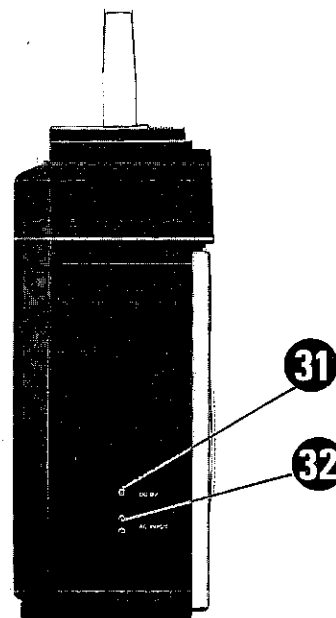
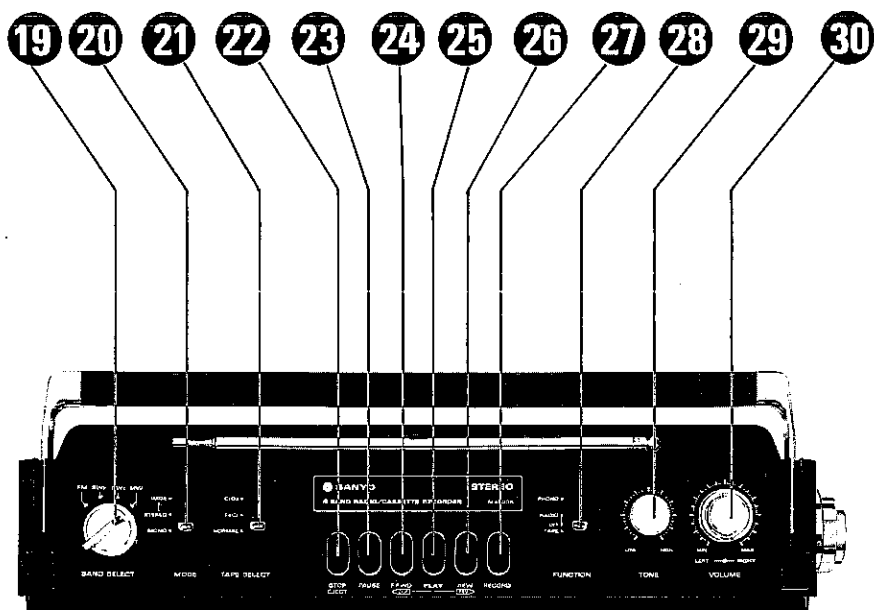
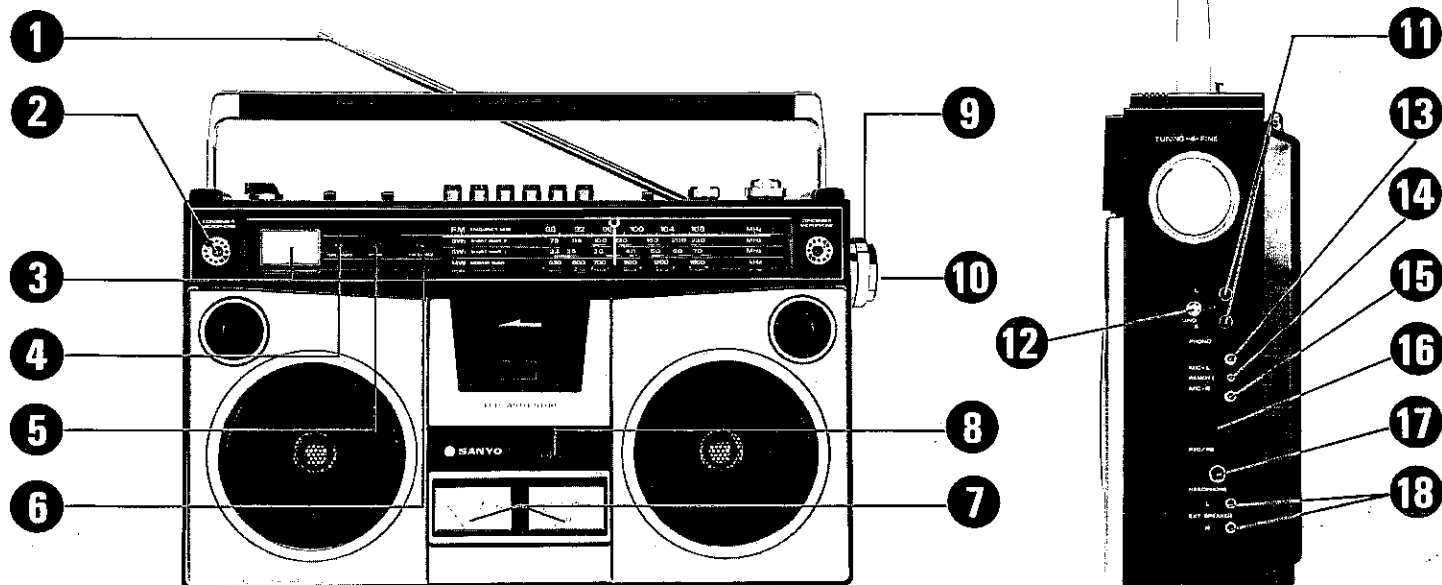


