

STEREO RADIO CASSETTE RECORDER

GF-9191E

OPERATION MANUAL

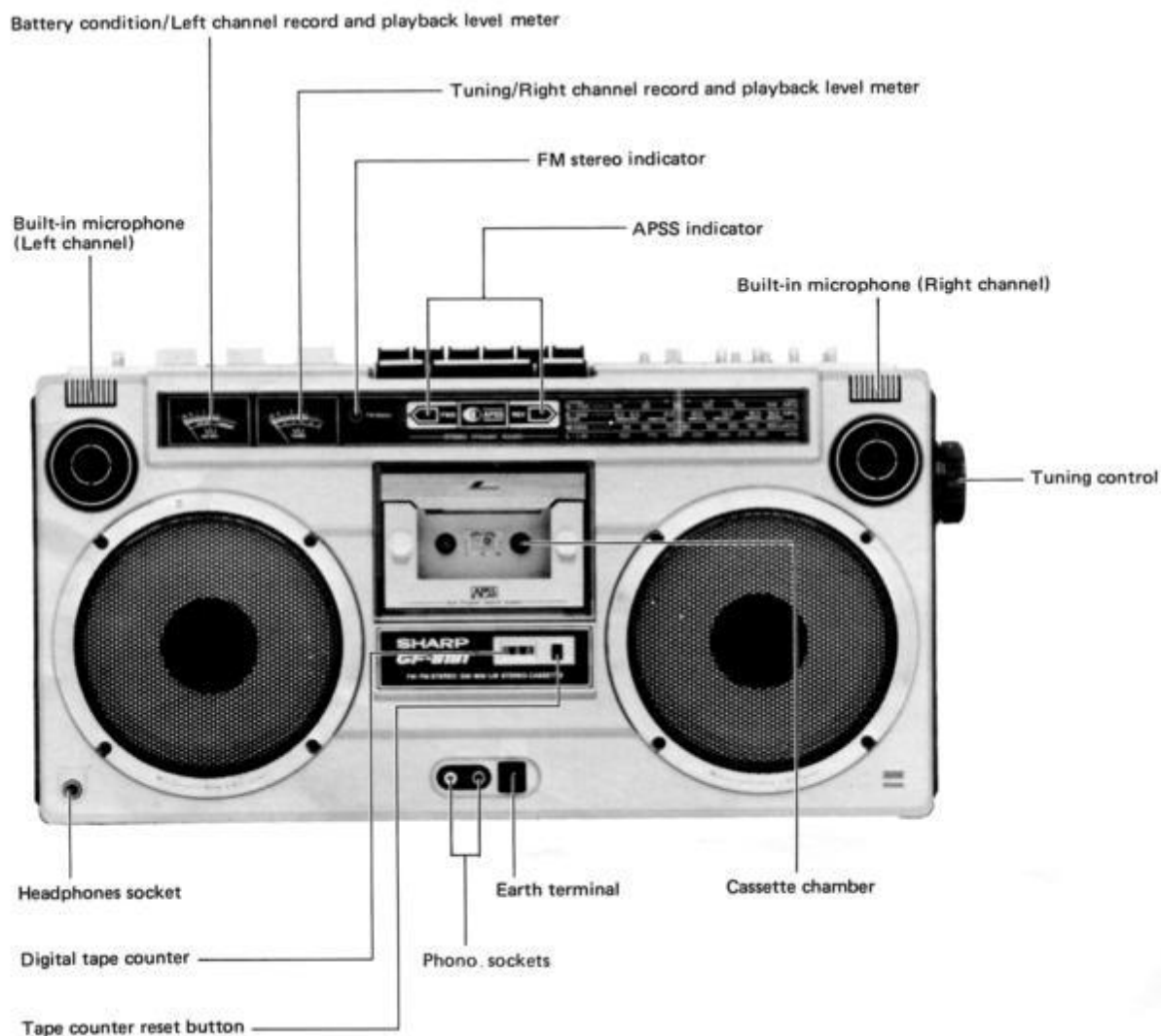
The
Searcher



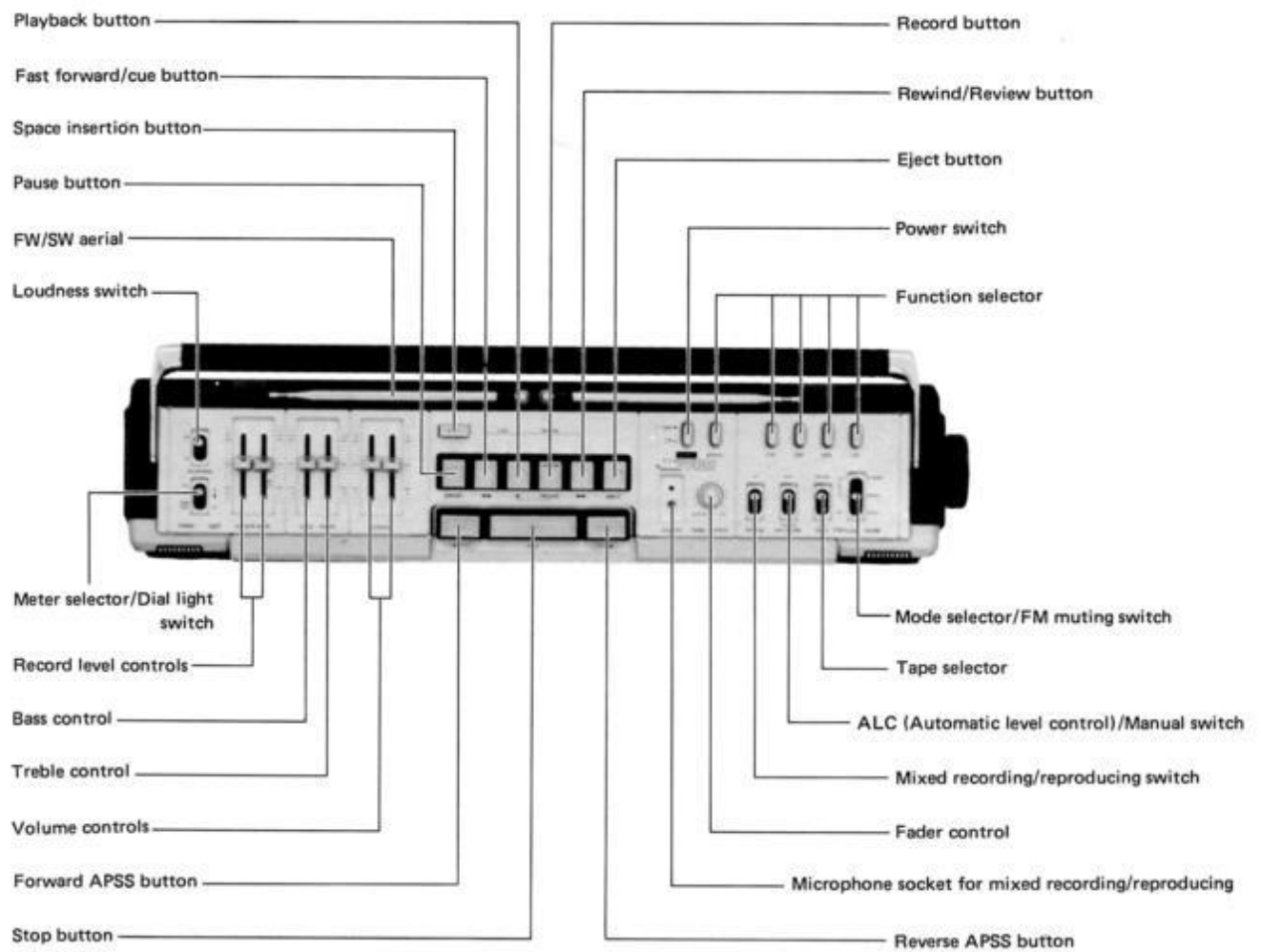
APSS
Auto Program Search System

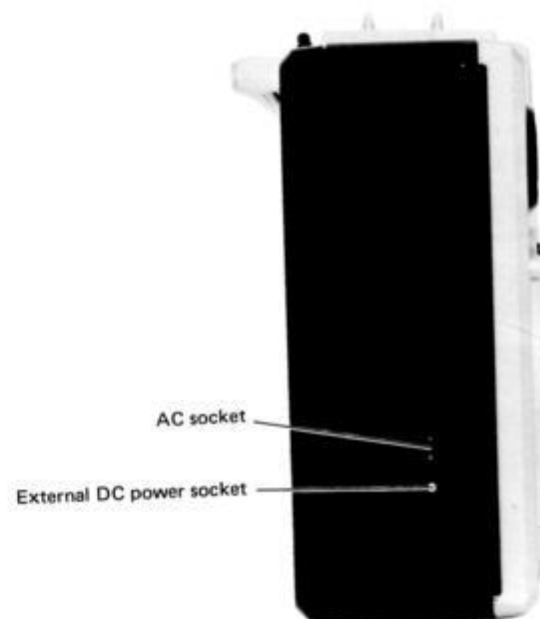
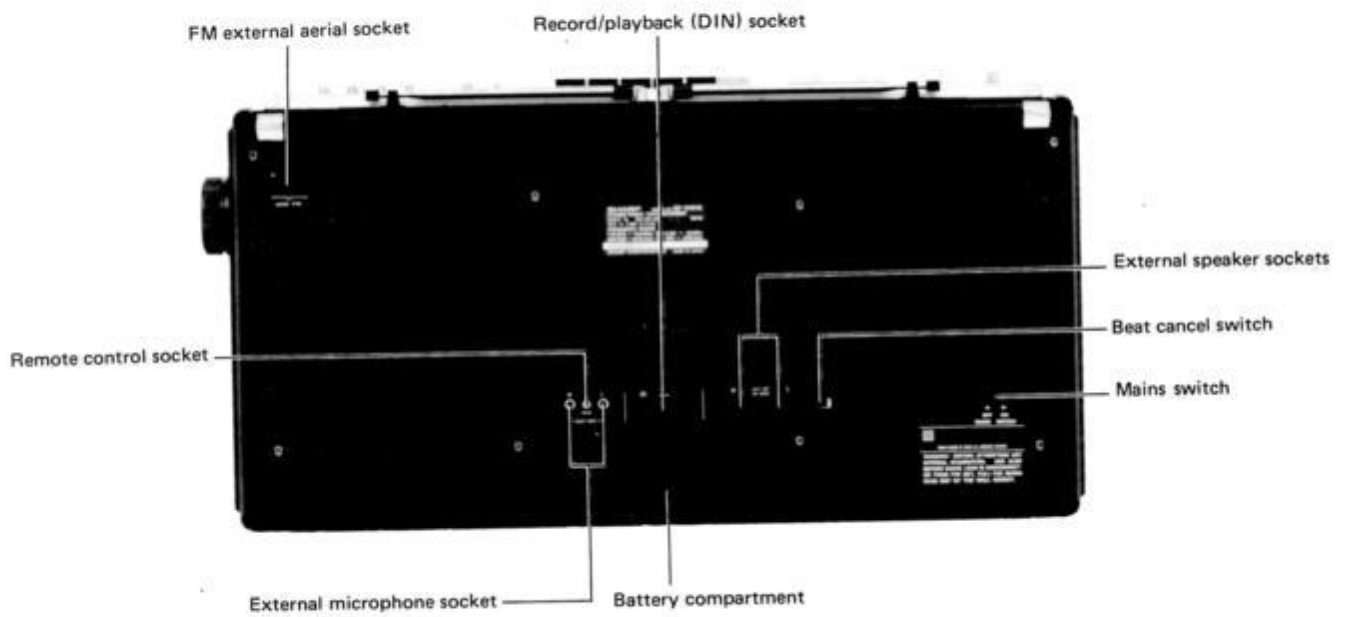
SHARP

