

DOUBLE CASSETTE STEREO TAPE RECORDER
MAGNETOPHONE A DOUBLE CASSETTE STEREO
GRABADORA ESTEREOFONICA DE "CASSETTE" DOBLE

雙卡式磁帶錄音機
트윈 카세트 스테레오 녹음기

OPERATION MANUAL
MODE D'EMPLOI
MANUAL DE MANEJO
使用説明書
사용설명서

GF-777Z



SHARP

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ENGLISH

FRANÇAIS

ESPAÑOL

中文

韓國語

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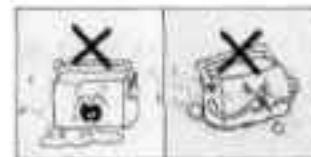
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CAUTIONS



1. Do not expose the unit to heat, 60°C (140°F), or above. For example do not place the unit near heaters, radiators, in direct sunlight, or even leave inside a motor vehicle on a sunny day — temperature can reach 80°C (176°F), or above. Heat will damage the cabinet. Also avoid leaving the unit in extremely cold places, 5°C (41°F), or below.



2. Do not expose the unit to moisture — rain, vapour, etc. — because the circuitry may be damaged.

3. Do not store the unit or Cassette Tapes in humid or dusty environments for any length of time.



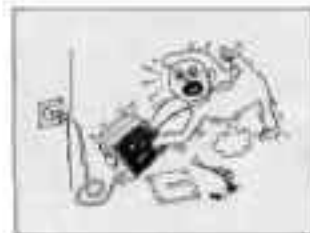
4. Do not apply any organic solvents — petroleum, benzine, thinners, etc. — or even insecticides — to the surfaces of the unit. Such materials can cause cracking or deterioration of the cabinet surface.



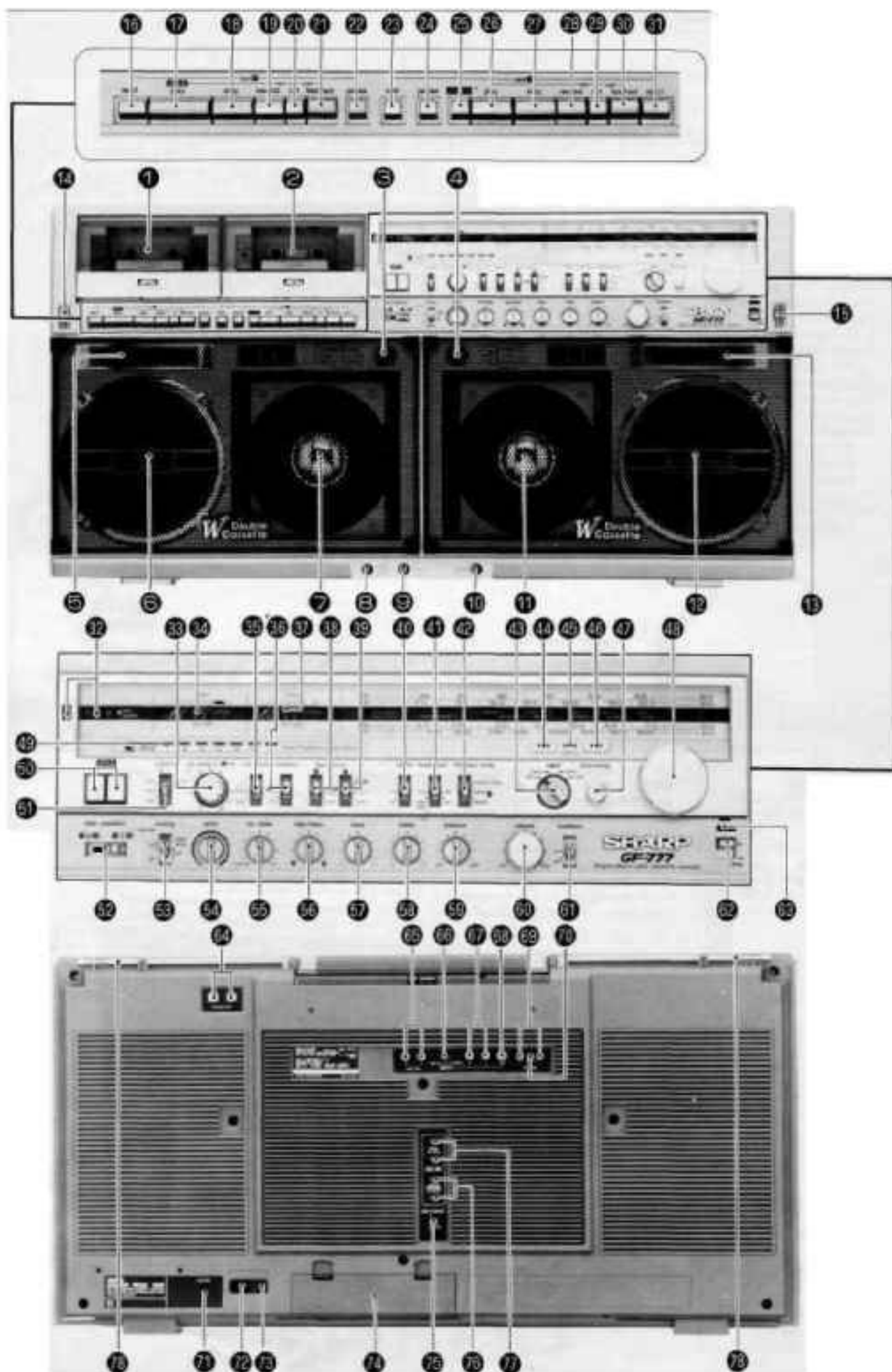
5. Do not oil any part of the unit.



6. Do not hold cords of plugs — AC supply plug and jack — when disconnecting. This will break the connections. Hold the plug body when disconnecting from the outlet.



7. Always disconnect AC Supply Cord Plug before servicing. Never remove cover unless qualified to repair this unit, because there is a danger from the high-voltage residual electric charge.



EXPLANATION OF CONTROLS

1 DECK 1: CASSETTE COMPARTMENT

Deck 1 plays tape but will not record. The playback of Deck 1 can be controlled with the APLD whereby particular programme items can be selected and played.

2 DECK 2: CASSETTE COMPARTMENT

The Cassette Compartment of Deck 2 will hold a Cassette Tape for playback or recording.

3 SUPER WOOFER SOUND CONTROL (LEFT and RIGHT CHANNELS)

This control is used to adjust the volume of the Super Woofer as well as the output of external speakers connected to the SUPER WOOFER sockets located at the reverse of the unit.

4 TWEETER (LEFT)

5 WOOFER (LEFT)

6 SUPER WOOFER (LEFT)

The SUPER WOOFER functions to reproduce sound at extra-low frequencies.

7 DECK 1: MONITORING SOCKET (TAPE 1 MONITOR)

Plug stereo headphones into the TAPE 1 MONITOR socket in order to listen to playback of Deck 1.

8 MIXING MICROPHONE SOCKET (MIX MIC)

Connect the plug of low impedance microphone in the MIX MIC Socket in order to record or to listen to the microphone input mixed Withinput from LINE INPUT Sockets (record player or other external equipment), or from the Unit's radio.

9 HEADPHONES SOCKET (PHONES)

Plug 8 ohm to 25 ohm impedance stereo headphones into the PHONES Socket in order to listen to audio output. The Unit's speakers are cut out when jack is connected.

10 SUPER WOOFER (RIGHT)

The SUPER WOOFER functions to reproduce sound at extra-low frequencies.

11 WOOFER (RIGHT)

12 TWEETER (RIGHT)

13 BUILT-IN MICROPHONE FOR LEFT CHANNEL RECORDING

14 BUILT-IN MICROPHONE FOR RIGHT CHANNEL RECORDING

15 DECK 1: CASSETTE EJECTION KEY (EJECT)

Depress the EJECT Key in order to open the Deck 1 Cassette Compartment for loading or unloading a cassette. The Cassette Compartment will not open if any function of Deck 1 is engaged.

16 DECK 1: PLAYBACK KEY (PLAY)

Depress the PLAY Key in order to start the playback of the tape on Deck 1. Recording is not possible on Deck 1.

17 DECK 1: STOP KEY (STOP)

Depress the STOP Key to stop the motion of tape on Deck 1. However the tape motion stops automatically at the end of play, fast forward or rewind, and all controls will disengage.

18 DECK 1: REWIND/REVIEW KEY (REWIND/REVIEW)

Depress the REWIND/REVIEW Key in order to rewind the tape of Deck 1. The REWIND/REVIEW and CUT Keys are depressed during playback in order to skip over programme items in the reverse direction. The key can also be depressed in order to locate a selected programme item during the rewinding (APLD).

19 DECK 1: CUT KEY

Deck 1: In order to discontinue APLD operation, press this button, and the deck will return to the playing mode. Depressing this key simultaneously with the FAST FWD key or REWIND key during playback will cause the deck to shift to the CUE (SKIP FORWARD) or REVIEW (SKIP REWIND) mode, respectively.

20 DECK 1: FAST FORWARD WIND/CUE (SKIP FORWARD) KEY (FAST FWD/CUE)

Depress the FAST FWD/CUE Key in order to wind the Deck 1 tape forward at high speed. The FAST FWD and CUT Keys are depressed at a time during playback in order to skip over programme items in the forward direction. The key can also be depressed in order to locate a selected programme item during forward winding.

21 DECK 1: PAUSE KEY (PAUSE)

Tape motion will stop when the PAUSE Key is depressed during playback or recording and resume from point of stopping when PAUSE Key is released, (depressed for the second time.)

22 DECK 2: EDITING KEY (EDIT)

Depress the EDIT Key in order to create a gap between programme items while recording on Deck 2. Editing of 5 second gap between programme items is required for APLD playback.

23 DECK 2: PAUSE KEY (PAUSE)

Tape motion will stop when the PAUSE Key is depressed during playback or recording and resume from point of stopping when PAUSE Key is released, (depressed for the second time.)

24 DECK 2: RECORD KEY (RECORD)

Depress the RECORD Key in order to engage recording function of Deck 2. PLAY Key automatically engages with depressing of RECORD Key. RECORD Key cannot be depressed when the PLAY Key is engaged.

25 DECK 2: PLAYBACK KEY (PLAY)

Depress the PLAY Key in order to engage the playback function of Deck 2.

26 DECK 2: STOP KEY (STOP)

Depress the STOP Key in order to stop the motion of the tape on Deck 2. However the motion of tape will stop automatically at the end of play, fast forward or rewind and all controls will disengage.