Deluxe Stereo Radio Cassette Recorder M4500K



 **SANYO**

CONTROLS

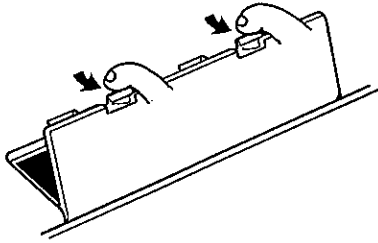


- | | | |
|---------------------------------------|------------------------------|--------------------------------|
| 1. Antenna | 13. Left Microphone Socket | 25. Play Button |
| 2. Built-in Microphone | 14. Remote Control Socket | 26. Rewind/Review Button |
| 3. Tuning/Battery Condition Indicator | 15. Right Microphone Socket | 27. Record Button |
| 4. Tape/Radio Indicator (Red L.E.D.) | 16. DIN (REC/PB) Socket | 28. Function Selector |
| 5. PHONO Indicator (Green L.E.D.) | 17. Headphone Socket (1/4") | 29. Tone Control |
| 6. FM Stereo Indicator (Red L.E.D.) | 18. External Speaker Sockets | 30. Volume Control |
| 7. Left and Right VU Meters | 19. Band Selector | 31. External DC Socket (DC 9V) |
| 8. Counter & Reset Button | 20. Mode Selector | 32. AC Input Socket |
| 9. Tuning Control Knob | 21. Tape Selector | |
| 10. Fine Tuning Control Knob | 22. Stop/Eject Button | |
| 11. Phono Input Socket | 23. Pause Button | |
| 12. Ground Terminal (GND) | 24. Fast Forward/Cue Button | |

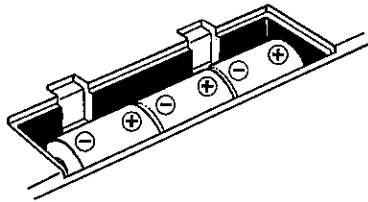
POWER SUPPLY

Battery Operation

1. Open the battery compartment lid, located on the back side of the recorder, by pushing the latches in the direction of the arrow.



2. Install 6 "D" size flashlight batteries to match the polarity of the + and - signs as indicated on the back of the recorder, placing the strip at the bottom for easy battery replacement.



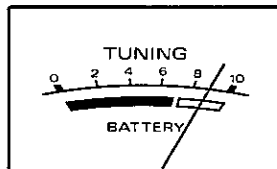
NOTE:

If the batteries are not installed in the direction shown on the cabinet back, the unit will not operate properly and damage to the unit may result.

3. Close the battery compartment lid.

Battery Checking

1. Check the battery condition by setting the Function Selector to the "PHONO" position.
2. The pointer of the Tuning/Battery Condition Indicator should show maximum swing to the right if the batteries are in good condition and are making good contact.