NAMES OF PARTS



For use on AC mains, the switch at the rear of the unit must be used.
When not in use, the mains switch should be always to "OFF".





SUPPLY VOLTAGE

The unit is designed to operate from 240 volt 50 Hz mains or from internal batteries 10 x HP 2 or equivalent. It is also possible to operate the unit from an external 15 volt D.C. supply.

MAINS OPERATION

1. IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:-

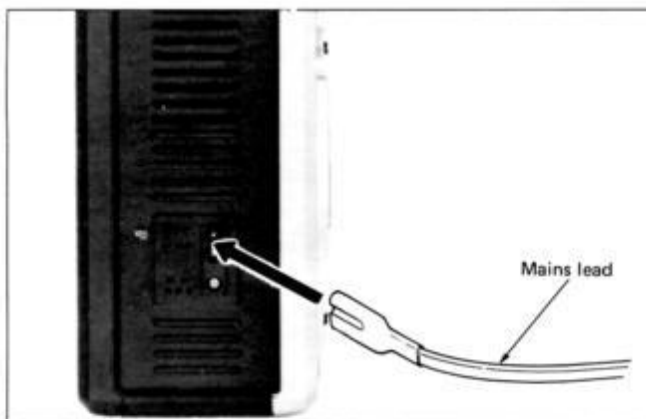
BLUE NEUTRAL
BROWN LIVE

You are advised to fit a 13 amp 3 pin fused plug containing a 3 amp fuse. As the colours of the wires may not correspond with marking identifying the terminals in the plug proceed as follows:- The wire which is coloured BLUE must be connected to the terminal marked with the letter N or coloured Black.

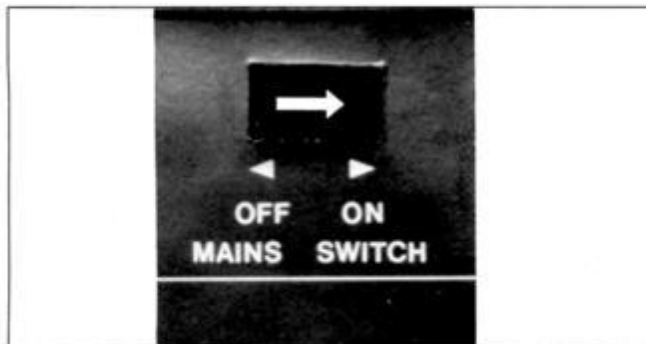
The wire which is coloured BROWN must be connected to the terminal marked with the letter L or coloured Red.

Ensure that the terminal screws have been properly tightened and clamp the flex securely with the cord grip.

2. Insert the connector at the other end of the lead into the socket at the side of the set and the plug you have just fitted into a convenient mains outlet. The set is now ready for use.



3. Switch the mains switch to "ON".



Notes:

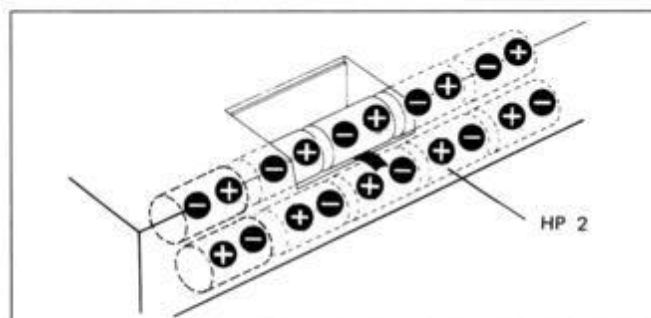
- 1) Inserting the mains connector into the side of the set automatically disconnects the batteries (see below).
- 2) To conserve batteries you are advised to use the mains supply whenever possible.

BATTERY OPERATION

1. Remove the mains lead connector from the side of the set.
2. Remove the battery compartment cover.



3. Insert 10 HP 2 batteries (or equivalent) into the compartment as shown.



4. Replace the battery compartment cover. The set is now ready for use.



Note:

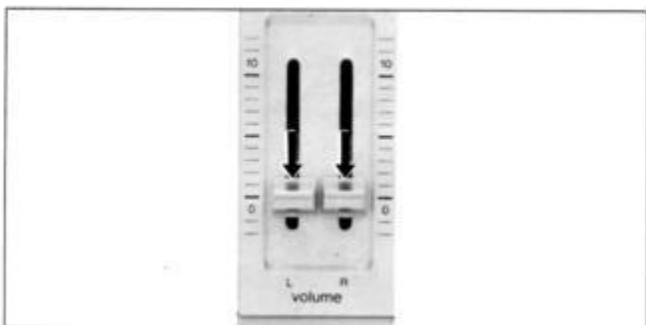
Remove the batteries when the unit will not be used for a long period, or when the batteries are exhausted. Otherwise the leaking liquid of the battery might damage the internal parts of set.

CHECKING BATTERY CONDITION

1. Set the power switch to "⊙/tape".



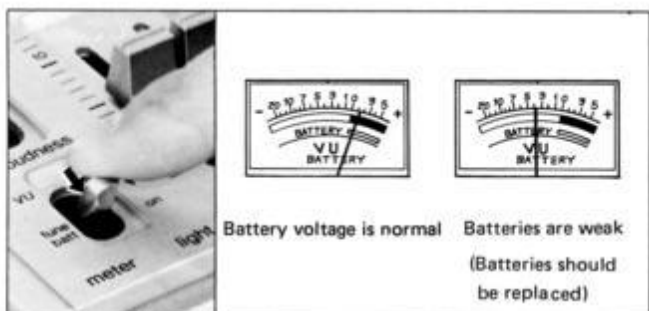
2. Adjust the volume control to "0".



3. Depress the play button (▶).



4. Check VU/BATTERY meter while pushing the meter switch to "tune/batt".



RADIO OPERATION

FM

1. Set the power switch to "ON".



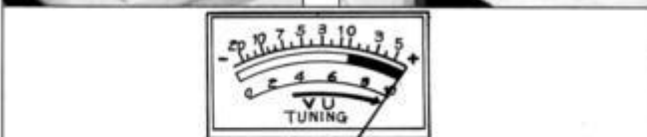
2. Push the function selector button "FM".



3. Extend the FM/SW rod aerial in its full length.



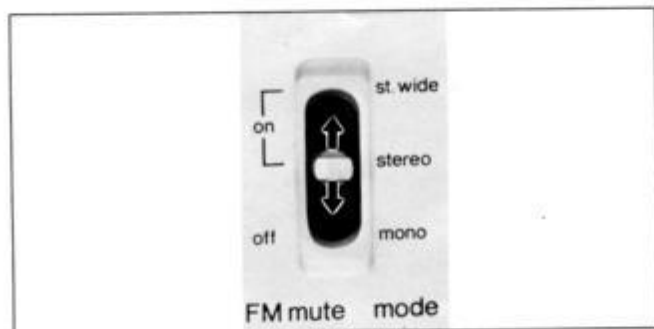
4. Whilst setting the meter switch to "tune/batt", tune to required station referring to the tuning indicator for greatest deflection. The dial light will illuminate the dial enabling you to tune easily in the darkness.



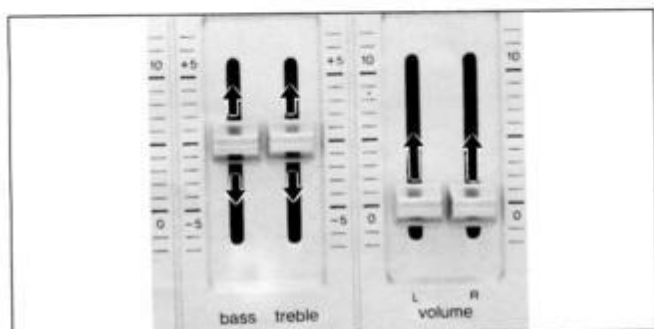
5. The FM/SW rod aerial is directional and improved reception can be achieved by rotating as shown.



