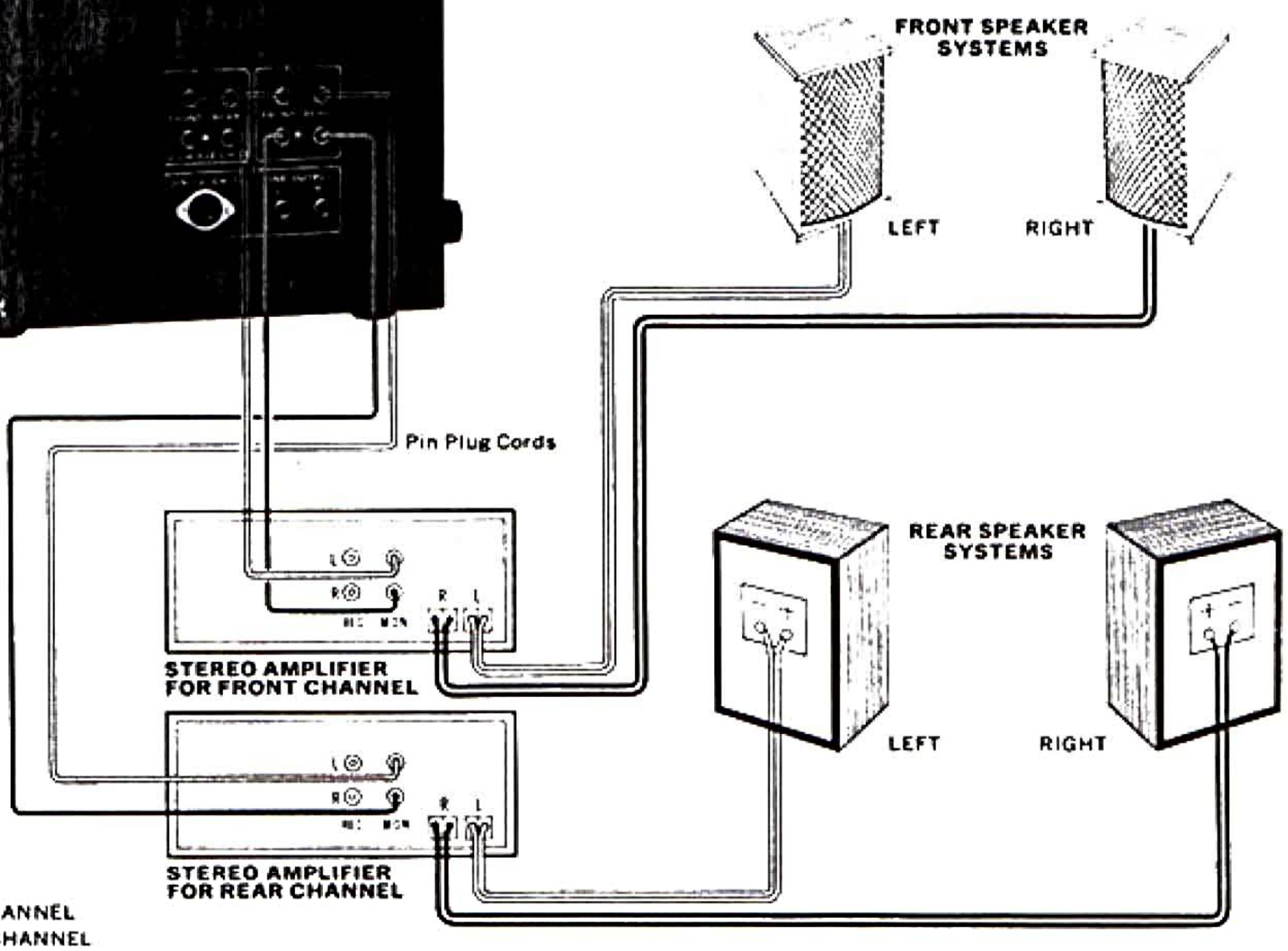


CONNECTIONS FOR 4-CHANNEL

Connections for 4-Channel Recording & Playback

A 4-channel recording may be made either with four microphones or from the 4-channel line inputs. For example, another 4-channel tape deck may be connected to these inputs to copy a 4-channel recorded tape; a 4-channel decoder may be connected to record an FM 4-channel broadcast or a 4-channel disc record. In any case, use the pin plug cables supplied to make the necessary connections, and be careful not to confuse the FRONT and REAR, LEFT and RIGHT cables.

To reproduce a 4-channel recorded tape, connections must be made between your 4-channel amplifier (or two 2-channel amplifiers) and the FRONT and REAR 4-channel outputs of the QD-5500, as illustrated below.



HOW TO THREAD THE TAPE / PREPARING FOR PLAYBACK

How to Thread the Tape

1. Place the empty metal reel supplied on the right turntable, and secure it by pulling the reel clamp stopper and turning it about 60 degrees.

2. Place the tape-loaded reel on the left turntable and secure it in the same manner.

3. Pull out about three feet of tape from the left reel, and thread it as shown in the photograph—i.e., along the inside of the left tension arm, around the outside of the impedance roller, under the head housing, between the capstan and pinch roller and along the outside of the right tension arm.

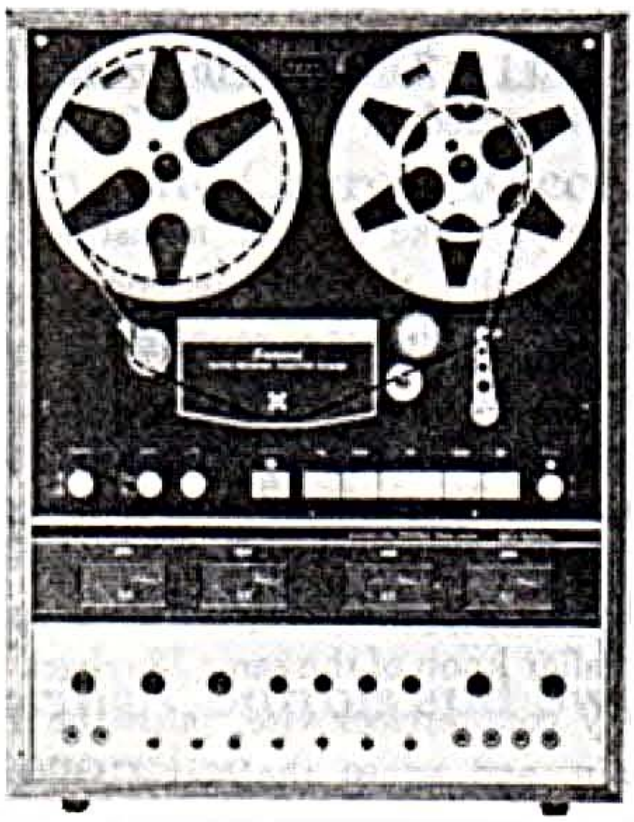
4. Finally, secure the tape to the right reel by inserting the tape end in the tape lock hole, holding the end with a finger and turning the reel counter-clockwise about two full turns.

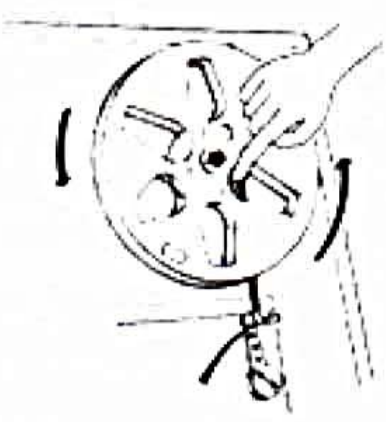
5. Be sure that the tape is properly tense and that the right tension arm is raised.

Note:

1) The empty reel should be of the same size as the tape-loaded reel.

2) Be sure to mount the tape-loaded reel so that the dull side of the tape contacts the heads.





Requirements for a Tape to Be Reproducible

1. The tape must be either a 4-track 4-channel recorded tape, 4-track stereo recorded tape, 4-track mono recorded tape, double-track stereo recorded tape, double-track mono recorded tape or a full-track recorded tape.

2. The tape must be recorded at the speed of either $7^1/_2$ ips (19cm/sec.) or $3^3/_4$ ips (9.5cm/sec.).

Preparing Switches and Controls for Playback

1. Referring to 'How to Thread the Tape' on the left, thread the tape properly.

2. Select the correct tape speed by the use of the Tape Speed Switch.

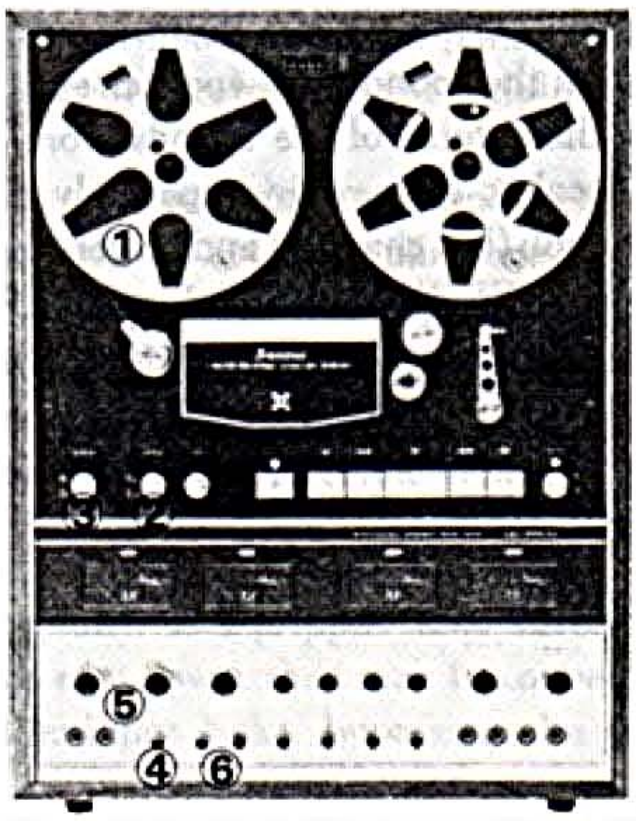
3. Push the Power Switch to turn on power, and the VU meters will illuminate.