3. If the pointer does not show maximum swing to the right and stays into the "ORANGE" zone, the batteries are exhausted and all batteries must be replaced by new ones.

IMPORTANT:

Exhausted batteries may leak and damage the recorder. Always remove the batteries if the recorder is not to be used for one month or more, or to be used on AC exclusively.

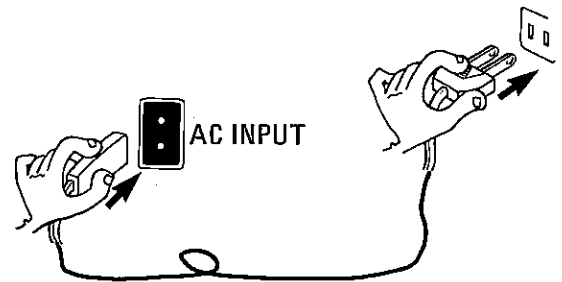
AC Operation

Connection to AC Outlet

Plug the one end of the power cord into the AC Input Socket located on the left side of the unit and the other end into an AC household outlet.

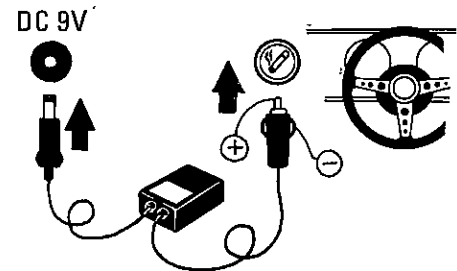
NOTE:

When the AC power cord is plugged into the AC input socket, the internal batteries are automatically disconnected. Therefore, the power cord must be removed from the recorder before it can be operated on batteries.



Car Battery Operation

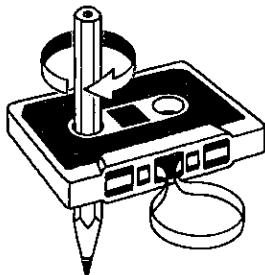
This recorder may be operated in an automobile having 12-volt negative battery with the OPTIONAL Car Adapter Cord (Model No. CA-97S). Connect the small end of the car adapter cord into the External DC Socket (DC 9V) on the left side of the recorder and the other end into the cigarette lighter socket of the car. The internal batteries are automatically disconnected when the car adapter cord is plugged into the External DC Socket.



TAPE CASSETTE

Checking the Cassette

Make sure that the cassette tape has no slack prior to inserting the cassette into the recorder. Unless the tape is tight, it may wind around the head mechanism and trouble may result. Use a pencil as shown in the picture to take up slack on one of the reels.



To Insert Cassette

1. Press the Stop/Eject Button. Press it again if any of the buttons are depressed.

2. Insert a cassette with the full reel to the right and side to be played and recorded toward you.

NOTE:

When inserting the cassette, push on the plastic portion of the cassette. Pushing on the exposed tape could damage the tape.

3. Close the cassette compartment lid.

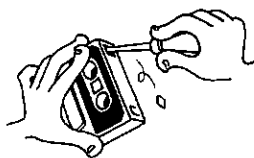
To Remove Cassette

1. Press the Stop/Eject Button. Press it again if any of the buttons are depressed.

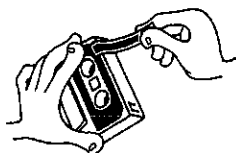
2. Remove the cassette from its compartment.

Safeguard Against Accidental Erasure

To safeguard valuable recordings against accidental erasing, break out the flaps at the rear of the cassette. Use a screwdriver for this purpose.



Remove flap A at the right to preserve sound on Side 1 and flap B to do the same for Side 2.



Cover the opening hole with adhesive tape if re-recording is necessary.

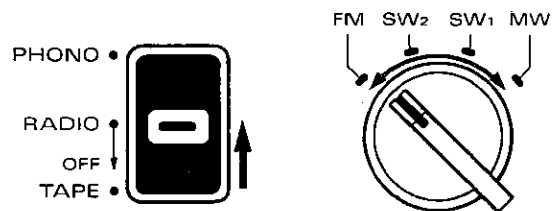
Important Notices:

1. The RECORD button cannot be depressed when a cassette which has these protective flaps removed is inserted. DO NOT press the RECORD button FORCIBLY when using these cassettes.
2. Almost all pre-recorded tapes are sold with these protective flaps already removed.