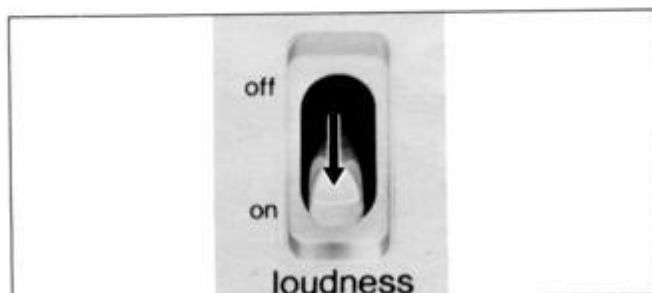
6. Set the FM mute/mode switch to "stereo" or "st wide" when tuned to a stereo FM transmission. (for explanation of the 3 positions refer to page 11). If receiving the weak broadcast of a distant station, set the mode switch to "mono". Otherwise, you may not be able to receive the station.



7. If the broadcast station is very far and signal is too weak, attach an outdoor FM aerial to the FM aerial socket. (See page 22).
8. Adjust the volume, bass and treble controls to your listening taste.



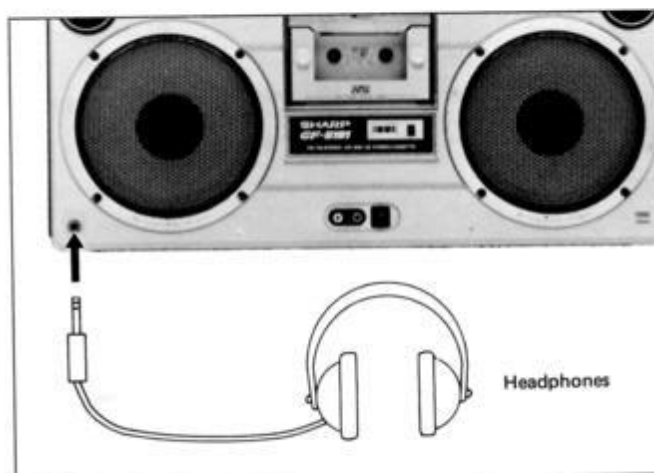
9. If listening to the sound while reducing its volume, set the loudness switch to "on" for compensation of bass and treble deficiencies.



10. To switch the radio off, set the power switch to "⏏/tape".



To listen in privacy you may use a pair of stereo headphones. The stereo headphones (4 ~ 8 ohms) fitted with a standard stereo jack plug can be plugged into the headphone socket.



If you wish to playback through an external audio system or alternative loudspeakers refer to page 13 and 18.

LW, MW or SW

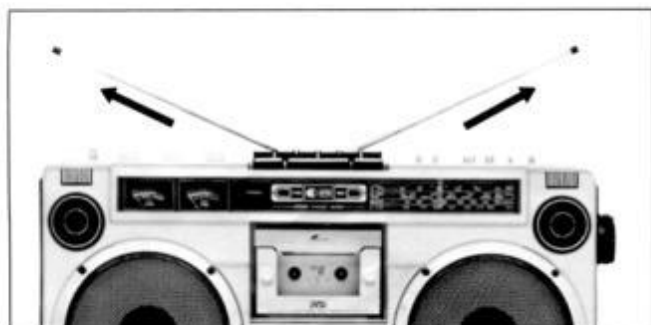
1. Set the power switch to "ON".



2. Select required wave band (LW, MW or SW).



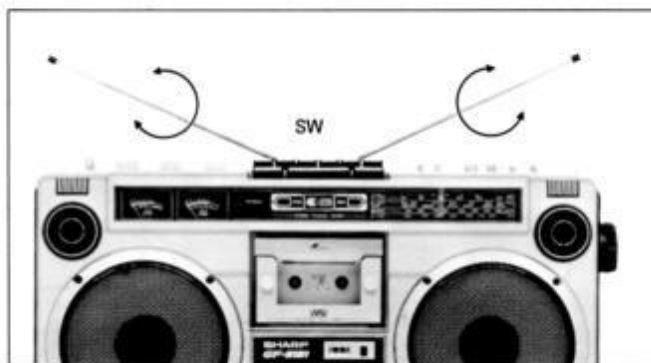
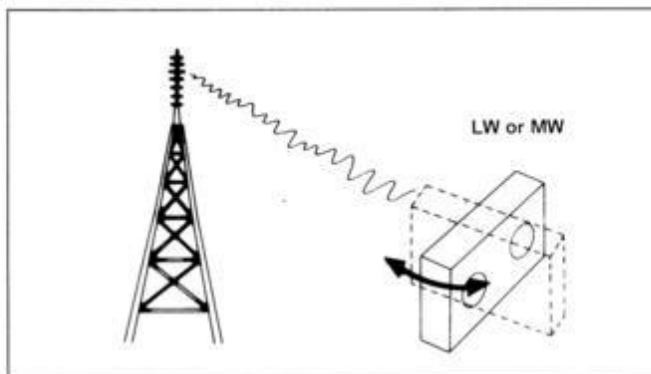
3. If receiving SW transmission, extend the FW/SW rod aerial.



4. Whilst setting the meter switch to tune/batt, tune to required station referring to the tuning indicator for greatest deflection.



5. The built in MW/LW aerial and the SW/FM rod aerial are directional and improved reception can be achieved by rotating as shown in the diagram.



6. For adjustment of volume and tone quality, see page 6.
7. To switch the radio off, set the power switch to "⏻/tape".



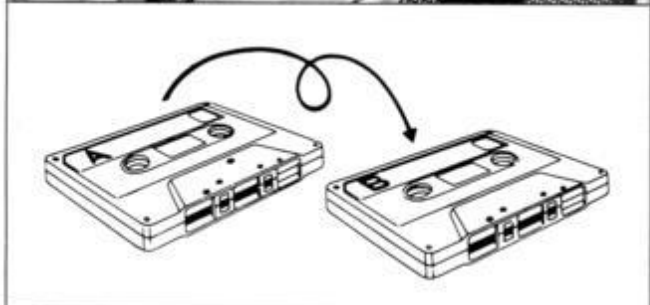
RECORDING FROM THE BUILT-IN RADIO

Tune in desired radio station following instructions on page 5/6/7.

1. Press the eject button.



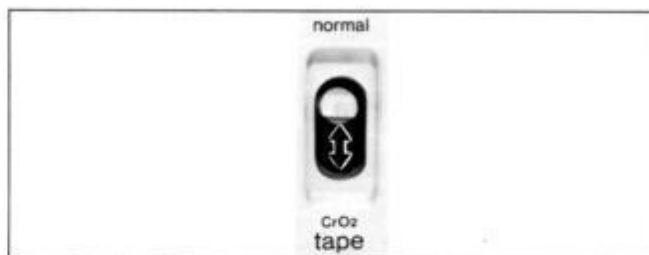
2. Load cassette into the cassette compartment with the side you wish to record facing the front and the exposed tape uppermost. The tape travels in the direction of the arrow on the cassette compartment lid, so if all the tape is wound onto the left hand spool it is necessary to either use the other side of the tape or to rewind. (see page 10).



3. Close the cassette compartment lid.



4. Set the tape selector consistent with type of tape to be used. (see page 21).



5. Depress the pause button.



6. Depress the record button, the play button (▶) also be automatically depressed. (The record button cannot be depressed if an erase proof cassette is used (see page 22).



Note:

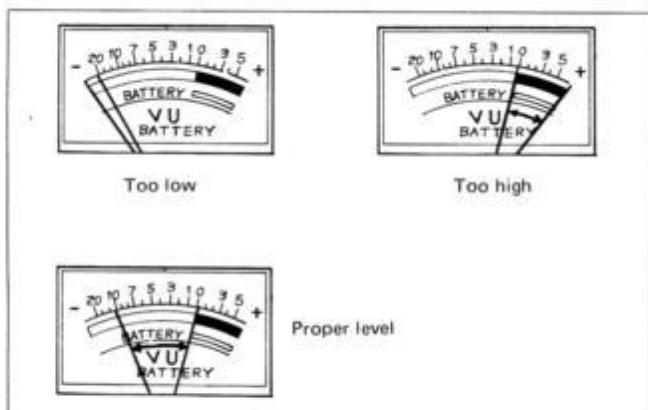
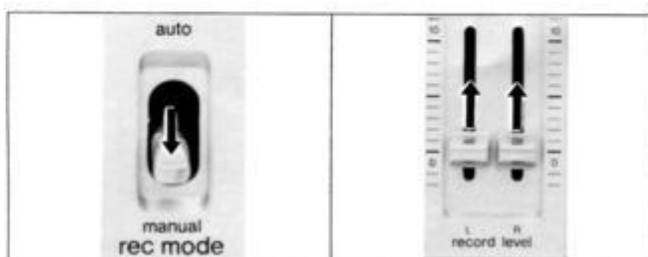
On LW AND MW it may be necessary to change the position of BEAT CANCEL switch if there is a "whistle" when recording.



7. If recording conversations, set the rec mode switch to "auto". It is not necessary to adjust the record level as this is done automatically by the A.L.C. (Automatic Level Control). The meter will show the record level.



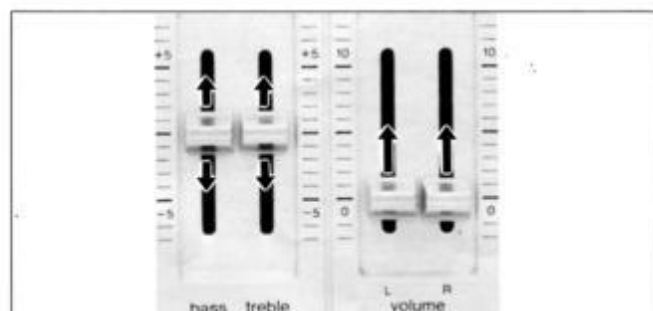
8. If recording musical sounds, set the rec mode switch to "manual", and adjust the record level controls so that the pointers of record level meters (VU) should just touch "0" point on the loudest sound.