27 DECK 2: REWIND/REVIEW (SKIP REWIND) KEY (REWIND/REVIEW)

Depress the REWIND/REVIEW Key in order to rewind the tape of Deck 2. The REWIND/REVIEW and CUT Keys are depressed at a time in order to skip over programme items in the reverse direction.

28 DECK 2: CUT KEY

Depressing this key simultaneously with the FAST FWD key or REWIND key during playback will cause the deck to shift to the CUE (SKIP FORWARD) or REVIEW (SKIP REWIND) mode, respectively.

29 DECK 2: FAST FORWARD WIND/CUE (SKIP FORWARD) KEY (FAST FWD/CUE)

Depress the FAST FWD/CUE Key in order to wind the Deck 2 tape forward at high speed. FAST FWD and CUT Keys are depressed at a time during playback in order to skip over programme items in the forward direction.

30 DECK 2: EJECTION KEY (EJECT)

Depress the EJECT Key in order to open the Deck 2 Cassette Compartment for loading or unloading a cassette. The EJECT Key cannot be depressed if any other function of Deck 2 is engaged.

31 DECK 2: TAPE COUNTER AND COUNTER RESET BUTTON

The number displayed on the Deck 2 Counter increases when tape moves forward and decreases when tape moves in reverse. Push the reset button to zero the counter at start of tape. Counter will provide an index of tape travel although there is no correspondence between the Counter and spool revolutions.

32 STEREO RECORDING LEVEL CONTROLS (REC LEVEL)

Turn the REC LEVEL controls in order to adjust the signal strength input to the left (L) and right channel (R) recording and with REC MODE selector in the MANU position. Recording inputs can be from the unit's radio, or from record player, or other external equipment, using the INPUT Sockets on the back panel.

④ VU METER (LEFT CHANNEL/BATTERY INDICATOR (VU/LEFT/BATTERY))

VU Meter displays left channel (L) signal strength of radio broadcast, Deck 1 or Deck 2 tape output level during playback, or Deck 2 recording input level from INPUT Socket, when the METER/LIGHT Switch is in the VU position. The indicator also displays BATTERY voltage level when the METER/LIGHT switch is in the TUNE/BATT position.

⑤ RECORDING MODE SWITCH (REC MODE)

Slide the REC MODE Switch to the AUTO position in order to engage automatic recording level control; slide to MANU position in order to adjust recording level with the REC LEVEL Controls.

⑥ DUBBING SWITCH (DUBBING)

Slide the DUBBING Switch to ON position in order to dub from Deck 1 onto Deck 2.

The main purpose of this switch is to disable the built-in microphones during tape dubbing, i.e. To prevent extraneous noises being recorded when Deck 1 is in stop mode. (Extraneous noise picked up by the internal microphones and external microphones).

⑦ VU METER (RIGHT CHANNEL)/TUNING INDICATOR (VU/RIGHT/TUNING)

VU Meter displays right channel (R) signal strength of broadcast, Deck 1 or Deck 2 tape output level during playback, or Deck 2 recording input level from INPUT Socket, when the METER/LIGHT Switch is in the VU position. The Indicator also displays signal strength of broadcast when the FUNCTION Switch is in the RADIO position and the METER/LIGHT switch is in the TUNE/BATT position.

⑧ DECK 1: TAPE SELECTOR SWITCH (TAPE SELECT [1])

Slide the TAPE SELECT [1] Switch to the NORMAL or CrO₂/METAL position in order to match the equalization circuits with the Cassette Tape used on Deck 1.

⑨ DECK 2: TAPE SELECTOR SWITCH (TAPE SELECT [2])

Slide the TAPE SELECT [2] Switch to the NORMAL, CrO₂ or METAL position in order to match the equalization and bias circuits with the Cassette Tape used on Deck 2.

⑩ SNRS (SUPER NOISE REDUCTION SYSTEM) SWITCH

When noise is noticeable when playing a tape, reproducing a record (through INPUT socket) or listening to the radio, slide the SNRS switch at the ON position to reduce the noise.

Note

For usual operation, set the switch to the OFF position.

⑪ METER SELECTOR/DIAL LIGHT SWITCH (METER/LIGHT)

Slide the METER/LIGHT Switch to VU position in order to display signal input level. Push to TUNE/BATT/ON position in order to display battery voltage on the left meter (VU LEFT/BATTERY) and signal strength of received broadcast on the right meter (VU RIGHT/TUNING). The dial light will illuminate.

⑫ FM MODE/FM MUTING SWITCH (FM MODE/MUTE)

Operate the FM MODE/MUTE Switch in order to select FM mode; and FM muting. Slide the Switch to the lower position in order to switch to MONO FM Mode; and FM Muting OFF. Slide to the central position for STEREO FM Mode; and FM Muting OFF. Slide to the upper position for STEREO FM Mode; and FM Muting ON.

⑬ WAVE BAND SELECTOR SWITCH (BAND)

Turn the BAND selector to the desired type of broadcast.

⑭ RADIO ECHO INDICATOR

Sliding the MIXING switch to the RADIO ECHO position will cause this indicator to illuminate, thus showing that the echo effect is being superimposed onto the radio broadcast.

⑮ DUBBING INDICATOR (DUBBING)

The DUBBING Indicator illuminates when the DUBBING Switch is in the ON position.

⑯ FM STEREO BROADCAST INDICATOR (FM STEREO)

FM STEREO Indicator illuminates during FM Stereo reception.

⑰ FINE TUNING CONTROL (FINE TUNING)

Rotate the FINE TUNING Control in order to improve the tuning of broadcast already tuned with the TUNING Control.

⑱ TUNING CONTROL

Rotate the TUNING Control in order to tune the desired broadcast.

⑲ and [50] APLD INPUT BUTTONS AND INDICATORS (APLD: 1-7)

Push APLD Button (▶ or ◀) in order to programme the APLD. The APLD Indicator segment advances from 1 to 7 as you keep pushing the ▶ button, while the APLD indicator segment retreats from 7 to 1 as you keep pushing the ◀ button.

The [1] indicator-number represents the programme peak that the APLD sensor is going to count.

⑳ FUNCTION SWITCH (FUNCTION)

Slide the FUNCTION Switch to TAPE position when using Tape Decks; RADIO position when using the Unit's radio; and to PHONO/LINE IN position when using external equipment as a signal source.

㉑ DECK MODE SELECTOR SWITCH (TAPE OPERATION)

Slide the TAPE OPERATION Switch to the [1] or [2] position in order to play Deck 1 and Deck 2, or Deck 2 and Deck 1 in sequence. Slide the TAPE OPERATION Switch to the [1] or [2] position in order to playback Deck 1 or Deck 2 or to playback Deck 1 and Deck 2 together.

㉒ MIXING SWITCH

Moving the MIXING switch to the MIX MIC OFF position will discontinue power to the mixing microphone connected to the MIX MIC socket. Setting this switch at the MIX MIC ON/RADIO ECHO OFF position will supply power to the mixing microphone without superimposing echo onto the radio.

Moving it to the MIX MIC ON/RADIO ECHO ON position will turn the mixing microphone on and also superimpose echo onto the radio broadcast. The strength of the echo effect may be adjusted with the ECHO control.

㉓ ECHO CONTROL

The ECHO control is to add echo effects on to the sound (through the mixing microphone or the radio broadcasts (as well as wireless microphone through FM band)). The echo effects will be strengthened by turning the control to the right.

In order to add echo effects on your voice during tape playing or recording, use the mixing microphone.

㉔ MICROPHONE FADER CONTROL (MIC FADER)

Turn the control in order to adjust the relative signal strength of unit's radio, Deck 1, Deck 2 or from INPUT Sockets and MIX MIC Socket during mixed recording or mixed sound reproduction.

㉕ TAPE FADING CONTROL (TAPE FADER)

For simultaneous playing of Deck 1 and Deck 2, this control adjusts the balance of output level of both Decks. Normally set the control at the central position between [1] and [2].

Notes

1. The control is inoperative in the recording mode.
2. Even turning the control fully to the right or the left does not perfectly cut off sound reproduction.

㉖ BASS TONE CONTROL (BASS)

Turn the BASS Control toward the minus sign (-) in order to reduce bass content of audio reproduction; and turn toward the plus sign (+) in order to boost the bass content.

㉗ TREBLE TONE CONTROL (TREBLE)

Turn the TREBLE Control toward the minus sign (-) in order to reduce the treble content of audio reproduction; and turn toward the plus sign (+) in order to boost the treble content.

㉘ CHANNEL BALANCE CONTROL (BALANCE)

Turn the BALANCE Control to a position between the left channel (L) and right channel (R) in order to balance the audible output of left and right channel speakers.

㉙ OUTPUT VOLUME CONTROL (VOLUME)

Turn the VOLUME Control to a position between the minimum (MIN) and maximum (MAX) in order to adjust audible stereo output to a level suited to the listening environment.

㉚ LOUDNESS SWITCH

When listening at very low volume settings, slide the LOUDNESS switch to the ON position in order to compensate for lowered bass or treble content.

② POWER SWITCH (POWER)

Slide the POWER switch to the:

- 1) On position ... in order to energize all circuits.
- 2) OFF/SLEEP position ... in order to turn off power to all circuits.

Notes

1. If the PLAY key and/or RECORD key are engaged the play or record function will not be turned off until the keys are released.
2. If the unit is not going to be used in the near future, disconnect the AC supply plug in order to cut off the power supply to the unit completely.
3. The OFF/SLEEP position is used for a Timer Unit operation combined with preparation of the unit for operation.

③ POWER INDICATOR (POWER)

POWER indicator illuminates when the POWER Switch is in the ON position and all circuits are energized.

④ FM ANTENNA TERMINALS (FM EXT. ANT)

Connect the 300 ohm (balanced) FM Antenna (not supplied) to the FM EXT. ANT Terminals. The external FM Antenna will have higher gain than the unit's Telescopic Antenna which may be inadequate for the reception locality.

⑤ LINE OUTPUT SOCKETS (LINE OUT)

Connect the input cables of external equipment — stereo amplifier, tape deck, etc. — to the LINE OUT Sockets left channel (L) and right channel (R). This will permit amplification or recording of unit's output with external equipment.

⑥ INPUT SELECTOR SWITCH

Change the INPUT SELECTOR position in accordance with the external unit connected to the INPUT socket. When using a record player, adjust this switch to the PHONO position. When recording or listening with other units, this switch should be set at the LINE position.

⑦ RECORD PLAYER INPUT AND LINE INPUT SOCKETS (INPUT)

Connect the output leads from the record player with a stereo magnetic cartridge of 3mV to 4mV output to the INPUT Sockets left channel (L) and right channel (R).