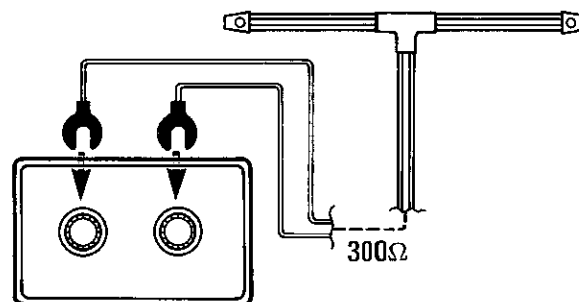
OPERATION

Radio Reception

1. Place the Function Selector in the "RADIO" position and "Tape/Radio" L.E.D. indicator will light. Set the Band Selector to your desired radio band.



2. For FM or SW band reception, pull out the antenna and determine the direction, length and angle for best reception. For MW, the antenna inside of the unit is somewhat directional. So the reception from the distant stations may sometimes be improved by rotating the unit. When receiving a weak or distant FM station, connect an external FM antenna to the external antenna terminals. (external FM antenna is optional extra).



3. Tune in a desired station by turning the Tuning Control as the Tuning/Battery condition indicator pointer shows maximum swing to the right when you have tuned in the maximum signal strength of a broadcasting station on FM, MW or SW bands. For SW tuning, retune in the station accurately with the Fine Tuning control.

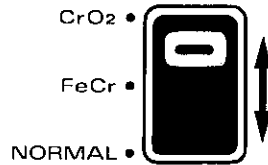
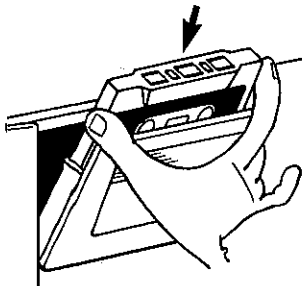
NOTE:

DO NOT turn the Tuning and Fine Tuning controls simultaneously.

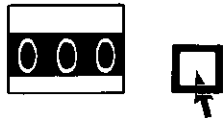
4. For MW or SW reception, set the Mode Selector to "MONO". For receiving an FM stereo broadcast station, set the selector to "STEREO". The Stereo Indicator will light when stereo broadcast is being received. The matrix stereo will be obtained by setting the selector to "WIDE" position.
5. Adjust the Tone and Volume controls to your desired sound volume and tonal quality.
7. To turn off the radio, set the Function Selector to the "TAPE" position.

Recording from Built-in Radio

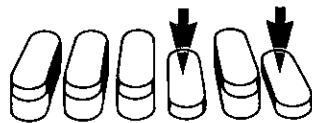
1. Set the Function Selector to the "RADIO" position.
2. Insert a cassette with the full reel to the right and then set the Tape Selector to the type of the tape being used.
CrO₂ for Chromium Dioxide Tape
FeCr for Ferrite Chromium Tape
NORMAL for all other tapes



3. Select the desired band, then tune in a desired radio program. Follow the instructions as described under "Radio Reception".
4. Press the Tape Counter Reset button to reset the counter at "000". The tape counter will be very useful to play back a particular selection, therefore, make a note of the counter numbers at the beginning of each selection while recording. Depress the RECORD and PLAY buttons simultaneously. Now you are recording.



PLAY RECORD



5. Since you can monitor through the speakers regardless of the volume control setting, adjust the Volume and Tone controls to your desired sound volume and tonal quality.
6. When recording a MW radio program on tape, an irritating beat sound may sometimes appear, caused by interaction between the recording bias frequency and the radio frequency. In such a case, simply set the Beat Cancel switch, located on the back of the unit, to the other position.
7. To start and stop the tape movement instantly during recording, depress the PAUSE button. To start it again re-press the button.
8. Press the Stop/Eject button and set the Function Selector to the "TAPE" position to stop the recording completely. When the tape is wound completely to the left side reel while recording, the RECORD and PLAY buttons will be released automatically, however the radio section will remain in the "ON" position.