9. Disengage the pause button by depressing it once again. The unit will start recording.



10. The volume, bass and treble controls can be adjusted without affecting the recording.



11. To temporarily stop, push the pause button. Press the button again to restart.



12. When you have finished recording, press the stop button.



13. If the end of the tape is reached the AUTO STOP will operate.



REWINDING AND FAST FORWARD WINDING

To play back the recordings you have made it is first necessary to rewind the tape:-

1. Press the rewind button (⏮).



2. When the beginning of the tape is reached the AUTO STOP will operate.



3. To stop the tape before the beginning of the tape: press the stop button.



Note:

If the batteries are low the auto stop may not function on REWIND and FAST FORWARD.

4. To wind the tape in the forward direction press the fast forward button (⏭).



5. The AUTO STOP will operate at the end of the tape.



6. To stop the tape before the end of the tape is reached press the stop button.



PLAYING BACK

1. Set the power switch to "⏻/tape".



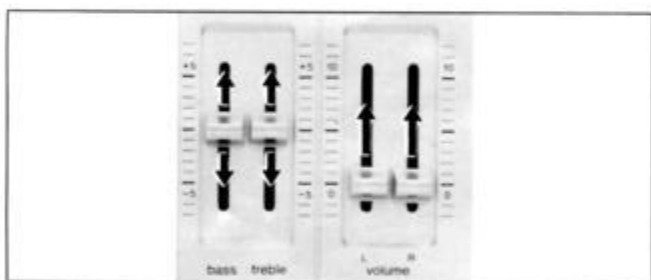
2. Set the tape selector consistent with type of tape to be used. (see page 21).



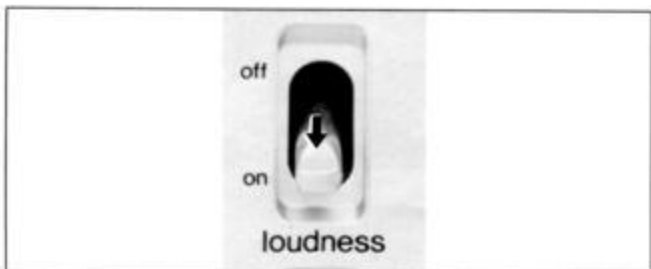
3. Press the play button (▶).



4. Adjust the volume, bass and treble.



5. If listening to the sound while reducing its volume, set the loudness switch to "on" for compensation of bass and treble deficiencies.



6. Set the mode switch to "mono", "stereo" or "st. wide" according to your taste. Ordinarily it is preferred to set the switch to "stereo".

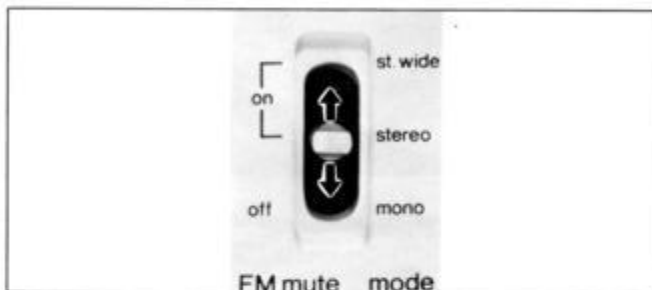
mono: Stereophonic signal is changed to monophonic, one and sound will come from the center position between right and left loudspeakers.

stereo: Normal stereophonic operation.

st. wide: Stereophonic signal is widened by the matrix circuit in the set (wide stereo range).

Note:

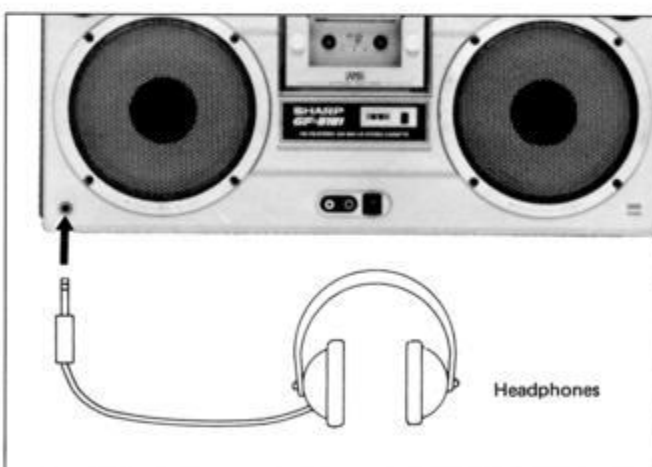
Monophonic signal is not widened even if the switch is set to "st. wide".



7. To temporarily stop, push the pause button. Press the button again to restart.



To listen in privacy you may use a pair of stereo headphones.



REVIEW AND CUE

Play-back cont'

8. When you have finished listening press the stop button.



9. The AUTO STOP will operate if the end of the tape is reached.



10. Press EJECT button to remove cassette.



Warning:

When used on mains, the electricity supply is still connected even when the auto-stop has operated. Do not leave the unit for long periods without switching off at the supply, and REMOVE THE PLUG FROM THE WALL SOCKET BEFORE disconnecting the mains lead from the side of the set.

1. To wind the tape in the forward direction for a shorter time, press the fast forward button (⏮) with the play button (▶) engaged.



2. The unit will return to PLAY BACK mode when the fast forward button is released.



3. To rewind the tape for a shorter time, press the rewind button (⏭) with the play button (▶) engaged.



4. The unit will return to PLAY BACK mode when the rewind button is released.



RECORDING FROM BUILT-IN MICROPHONE

1. Set the power switch to "⓪/tape".

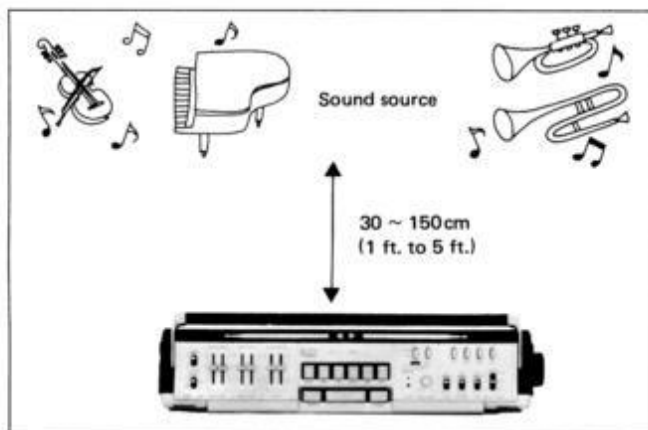


2. Follow procedure detailed in RECORDING FROM BUILT-IN RADIO (page 8).

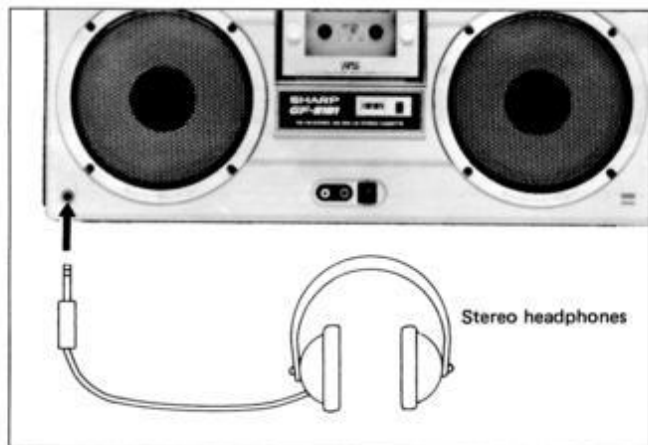
Note:

When recording with built-in microphones, should be nothing connected to EXT. MIC socket and RECORD/PLAYBACK socket.

3. For best recordings, the sound source should be 30 ~ 150cm (1 ft. ~ 5 ft.) from the unit. Satisfactory results, however, can be obtained at greater distances.



4. To monitor your microphone recordings it is necessary to use stereo headphones, the volume of which can be set using the volume control without affecting the recording.



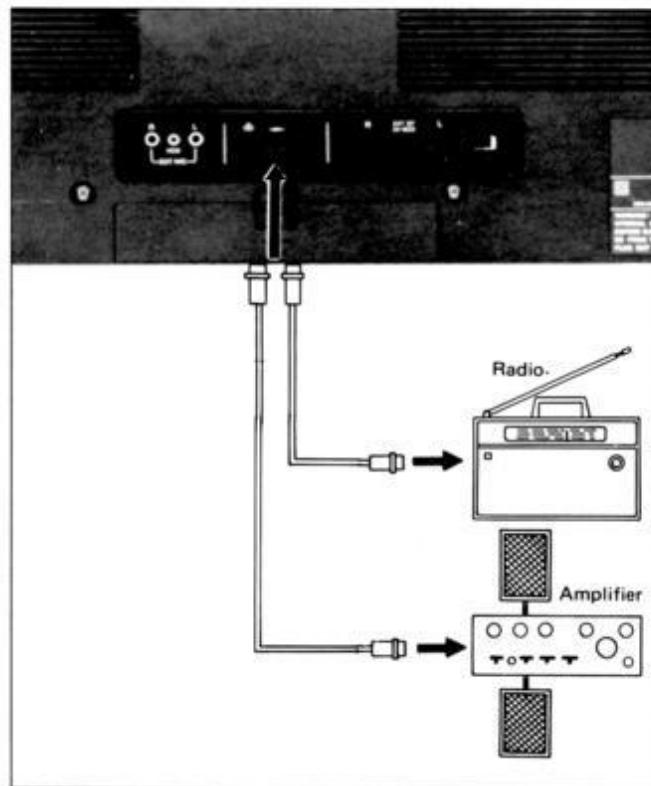
CONNECTION TO OTHER AUDIO SYSTEMS

If you wish to connect the GF-9191E to another audio system use a standard lead fitted with two 5-pin 180° DIN plugs (available from your local dealer). This lead may be used both for recording from, and playing through the audio system.

1. Plug one end of the lead into the RECORD/PLAYBACK socket (⓪=⓪) and the other end in the DIN type socket on the audio system.