Or, connect the output leads from external equipment — stereo amplifier, tape deck, etc. — to the INPUT Sockets left channel (L) and right channel (R). This will permit recording of input from external equipment.

Move the INPUT selector to the LINE IN or PHONO settings, depending upon the type of unit to be connected.

⑧ GROUNDING TERMINAL (GND)

Connect the Grounding wire of external record player or of external equipment to the GND Terminal. This will eliminate AC line hum interference heard in the unit's audio reproduction.

⑨ and ⑦① REMOTE START/STOP CONTROL SOCKET (REM) AND EXTERNAL MICROPHONE SOCKET (EXT MIC)

Plug stereo microphone of low impedance into the left (L) and right (R) sockets. If microphone has remote start/stop switch connect the plug into the remote control socket (REM).

⑩ AC SUPPLY VOLTAGE SELECTOR (VOLTAGE)

The GF-7772 can be set to operate at 110 - 120V, 210 - 220V or 230 - 240V, AC current. Before plugging the Unit into the AC outlet, this selector should be set to the voltage indication corresponding to the power supply in your area.

⑪ AC SUPPLY INPUT TERMINAL (AC INPUT)

Connect the AC Supply Cord connector into the AC INPUT Terminal. Connection of AC Supply Cord cuts out internal batteries, or external DC supply.

⑫ 15 VOLT DC TERMINAL (DC 15V)

Connect the Car Battery Adaptor Cord AD-118N (not supplied) into the DC 15V Terminal Socket in order to power the unit from a motor vehicle battery. Connection of AD-118N to DC 15V Terminal Socket cuts out the unit's internal battery.

⑬ BATTERY COMPARTMENT

Install 10 batteries, each 1.5 Volt, type UM/SUM-1; R-20; HP-2; or D. Check batteries polarity carefully when fitting.

⑭ BEAT INTERFERENCE CANCELLING SWITCH (BEAT CANCEL)

Slide the BEAT CANCEL Switch to A, B or C position in order to cancel the maximum amount of beat interference when tuned to AM (MU) or SW₁ broadcasts.

⑮ EXTERNAL SUPER WOOFER SOCKETS

These sockets enable connection of external super woofer (4 ohms to 8 ohm impedance).

⑯ EXTERNAL MAIN SPEAKER SOCKETS (EXT SP. MAIN)

Connect the plugs into the EXT SP MAIN Sockets (L and R) in order to connect external speakers, 4 ohm to 8 ohm impedance. Built-in speakers (woofer and tweeter) are cut out when jacks are connected.

⑰ TELESCOPIC ANTENNA

Raise and extend both rods in order to receive stereo FM broadcasts. Raise and extend the left hand rod only in order to receive SW₁ or SW₂ broadcasts. If FM reception is unsatisfactory then connect an outdoor (external) antenna.

PREPARATION FOR USE

1 POWER SUPPLY

The GF-777Z Unit will operate on an AC supply of 110 ~ 120 Volts, 210 ~ 220 Volts or 230 ~ 240 Volts of 50Hz or 60Hz. For portable use

it will operate on its internal batteries, or from an external 15 Volts supply (with an adaptor)

2 AC SUPPLY OPERATION



AC Supply voltage adjustment

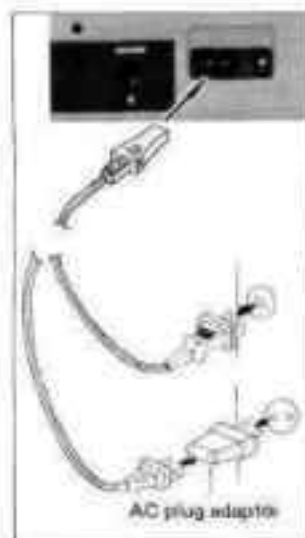
The Voltage Selector setting should be checked to see that it conforms to the local AC supply voltage. This must be done before plugging into AC supply. Adjustment is made by turning the adjusting screw in either direction with a screwdriver until reading of Selector matches the local AC supply voltage.

Connection to AC Supply

1. Connect the AC supply cord connector to the AC INPUT terminal point on the Unit.
2. Connect the AC supply plug (the other end connector of the cord) to the AC supply (110 ~ 120, 210 ~ 220 or 230 ~ 240V).

Notes

1. Connection of AC INPUT Terminal with connector cuts out internal batteries, (if installed).
2. Disconnect AC INPUT Terminal Connector in order to operate Unit with its internal batteries, (if installed).
3. Operate the Unit with the AC supply in order to conserve battery power, or when batteries are not installed.
4. Disconnect AC supply plug from AC supply outlet when the Unit is not being used for long periods.
5. The AC plug adaptor (accessory) may be used in countries where the AC supply voltage is 210-220V or 230-240V and the wall outlet is as shown at the left.



3 INTERNAL BATTERY OPERATION

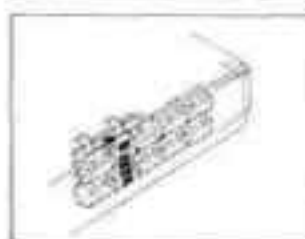
It is advisable to use AC power for long periods of recording.

1. Disconnect the AC Supply Cord Connector from AC INPUT Terminal of the Unit.

2. Remove Battery Compartment Cover.



3. Install ten batteries into the Battery Compartment. Use the UM-SUM-1; R-20, HP-2; or D type batteries.



Notes

1. Be careful to install batteries in series.
2. Be careful when installing batteries to ensure that all battery terminals, and the Unit's battery terminal contacts are perfectly clean. Dust between contacting terminals will cause malfunction of operation.

4. Replace Battery Compartment Cover. Unit is ready for internal battery power supply operation.



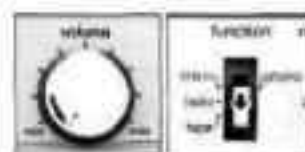
Caution

Remove batteries from the Unit when the Unit is not intended for use over long periods. Also remove batteries when batteries power is weakened. Leaking electrolyte from batteries will cause serious damage to the Unit.

4 INTERNAL BATTERY CONDITION CHECK

The battery check serves as an indication of the effective battery life. Batteries should be replaced according to the BATTERY meter display.

1. Disconnect the AC INPUT Terminal Connector.
2. Disconnect the connector from the DC 15V Terminal.



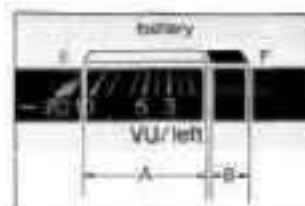
3. Turn the VOLUME Control to the MIN position.
4. Slide the FUNCTION Switch to the TAPE position.



5. Depress the PLAY Key of either Deck 1 or of Deck 2.



6. Slide the METER/LIGHT Switch to the TUNE/BATT position and hold in that position.

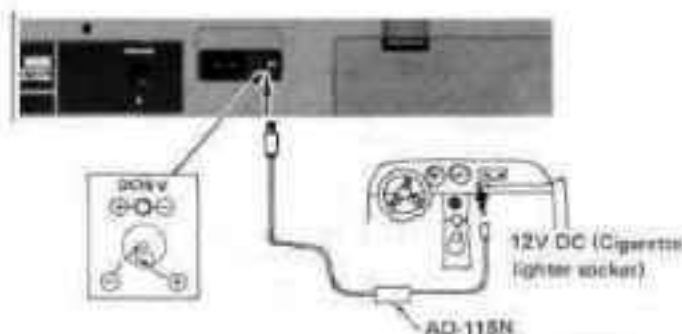


7. View the BATTERY meter.

8. Replace batteries, if the pointer of BATTERY meter enters the "A" zone. (See the illustration.)

9. Do not attempt to replace batteries as long as the pointer is within the "B" zone.

5 EXTERNAL DC POWER SUPPLY OPERATION



The Unit can be operated on an external 15 Volt, D.C. supply. With the use of the Car Battery Adapter Cord AD-115N (not supplied) it is possible to use a 12 Volt vehicle battery.

1. Plug the Connector of AD-115N into the DC 15V Terminal point on the Unit.
2. Plug the other end of the Adapter Cord (with plug fitted) into the vehicle's 12 Volt, D.C. cigarette lighter socket on the dash board.

Note:

Connection of Adapter Cord to the DC 15V Terminal point will cut out the internal batteries.

RADIO OPERATION

1 FM (FREQUENCY MODULATION) RECEPTION

1. Slide the POWER Switch to the ON position. POWER Indicator illuminates.
2. Slide the FUNCTION Switch to the RADIO position.
3. Increase the VOLUME Control slightly from MIN position.
4. Turn the BAND Switch to the FM position.
5. Slide the FM MODE/MUTE Switch to the appropriate position:
 - a) STEREO/MUTE: when receiving powerful FM Stereo broadcast.
 - b) STEREO: when receiving weak FM Stereo broadcast.
 - c) MONO: when receiving weak Stereo or Mono FM broadcast — reproduction will be mono.

Notes:

1. Position a) or b) permits reception of FM stereo or mono broadcasts. Selection of stereo or mono broadcast is automatic (stereo broadcast is received when stereo broadcast is transmitted; mono broadcast is received when mono broadcast is transmitted).
2. Position a) muting will eliminate inter-station noise occurring during the tuning of broadcast. However weak FM broadcasts will also be muted and not heard.
3. Position b) permits reception of FM stereo and mono broadcasts. Selection of stereo or mono broadcast is automatic; (stereo broadcast is received when stereo broadcast is transmitted; mono broadcast is received when mono broadcast is transmitted).
4. Position b) cuts out muting.
5. Position c) cuts out muting.



6. Raise and extend the telescopic antenna.

7. Rotate the TUNING Control in order to tune in the broadcast. Also slide the METER/LIGHT Switch to the TUNE/BATT position. Continue tuning in the broadcast until the maximum deflection of the pointer on the TUNING Meter.



8. FM STEREO Indicator illuminates if stereo broadcast is received.



9. Adjust the length and axis of the Telescopic Antenna until the maximum deflection of the pointer on TUNING/VU meter.



10. Turn the VOLUME Control to a position which results in a suitable acoustic effect for the listening environment.



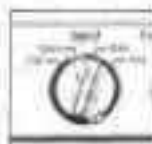
11. Turn the BALANCE Control to a position between the left channel (L) and right channel (R) in order to balance the audible output of the left and right channel speakers.
12. Turn the TREBLE and BASS Controls in order to adjust the treble and bass contents of the audio reproduction. Turn the TREBLE and BASS Controls towards the plus signs (+) in order to boost treble and bass contents, toward the center in order to flatten treble and bass contents, and towards the minus signs (-) in order to cut the treble and bass contents.



13. When listening to the sound at a very low volume settings, set the LOUDNESS switch to the ON position in order to compensate bass and treble deficiencies.