Recording from Built-in Condenser Microphone

1. Be sure nothing is plugged into the MIC and DIN sockets, and the Function Selector is placed in the "TAPE" position.
2. Press the Stop/Eject button and insert a cassette with the full reel to the right, then set the Tape Selector to the type of the tape being used.
3. Press the Tape Counter Reset button to reset the counter at "000" and then depress the RECORD and PLAY buttons simultaneously. Now you are recording.
4. Speak in a normal voice at a distance of approximately 1 foot away from the built-in microphones. When the VU meter pointers do not swing to the right, full recording levels are not being achieved and the microphones should be moved closer to the person speaking,
5. This unit has an automatic level control (ALC) circuit and does not require any adjustment of the volume control while recording.
6. If you wish to briefly stop the tape without resetting the RECORD and PLAY buttons, depress the PAUSE button. To start again, depress the PAUSE button a second time.

To stop the recording completely, press the Stop/Eject button.
7. When the tape is wound completely to the left side reel while recording, the RECORD and PLAY buttons will be released automatically.

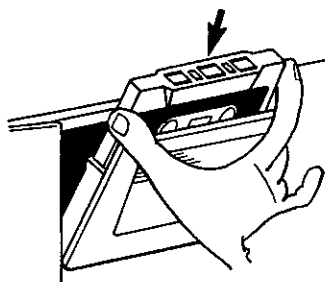
Recording from External Microphone

1. Press the Stop/Eject button and insert a cassette into the compartment, then close the lid.
2. Place the Function Selector in the "TAPE" position, then set the Tape Selector to the type of the tape being used.
3. Connect an optional external microphones into the MIC sockets. The Mode Selector should be set to the "STEREO" position when you make a stereo recording. For monaural recording, connect one microphone into one of the MIC sockets with the Mode Selector in the "MONO" position.
4. Press the Tape Counter Reset button to reset the counter at "000" and then depress the RECORD and PLAY buttons simultaneously. Now you are recording.
5. If you wish to monitor the sound quality while recording, plug an optional headphones into the HEADPHONE socket on the right side of the recorder.
6. Press the PAUSE button to stop the recording at any position. To stop the recording completely, press the Stop/Eject button.

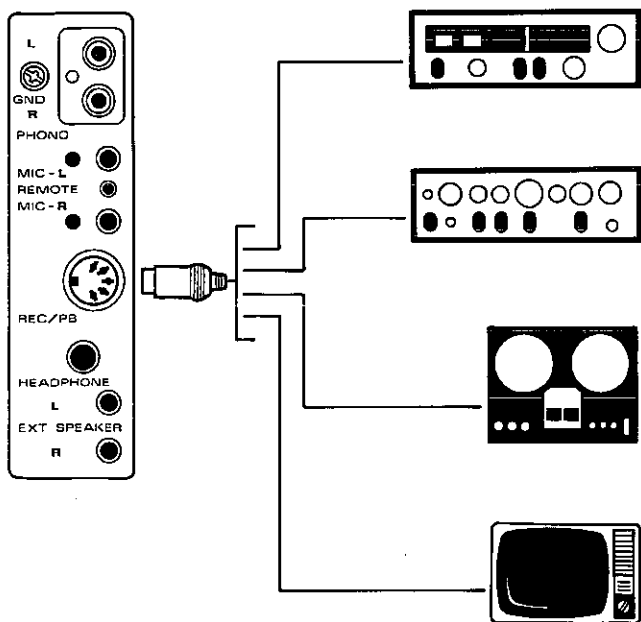
When the tape is wound completely while recording, the RECORD and PLAY buttons will be released automatically.