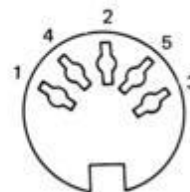
Note:

Do not attempt to connect the GF-9191E to a television set without first consulting a qualified engineer.



2. The connections to the RECORD/PLAYBACK socket are shown below. If your audio system does not have a DIN socket your local dealer may be able to supply you with a suitable alternative lead.

- | | | |
|---|-------|--------------|
| 1 | | Left input |
| 2 | | Common Earth |
| 3 | | Left output |
| 4 | | Right input |
| 5 | | Right output |



ERASURE OF RECORDED TAPES

Previous recordings are automatically erased when a new recording is made. It is possible, however, to erase the tape without making a further recording.

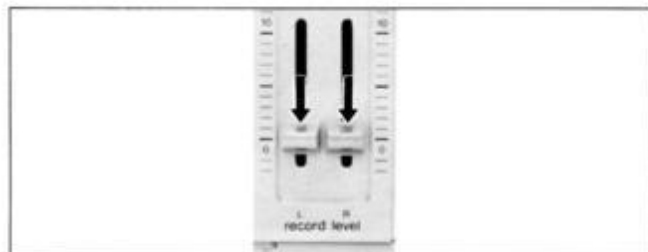
1. Set the power switch to "⏻/tape".



2. Set the rec mode switch to "manual".



3. Adjust the record level control to "0".



4. Depress the RECROD button.



5. The automatic stop will operate at the end of the tape.



EDIT SWITCH

During recording, the EDIT switch, if pushed, can cut out the input signal while keeping the unit in record mode.





Auto Program Search System

Introduction

One of the drawbacks of most cassette systems when compared with discs is the constant "trial and error" forward and reverse winding necessary to find the beginning of a recording made in the middle of a tape.

Using APSS, the GF-9191E "searches" for gaps in the recorded material and automatically starts playing at the beginning of the recording following the gap.

Using the APSS

FWD APSS — To find the next piece of music etc. (see page 16)

REV APSS — To find the beginning of the piece of music etc. to which you are listening. (see page 17)

Preparation of tapes for APSS

For APSS to work normally it is necessary to have at least a 3 second music space (gap) between each piece of music etc. Most commercially available popular pre-recorded cassettes will already be suitable.

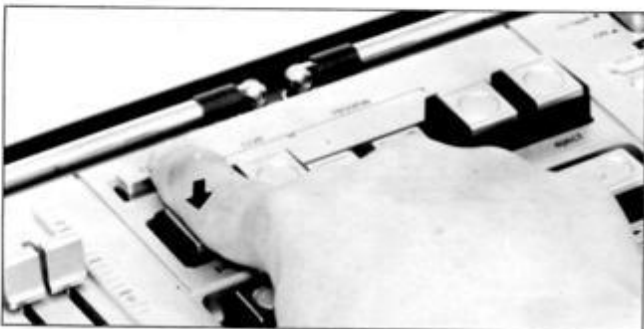
To make your own music space, proceed as follows.

1. At the end of the program quickly depress the "EDIT" switch for 4 seconds.

The tape will travel while the "space" is recorded.



2. After the APSS spacing, depress the pause button.



Note:

The APSS will not operate normally using the following:-

- a) Tapes with intermittent sound (eg. conversation, lectures etc.)
- b) Tapes which contain pianissimo classical music, solo performance modern jazz etc.
- c) Tapes with low recording level (less than -20VU) throughout.
- d) Tapes with less than 3 second gap between recordings.
- e) Tapes with excessive hum or noise in the gaps between the recordings.

In these circumstances the APSS may either miss the required gap or start playing in the middle of a recording.

3. After depressing the pause button, release EDIT button. A music space has been prepared. Wait your next recording.



4. Just before starting the next desired program, disengage the pause button by depressing it once again.



Repeat the procedure through the entire recording.

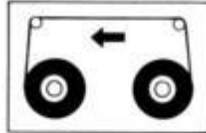
Note:

When taping from discs it is usually not necessary to use the "EDIT button". The normal spacing between selection on the discs is sufficient for APSS operation.

**FWD
APSS**

To Automatically find the piece of music etc. following the one to which you are already listening.

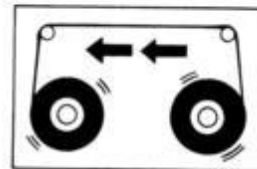
1. The play button (▶) is already depressed.



2. Depress the Forward APSS button (◀ APSS). The APSS sign will light up.



3. The tape will rapidly forward-wind whilst the GF-9191E "searches" for the next gap.



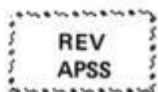
4. When the "gap" is reached the GF-9191E automatically returns to the PLAYBACK mode.



Note:

If you wish the GF-9191E to stop at the beginning of the next recording: Depress the pause button before following the above instructions. To start playing again, release pause button.





To automatically find the beginning of the piece of music etc. to which you are already listening.

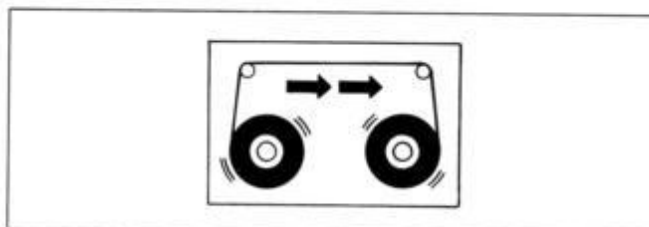
1. The play button (▶) is already depressed.



2. Depress the Reverse APSS button (APSS ▶). The APSS sign will light up.



3. The tape will rapidly rewind whilst the GF-9191E "searches" for the gap at the beginning of the pieces of music etc.



4. When the "gap" is reached the GF-9191E automatically returns to the PLAYBACK mode.



Note:

If you wish the GF-9191E to stop at the beginning of the piece of music etc.: Depress the pause before following the above instructions. To restart release the pause button.

IF YOU HAVE DIFFICULTY WITH EITHER FWD or REV APSS:
Read Page 15.



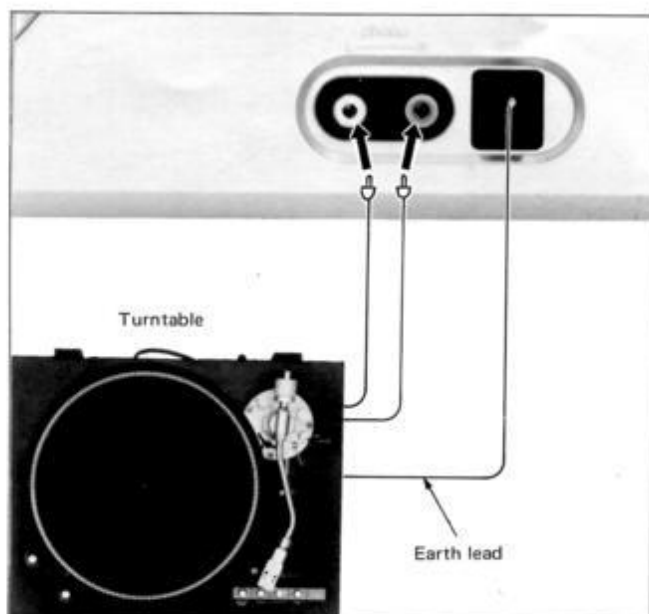
DISC PLAYING

1. Connect output cables of a turntable which provide with magnetic cartridge to the phono socket of this recorder.

Note: Never connect a turntable which provides with ceramic or crystal cartridge to phono sockets of this recorder.

If the turntable provides with Earth lead (or Earth terminal), connect it to GND terminal of this recorder.

While pressing Earth terminal, insert lead into the terminal. Release your finger from the terminal.



2. Set the power switch to "on".



3. Depress the function selector button "phono".



4. Adjust the turntable to play a disc.
5. For adjustment of volume and tone quality, see page 6.
6. To from the disc, take the same procedures in the paragraph RECORDING FROM THE BUILT-IN RADIO on page 8.

TAPE COUNTER

If the tape counter is set to 000 at the beginning of each cassette, (by pressing the reset button), the number shown at the beginning of each recording can be noted to provide a convenient tape index.

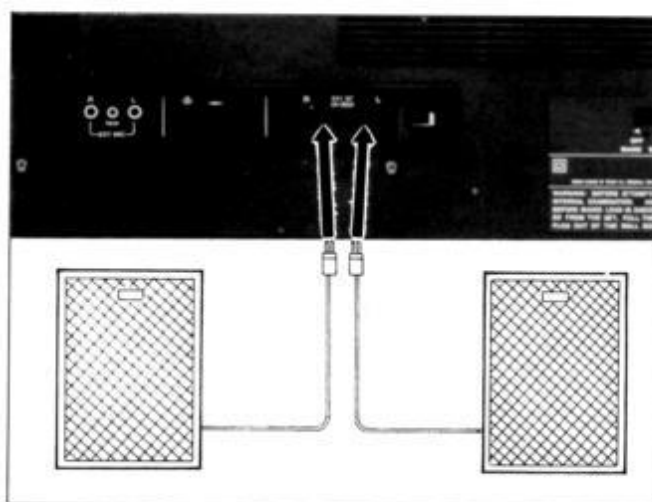


TO USE EXTERNAL LOUDSPEAKERS

If it is desired to use the GF-9191E with external loudspeakers, the speaker leads must be terminated with DIN type plugs and the loudspeakers themselves should have a nominal impedance of 4 to 8 ohms.

To ensure that the loudspeakers are correctly phased, (if the leads are not already fitted with the correct plugs), ask your local dealer to fit the plugs for you.

Whilst using external loudspeakers the internal loudspeakers are automatically disconnected.