2 SHORT WAVE (SW₂ or SW₁) RECEPTION

1. Perform steps 1 to 4 mentioned for FM Reception on page 7.
2. Turn the BAND Switch to the SW₂ or SW₁ position.
SW₂ . . . 7.3 MHz - 2.2 MHz
SW₁ . . . 2.2 MHz - 7.3 MHz
3. Raise and extend the left side telescopic antenna to a vertical position. Do not raise and extend the right side antenna. If it is already raised and extended, then retract it and fit into the right side antenna lock clip, (on the top panel of the Unit).



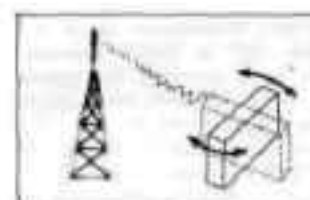
4. Rotate the TUNING Control in order to tune in the broadcast. Also slide the METER/LIGHT Switch to the TUNE/BATT position. Continue tuning in the broadcast until the maximum deflection of the pointer on the TUNING Meter.

For further tuning rotate the FINE TUNING Control until the maximum deflection of the pointer on the TUNING Meter.

5. Perform steps 10 to 15 mentioned for FM Reception on page 7, and this page.

3 AM (AMPLITUDE MODULATION) RECEPTION

1. Perform steps 1 to 4 mentioned for FM Reception on page 7.
2. Turn the BAND Switch to the AM position.
3. Perform steps 7 and 10 to 15 of FM Reception mentioned on pages 7, and this page.



4. Rotate the Unit around the vertical axis in order to orientate the internal directional antenna for peak gain.

CASSETTE TAPE RECORDER OPERATION

1 NOTES ON CASSETTE TAPES AND DECKS

1. Use well-known brands of Cassette Tapes.
2. Avoid use of C-120 type Cassette Tapes.
3. When quality of recording is below standard the cause may be a deposit of oxide and other tape materials on the magnetic Heads. This will happen more frequently with the use of low quality Cassette Tapes. Cleaning of Heads is performed with a Cleaning Cassette (not supplied). Use the Cleaning Cassette according to manufacturer's instructions and avoid prolonged use — longer than required to clean the Heads — because this will cause unnecessary wear of Heads. The reduction in the quality of recording is not, therefore, due to any fault of the Unit.

4. Heads can also be cleaned manually by wiping the Heads with cotton wadding on a stick which has been moistened with methylated spirits. Wipe the Heads until the deposit is removed.

TAPE 1



TAPE 2



Caution

1. Do not attempt to clean the Heads with any hard instrument. Scraping the Heads with a hard instrument will cause serious damage.
2. Do not use any organic solvents for cleaning the Heads — benzene, thinners, etc.

2 MECHANISM FAULT

a. Tape jamming causing irregular playback speed.

b. Tape tangling around the Capstan Roller.

The above difficulties can be avoided if the following precautions are taken.



1. Inspect the Cassette for loosely wound tape spools. The spools can be viewed through the window in the centre of the cassette; refer to figure A.



Figure B

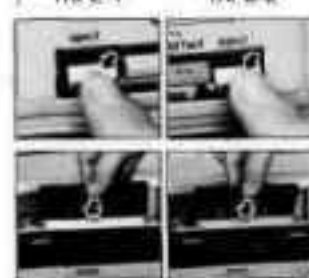
Loosely wound spools can be tightened by winding the spool with a pencil or similar object inserted into the spool spindle hole; refer to figure B.

If the cassette appears to be very stiff and winds slowly the cause may be due to folds or overlapping windings on the spool. The difficulty can be resolved by fast forward winding of the Cassette followed by rewinding.

Capstan and pinch rollers need periodic cleaning. An accumulation of dust on the drive components can cause wow and flutter or tape to wind around the capstan. Clean capstan and pinch rollers with a soft cloth moistened in denatured methylated spirit.

3 LOADING AND UNLOADING CASSETTE TAPES

1 TAPE 1 TAPE 2



1. Depress the EJECT Key in order to open the Cassette Compartment — of Deck 1 or Deck 2.

2. Place a Cassette into the Compartment with the side to be recorded or played, A or B (1 or 2) side, facing outward. Also place the Cassette in the Compartment with the strip of exposed tape facing downward.

3. Before commencing recording or play check that tape is wound onto the left hand spool. If the tape is wound onto the right hand spool then either reverse the side of Cassette in the Compartment, turn A side over to B side, or vice versa, or rewind the tape, refer to page 15.



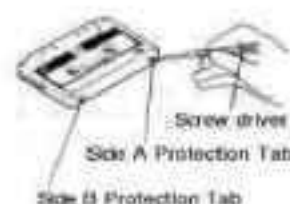
4. Close the Compartment Cover.

5. Depress the EJECT Key in order to open the Cassette Compartment Cover when unloading the Cassette. Remove the Cassette by hand.

Notes:

- 1) Deck [1] will play Cassette Tapes with the APLD operation. Deck [1] cannot be used for recording.
- 2) Deck [2] will play and record Cassette Tapes.
- 3) Cassette Tapes loaded for recording must be placed into Deck [2].
- 4) Do not depress the PLAY Key while the Cassette compartment is open because this will cause damage.

4 ERASURE PROTECTION



In order to protect recorded tapes from accidental erasure the erasure tabs fitted to the edge of the Cassette should be removed (with a minus screwdriver.) (Illustration shows that the side "A" is facing upwards.) Cassette Tapes treated in this manner cannot be erased and when in the Cassette Compartment of Deck 2 it will not be possible to depress the RECORD Key. Erasure protection of side A (or 1) of the Cassette requires the removal of tab A (or 1); and side B (2) the removal of tab B (or 2).

The Cassette Tapes treated in this manner can be used for recording if the open tab holes are covered with a strong plastic tape.

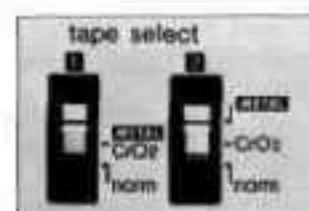


5 CASSETTE STORING



1. Do not store or place the Cassette in storing magnetic fields such as those radiating from TV sets, loudspeakers, etc. Exposure to magnetic radiation will reduce the recording sensitivity or even erase the recording.
2. Do not store the Cassette in hot, moist, or dusty environments.

6 TAPE SELECTOR SWITCH OPERATION



1. Slide the TAPE SELECT [1] Switch to the NORMAL or to the CrO₂/METAL position in order to match the circuit with the Cassette Tape being used on Deck [1] (or playing).

2. Do the same for TAPE SELECT [2] switch. The TAPE SELECT [2] Switch is effective during playing and recording of Cassette Tape.

3. The Unit has been adjusted to match the following Cassette Tapes.

Normal.....	SHARP C-60SD/C-90SD
	MAXELL UDC-60/C-90
CrO ₂	MAXELL UDXL II C-60/C-90
Metal.....	SHARP C-60MX
	TDK MA C-48/C-60

Other manufacturer's Cassette Tapes are suitable for the Unit if the TAPE SELECT switches [1] and [2] are operated so as to match the Unit's circuits with the type of tape used. Refer to the table on page 10 for correct matching.

Brand	Type of tape	Position of [1] switch	Position of [2] switch	
		Playback	Recording	Playback
SHARP	C-465/C-605/C-805	normal	normal	normal
	C-465D/C-605D/C-805D			
	C-60CR/C-90CR	CrO ₂ /metal	CrO ₂	CrO ₂
	C-60MX	CrO ₂ /metal	metal	metal
MAXELL	LN C-60/C-90	normal	normal	normal
	UD C-60/C-90			
	UD-XLI C-60/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
	UD-XLII C-60/C-90			
	METAL C-46/C-90	CrO ₂ /metal	metal	metal
TDK	D-C-60/C-90	normal	normal	normal
	AD-C-60/C-90			
	SA-C-90/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
	MA-R C-46/C-60	CrO ₂ /metal	metal	CrO ₂
	MA-C-46/C-60			
SONY	LNX-60/90	normal	normal	normal
	HFX-60/90			
	SXF-60/90	CrO ₂ /metal	normal	CrO ₂
	FE-CH-60/90			
	EHF-60/90	CrO ₂ /metal	CrO ₂	CrO ₂
FUJI FILM	FLC-60/C-90	normal	normal	normal
	FX-I C-60/C-90			
	FX-II C-60/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
	METAL C-46/C-60	CrO ₂ /metal	metal	metal
	MASTER I C-60/C-90	normal	normal	normal
SCOTCH	MASTER H C-60/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
	MASTER III C-60/C-90	CrO ₂ /metal	normal	CrO ₂
	METAFINE C-46/C-90	CrO ₂ /metal	metal	metal
	MPX ₃ OXIDE C-60/C-90	normal	normal	normal
MEMOREX	HIGH BIAS C-60/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
	GRAND MASTER I C-60/C-90	normal	normal	normal
	GRAND MASTER II C-60/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
AMPEX	PROFESSIONAL-I C-60/C-90	normal	normal	normal
	PROFESSIONAL-II C-60/C-90	CrO ₂ /metal	CrO ₂	CrO ₂
	PROFESSIONAL-III C-60/C-90	CrO ₂ /metal	normal	CrO ₂

7 RECORDING FROM THE UNIT'S RADIO

Note for Users in Australia

Copyright may exist in material you wish to record. Copying such material without permission of the relevant licensee(s) or owner(s) of the copyright is prohibited by law. SHARP is not in a position to authorize the recording of copyright works and nothing in this OPERATION MANUAL should be read or implied as giving that authority.

For other countries

Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to relevant law in your country.

Recording is possible only on Deck 2. Therefore the following instructions are relevant to Deck 2.

1. Prepare the Unit for radio reception. Refer to appropriate section of Radio Operation, pages 7 and 8.
2. Load a Cassette Tape into the Cassette Compartment of Deck 2. Refer to the instructions on page 9.
3. Slide TAPE SELECT ([2] Switch) to the NORMAL, CrO₂ or METAL position as mentioned in section on page 9 and this page.
4. Slide the MIXING switch to the MIX MIC OFF position (if not already in that position).



5. Depress the PAUSE Key of Deck 2. Normally Cassette Tapes are provided with leader tape on both ends. Therefore with a completely wound tape the recording should be started not immediately but allowing the lead to pass through the Deck for about 5 seconds. After making a 5 second programme gap on the tape then start recording.



6. Depress the RECORD Key of Deck 2. The PLAY Key will engage automatically.

Notes:

- 1) The RECORD Key cannot be depressed if the Cassette has been protected against erasure. Refer to instructions on page 9.
- 2) The RECORD Key cannot be depressed if the Cassette Compartment is not loaded with a Cassette.
- 3) The RECORD Key cannot be depressed if the PLAY Key has already been engaged. In this case do not attempt to depress the RECORD Key with force.