4. Turn the Playback Selector to 2-CH or 4-CH, whichever mode is desired.

5. Turn the Playback Volume Controls fully counter-clockwise.

6. Set the Tape Monitor Switches to 'PLAYBACK.' Set the FRONT switch only to play a 2-channel recorded tape, and both the FRONT and REAR switches to play a 4-channel one.

When the above preparations are finished, proceed as instructed on the following pages, depending on the kind of recording to be reproduced. For detailed information about the individual controls and switches, refer back to pp. 3-6.



HOW TO PLAY A RECORDED TAPE

How to Play a 4-Track 4-Channel Recorded Tape

When all the preceding preparations are completed, proceed as follows to reproduce a 4-track 4-channel recorded tape:

1. Push the Forward Button, and the tape will start moving from left to right.

2. Turn both Playback Volume Controls clockwise until the VU meter pointers indicate the red 1 or 2 mark at the loudest passages of the music recorded on the tape.

3. Adjust the volume and tone controls on your 4-channel amplifier to obtain the desired volume and tone quality in the sounds from speaker systems.

Note: A 4-channel recorded tape has different sounds recorded in all four tracks. You cannot play it in the reverse direction, unlike 2-channel recorded tapes.

How to Play a 4-Track 2-Channel Recorded Tape

When all the preceding preparations are completed, proceed as follows to reproduce a 4-track stereo recorded tape:

1. Push the Forward Button, and the tape will start moving from left to right.

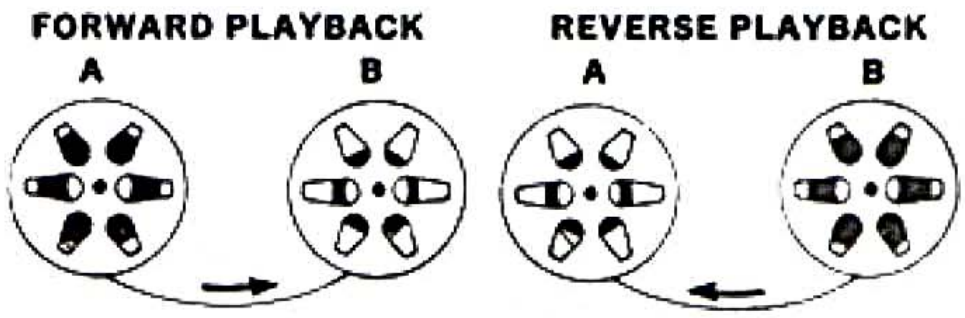
2. Turn the FRONT (2-CH) Playback Volume Control clockwise until the FRONT VU meter pointers indicate the red 1 or 2 mark at the loudest passages of the music recorded on the tape.

3. Adjust the volume and tone controls on your stereo amplifier to obtain the desired volume and tone quality in the sound from speaker systems.

4. Balance the volume of the sounds from the left and right speaker systems by separately adjusting the smaller knob (left channel) and larger ring (right channel) of the FRONT (2-CH) Playback Volume Control.

When the Tape is Wound up by the Right Reel

Before the tape end slips off the left reel, push the Reverse Button to reverse the direction of tape travel, and the remaining two tracks will be reproduced. The reversal of the tape can be automatically activated by attaching a strip of sensing foil to the tape end, if desired. For detailed instructions about automatic reversal, turn to page 17.



How to Play a 4-Track Mono Recorded Tape

1. Push the Forwar Button.

2. Turn the larger ring of the FRONT (2-CH) Playback Volume Control fully counterclockwise, and adjust the sound volume by turning its smaller knob so that the left channel VU meter pointer will swing to the red 1 or 2 mark for the loudest passages of the music recorded on the tape. Track 1 is reproduced.

3. If necessary, make further adjustment of the sound volume with the volume control of your stereo amplifier. Use its other countrols and switches as required.

4. When the tape has played to the end, push the Reverse Button. Track 4 will now be reproduced.

5. When the tape has played to the end in the reverse direction, press the Stop Button once. Then, turn the smaller knob of the same Playback Volume Control fully counterclockwise, push the Forward Button again, and adjust the sound volume with its larger ring to make it the same as before. Track 3 will be reproduced.

6. When the tape has played to the end, reverse the tape motion by pushing the Reverse Button. Track 2 will be reproduced.

PREPARING TO RECORD/2-CHANNEL RECORDING (1)

Kinds of Tape

Recording tape is classified into serveral kinds by its length, thickness and base material. It is advisable to use quality tape for best recording results.
The QD-5500 is equipped with a Record Bias Selector to permit the use of either standard tape or high-performance low-noise tape. In our factory, it is aligned with Scotch #150 standard tape and then with Scotch #203 low-noise tape.

Recording Bias

The Record Bias Selector permits selecting the bias current best suited to the particular type of tape in use, so that you can make quality recordings on any tape. Set it to 'STANDARD' if you are using standard tape, and to 'HIGH' if you are using low-noise tape. (When you play back a recorded tape, it does not matter where the selector is set.)
When actually deciding which tape to buy, consult the table below and tell the clerk how long a recording you wish to make.

SELECTOR POSITION / TAPE	STANDARD	HIGH
SCOTCH*	# 150	# 203
BASF*	LP-35	LP-35LH
AGFA*	PE-31K	PE-36K

* Type 150 (1,800 feet)

Selecting the Correct Recording Speed

On your QD-5500, the tape speed can be switched over between $7^1/_2$ ips (19cm/sec.) and $3^3/_4$ ips (9.5 cm/sec.). If you are recording music or other hi-fi materials, the $7^1/_2$ ips (19cm/sec.) speed is more appropriate. For recording conversations or background music, however, the $3^3/_4$ ips (9.5cm/sec.) speed is sufficient and gives longer recording time.

Preparing Controls and Switches for Recording

1. Place the tape-loaded reel on the left turntable, and thread the tape as instructed on page 10.
2. Select the desired tape speed by operating the Tape Speed Switch.
3. Set the Playback Selector to the desired mode—4CH for 4-channel recording, and 2CH for 2-channel and mono recording.
4. Set the Record Bias Selector to STANDARD or HIGH, depending on the kind of tape you are using.
5. Adjust the Record Selector to the desired mode —4CH, 2CH, L channel only mono or R channel only mono.
6. Turn the Master Level Control to '8'.
7. Turn on the Power Switch.

4-TRACK 2-CHANNEL RECORDING

Connections Required to Record from Microphones

Insert a pair of microphones into the microphone jacks on the front panel. Insert the one placed on the left side into the jack marked MIC LEFT, and the one placed on the right into the jack marked MIC RIGHT. For best results, use a pair of the Sansui SDM-2 (cardioid type, 10kΩ) or SDM-1 (also cardioid type, 50kΩ/600Ω compatible) microphones, which are available at your nearest Sansui dealer.

Note:
Inserting a microphone into a microphone jack on the front panel automaticaly disables the DIN connector socket on the side panel. If you have your amplifier connected to the DIN socket and wish to mix the microphones with the program source played through the amplifier, move the amplifier connections over to the pin jacks.

Connections Required to Record from a Tuner or Turntable

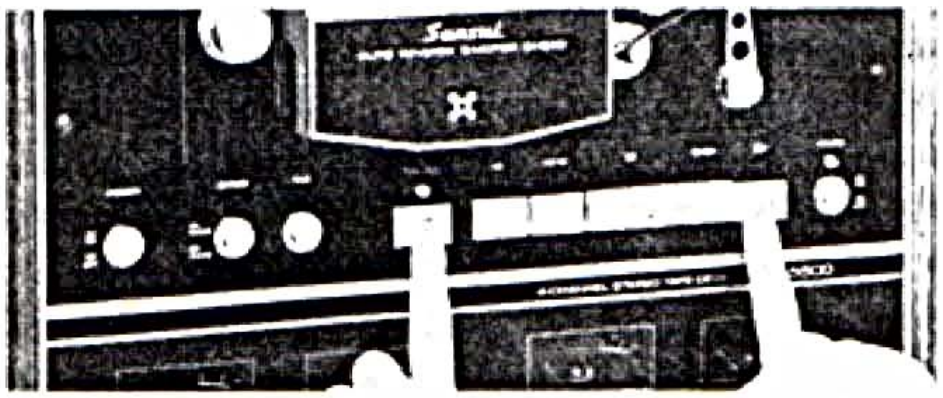
Connect your QD-5500 to an integrated stereo amplifier, referring to the illustration on page 8. Use the pin plug cables supplied and connect the line input terminals of the tape deck with the recording output terminals of the amplifier. Then connect a tuner and/or turntable to the amplifier.

Note:
1) If you wish to connect the tape deck and a stereo amplifier with a DIN cord, plug one end of it into the DIN connector on the tape deck and the other end into the DIN connector on the amplifier.
2) Be sure to cut off power supply for all appliances before making any interconnections.
3) Turn on the tape monitor switch of your amplifier.
4) If the tuner is equipped with recording output terminals of its own, they may be connected directly to the line input jacks, bypassing the amplifier, if desired.