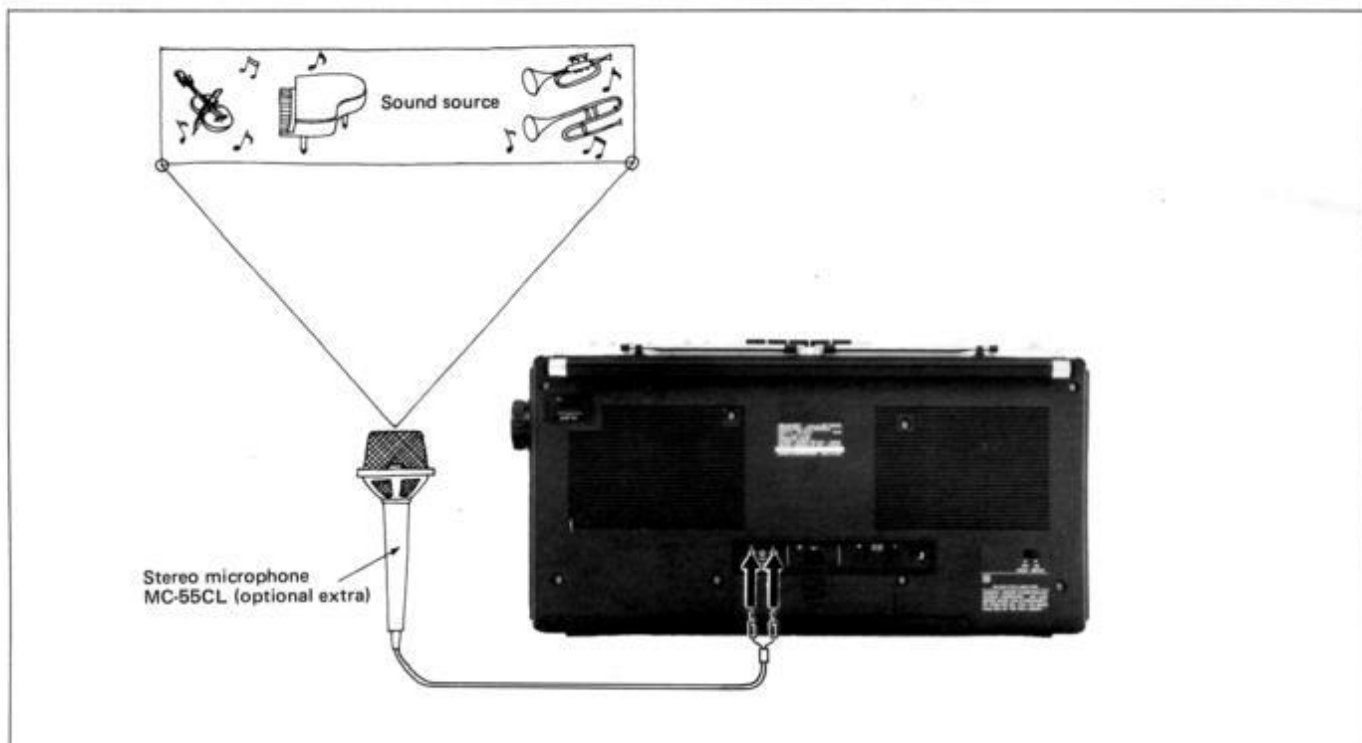


RECORDING USING EXTERNAL MICROPHONE(S)

1. Connect a pair of microphones to the microphone sockets or alternatively the stereo microphone MC-55CL (not supplied).
2. Proceed as described in RECORDING FROM BUILT-IN MICROPHONES (Page 13).

Note:

If your microphone(s) is fitted with a remote stop/start switch, the small jack is inserted into the REMOTE CONTROL SOCKET adjacent microphone socket.



"STRAIGHT THROUGH" AMPLIFICATION

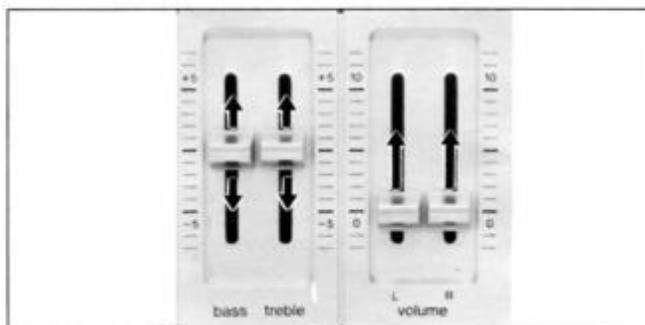
The GF-9191E may be used as a microphone amplifier in a small room.

1. Connect microphone(s) as instructed in the figure above.
2. Place cassette in cassette compartment.
3. Press the pause button.

5. Connect an external loudspeakers. (see page 18)
6. Adjust the volume, bass and treble controls.



4. Press the record button.



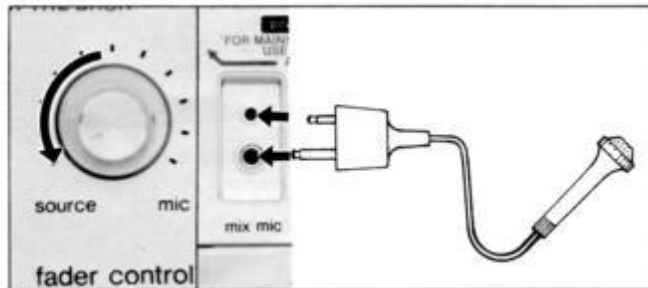
MIXED RECORDING AND MIXED REPRODUCING

Using a mixing microphone (impedance: 400 ohms ~ 3K ohms) enables GF-9191E to do mixed recording or mixed reproducing with built-in microphones, built-in radio, built-in recorder, or a turntable and other external audio systems connected to the DIN socket.

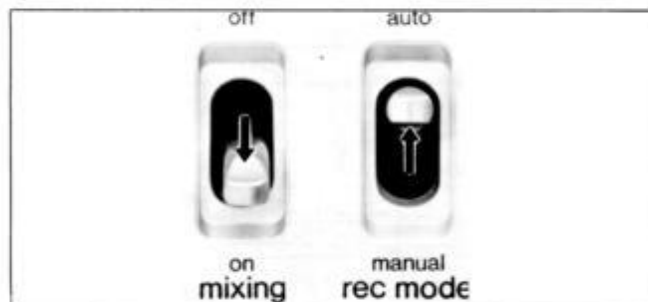
Note: Recorded or reproduced sound with this mixing is monophonic.

Preparation

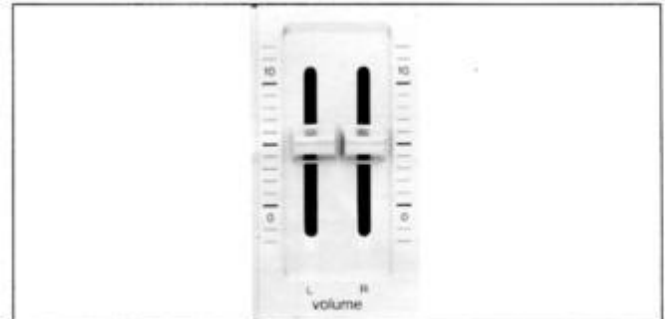
1. Adjust the fader control to "source" and connect a mixing microphone to mix mic socket.



2. Switch the mixing switch to "on".
3. Switch the rec mode switch to "auto".



4. Adjust the volume controls to the position center of "10" and "0".



Source unit to be mixed with the mixing microphone	Mixed reproducing	Mixed recording	Operation				Monitoring
			Depress the play button (◀)	Depress the record button	Fader control		
					If it is set to the “source”	If it is set to the “mic”	
Built-in radio	Allowed	Allowed	No	Push the record button at the time of mixed recording.	Sound coming from the built-in radio is increased.	Sound coming from the mixing microphone is increased.	Built-in speakers, headphones or external speaker.
Built-in recorder	Allowed	Not allowed	Yes	No	Sound coming from the built-in recorder is increased.		Built-in speakers, headphones or external speaker.
Turntable	Allowed	Allowed	No	Push the record button at the time of mixed recording.	Sound coming from the turntable is increased.		Built-in speakers, headphones or external speaker.
External audio systems connected to the RECORD/ PLAYBACK DIN socket	Not allowed	Allowed	No	Yes	Sound coming from external audio systems connected to the RECORD/PLAYBACK DIN socket is increased.		Headphones or external speaker.
Built-in microphones	Not allowed	Allowed	No	Yes	Sound coming from the built-in microphones is increased.		Headphones or external speaker.
External microphone	Not allowed	Allowed	No	Yes	Sound coming from the external microphone is increased.		Headphones or external speaker.

TAPE SELECTOR

TAPE SELECTOR

This unit has been factory-adjusted to the characteristics of SHARP cassette tapes.

When using commercially available cassette tapes with this unit, switch the tape selector according to the following table.



Brand	Type of tape	Position of the switch	
		Recording	Playback
SHARP	C-60P/C-90P	Normal	Normal
	C-60UD/C-90UD		
	C-60CR/C-90CR	CrO ₂	CrO ₂
MAXELL	LN C-60/C-90	Normal	Normal
	UD C-60/C-90		
	UDXL C-60/C-90		
	CR C-60/C-90	CrO ₂	CrO ₂
BASF	C-60LH/C-90LH	Normal	Normal
	C-60LH SUPER		
	C-90LH SUPER		
	C-60CR/C-90CR	CrO ₂	CrO ₂
	FERROCHROM C-60/C-90	Normal	CrO ₂
SCOTCH	C-60LH/C-90LH	Normal	Normal
	C-60HD		
	C-60LN		
	MASTER C-60		
	CLASSIC C-60/C-90	Normal	CrO ₂
AGFA	STD C-60/C-90	Normal	Normal
	C-60CR/C-90CR	CrO ₂	CrO ₂
	CRAFT C-60/C-90	Normal	CrO ₂
TDK	SD C-60/C-90	Normal	Normal
	SA C-60/C-90	CrO ₂	CrO ₂
SONY	C-60/C-90	Normal	Normal
	C-60HF/C-90HF		
	C-60 DUAD/C-90 DUAD	Normal	CrO ₂
	C-60CR/C-90CR	CrO ₂	CrO ₂
FUJI FILM	FL C-60/C-90	Normal	Normal
	FM C-60/C-90		
	FX C-60/C-90		
	FC C-60/C-90	CrO ₂	CrO ₂
MEMOREX	STD C-60/C-90	Normal	Normal
	CR C-60/C-90	CrO ₂	CrO ₂

IMPORTANT NOTES CONCERNING CASSETTE TAPES

- I. After a period of time, especially when inexpensive brands of tape are used, the sound on playback may become "muffled" or in extreme cases, almost inaudible.