7. Slide the REC MODE Switch to the MANU position in order to adjust the recording level with the REC LEVEL Controls (Refer to the next step, or slide REC MODE Switch to the AUTO position in order to engage automatic recording level control).



8. Adjust the REC LEVEL controls ([L] for the left channel and [R] for the right channel) such that the indicator of the VU meter is at the "0" position for the highest signal level to be recorded.

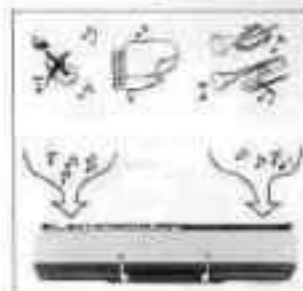
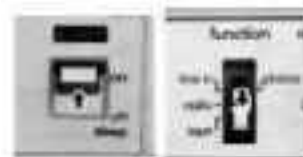




9. Slide BEAT CANCEL Switch to "A" position or to "B" position or to "C" position in order to cancel the maximum amount of beat interference when tuned to AM broadcasts.
10. Depress the PAUSE Key in order to release it at moment recording is to start.
11. Adjustment of the VOLUME BALANCE, BASS and TREBLE Controls and LOUDNESS Switch will not alter the recording level. Refer to page 7.
12. Depress the PAUSE Key in order to interrupt the recording on Deck 2. Tape motion will stop when the PAUSE Key is engaged (audio output from unit's speakers or from headphones will be lowered) and resume from the point of stopping when PAUSE Key is released, (depressed for the second time.)
13. Slide the POWER Switch to the SLEEP/OFF position. Recording process will continue until Cassette Tape has reached its end and Deck 2 automatically stops. Refer to the sleep System Instructions mentioned on page 16.
14. Depress the STOP Key in order to stop the recording process — at the end of recording.
15. Recording process will continue until Cassette Tape has reached its end and the Deck 2 automatically stops. All Keys are disengaged.
16. Recording (or playback) can be continued on the reverse side of the Cassette Tape. Perform steps 5, 2 and 4 in sequence for Unloading and Loading of Cassette Tape mentioned on page 9 and also steps 5, 6 and 10 for Recording from Unit's Radio.

8

RECORDING WITH THE UNIT'S MICROPHONES



1. Disconnect the plugs from EXT MIC Sockets, (if connected).
2. Slide the POWER Switch to the ON position.
3. Slide the FUNCTION switch to the TAPE position.
4. Slide the DUBBING Switch to the OFF position, (if not already in that position.)
5. Depress the STOP Key of Deck 1, (if the tape is running.)
6. Slide the MIXING switch to the MIX MIC OFF position (if not already in that position.)
7. When recording, for optimal sound reproduction, position the front panel of the unit such that it faces, and place the unit as close as possible to the sound source.
8. Perform steps 2 to 8 and step 10 of Recording from the Unit's Radio mentioned on page 10 and this page.

Note:

Monitoring of recording with headphones or with the Unit's speakers is not possible.

9 PLAYBACK

The Unit can playback Cassette Tapes in a variety of combinations using Deck 1 and Deck 2.

- 1) Individual Playback.
Playback from Deck 1 or playback from Deck 2.
- 2) Simultaneous Playback.
Deck 1, and Deck 2 playback together. Playback of Deck 1 and playback of Deck 2 are mixed in the speaker output. Or Deck 1 playback can be monitored with Headphones and Deck 2 playback can be heard with the unit's speakers or Headphones.
- 3) Sequential Playback.
Playback from Deck 1 is followed in sequence by playback from Deck 2. Or playback from Deck 2 is followed in sequence by playback from Deck 1.

• INDIVIDUAL PLAYBACK

1. Perform steps of Cassette Tape Loading and Unloading mentioned on page 9 in order to load Cassette Tapes into Deck 1 or Deck 2.
2. Slide the TAPE SELECT [1] Switch or TAPE SELECT [2] Switch to the proper position. (Refer to Tape Selector Switch Operations on page 9).
3. Slide the POWER Switch to the ON position.
4. Slide the FUNCTION Switch to the TAPE position.
5. Slide the MIXING Switch to MIX MIC OFF position.
6. Slide the TAPE FADER control to the central position between [1] and





7. Slide the TAPE OPERATION Switch to the 1 or 2 position.



8. Depress Deck 1 or Deck 2 PLAY Key. Deck 1 or Deck 2 will commence playback of Cassette Tape.

9. Turn VOLUME, BALANCE, BASS, TREBLE and Slide the LOUDNESS Switch Controls respectively, in order to adjust the audio reproduction suitable for the acoustic environment. Refer to page 7.



10. Slide the SNRS Switch to the ON position in order to reduce tape hiss noise. Slide the SNRS Switch to the OFF position after using the SNRS.



11. Plug the stereo headphones into the PHONES Socket, if required. Refer to Headphones, Page 18.



12. Depress the PAUSE Key in order to interrupt the playback of Deck 1 or Deck 2. Tape motion will stop when the PAUSE Key is engaged and resume from the point of stopping when PAUSE Key is released. (Depressed for the second time).



13. Depress the STOP Key in order to stop Deck 1 or Deck 2.

14. Deck 1 or Deck 2 will automatically stop and the PLAY Key will disengage when the Cassette Tape reaches the end.



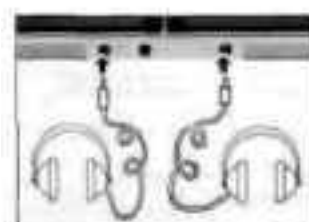
15. Both sides of the Cassette Tape can be played on Deck 1 or on Deck 2. When the Cassette Tape reaches the end, the reverse side of the Cassette Tape is ready for playback.

• SIMULTANEOUS PLAYBACK

Deck 1 and Deck 2 can be played simultaneously.



- Depress the PLAY Keys of Deck 1 and of Deck 2.
- The stereo audio reproduction from the Cassette Tapes on Deck 1 and Deck 2 will be heard from the speakers output — left channel and right channel.



- Plug the stereo headphones into the TAPE 1 MONITOR Socket in order to hear the stereo audio reproduction from Deck 1. Deck 2 stereo audio reproduction will be heard from the speakers output or headphones through PHONES Socket.



- Slide the TAPE FADER Control to adjust volume balance between Deck 1 and Deck 2.

• SEQUENTIAL PLAYBACK

Sequential playback from Deck 1 to Deck 2 or from Deck 2 to Deck 1 is possible.

- Load two Cassette Tapes into Deck 1 and also into Deck 2 Cassette Compartment. Refer to instructions for Loading and Unloading Cassette Tapes mentioned on page 9.

- Arrange Cassette Tapes in Deck 1 and Deck 2 for the desired starting point. The APLO Fast Forward, or Rewind operation will be useful for this. Refer to the APLO Operation instructions mentioned on pages 13 and 14.

- Slide the TAPE SELECT 1 or 2 Switch to the proper position. Refer to reference chart and instructions on pages 9 and 10.

- Perform the steps 3 thru 6 of Individual Playback mentioned on page 11.



- Slide the TAPE OPERATION Switch to the 1 or 2 position.

- Depress the PLAY Key of the Deck which is to be played first. Playback on the Deck to be played first will start.



- Depress the PLAY Key of the Deck which is to be played finally.



- Playback of the Cassette Tape to be played finally will begin when the Cassette Tape Deck played first has ended.

10 SKIPPING, (CUEING OR REVIEWING)



- Depress the PLAY key of Deck 1 and/or Deck 2.

- Depress the FAST FWD/CUE Key of Deck 1 and/or Deck 2 in order to wind the Cassette Tape forward rapidly. The FAST FWD/CUE Key does not lock in position and the Cassette Tape will wind forward as long as the Key is held in the depressed position. When the FAST FWD/CUE Key is released the Cassette Tape of Deck 1 and/or Deck 2 will resume playback.



- Depress the REWIND/REVIEW Key of Deck 1 and/or Deck 2 in order to rewind the Cassette Tape rapidly. The REWIND/REVIEW Key does not lock in position and the Cassette Tape will rewind as long as the key is held in the depressed position. When the REWIND/REVIEW Key is released the Cassette Tape of Deck 1 and/or Deck 2 will resume playback.

The APLD provides a positive means for finding separated programme items recorded on a Cassette Tape. The programme items — song, movements of a symphony, etc. — can be played at the push of a key in any combination of forward or reverse sequence. This arrangement eliminates the trial and error method of finding programme items on a Tape which was considered to be a disadvantage of the Tape Recorder in comparison with the Record Player. Deck 1 of the GF-7772 Unit is provided with the APLD which scans the forward or reverse motion of the Cassette Tape and detects the separation of programme items (gaps) on the recorded tape. At such gaps the Deck automatically commences play.

Forward APLD

operation — to find the start of a piece of music or other programme item whilst winding forward.
After programming steps mentioned below please follow the operation instructions regarding FORWARD APLD OPERATION.

Reverse (Rewind)

APLD operation — to find the start of a piece of music or other programme item whilst rewinding.
After programming steps mentioned below please follow the operation instructions regarding FORWARD APLD OPERATION.

PROGRAMMING THE APLD COUNTER

The APLD can be programmed in order to play a section of items on the Cassette Tape that are more than two programme items apart. In either the forward or reverse direction. Up to 7 programme items can be selected in one operation; more items can be selected by a second programming operation after the first 7 programme items have been played. It is not necessary to programme the APLD for consecutive items or to skip to the next item to the one being played.

Skipping (forward or reverse)

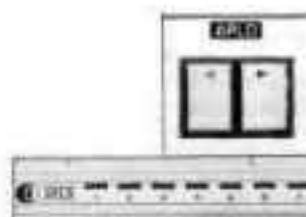
1. Perform steps 1 to 8 for playing of Cassette Tape on Deck 1. Refer to pages 11 and 12.
2. Depress the FAST FWD Key in order to skip forward to the next item, or depress the REWIND Key in order to skip in reverse to the next item.



Selecting Programme Item

1. Perform steps 1 to 8 for playing of Cassette Tape on Deck 1. Refer to pages 11 and 12.
2. Count the number of gaps from the present position of Cassette Tape to the beginning of the selected item.