2-CHANNEL RECORDING (2)/4-CHANNEL RECORDING

Presetting the Recording Levels and Entering the Recording Mode

1. Set the Front (2CH) Monitor Switch to SOURCE to preset the record levels.
2. Set the 2CH-1 or 2CH-2 (whichever inputs you are using) Mic/Line Switches to either MIC or LINE, depending on the kind of program source you are recording.
3. If using the 2CH-1 line inputs, the DIN socket or the 2CH-1 MIC jacks, adjust the 4CH FRONT (2CH-1) LEFT Record Level Control to preset the record level in the left channel, and the 4CH FRONT (2CH-1) RIGHT Record Level Control to preset that in the right channel. After these controls are individually adjusted, adjust the over-all record level with the Master Level Control so that the two VU meters will swing up to the red 1 or 2 mark at the loudest passages of the music to be recorded.
If using the 2CH-2 line inputs or 2CH-2 MIC jacks, adjust the 4CH REAR (2CH-2) LEFT and RIGHT Record Level Controls similarly.
4. Set the Record Selector to 2CH, confirm the connections, then enter the record mode by pushing the Forward Button while pushing the Record Button firmly. The FRONT LEFT and RIGHT Recording Indicator Lamps and the Stand-by Lamp above the Record Button will light, and the tape will begin to travel from left to right to record.



Note:
1) The original sound before it is recorded and the recorded sound can be heard alternately for the purpose of comparison by operating the Tape Monitor Switch. Refer to page 5 for instructions about the use of this switch.
2) If you are recording from microphones and have not coupled an amplifier to the tape deck, the sound being recorded can be monitored by inserting a stereo headphone set into the appropriate headphone jack.
3) If you are recording from microphones and want to monitor the recording through an amplifier connected to the tape deck, place the microphones a sufficient distance away from the speaker systems or turn down the volume control of the amplifier in order to prevent howling.
4) When recording human voices with microphones, place the microphones about a foot away from the sound source.

When the Tape Has Been Recorded to the End

When the tape has been recorded to the end in the forward direction, push the Stop Button, move the right reel over to the left turntable and the empty left reel to the right turntable, then push the Record Button and Forward Button again. The tape deck will resume recording.
The SD-5050 does not record in the reverse direction.

4-TRACK 4-CHANNEL RECORDING

Connections Required to Record from Microphones

Insert four microphones into the MIC jacks' positioning them properly to create sound effects of your preference. For best recording results, it is recommended to use high-impedance microphones such as the Sansui SDM-1 or SDM-2 (optional).

Connections Required to Record from a Tuner, Turntable or another 4-Channel Deck

Connect the recording output terminals of your 4-channel amplifier, receiver or, decoder (to which you have connected your tuner or turntable or the second 4-channel tape deck) with the 4CH LINE INPUT jacks of the QD-5500, using the pin plug cables supplied.

Presetting the Record Levels and Entering the Record Mode

1. Set the FRONT and REAR Monitor Switches to SOURCE to preset the record levels.
2. Set all four Mic/Line Switches to either MIC or LINE, depending on the kind of program source you are recording.
3. Adjust the FRONT LEFT and RIGHT, REAR

LEFT and RIGHT Record Level Controls individually so that all four VU meters will swing in approximately equal proportions. Then adjust the Master Level Control so that they will swing up to the red 1 or 2 mark at the loudest passages of the music to be recorded.

4. Set the Record Selector to 4CH, confirm the connections once more, then enter the record mode by pushing the Forward Button while pushing the Record Button firmly. All four Record Indicator Lamps and the Stand-by Lamp above the Record Button will light, and the tape will begin to travel from left to right to record.

4-TRACK MONO RECODING

Connections Required to Record from a Microphone

Insert a microphone into the MIC FRONT LEFT jack first, and record into track 1 monophonically. When the tape has reached its end, move the right reel over to the left turntable and the empty left reel to the right turntable. Now record into track 4. When the tape has been recorded to the end, switch the reels again, and insert the microphone into the MIC FRONT RIGHT jack this time. This enables you to record into track 3 monophonically. Switch the reels once more when the tape has reached its end, and record into track 2.

Connections Required to Record from a Tuner or Turntable through an Amplifier

Connect the tuner and/or turntable to an amplifier. If the amplifier is monophonic, couple its recording output to the 4CH LINE INPUT, FRONT LEFT jack of the tape deck first. Leave the volume control of the amplifier at the usual listening level, but turn on its tape monitor switch. If the tuner has its own recording output terminals, they may be coupled directly to the 4CH LINE INPUT, FRONT jacks of the tape deck, bypassing the amplifier. In both cases, be sure to turn the Record Selector to L.

Note: Observe the same precautions as for stereo recording.

Presetting the Record Level and Entering the Record Mode

1. Set the FRONT (2CH) Monitor Switch to SOURCE to preset the record level.

2. Set the 4CH FRONT LEFT Mic/Line Switch to either MIC or LINE, depending on the kind of program source you are recording.

3. Adjust the 4CH FRONT LEFT Record Level Control so that the FRONT LEFT VU meter will swing up to the red 1 or 2 mark at the loudest passages of the music to be recorded.

4. Set the Record Selector to L, confirm the connections once more, then enter the record mode by pushing the Forward Button while pushing the Record Button firmly. The FRONT LEFT Recording Indicator Lamp and the Stand-by Lamp above the Record Button will light, and the tape will begin to travel from left to right to record.

5. When the tape is wound up by the right reel, track 1 has been recorded. Now switch the left and right reels and enter the record mode again to record into track 4. There is no need to re-adjust the record level unless you are recording entirly different material.

6. When the tape is wound up by the right reel again, move the microphone or mono amplifier connection over to the 4CH FRONT RIGHT jack. Turn the Record Selector to R this time, and adjust the record level with the 4CH FRONT RIGHT Record Level Control.

7. Enter the record mode to record into track 3.

8. When the tape reaches its end, switch the reels and enter the record mode once more. The remaining track 2 will now be recorded.

ACCESSORIES

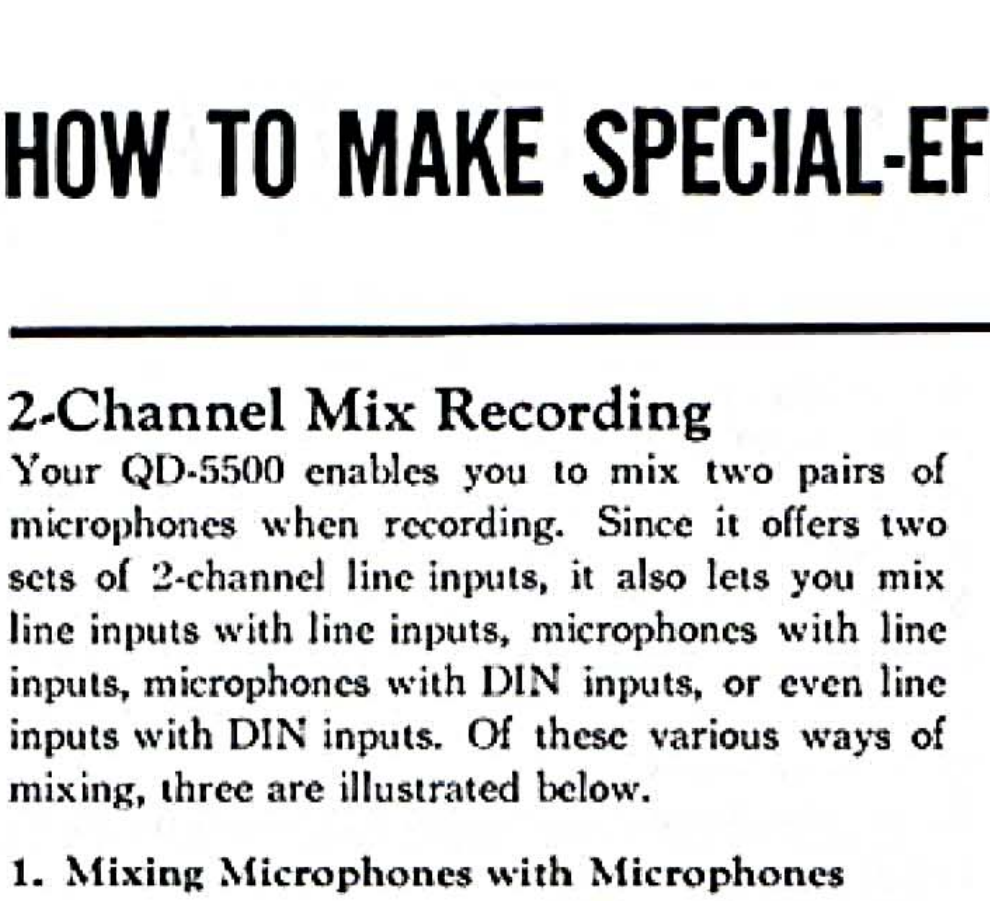
1.	EMPTY REEL (RSM-7)	1
2.	CLEANER (SCH-1)	1
3.	OIL	1
4.	SPLICING TAPE	1
5.	SENSING FOIL	15
6.	PIN PLUG CORDS	4
7.	ECHO RECORDING PLUG	1
8.	SPARE FUSES	2
9.	REEL SPACERS	2
10.	SILICON CLOTH	1
11.	OPERATING INSTRUCTIONS	1
12.	INSTRUCTION SHEET	1