Recording from External Sound Source

1. Insert a cassette with the full reel to the right and then set the Function Selector to the "TAPE" position.



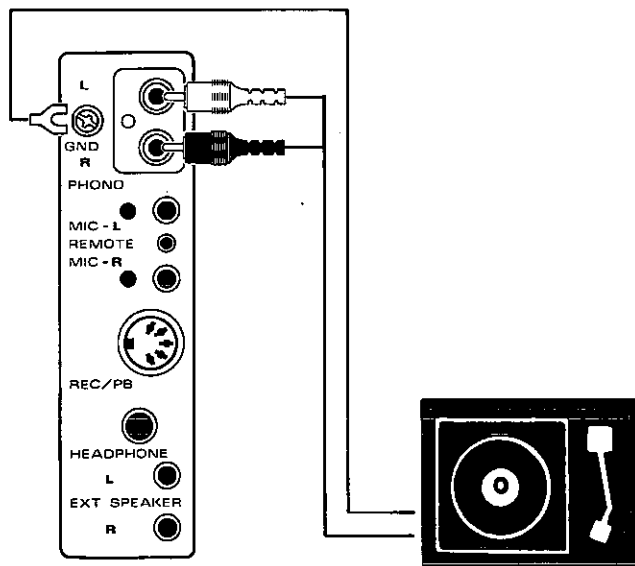
2. Connect an optional DIN cable from the output of your tuner, amplifier or other signal source to the DIN socket of the unit.



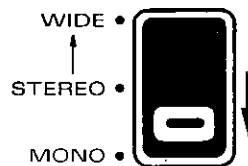
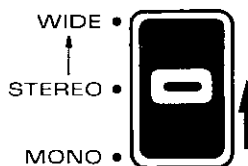
3. Set the Tape Selector to the type of the tape being used.
4. Press the Tape Counter Reset button to reset the counter at "000" and then depress the RECORD and PLAY buttons simultaneously.
5. Since this unit has a variable monitoring circuitry, you can adjust the Volume and Tone controls to your desired volume and tonal quality while recording.
NOTE:
The Mode Selector should be set to the "STEREO" position when you make stereo recording.
6. Press the PAUSE button to stop the recording at any position. To stop the recording completely, press the Stop/Eject button.
When the tape is wound completely to the left side reel while recording, the RECORD and PLAY buttons will be released automatically.

Playback a Record through your unit.

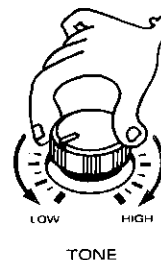
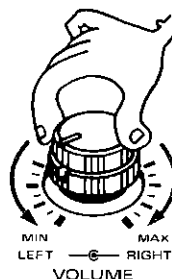
1. Set the Function Selector to the "PHONO" position and green L.E.D. PHONO indicator will light.
2. Connect an optional turntable having MAGNETIC cartridge to the PHONO input sockets. If the turntable has an earth lead, connect its free end to the Ground Terminal (GND).



3. Set the Mode Selector to "STEREO" or "MONO" position to correspond with the record disc to be used.



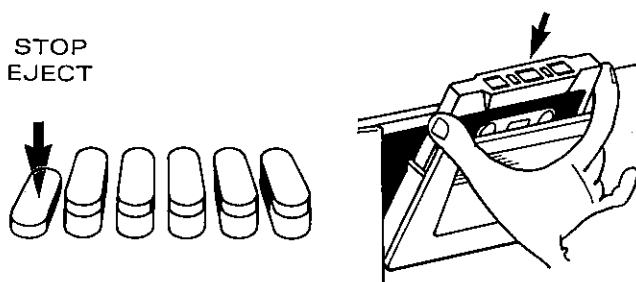
4. Turn the Volume control to its MINIMUM position and start playback by following the instructions of your turntable.
5. Adjust the Volume and Tone controls to your desired sound volume and tonal quality.



6. If you wish to record from your turntable, insert cassette and then depress the RECORD and PLAY buttons simultaneously.