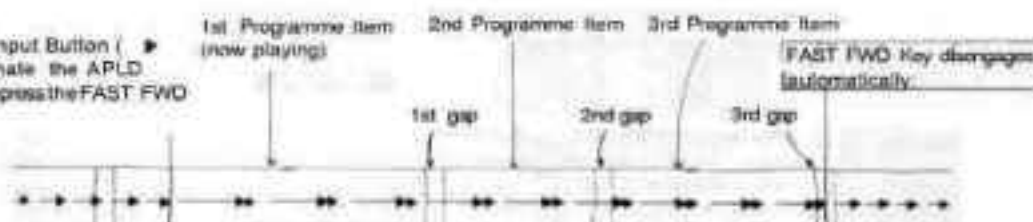
Push the APLD Input Button (◀ or ▶) that corresponds to the number of gaps counted in step 2. The APLD indicator will illuminate. The number of lit LED for APLD indicator shows the number of programmes that APLD is going to skip. As you keep pushing the ▶ button the number of programmes that APLD skips increases, while the number of programmes decreases as you keep pushing the ◀ button.



EXAMPLE

- A. Skipping the next two programme items in sequence in order to begin playback at the third item ahead of the present position.

Push the APLD Input Button (▶ or ◀) to illuminate the APLD indicator "3". Depress the FAST FWD Key.



FORWARD APLD OPERATION

1. Perform all steps for Selecting Programme Items mentioned at the left side of this page.
2. Depress the FAST FWD Key in order to wind the Cassette Tape forward rapidly.



3. Tape will rapidly wind forward while the APLD sensor searches for the selected programme.



4. At the selected programme item, the FAST FWD key automatically releases and playback of the cassette tape automatically starts.

REVERSE APLD OPERATION

1. Perform all steps for Selecting Programme Items mentioned at the left side of this page.
2. Depress the REWIND Key in order to rewind the Cassette Tape rapidly.



3. Tape will rapidly wind backward while the APLD sensor searches for the selected programme item.

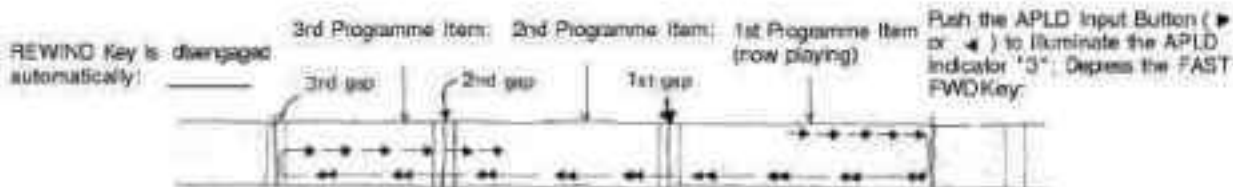


4. At the selected programme item, the REWIND key automatically releases and playback of the cassette tape automatically starts.

Notes:

- 1) As the Cassette Tape advances or reverses the APLD indicators (1 — 7) illuminate corresponding to the number of items remaining.
- 2) Refer to the instructions below if any difficulties are encountered in the operation of the APLD.
- 2) In order to discontinue APLD operation in progress depress the CUT key, and the deck will return to the playing mode.

EXAMPLE B. Skipping the previous two programme items in sequence in order to begin playback at the second item behind the present position



APLD Forward Pause Control

1. Depress the PAUSE Key of Deck 1.



2. Perform all steps for Selecting Programme Items and also Forward APLD operation mentioned on page 13.
3. The Cassette Tape motion will stop at the beginning of the selected programme item.



4. Depress the PAUSE Key again (to release) in order to start the playback of the selected programme item.

APLD Reverse Pause Control

1. Depress the PAUSE Key of Deck 1.



2. Perform all steps for Selecting Programme Items and also for Reverse APLD Operation mentioned on page 13.
3. The Cassette Tape motion will stop at the beginning of the selected programme item.



4. Depress the PAUSE Key again (to release) in order to start the playback of the selected programme item.

• SUITABLE CASSETTE TAPES FOR APLD OPERATION

The APLD may not operate successfully with Cassette Tapes that have any of the following types of recording:

1. Cassette Tapes with intermittent recording — conversation, lectures, etc.
2. Cassette Tapes with recordings of soft classical music, solo performances, modern jazz, etc.
3. Cassette Tapes with low signal strength recordings — below — 15VU over the entire recording.
4. Cassette Tapes with recorded programme items separated by less than a three second gap.
5. Cassette Tapes with recordings containing high level noise occurring between the programme items.

All these types of Cassette Tape recordings are not suited to APLD operation and may cause the APLD to start play at a point in mid-programme item, or to skip over programme items selected, or both.

• NOTES ON APLD OPERATION

1. Avoid operation of the APLD when the play is close to the end of a programme item. This may cause a skipping of the item selected and playing of the following item.
2. Avoid placing the Unit near sources of powerful magnetic radiation — TV sets, generators, electrical appliances during operation. Exposure to magnetic radiation will disturb the functioning of the APLD circuits.
3. Do not depress the FAST FWD Key or the REWIND Key during the recording of Cassette Tapes on Deck 2.
4. Any sound emitted from the speakers during APLD operation (searching for a programme item) does not indicate a fault in the Unit.

• EDITING CASSETTE TAPES FOR APLD OPERATION

The majority of commercially available prerecorded Cassette Tapes are produced with separate programme items of sufficient duration for use with the APLD on Deck 1. When recording Cassette Tapes on Deck 2 it will be necessary to separate the programme items during recording, or to edit gaps into continuously recorded Cassette Tapes.



1. Depress the EDIT Key of Deck 2 (for about 5 seconds) during the process of recording at a point suitable for editing a programme item.



2. After about 5 seconds, depress the PAUSE Key of Deck 2 while keeping the EDIT Key depressed.



3. Release the EDIT Key. The gap is then edited onto the Cassette Tape recording.

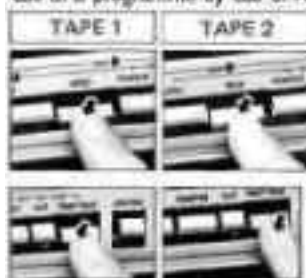


4. Depress the PAUSE Key again (to disengage) at a suitable point for starting the recording of the next programme item.



5. Perform the steps 1 to 4 throughout the recording in order to edit the recording with gaps that will produce a recorded Cassette Tape suitable for APLD Deck 1 played.

This is a method of searching for a position on the tape without using APLD. However, FAST FWD and REWIND keys are mainly used to wind the tape to its end, or to advance the tape to a desired programme with the help of the tape counter (Refer to the Instructions on page 17), for advancing the tape to an approximate position before reaching for the cue of a programme by use of APLD.



FAST FORWARD WINDING

1. Depress the STOP Key of Deck 1 and/or Deck 2.



2. Depress the FAST FWD Key of Deck 1 and/or Deck 2 in order to wind the Cassette Tape forward rapidly.



3. Depress the STOP Key of Deck 1 and/or Deck 2 again in order to stop the winding of the Cassette Tape on Deck 1 and/or Deck 2.

REWINDING



1. Depress the STOP Key of Deck 1 and/or Deck 2.



2. Depress the REWIND Key of Deck 1 and/or Deck 2 in order to rewind the Cassette Tape of Deck 1 and/or Deck 2.



3. Depress the STOP Key of Deck 1 and/or Deck 2 in order to stop the rewinding of the Cassette Tape on Deck 1 and/or Deck 2.

Notes:

- Deck 1 and/or Deck 2 will stop automatically and all Keys disengage when the Cassette Tape of Deck 1 and/or Deck 2 is completely wound or rewound.
- The automatic stopping and disengaging of Keys may not operate after the Cassette Tape of Deck 1 and/or Deck 2 is completely wound or rewound when operating the Unit on its internal battery power supply. This will be due to weak or exhausted batteries.
- Depress the STOP Key of Deck 1 and/or Deck 2 before depressing the PLAY Key of Deck 1 and/or Deck 2 in order to return Deck 1 or Deck 2 from fast forward winding or rewinding to playback.
- Depress the STOP Key of Deck 1 and/or Deck 2 before depressing the FAST FWD Key or the REWIND Key of Deck 1 and/or Deck 2 in order to reverse the winding operation from fast forward winding to rewinding, or from rewinding to fast forward winding.
- When the Unit is given no power at all (with the AC supply cord plugged off a wall outlet or with no battery loaded), if the STOP Key is depressed following a push of the PLAY Key, the Unit enters always in PLAY mode even when the FAST FWD Key or REWIND Key is depressed after the power is regained.

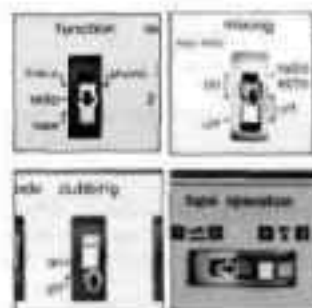
The Dual Deck System of the GF-777Z permits dubbing operations without the need of another Tape Recorder. However dubbing can also be carried out with the use of an additional Tape Recorder if required — open reel or cartridge type recorder for example. Refer to page 18. Dubbing takes place from Deck 1 onto Deck 2.

Notes: (dubbing preparations)

- Disconnect Headphones jack from the TAPE 1 MONITOR Socket.
- Disconnect Microphone jacks from the EXT MIC left channel (L) and right channel (R) Sockets.

DUBBING PROCEDURE

- Load a pre-recorded Cassette Tape into the Cassette Compartment of Deck 1. Perform steps of Loading and Unloading Cassette Tapes mentioned on page 9.
- Operate the APLD in order to prepare the Cassette Tape for the dubbing of selected programme item. Perform all the steps for Selecting Programme Items and Forward APLD Operation or Reverse APLD Operation mentioned on page 13.
- Load a Cassette Tape suitable for recording into the Cassette Compartment of Deck 2. Perform all steps for Loading and Unloading Cassette Tapes mentioned on page 9.
- Rewind the Cassette Tape to the start, or fast forward wind the Cassette Tape to the point at which dubbing is to start. Perform all steps for Fast Forward Winding or Rewinding mentioned on the left side of this page.
- Slide the TAPE SELECT Switch of Deck 1 and Deck 2 to the proper positions. Refer to instructions and chart on pages 9 and 10.
- Slide the FUNCTION selector switch to the TAPE position.
- Slide the MIXING switch to the MIX MIC OFF position.
- Slide the DUBBING Switch to the ON position in order to cut out the Unit's microphones. The DUBBING Indicator illuminates.
- Slide the TAPE OPERATION Switch to the **1** of **2**.



TAPE 1 TAPE 2



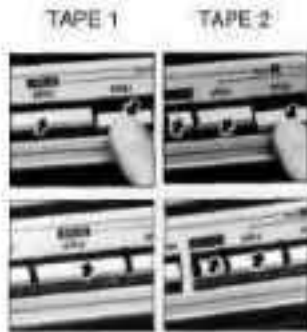
10. Depress the PAUSE Key of Deck 2.