HOW TO MAKE SPECIAL-EFFECT RECORDINGS

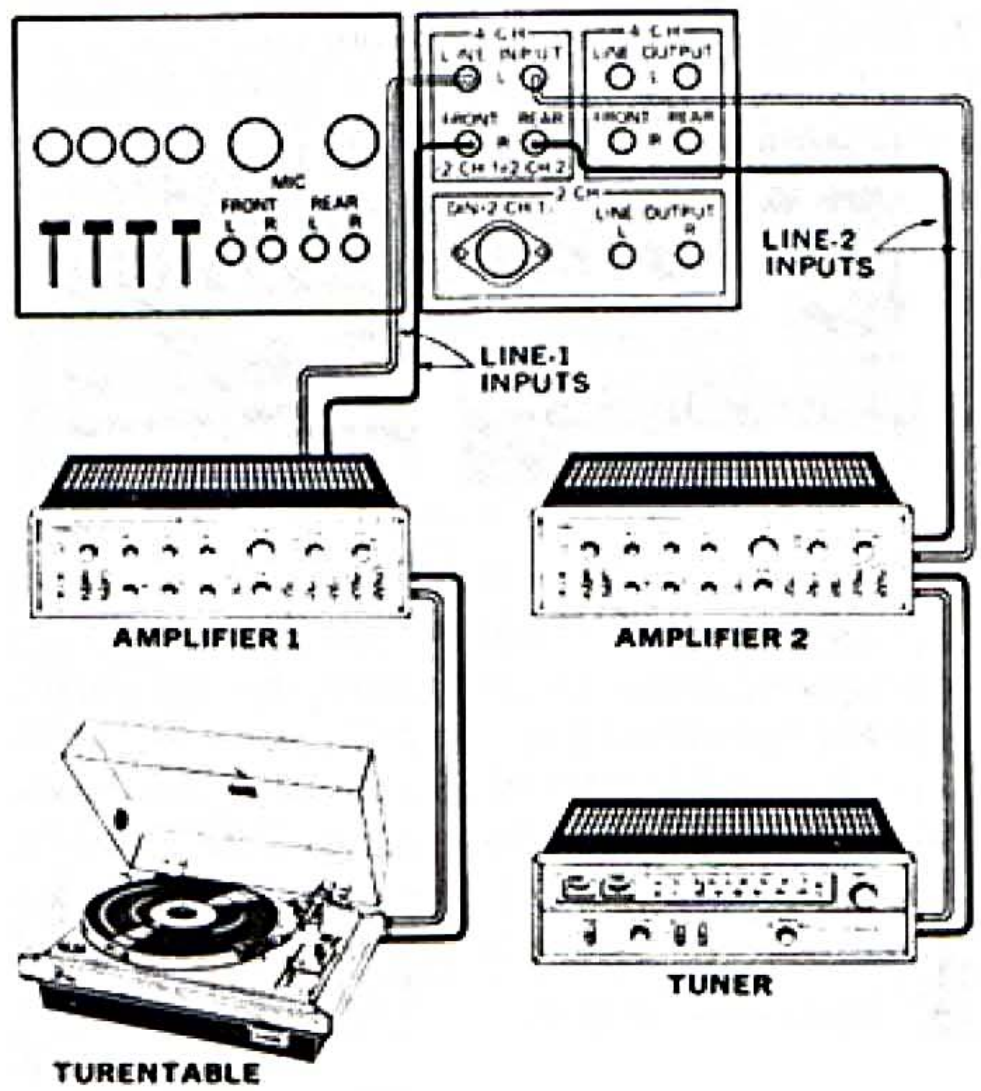
2-Channel Mix Recording

Your QD-5500 enables you to mix two pairs of microphones when recording. Since it offers two sets of 2-channel line inputs, it also lets you mix line inputs with line inputs, microphones with line inputs, microphones with DIN inputs, or even line inputs with DIN inputs. Of these various ways of mixing, three are illustrated below.

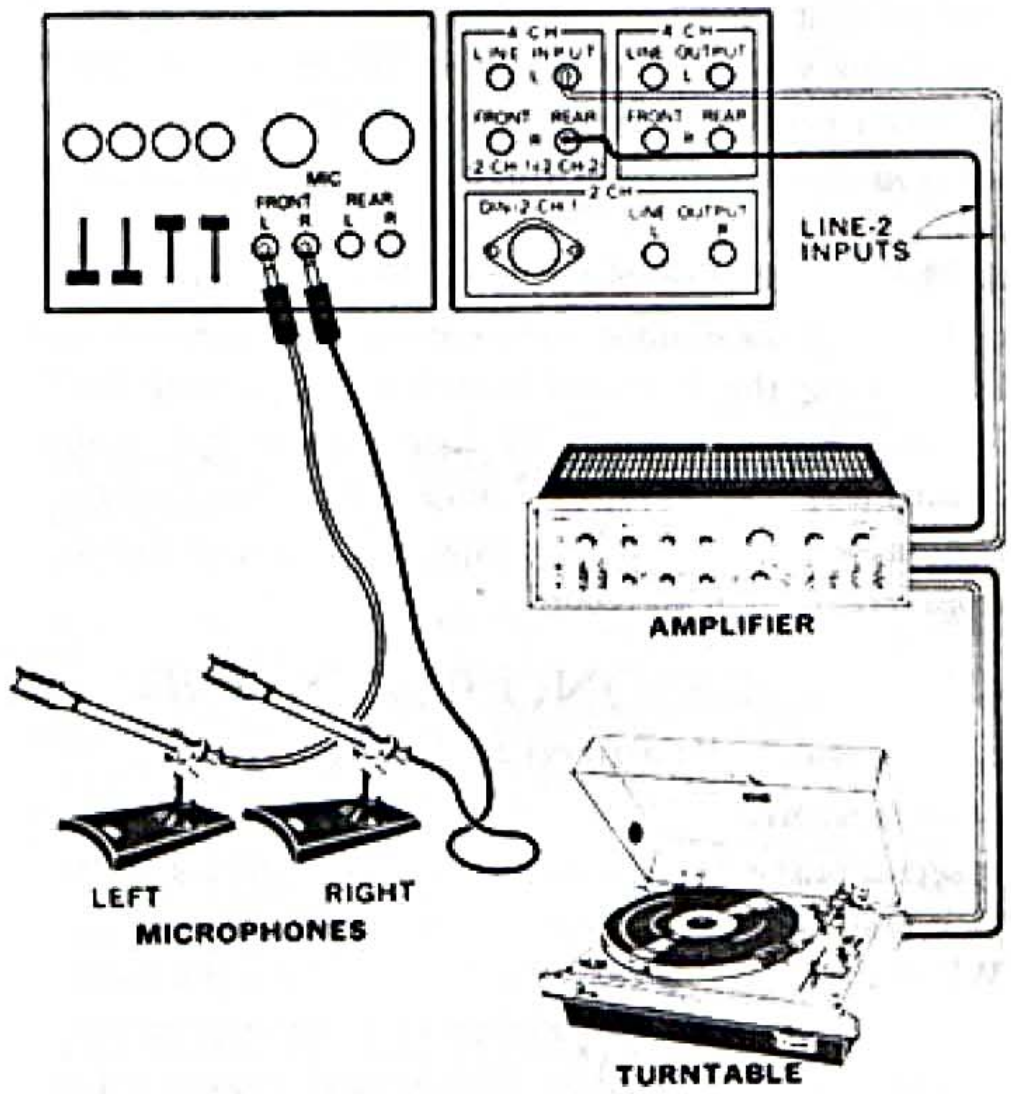
1. Mixing Microphones with Microphones



2. Mixing Line Inputs with Line Inputs



3. Mixing Microphones with Line Inputs



1. Set the four Mic/Line Switches to MIC or LINE, depending on what combination of program sources you are recording. If mixing microphones with microphones, set all four switches to MIC. If mixing microphones with line inputs, set the FRONT LEFT and RIGHT switches to MIC, and the REAR LEFT and RIGHT switches to LINE. If mixing line inputs with DIN inputs, set the FRONT LEFT and RIGHT switches to MIC, and the REAR LEFT and RIGHT switches to LINE.

2. Set the Record Selector to 4CH, and both Tape Monitor Switches to SOURCE to preset the record levels.

3. Preset the 2CH-1 record levels first. This is accomplished by adjusting the 4CH FRONT (2CH-1) LEFT and RIGHT Record Level Controls so that the corresponding VU meters will swing in approximately equal proportions.

4. Now preset the 2CH-2 record levels, utilizing the 4CH REAR (2CH-2) LEFT and RIGHT Record Level Controls.

5. Once the individual record level controls are adjusted, the over-all record level may be controlled with the Master Level Control, so that all four VU

meters will swing up to the red 1 or 2 mark at the loudest passages of the music to be recorded.

6. Now enter the stereo record mode by turning the Record Selector to 2CH and then pushing the Forward Button while keeping the Record Button firmly pressed. Two stereo sources will now be mixed into one stereo recording.

Note: To record mixed inputs, be sure to turn the Record Selector to 2CH before going into the record mode. The reason it is first set to 4CH is to monitor the signal levels in all four channels and preset the record levels. If you leave it in that position, you'll only make a 4-track 4-channel recording instead of a mixed-inputs recording. When the tape deck starts recording in the stereo recording mode, only the FRONT LEFT and RIGHT VU meters will operate, but their movements indicate the composite 2CH-1 and 2CH-2 signal strengths.

2-Channel Echo Recording

This technique lets you add echo (reverberation) to sound as you record, for a greatly enhanced sense of liveliness. Since your QD-5500 accomplishes it entirely electronically, it does not impair the original tonal quality.