Playback

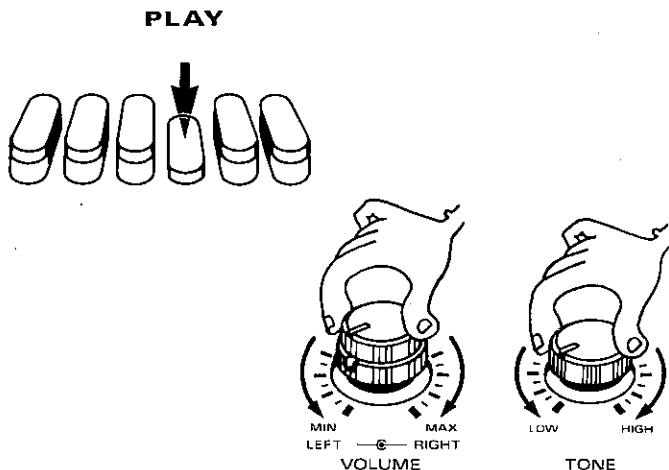
1. Set the Function Selector to the "TAPE" position.
2. Press the Stop/Eject button and insert the recorded cassette with the full reel to the right and side to be played toward you.



3. Set the Tape Selector to the type of the tape to be used. When using the stereo tape, set the Mode Selector to the "STEREO" position. For the Monaural tape, set the selector to the "MONO" position.



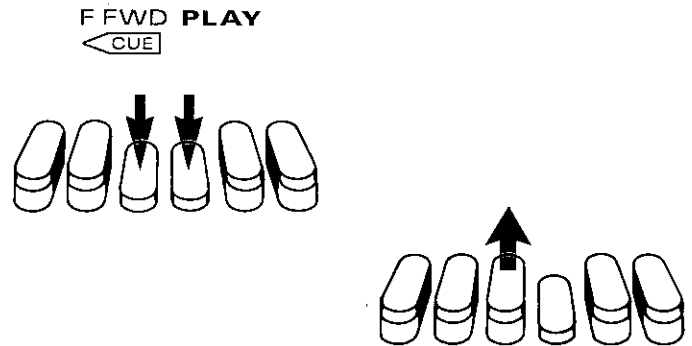
4. Depress the PLAY button and your unit will begin to play back. Adjust the Volume and Tone controls to your desired sound volume and tonal quality.



5. To play back the recorded tape through your amplifier, connect an optional DIN cable from the DIN socket of this unit to your amplifier, then follow the steps 1) thru 3) above.
6. To stop the playback instantly during playback, depress the PAUSE button. Release the button to start it again. To stop the playback completely, press the Stop/Eject button. When the tape is wound completely to the left reel during playback, the PLAY button will be released automatically.

Cue & Fast Forward

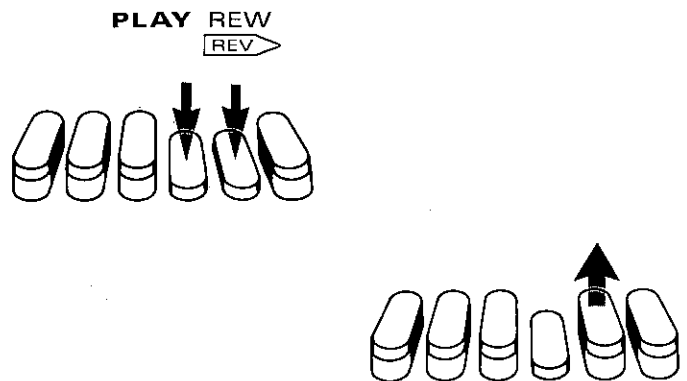
While in the PLAYBACK mode, the Fast Forward/Cue button is depressed, the tape runs fast forward and the recorded portion produces "cue" (chattering) sound. Thus, the recorded and unrecorded portion of the tape can be easily distinguished for easy tape scanning. When the Cue/Fast Forward button is released, the playback mode will be resumed.



For normal fast forward operation, press the Stop/Eject button to release the PLAY button and then depress the Cue/Fast Forward button. Push the Stop/Eject button when the desired portion in the middle of the tape is reached.

Review & Rewind

When the Review/Rewind button is depressed in the RECORD or PLAY mode, (the RECORD button will be released in the RECORD mode), the tape will rewind until you release the button. By releasing the button the recorder will go into the playback mode. This feature allows quick repeat play of hard to understand section without resetting the controls or quick review to listening to the just-recorded program.