This is most frequently NOT A FAULT OF THE MACHINE ITSELF but merely a deposit of oxide and other contamination on the tape head.

The easiest way to overcome the problem is by use of a proprietary brand of head-cleaning cassette. Follow the instructions provided with the cleaner carefully and DO NOT OVERUSE as this may cause undue wear. The tape head is a delicate precision component and serious damage will result if you attempt to scrape the contamination away with a sharp implement.

II. Other common causes of trouble are

- a) tapes jamming — leading to uneven speed on playback, and
- b) tapes tangling — where the tape wraps itself around vital parts of the mechanism.

To reduce the likelihood of these problems occurring you must observe the following precautions:

1. Check that there are no loose layers of tape visible through the cassette centre window (see fig. 1). "Take-up" these loose layers using a pencil or ballpoint pen before inserting the cassette into the machine (see fig. 2).

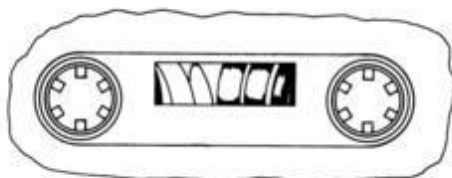


Fig. 1

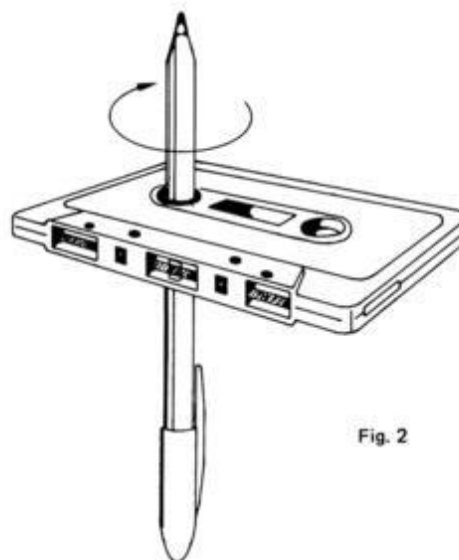
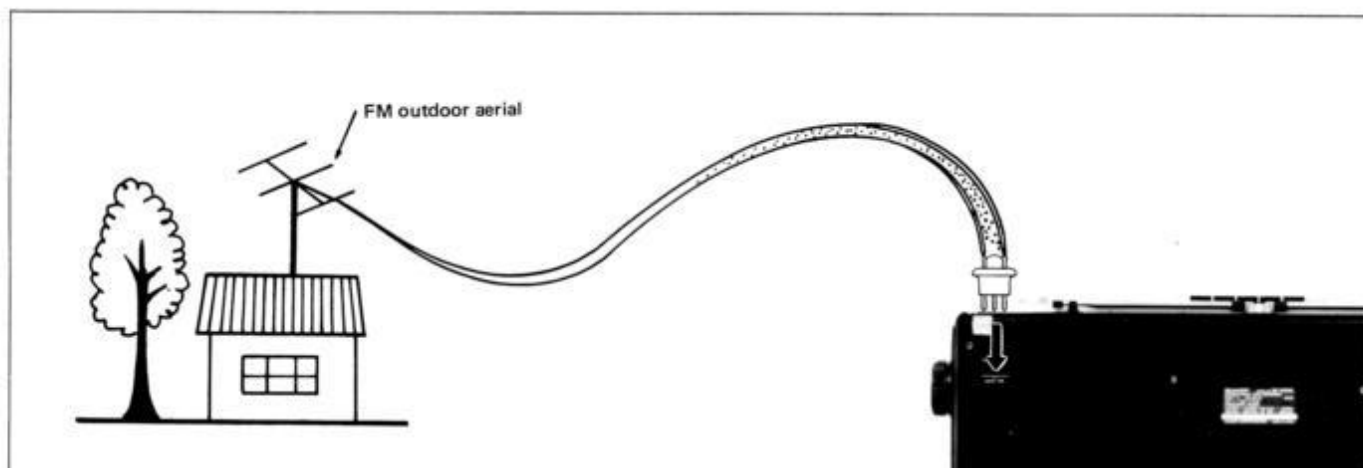


Fig. 2

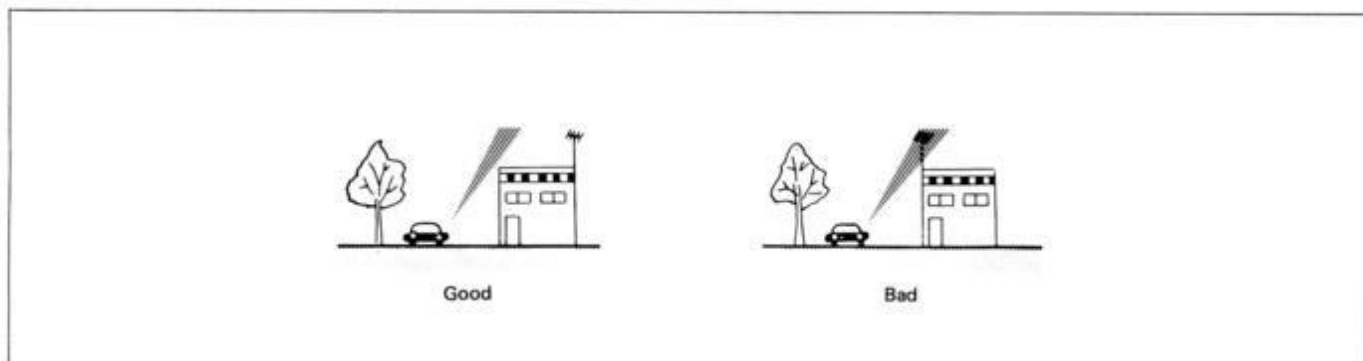
2. If the cassette feels "tight" whilst performing the operation shown in fig. 2 the tape may be jamming due to "ridges" in the winding of the tape (visible through the centre window). These may be removed in most cases by fast winding of the cassette from one end to the other and back again.
3. Use only well-known brands of tape.
4. Use of C120 cassettes is not generally recommended.

CONNECTION OF EXTERNAL FM AERIAL

If a FM station is distant and signal weak, connect an outdoor FM aerial to FM external aerial socket of the recorder.

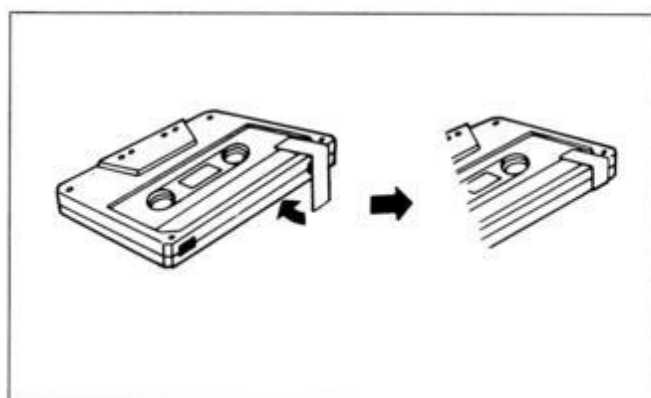
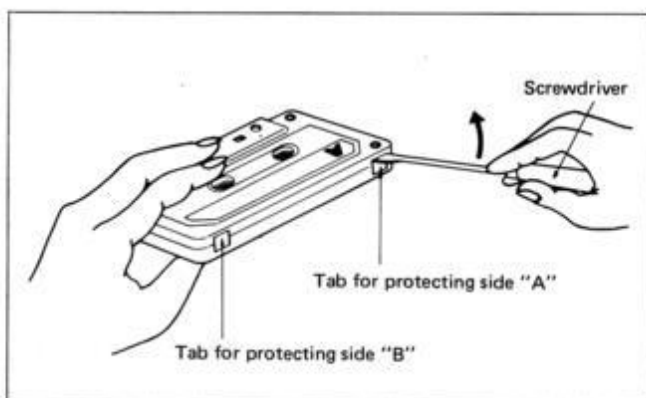


When setting an outdoor FM aerial, avoid areas nearest to auto traffic. Otherwise noise can be mixed with the broadcasted signal.