To record with echo, proceed as follows:

1. Insert the Echo Recording Plug (supplied) into the DIN socket on the side panel.

2. Set the FRONT Mic/Line Switches to MIC, and the REAR Mic/Line Switches to MIC if recording from microphones, or to LINE if recording from line inputs.

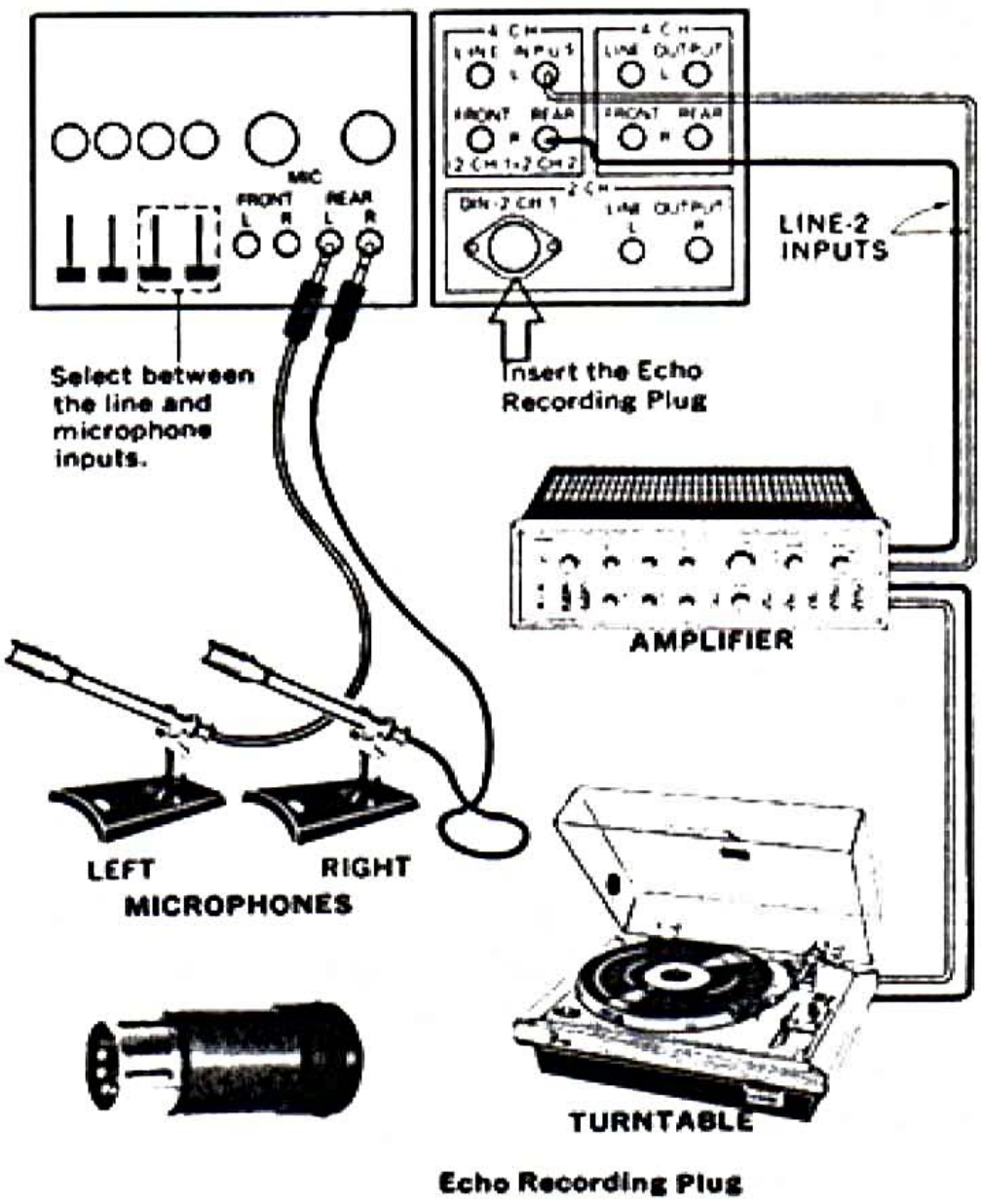
3. Connect your stereo program source to the REAR line inputs.

4. Adjust the amount of echo with the FRONT Record Level Controls. Turning them clockwise increases it.

Note:

1) This technique does not work with 4-channel and monophonic recording or with a tape that is already recorded. Use an independent reverberation amplifier (such as the Sansui RA-500) to add echo to these recordings.

2) If you increase the amount of echo too much, an oscillating phenomenon like howling may happen.



Echo Recording Plug

Add-on Recording

This is when you want to add music or commentary immediately after the last recording, and is also convenient when you want to edit or re-record an already recorded selection from the middle.

Prepare the music or commentary you want to add and keep it ready to go. Then, push the Record Button and Forward Button, but keep the Record Selector at 2CH STANDBY or 4CH STANDBY. Push the Tape Monitor Switches down to 'PLAY-BACK,' and the tape will be played back although both the Record and Forward Buttons are pressed. When the tape comes to the desired spot, start the additional program source and turn the Record Selector to 2CH or 4CH at the same time. The tape deck starts recording the program source immediately without any pause or click noise. When you play back the recorded tape, you'll hear it as one continuous recording.

AUTOMATIC REVERSE PLAYBACK/HOW TO ERASE

Automatic Reverse

When you are playing back a recorded tape in the forward direction and the tape comes near the end, push the Revers Button before it completely leaves the left reel. The tape motion will be reversed and the tape deck will continue to play back the tape in the other direction. The reversal, however, can be automatically activated by attaching a strip of sensing foil to the end of the tape.

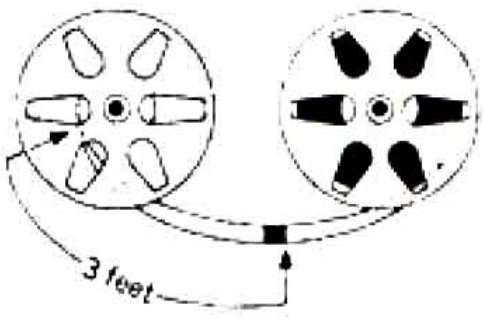
Note:

1) If sensing foil is attached at the beginning of the tape you are about to use, wind it on the right reel until the sensing foil is past the sensing poles, then push the Forward Button.

2) Automatic reverse by sensing foil is activated even when recording, and the tape deck will automatically change to reverse playback. As the QD-5500 does not record in the reverse direction, either use tape without sensing foil or stop the tape before the sensing foil on it contacts the sensing poles, switch the left and right reels, then record into tracks 2 and 4.

How to Attach Sensing Foil

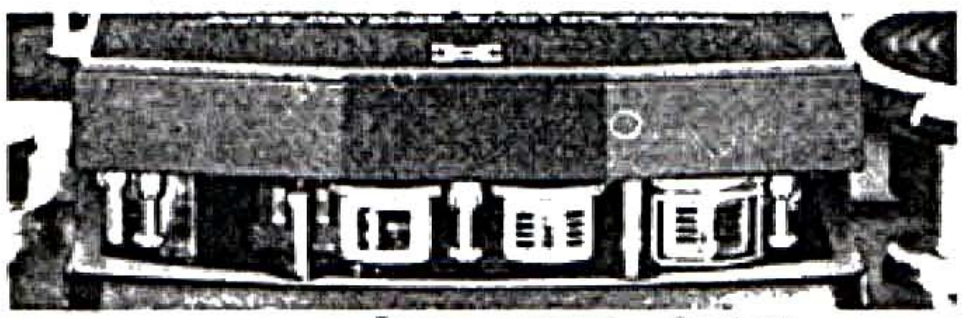
Attach a strip of sensing foil (about 6mm wide, 20mm long) at the place on the tape where you wish to trigger automatic reverse. Attach it on the duli side of the tape, normally at a point about three feet from the end of tape, and automatic reverse will be triggered as the sensing foil contacts the sensing poles.



How to Erase

Recording New Material over Old Material

Because the erasing head is situated before the recording head as can be seen in the photograph, it erases any old material on the tape as it travels from left to right in the recording mode. Subsequently, the recording head records new material into the clean tape.



Erasing a Recorded Tape Completely

Load the tape to be erased on the left turntable, turn down all four Record Level Controls to the zero level, set the Record Selector to 4CH, and go into the 4-channel record mode at the speed of 7½ ips (19cm/sec.) by pushing the Record and the Forward Buttons. If you want to erase only two tracks, set the Record Selector to 2CH.

Note: Although this is not recommended, a recorded tape can be erased quickly, if desired, by using a tape demagnetizer or bulk demagnetizer.

Erasing Part of a Recorded Tape

1. Play back the recorded tape in the forward direction.

2. When you come to the beginning of the portion you want to erase, push the reset button of the tape counter to reset it to '0000.'

3. Continue to play back the tape, and when you reach the end of the portion you want to erase, stop the tape and log the counter reading. Then rewind the tape back until the counter reads '0000.'

4. Turn down the input volume control(s) completely, and erase the portion by entering the recording mode and retaining it until the tape comes to where the tape counter indicates the logged reading.

Erasing Only One Track

To erase only one track, enter the monophonic recording mode through the use of the Record Selector. Set the selector to L or R, depending on which track you wish to erase, turn down the input volume control(s) completely, then push the Record and Forward Buttons. To erase track 2 or 4, switch the left and right reels, rewind the tape on the left reel, then enter the monophonic recording mode.

SIMPLE MAINTENANCE HINTS (1)

How to Splice a Tape

As your QD-5500 has been disigned from the outset with the protection of tape in mind, tape is very unlikely to break. However, should it ever break, or if you cut a tape to edit, splice it as instructed below.