11. Depress the RECORD Key of Deck 2. (The PLAY Key will also engage)



12. Depress the PLAY Key of Deck 1 and also the PAUSE Key of Deck 2 together (to release). (Or depress the PAUSE Key of Deck 1 and also the PAUSE Key of Deck 2 if APLD procedures have been taken.) Dubbing from Deck 1 to Deck 2 begins.

13. Turn the VOLUME, BALANCE, BASS, and TREBLE Controls and slide the LOUDNESS switch to ON position in order to adjust reproduced audio characteristics. Refer to steps 10 thru 13 of FM Reception on page 7. Adjustment of these controls will not affect the recording level. In cases where sound reproduction is unnecessary, set the VOLUME control at the "0" position.



14. Depress the STOP Key of Deck 1 and Deck 2 in order to stop the dubbing.

15. The Cassette Tapes in Deck 1 and Deck 2 will stop after reaching the ends; Deck 1 and Deck 2 will automatically disengage all Keys.

14 MULTI-RECORDINGS

Multi-recording is a method for superimposing voice and other sounds onto the original sound track by means of repeated mixing and dubbing.

1. Load Recorded Tape into Deck 1 and Unrecorded Tape into Deck 2.
2. Dubbing from Deck 1 to Deck 2 (refer to DUBBING on page 15). Record with another sound using Mixing Microphone (refer to pages 19 and 20).
3. Load the Tape of Deck 2 into Deck 1 and load Unrecorded Tape into Deck 2.
4. Repeat the same procedure with above (2).
5. By repeating above procedures of (2) and (3), multi-recording is possible.

15 ERASURE OF RECORDED TAPES

Recorded Cassette Tapes are erased during the new recording process. It is also possible to erase Cassette Tapes without recording.



1. Slide the FUNCTION Switch to TAPE position.
2. Slide the DUBBING Switch to ON position.



3. Slide the REC MODE Switch to MANU position.
4. Rotate REC LEVEL control to the "0" position.



5. Slide the MIXING Switch to the MIX MIC OFF position.
6. Depress the RECORD Key of Deck 2.



7. The Cassette Tape in Deck 2 will stop after reaching the end of the tape. All Deck 2 Keys will automatically disengage.



• EDITING SWITCH

For short periods of tape erasure it is possible to use the EDIT Switch. Depress the EDIT Switch during the recording process.

16 SLEEP SYSTEM

This unit is equipped with a system that automatically shuts off all radio and audio circuits the moment the end of tape is reached. This function operates on fast forward, rewinding, playing or recording.

Sleeping While Listening to or Recording from Radio

1. Perform steps of Recording from the Unit's Radio mentioned on pages 10 and 11. Or, perform steps of PLAYBACK mentioned on pages 11 and 12.
2. Slide the POWER switch to OFF/SLEEP position.
3. The running time of the tape will depend on the type of Cassette Tape. For example, C-60 tape plays for half an hour before turning off the Unit. If shorter period of time is required, advance the tape to an estimated position on tape and then proceed with this operation, the time period can be made shorter. In cases of sequential playback, the total length of tape playback may be calculated by adding the playing times of the tapes inserted in Decks 1 and 2.

Tape of used	Timer Period
C-60	approx. 23 mins.
C-60	approx. 30 mins.
C-90	approx. 45 mins.

17 TAPE COUNTER (for Deck 2)

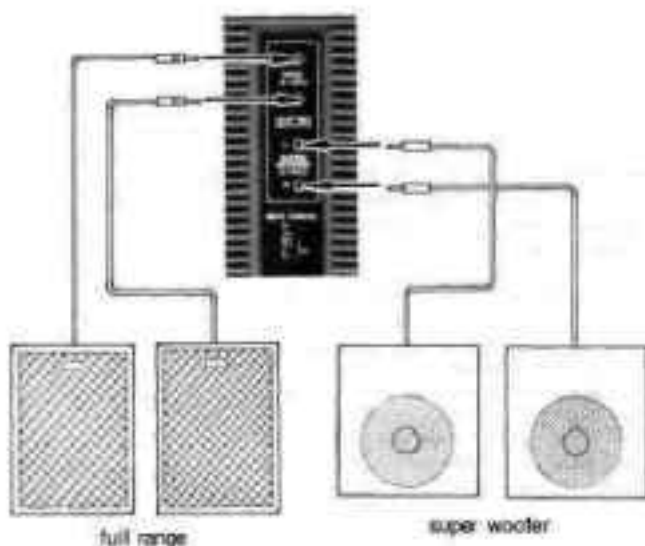
By pressing the reset button, the tape counter is set to "000" (at the start of Cassette Tape), and the number displayed at the beginning of each recorded item can be noted. This provides a convenient reference. In order to locate the position of any item recorded on the tape, use the noted tape counter number that precedes each item.

1. Rewind the tape to the beginning.
2. Then set the tape counter to read "000" and start fast forward winding until the number of the counter advances to the noted number.
3. In order to stop the tape when the noted number is reached, depress the STOP key of Deck 2.
4. You are now ready to play the item by depressing the PLAY key of Deck 2.

EXTERNAL UNITS

1 EXTERNAL SPEAKERS

The GF-777Z Unit can power external speakers. The external speakers require at 4 to 8 ohm impedance and the external speakers cords must be fitted with a 3.5mm connector. Also the connections made in the connector must phase the speakers correctly, (seek advice from the SHARP dealer on this point.) When the external speakers are connected to the Unit the internal speakers are cut out.



18 REMOVING AND ATTACHING THE FRONT MESH



REMOVAL

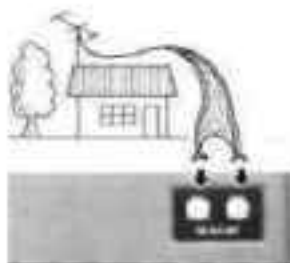
Position a finger at the top extremity of the speaker mesh and, pulling away from the unit, remove the upper portion of the mesh. Next, insert finger into this opening and, once again pulling away from the unit, remove the entire mesh. In this manner remove the meshes of both right and left speakers.



ATTACHMENT

Insert the projections on the corners of the speaker mesh (one projection at each corner) into the rubber holes in the unit body. Ensure proper attachment by pressing each corner such that each projection is fully inserted into its corresponding hole.

2 OUTDOOR (EXTERNAL) FM ANTENNA



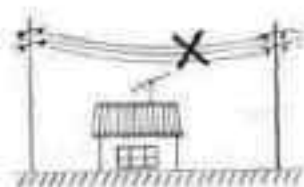
The FM radio reception gain can be improved with the use of an outdoor (external) antenna. If reception with the telescopic antenna is unsatisfactory then connect the outdoor antenna to the FM EXT ANT Terminals (on the rear of the Unit). Weak reception may be due to the geographical position of the receiver relative to the particular broadcast transmitter.



Notes:
Do not use an outdoor TV antenna instead of an outdoor FM antenna, the TV antenna will cause local TV reception interference.



2. Place the outdoor antenna as far away as conveniently possible from roads and railways.



3. Do not set up the outdoor antenna near to power cables or any other power circuitry.

3 HEADPHONES



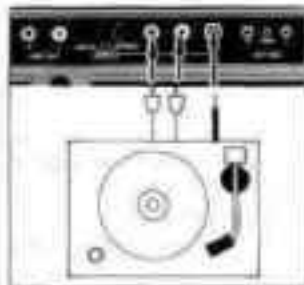
For listening to the Sound in environments which are not suited to speaker sound reproduction (excessively noisy place or places where other people prefer silence) the use of stereo headphones is recommended. Plug stereo headphones into the PHONES Socket (on the front panel of the Unit) if headphones listening is desirable. The speaker's output will be cut off when headphones plug is connected. SHARP Stereo Headphones (not supplied) are recommended. Models HP-30, HP-40, HP-200, HP-300, or HP-400H.

4 RECORD PLAYER AUDIO REPRODUCTION

The GF-777Z Unit can be connected to the output of a stereo magnetic cartridge pick-up used on a Record Player because the Unit is provided with an equalizing circuit for this purpose. Ceramic and Crystal cartridges are not suited to the circuits of the Unit.



1. Slide the POWER Switch to the OFF/SLEEP position.
2. Slide the MIXING Switch to the MIX MIC OFF position.



3. Connect the output cables from the stereo magnetic cartridge of the Record Player to the INPUT Sockets: left channel (L) and right channel (R) of the Unit.
4. Connect the grounding wire of the Record Player (if provided) to GND Terminal of the Unit.



5. Slide the POWER Switch to the ON position.
6. Slide the FUNCTION Selector Switch to the PHONO/LINE IN position.



7. Slide the INPUT Selector Switch on the back panel to the PHONO position.

8. Prepare the Record Player for playing a stereo record.
9. Adjust the Controls of the recorder to appropriate positions for suitable audio characteristics. Perform the steps 10 thru 13 of FM Reception mentioned on page 7.

5 RECORDING FROM A RECORD PLAYER

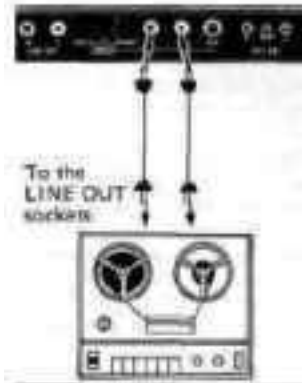
1. Perform steps 1 to 5 of Record Player Audio Reproduction mentioned above.
2. Perform steps 2 thru 6 and 10 of Recording from the Unit's Radio, mentioned on pages 10 and 11.
3. Record output of the Record Player.

6 CONNECTION TO AN EXTERNAL RECORDER

It is possible to perform dubbing operations using an external Tape Recorder. If the Tape to be dubbed is a Cassette type then follow procedures mentioned on page 15. The following procedure is for the open reel type or other recording equipment.

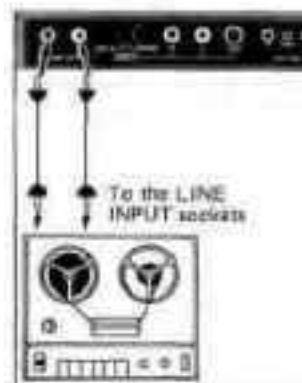


Note:
Slide the MIXING Switch to the MIX MIC OFF position.



•DUBBING FROM AN EXTERNAL RECORDER

1. Connect the external Tape Recorder to the INPUT Sockets of the GF-777Z Unit.
2. Slide the INPUT selector switch on the back panel to the LINE IN position.
3. Load the recorded source tape onto the external Recorder.
4. Load the Cassette Compartment of Deck 2 on the GF-777Z Unit with a suitable Cassette Tape on Deck 2 to a point for starting the dubbing recording.
5. Prepare Deck 2 of the GF-777Z Unit for recording, refer to pages 10 and 11 and also prepare the External Recorder for playing of recorded tape.