NOTE:

If you wish to review just-recorded program recorded from built-in radio or turntable, the Function Selector should be set to the "TAPE" position before pushing the Review button.

For normal rewinding, press the Stop/Eject button to release the PLAY button and then press the Review/Rewind button. Push the Stop/Eject button again to release the Review/Rewind button.

NOTE:

When the end of the tape is reached while in the REWIND or Fast Forward operation, your recorder will shut off automatically.

MAINTENANCE

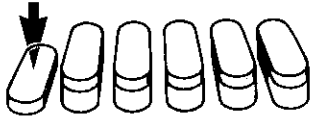
1. Cleaning of the heads, the pinch roller and the capstan.

To assure continued high performance from your recorder, periodically clean the heads, the pinch roller and the capstan whenever an accumulation of dust and red-brown oxide particles are noticed.

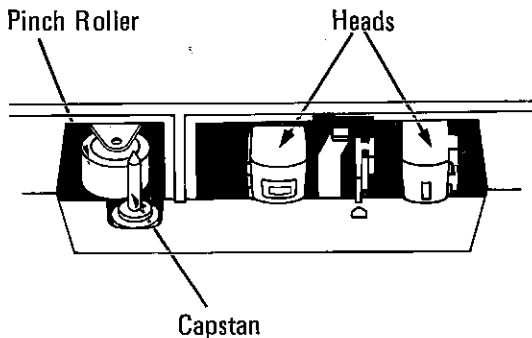
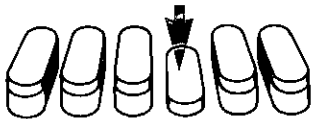
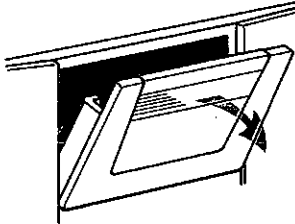
These particles may be cleaned with a cotton swab moistened in isopropyl alcohol or special head-cleaning fluid.

To do this properly, depress the Stop/Eject button to open the cassette compartment. Depress the PLAY button, causing the heads to project from its housing. Carefully rub the face of the heads and also the surface of the capstan and the pinch roller.

STOP
EJECT



PLAY



2. Cleaning of other parts.

Use a clean soft cloth, moistened with plain lukewarm water. Never use benzol, benzine, alcohol or other strong chemical cleaners since these could damage to the finish of your unit. It is important that no liquid reached the inside of the unit.

SPECIFICATIONS

Recording System:	AC bias.
Erasing System:	AC erasing.
Tape Speed:	1-7/8 ips.
Rewind & F-Forward Time:	95 sec. (C-60).
Wow & Flutter:	0.24% rms.
Frequency Response:	
60 - 10,000Hz:	(Normal Tape)
60 - 12,000Hz:	(CrO ₂ or FeCr Tape)
Signal to Noise Ratio:	45 dB.
Tuning Range:	
MW:	525 - 1605kHz.
SW1:	2.3 - 7.3MHz.
SW2:	7.3 - 23.0MHz.
FM:	88 - 108MHz.
Output Power:	3,000mW x 2 (Max.)
Power Source:	
AC:	240V.
DC:	9 volts with 6 "D" size cells.
Loudspeakers:	
Woofers:	12cm x 2,4 ohms.
Tweeters:	5 cm x 2,4 ohms.
Terminal Impedance:	
Inputs:	MIC: 2.2 kohm. DIN: 12 kohm. PHONO: 47 kohm.
Outputs:	Ext. Speaker: 4 ohms. DIN: 5.6 kohm. Headphone: 4 ohm.
Semiconductors:	
IC:	6.
Transistor:	17.
Diode:	24.
Dimensions:	448 x 270 x 115mm approx.
Weight:	5.2 kg. approx.

Specifications subject to change without notice.

SANYO ELECTRIC CO., LTD.
Osaka, Japan.

Model M4500KAUS (REV. 0) Printed in Japan.