Necessarry Equipment

Scissors: Demagnetize them before use, using either a head demagnetizer or bulk demagnetizer.

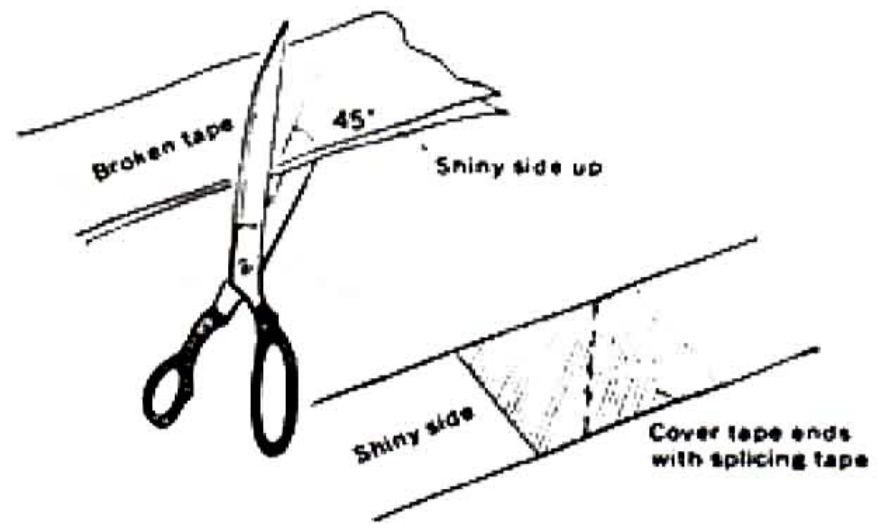
Splicing tape: Use either the splicing tape supplied or commercially available splicing tape for magnetic tape. Do not use vinyl tape or Scotch tape, as they may make the tape sticky and contaminate the heads.

Splicing Procedure

1. Completely overlap the two tape ends to be spliced, turning the shiny side up; then cut them at an angle of about 45 degrees.

2. Place the tape ends so cut on a flat surface, still the shiny side up. Place them so that one end joins the other precisely. Cover the joint with splicing tape. Be sure to press the splicing tape tightly.

3. If the splicing tape runs wider than the spliced tape, trim it neatly along the edge of the tape.

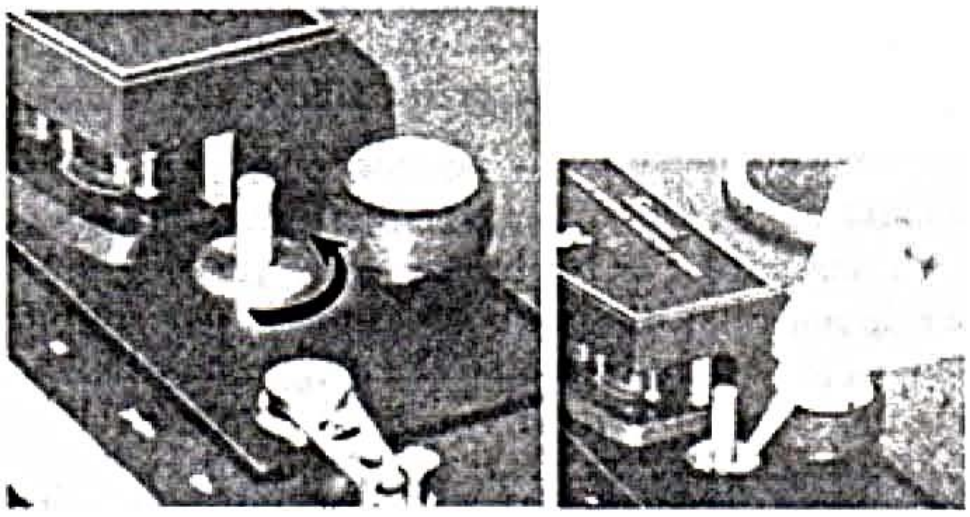


Lubrication

Lubricate the capstan bearing and pinch roller approximately every 2,000 hours of use, using the oil supplied. Do not use other kinds of oil.

Lubricating the Capstan Bearing

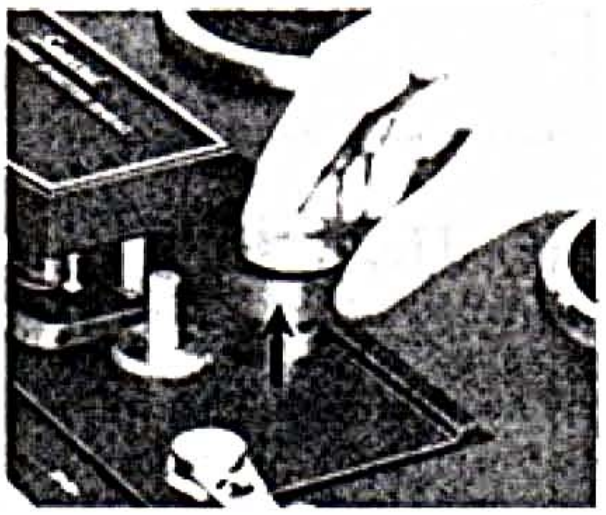
Remove the metal ring at the bottom of the capstan (see the photograph below) by turning it counterclockwise, then let fall a few drops of oil between the capstan shaft and its bearing. Do not drop too much oil, as excess oil will ooze out around the bottom of the capstan.



Lubricating the Pinch Roller

1. Pull the pinch roller strongly, and it will come off together with its shaft.

2. Drop one drop of oil at the bottom of the shaft. Never drop more than one drop of oil, as excess oil will stain the rubber part of the pinch roller, causing the tape to slip, producing wow and flutter or generally damaging the quality of the pinch roller. If oil has stained the capstan shaft or pinch roller, wipe it off with a piece of cloth moistened with the Sansui SHC-1 cleaner liquid.

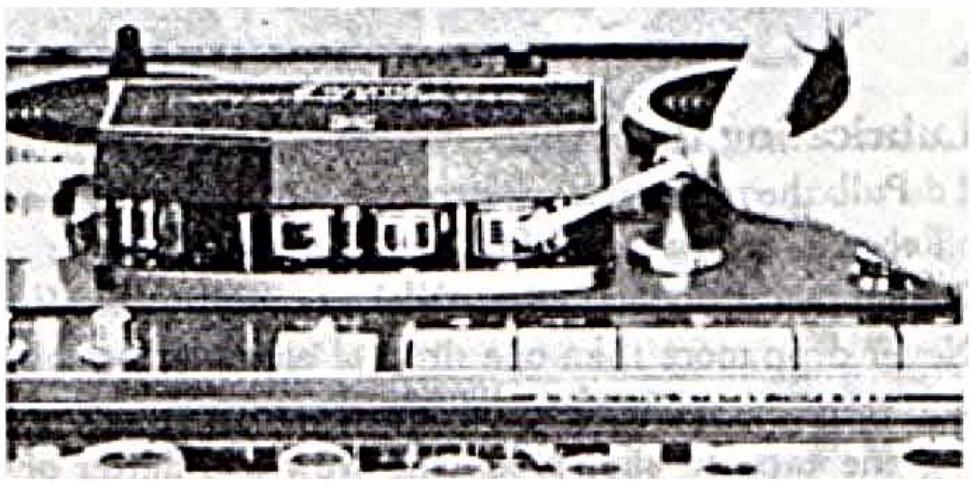


SIMPLE MAINTENANCE HINTS (2)

Maintenance of the Heads

The oxide and binder from recording tape gradually accumulate on the erasing, recording and playback heads of your QD-5500, deteriorating the erasing efficiency, recording and playback sensitivity or tone quality of reproduced sound. They may also accumulate on the capstan, pinch roller and tape guides, making the tape travel unsmooth and causing wow and flutter.

These parts should be cleaned periodically, using a 'Q-Tip' or cotton swab moistened with the Sansui SHC-1 head cleaner supplied. When cleaning the heads, take extra care not to damage their surfaces. Never use any abrasive or metallic object to clean the heads, as they may nick or scratch the heads. If the contamination is serious, soak an ample amount of the cleaner in a piece of clean, lintless cloth and wipe the heads and other parts with it, but do not scrub too hard. The cleaner may also be used to clean rubber parts such as the pinch roller.

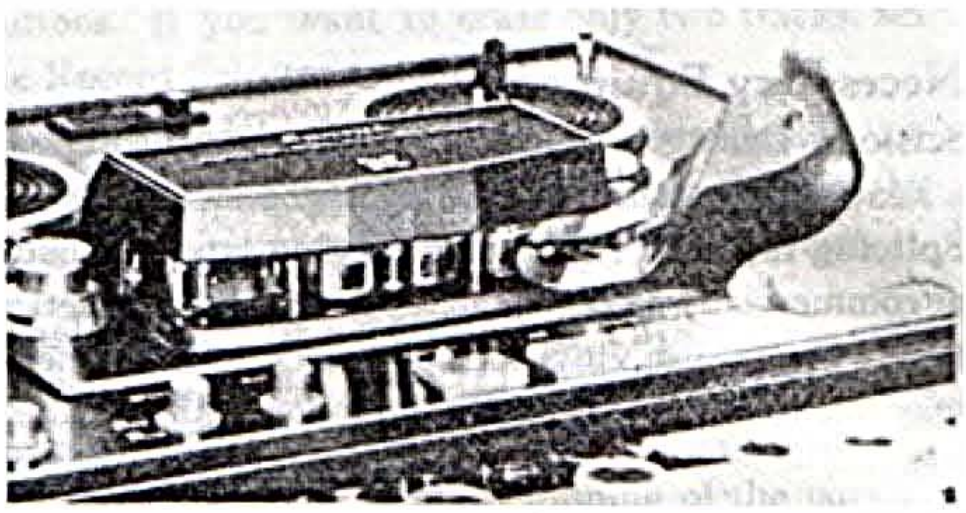


Head Cleaner SHC-1

Demagnetizing the Heads

The magnetic heads on your QD-5500 are gradually magnetized after many hours of use. This will not only impair their high-frequency response but cause them to record noise into the tape.