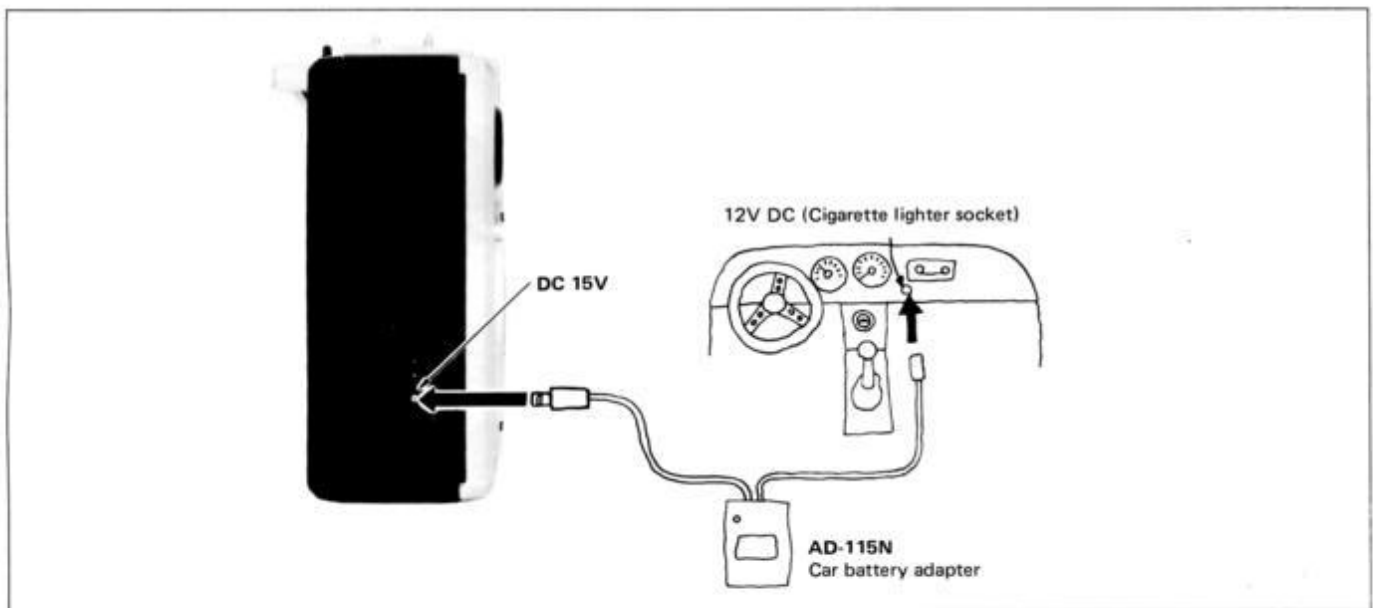
ERASE PROTECTION OF RECORDED TAPE

To protect a cassette from being accidentally erased it was designed with two removable tabs. When the tabs are removed the record key is prevented from being engaged. It is possible to overcome the protection by placing a piece of cellophane tape over the openings where the tabs were removed.



OPERATION ON CAR BATTERY

This set can be operated on 12V car battery by using a car battery adaptor (Optional extra, AD-115N).

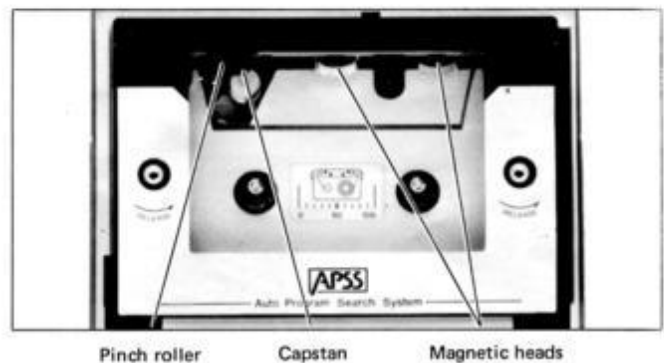


CLEANING THE MAGNETIC HEADS AND MECHANICAL PARTS

You are recommended to use a head cleaning tape once or twice a month. Refer lubrication and service to your local dealer.

Note:

Do not overuse the cleaning tape as this may cause excessive head wear. 5–10 seconds use on each occasion will usually be adequate.



CLEANING THE CABINET

Use only a damp cloth for cleaning the cabinet.

SPECIFICATIONS

Power source:	a.c. 240V, 50/60Hz d.c. 15V (Ten HP 2 batteries or external D.C. supply)
Speakers:	16cm (Woofer) x 2 5cm (Tweeter) x 2
Output power:	MPO 20W (10 W + 10 W; AC operation) RMS power 11 W (5.5 W + 5.5 W, DC operation, 10% distortion)
Semiconductors:	6-IC (Integrated circuit) 34-Transistor 27-Diode 3-LED
Dimensions:	
Width:	516mm
Depth:	115mm
Height:	271 mm
Weight:	6.5 kg (Without batteries)

TAPE RECORDER SECTION

Tape:	Philips type compact cassette tape
Frequency response:	40 ~ 15000Hz (CrO ₂ tape) 40 ~ 12000Hz (normal tape)
S/N ratio:	50dB
Wow & flutter:	0.25% (DIN45 511)
Input sensitivity and input impedance:	
Phono:	1 mV/50 k ohms
External microphone:	600 ohms
Mixing microphone:	600 ohms
Record/playback socket:	2.5 mV/10 k ohms
Output level and loaded impedance:	
Headphones:	4 to 8 ohms
External speaker:	4 to 8 ohms
Record/playback socket:	0.7 V, 50 k ohms

RADIO SECTION

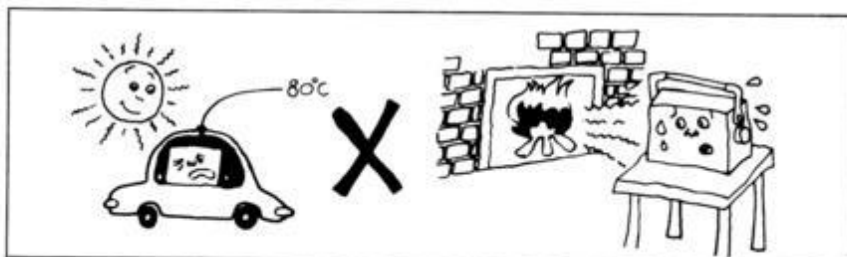
Frequency range:	FM 87.6 ~ 108MHz
	SW 5.95 ~ 18MHz
	MW 520 ~ 1620kHz
	LW 150 ~ 285kHz

The manufacturer reserves the right to vary specifications, design, or use alternative materials as may be deemed necessary or desirable at any time, any such change or variations being of a kind as not to reduce the quality, performance or appearance.

IMPORTANT NOTES

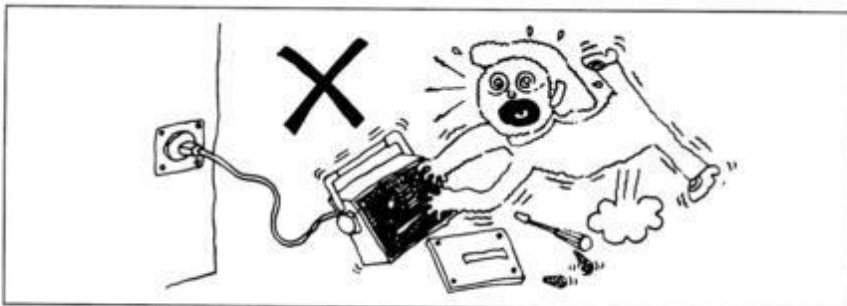
The cabinet of this set will be deformed, if it is subjected to heat of 60°C or more. The temperature in a car may sometimes reach as high as 80°C or more.

Do not put the set on a place exposed to the direct rays of the sun or near heating apparatus such as stove, radiator etc.

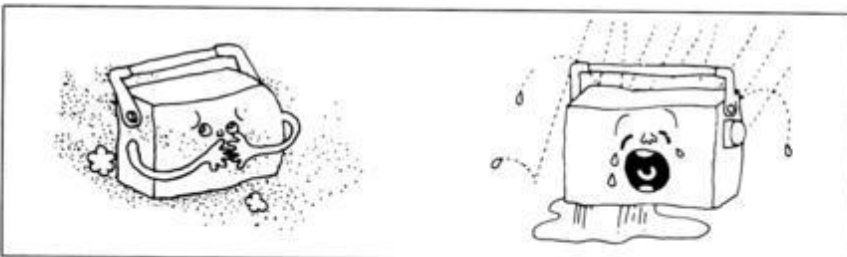


Warning:

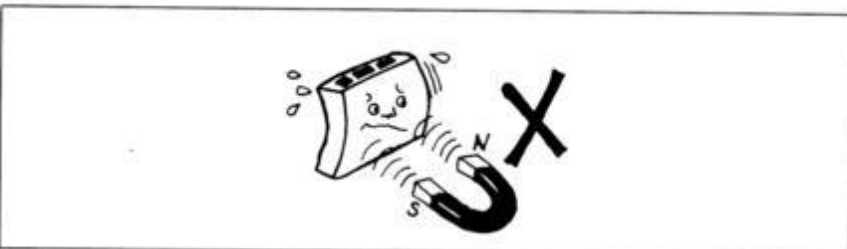
Remove the mains plug from the wall socket when the unit is not in use and before attempting any internal examination.



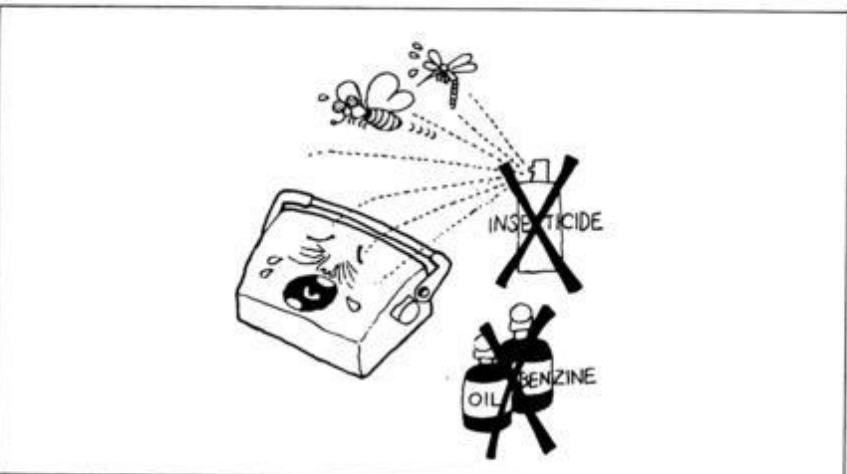
Do not subject to excessive dust or moisture.



Do not place the cassette near a magnetic field such as a radio, TV, etc. Magnetism may affect tape sensitivity and erase the recordings.



Since the cabinet and control panel will become corroded or cracked, if petroleum or benzol type organic solvent or oil is applied, caution must be taken when handling insecticide, benzine, thinner, gasoline, etc. near the unit.





SHARP CORPORATION

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