•DUBBING ONTO AN EXTERNAL RECORDER

1. Connect the External Tape Recorder to the LINE OUT Sockets of the GF-777Z Unit with RCA type cables.
2. Load a Cassette Tape into the Cassette Compartment of either Deck 1 or Deck 2 of the GF-777Z Unit. Find the position on the Cassette Tape from where the dubbing should start.
3. Prepare the External Tape Recorder for recording.
4. Prepare Deck 1 or Deck 2 for playback. Refer to pages 11 and 12.

7 MICROPHONE AMPLIFICATION

The Unit will amplify the input from an external microphone, (which is useful for public address activities.) The microphone (not supplied) should be fitted with a 6.3mm diameter plug.



1. Connect the microphone plug to the MIX MIC Socket.



2. Slide the MIC FADER Control to the MIC position.

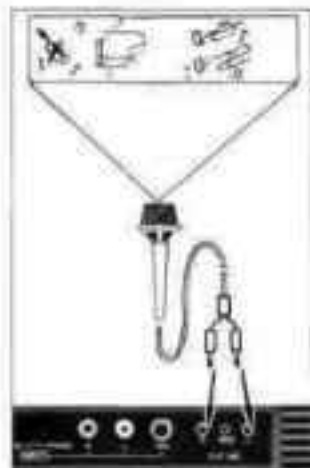
3. Slide the MIXING Switch to the MIX MIC ON position.

4. Adjust the VOLUME, BALANCE, BASS, and TREBLE Controls and LOUDNESS switch as mentioned for FM Reception on pages 7 and 8.

8 RECORDING FROM EXTERNAL MICROPHONES

Notes:

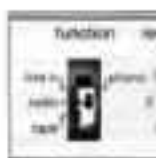
- 1) Check whether Deck 1 is in the stop mode.
- 2) Slide MIXING Switch to MIX MIC OFF position.
- 3) Slide the DUBBING Switch to OFF position.



- 1 Stereo Recording
 - a) Prepare two microphones, (400 ohm to 3 kohm impedance each, with 3.5mm dia. plugs), or use SHARP'S stereo microphone MC 57CL/MC 55CL.
 - b) Plug the microphones into the EXT MIC R and L sockets. If microphone is fitted with a remote stop/start switch, the plug is inserted into the REM control socket between the microphone sockets.
 - c) Arrange the microphones as shown in the illustration.
- 2 Mono Recording
The signal is recorded on either the left or right channel tape track. Plug the mono microphone into EXT MIC left or right socket on the rear panel.



3. Use stereo headphones in order to monitor the recording. Monitoring is also possible with the internal speakers, but this may result in feedback whistle (howling); therefore the use of headphones is advisable. Connect headphones to the PHONES Socket on the front panel. The monitoring level can be adjusted by using the VOLUME Control, without affecting the recording.

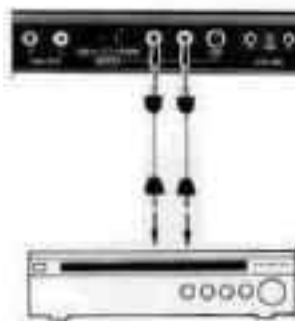
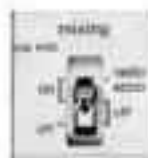


4. Slide the FUNCTION Switch to the TAPE position.
5. Make the recording by referring steps 2 thru 8 and 10 of the explanation for Recording from the Unit's Radio on pages 10 and 11.

9 RECORDING FROM AM AMPLIFIES

Note:

Slide the MIXING Switch to the MIX MIC OFF position.



1. Turn off both GF-777Z Unit and the Amplifier.
2. Amplifier output sockets, (REC OUT, TAPE OUT, etc.) should be connected to the INPUT right channel (R) and left channel (L) Sockets of the GF-777Z Unit (with cables that have plugs suitable for connecting into each set of sockets.) Even if the input terminals, (TAPE PLAYBACK or TAPE INPUT, etc.) are connected or are already connected to the LINE OUT Sockets of the GF-777Z Unit recording can be affected.



3. Slide the INPUT Switch on the back panel to the LINE IN position.



4. Turn on the POWER Switches of both Units.
5. Slide the FUNCTION Switch to the PHONO/LINE IN position.
6. Start the recording process. Refer to steps 2 to 8 and 10 of Recording from the Unit's Radio on pages 10 and 11.
7. Adjust VOLUME, BALANCE, BASS and TREBLE Controls and LOUDNESS Switch in order to balance audio characteristics with specific environmental acoustic conditions. Refer to steps 10 through 15 of FM Reception on pages 7 and 8.

10 MIKED RECORDING AND PLAYING

The GF-777Z Unit can mix the output of a mixing microphone with the playback (Deck 1 or Deck 2), input from the Unit's internal microphones, the Unit's radio, a Tape Recorder, a Record Player, or other external audio equipment which is connected to the INPUT Socket. The reproduced mixed audio output is monophonic.

1. Follow the instructions provided in the chart for mixed playing or mixed recording with the mixing microphone and source.

Possible. (with connection of extra tape recorder to the LINE OUT sockets.)

SOURCE UNIT FOR MIXING	MIXED PLAYING	MIXED RECORDING			
		FUNCTION	MONITORING		
			Unit's Speaker	Headphones	External Speaker
Built-in Deck 1	Possible	Possible	Possible	Possible	Possible
Built-in Deck 2					
Unit's Radio	Impossible	Possible	Possible	Possible	Possible
Unit's Microphones		Impossible	Impossible	Impossible	Impossible
External Record Player	Possible	Possible	Possible	Possible	Possible
External Audio Systems Connected to the INPUT Sockets	Impossible	Possible	Possible	Possible	Possible
External Microphones		Impossible	Impossible	Possible	Possible



2. Connect the mixing microphone (with a 6.3mm plug), to the MIX MIC Socket. The mixing microphone requires 400 ohm to 2K ohm impedance.



3. Adjust the MIC FADER Control to the central position between the SOURCE and MIC positions.
4. Turn the TAPE FADER Control to the central position between 1 and 2 positions.



5. Increase the volume level slightly from "MIN" position.
6. Slide the MIXING Switch to the MIX MIC ON position.



7. When you want voice and sound in the mixing microphone to have an echo effect, turn the ECHO Control clockwise. The more the control moves clockwise, the more the echo increases.

8. Follow steps for Playback, on pages 11 and 12, or Recording, page 10 and 11.



9. In cases where mixed playing of Tapes 1 and 2 is desired, volume balance for both tapes may be adjusted by means of the TAPE FADER Control.



10. Volume balance for mixing microphone and source (radio broadcast, record reproduction or sound from other external Units) may be adjusted with the MIC FADER control.

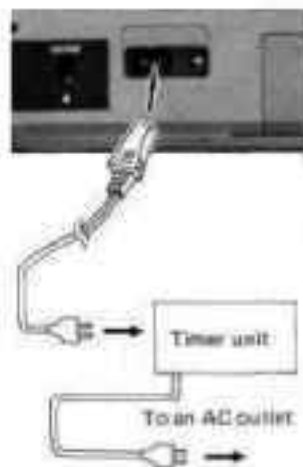


11. Adjust the volume level with the VOLUME Control.

12. Also mixing of sound of Deck 1 with the mixing microphone is possible while dubbing from Deck 1 to Deck 2. Refer to the Multi-recordings mentioned on page 16.

11 AUTOMATIC RECORDINGS LAV BACK STARTING (TIMER START)

It is possible to start the Unit in order to record or playback with a Timer Unit (Automatic-On System).



1. Connect the AC supply cord plug of the Unit, into the AUTOMATIC ON Sockets of the Timer Unit. Adjust the Timer to the EVER-ON condition.
2. Connect the AC supply cord on the Timer Unit to the AC wall outlet.
3. Perform steps of Recording mentioned on pages 10 and 11. Or, perform steps of playing (Individual playback, Simultaneous playback or Sequential playback) mentioned on pages 11 and 12.
4. After that, depress the STOP Key to get the GF-7772 Unit in STOP mode.
5. Slide the POWER Switch to the OFF/SLEEP position.

6. Adjust the Timer Unit to a desired time for starting the Unit's playback or recording. Adjust the Timer Unit to the AUTOMATIC ON condition.
7. Again depress the PLAY Key or RECORD Key to get the GF-7772 Unit in the same state as mentioned in step 3.

8. The GF-7772 Unit will turn on when the preset time arrives and playback or recording on Deck 2 will begin.

Notes:

- When the end of the tape is reached, the tape automatically stops and the recorder returns to the neutral mode. Yet, the radio continues to operate without turning off.
- Refer to Timer Manufacturer's instructions before using the Timer. There are various types of Timers available and each may have slightly different operating methods.

SPECIFICATIONS

GENERAL

Power source:	AC: 110-120/210-230/230-240V, 50/60Hz DC: 1.5V (UM/SUM-1, R-20, HP-2, or "D" battery \times 10, or optional DC supply)
Speakers:	18cm \times 2 15cm \times 2 Horn type \times 2
Output power:	PMPO 80W, with four amplifiers AC Supply operation
Semiconductors:	17 IC's 52 Transistors 1 FET 1 SCR 59 Diodes 11 LEDs
Dimensions:	Width: Depth: Height:
Weight (without batteries):	752mm 186mm 379mm 12.2kg

TAPE RECORDER/PLAYER

Tape:	Philips-type compact cassette tape
Frequency response:	30Hz to 18000Hz (Metal tape) 30Hz to 17000Hz (CrO ₂ tape) 30Hz to 14000Hz (normal tape)
S/N ratio:	60dB (S/NRS: ON) 56dB (S/NRS: OFF) 0.058% (W/RMS)
Wow and flutter:	
Input sensitivity and input impedance:	
Ext. Mic:	600 ohms
Mixing mic:	600 ohms
Line in:	22 kohms
Output level and loaded impedance:	
Headphones:	8 ohms to 25 ohms
External speaker:	4 ohms to 8 ohms
Line out:	0.7V/150k ohms

RADIO

Frequency range:	AM: 525kHz to 1605kHz SW1: 2.3MHz to 7.8MHz SW2: 7.8MHz to 22MHz FM: 87.5MHz to 108MHz
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Note:

SHARP CORPORATION reserves the right to change the specifications, materials of production, and the design of the Unit. However any such alterations will not impair the quality of construction and grade of performance of the Unit.