Demagnetize the heads about every 30 hours of use, using the Sansui SHE-1 head demagnetizer. Turn off the tape deck's Power Switch, bring the pole pieces of the demagnetizer close to the surfaces of the recording and playback heads, capstan, tension arms and all other parts that contact the tape. Move the demagnetizer up and down several times, then withdraw it very slowly. Cut off the power supply for the demagnetizer only when it is over a foot away from the tape deck.



Head demagnetizer SHE-1

Note:

1) Be sure that the Power Switch of the tape deck is turned off before starting the demagnetizing procedure.

2) When demagnetizing the heads, do not let the demagnetizer actually touch the heads; the head surfaces are very sensitive and can be easily scratched by the pole pieces of the demagnetizer.

Should the Power Fuse Blow

If pushing the Power Switch fails to turn on the power for the tape deck, check the power fuse on the rear panel. Turn the fuse cap in the direction of the arrow and remove it. Take off the glass-tubed fuse and see if it has blown. If it has, make a simple investigation of your QD-5500 to determine the cause of the blowout, then replace the blown fuse with a new glass-tubed fuse of the rated capacity. For 100-117 volt operation, use a 2-ampere glass-tubed fuse. For 200-240 volt operation, use a 1-ampere glass-tubed fuse.

If You Move to an Area where the Power Voltage and Frequency Are Different

Your QD-5500 is adjusted to the AC line voltage and frequency of your area prior to shipment. These are indicated on the rear panel. However, if you should move to an area where the line voltage and/or frequency are different, remove the power cord from the AC outlet and adjust the settings as instructed below.

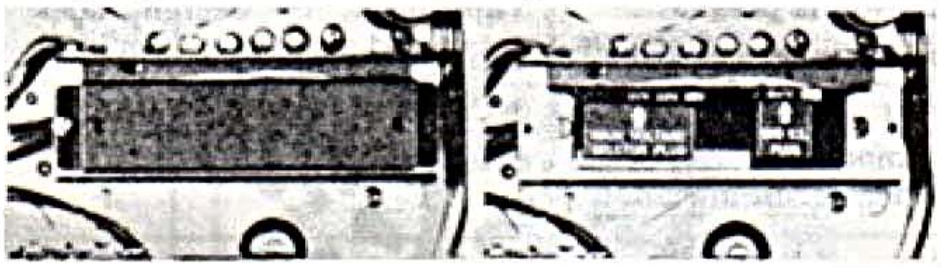
Adjusting the Line Voltage Setting

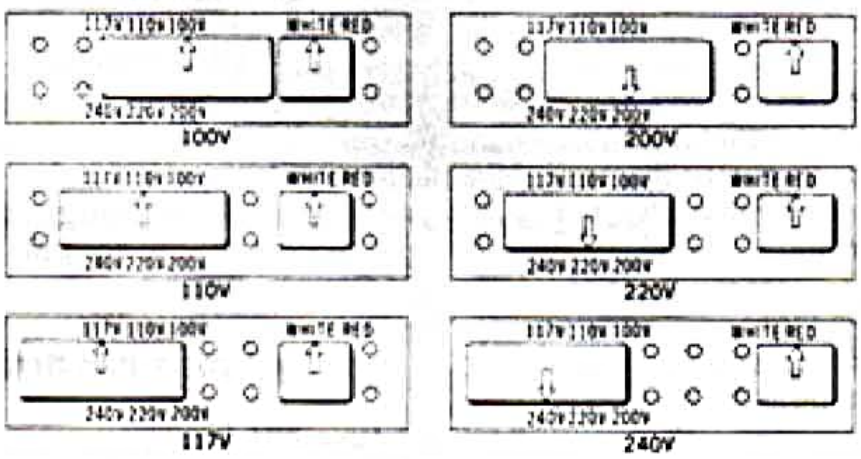
1. Remove the rear panel, and locate the black protector cover for the Voltage Selector Plug below the supply reel motor (the righthand motor as you face the back of the tape deck). See the photo for its location.

2. Remove the Voltage Selector Plug once, then re-insert it so that the arrow mark on it faces the correct voltage.

3. For 100, 110 or 117 volt operation, be sure that the sub plug next to the Voltage Selector Plug is inserted into the jacks indicated in white (see photo).

4. For 200, 220 or 240 volt operation, be sure the sub plug is inserted into the jack indicated in red.





Adjusting the Line Frequency Setting

The line frequency is switched over by adjusting the frequency Switch and the capstan drive belt.

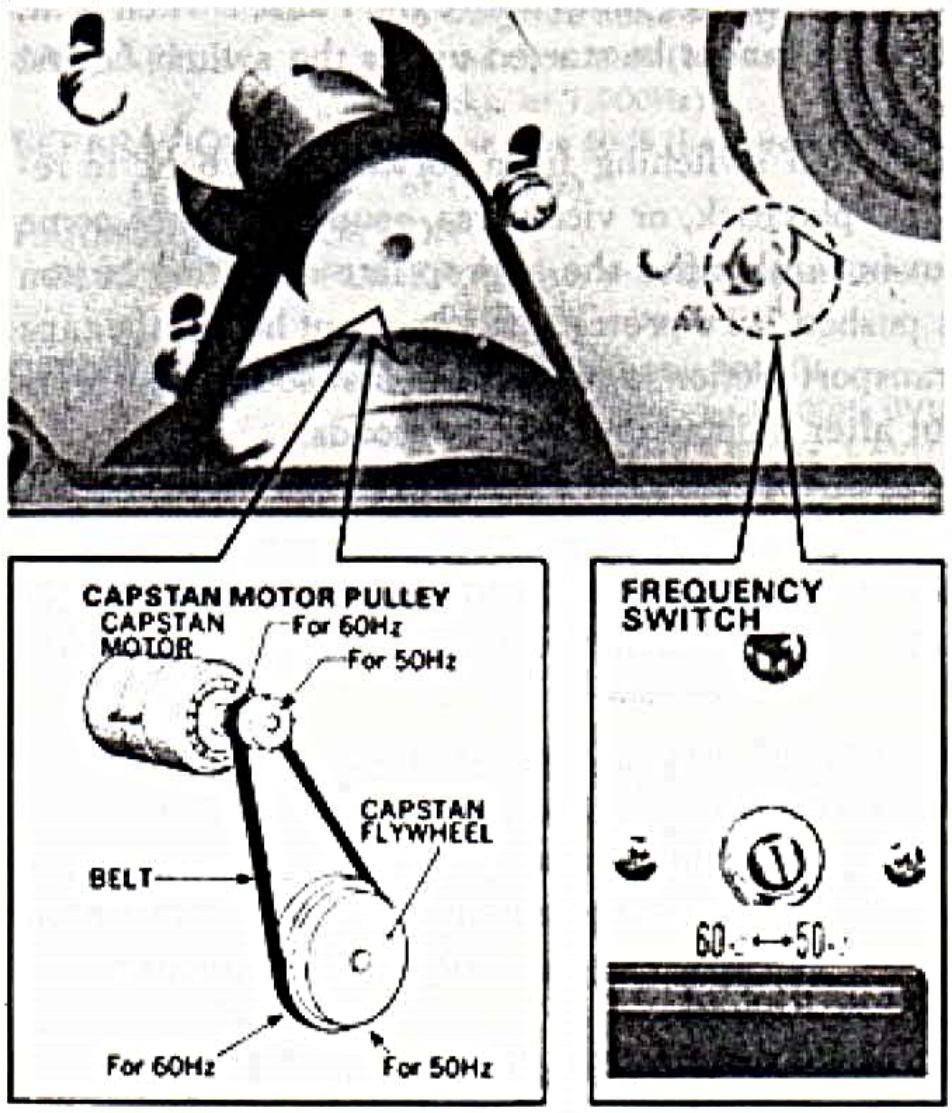
1. Place the tape deck on its back on a flat surface, and remove the three screws from the bottom.

2. Place the tape deck upright again, and pull the electronics section out slightly. Then, remove the four screws fastening the dress front panel and take off the panel.

3. Locate the Frequency Switch below the take-up reel motor (the righthand motor as you face the front of the tape deck). Using a screwdriver, turn the switch to the correct frequency of your area (the counterclockwise position is for 50Hz, and the clockwise position for 60Hz). Refer to the photo.

4. Now, adjust the seating of the capstan drive belt as shown in the illustration. Both the capstan motor pulley and the capstan flywheel have two steps. For the capstan motor pulley, the larger step is for 50Hz and the smaller step is for 60Hz. For the capstan flywheel, however, the larger step is for 60Hz and the smaller step is for 50Hz. If the re-hooking of the belt seems too difficult or troublesome for you, get in touch with the authorized Sansui Service Station nearest you.

5. When the belt is properly re-hooked, turn the pulley by hand and see if the belt moves smoothly.



SIMPLE MAINTENANCE HINTS (3)

Simple Maintenance Hints

1. Avoid installing your QD-5500 in an extremely cold, hot or dusty place or where it may be exposed to direct sunlight. Such environments will do harm to the tape, as well as to the mechanisms and electronics of the tape deck. In a very cold place where water freezes, the lubricating oil on the vital parts hardens to hinder normal operation of the machine. The ideal environmental temperatures are from 5°C to 30°C (41°F to 86°F).

2. Ventilation openings are provided in the top and rear panels. It is advisable to leave at least 4 inches of space between the wall and the rear panel of the tape deck.

3. While your QD-5500 is designed to function well despite line voltage fluctuations of up to ±10%, it provides the best performance if installed in a place where these variations are below ±5%.

4. Your QD-5500 is adjusted to the correct line voltage and frequency of your area prior to shipment; they are indicated on the rear panel.

5. If the orange lamp above the Pause Switch is lit, the tape cannot be started unless the switch is first released.

6. When switching from forward playback to reverse playback, or vice versa, sound does not come out instantly after the appropriate operating button is pushed. To protect the important heads, the tape transport section is designed so that sound will come out after a delay of about 2 seconds.

7. To stop the tape during fast forwarding (or rewinding) without risking tape breakage, it is advisable to push the Rewind (or Fast Forward) Button first to slow down the tape, then push the Stop Button.

8. To play back a recorded tape, be sure that the Tape Monitor Switch(es) are set to PLAYBACK. When recording, set the same switch(es) to SOURCE once and preset the recording levels, then set them back to PLAYBACK to monitor the recorded sound.

9. Make certain that all connection plugs are completely inserted.

Conditions Not Indicative of a Faulty Deck

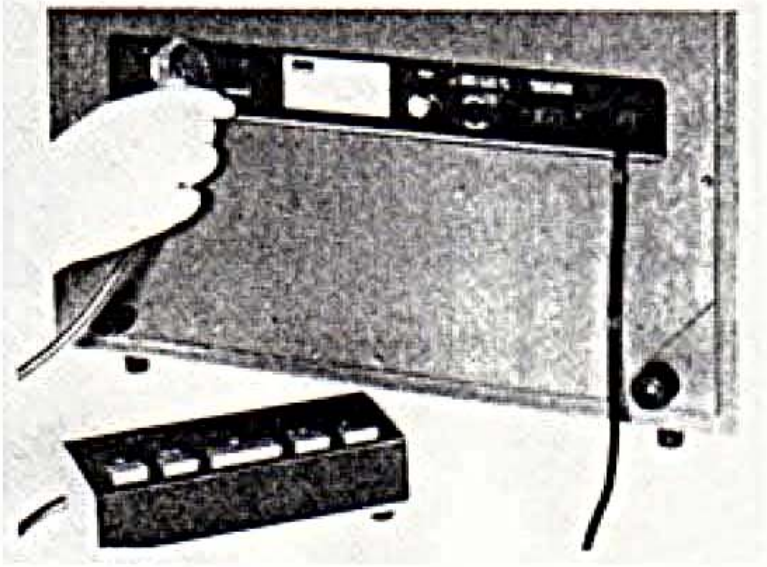
The conditions listed in the table below are often mistaken as troubles due to flaws in the tape deck. If you encounter these difficulties, look them up in the table once and see if they can be cured very easily.

CONDITION	PROBABLE CAUSE
Tape does not move. Tape sounds funny.	Pause Switch is locked. Tape is hanging slack, allowing tension arm to drop and cut off motor power. Dummy plug of remote control connector on rear panel is unplugged. Tape is being played back at wrong speed.
No sound, or only weak sound is heard from either or both speaker systems.	Monitor Switch is set to SOURCE. Pin plug cables are not properly plugged in. Or they are plugged into wrong jacks. Head surfaces are unclean. Playback volume controls are not properly adjusted.
Tape deck does not record when Record Button is pressed.	Record Selector is set to STAND-BY. Tape deck, by design, does not record in reverse direction.
Old recording is not completely erased when recording anew.	Surface of erasing head is unclean.
Microphones do not work.	Impedance of microphones is wrong.
Tape Travel Direction Lamps indicate direction opposite to tape travel during fast forwarding or rewinding.	Normal condition, as these lamps only indicate playback head in arrow direction is live and capstan is revolving in that direction, ready to play tape any moment.
Pushing Power Switch does not turn on power.	Right tension arm is hanging down. Power fuse has blown.

OPTIONAL/SPECIFICATIONS

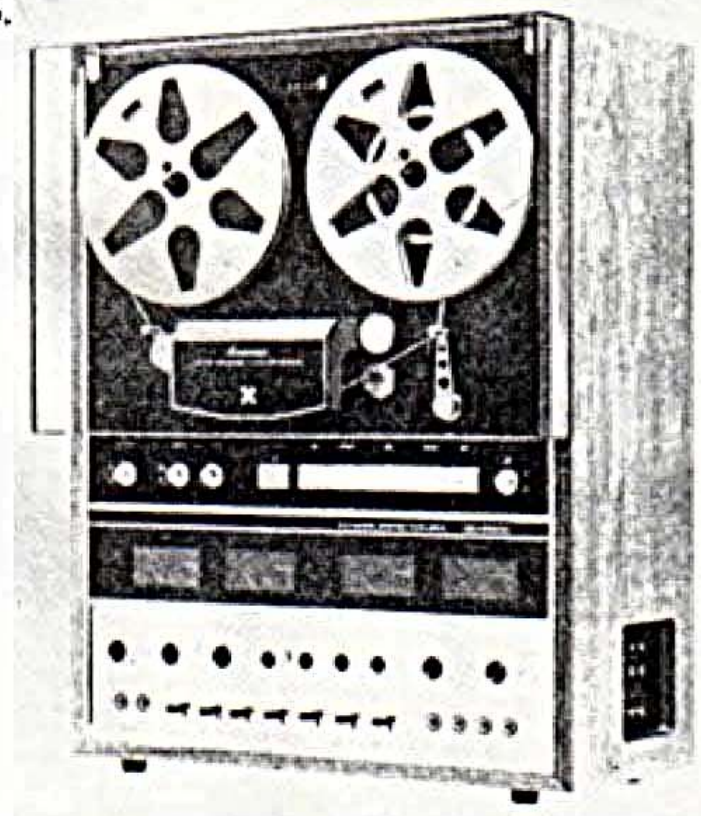
Remote Controller

You can remotely operate your QD-5500 from a distance of up to 16 feet by the use of the Sansui SRC-2 Remote Controller, which is available as an optional extra. To do this, remove the dummy plug in the Remote Control Connector on the rear panel and plug in the Remote Controller in its place.



Dust Cover

A beautiful transparent acrylic dust cover, to protect the precision tape transport mechanism of the QD-5500 from dust, is available as an optional extra at your nearest Sansui dealer. Ask for the Sansui SDC-5.



* Design and specifications subject to change without notice for improvements.

TRACK SYSTEM:	4-track 2-channel recording forward playback forward and reverse 4-track 4-channel recording forward playback forward
REEL SIZE:	7" maximum
TAPE SPEED:	7½ips (19cm/sec), 3¾ips(9.5cm/sec)
TAPE SPEED ACCURACY:	within ±0.5%
HEADS:	4-track 4-channel ERASE 4-track 4-channel RECORD 4-track 4-channel PLAYBACK
MOTORS:	4-pole/8-pole two-speed hysteresis synchronous type for capstan drive, 6-pole induction type for reel drive
CAPSTAN DRIVE SYSTEM:	belt drive
WOW AND FLUTTER:	less than 0.07% at 7½ ips (WRMS) less than 0.12% at 3¾ ips (WRMS)
FAST WIND TIME:	approximately 90 seconds for 1,200 ft. length tape
FREQUENCY RESPONSE	
	15 to 25,000Hz (20 to 20,000Hz ±3dB) at 7½ ips 15 to 15,000Hz (30 to 12,000Hz ±3dB) at 3¾ ips
SIGNAL TO NOISE RATIO:	better than 60dB (3% THD level to weighted noise level)
CROSSTALK:	better than 60dB (between adjacent tracks, at 1,000Hz)
SEPARATION:	better than 50dB (between channels, at 1,000Hz)
HARMONIC DISTORTION	
PLAYBACK AMPLIFIER:	better than 0.15% at 1,000Hz, 0.47V output
TAPE DISTORTION (record/playback total):	better than 1.2V at 1,000Hz 0VU better than 3% at 1,000Hz +6VU
ERASURE:	better than 60dB
INPUT SENSITIVITY AND IMPEDANCE:	
MICROPHONE:	0.5mV (50kΩ)
LINE:	70mV (100kΩ)
DIN:	14mV (100kΩ)
OUTPUT LEVEL	
2-CHANNEL OUTPUT:	0.47V maximum (0VU=0.3V)
DIN (2-CHANNEL):	0.47V maximum (0VU=0.3V)
4-CHANNEL OUTPUT:	0.47V maximum (0VU=0.3V)
BIAS OSCILLATOR FREQUENCY:	100kHz
SEMICONDUCTORS:	Transistors 38; Diodes 19
POWER REQUIREMENTS	
POWER VOLTAGE:	100, 110, 117, 200, 220, 240V AC 50/60Hz
POWER CONSUMPTION:	Average 115VA, 110W
DIMENSIONS:	422mm (16⅝") W, 554mm (21⅞") H, 268mm (10⅝")D
WEIGHT:	24.2kg (53.4 lbs.)

SANSUI ELECTRIC CO., LTD.
14-1, 2-chome, Izumi, Suginamiku, Tokyo 168, Japan.
TELEPHONE: (03) 323-1111 / TELEX: 232-2076

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