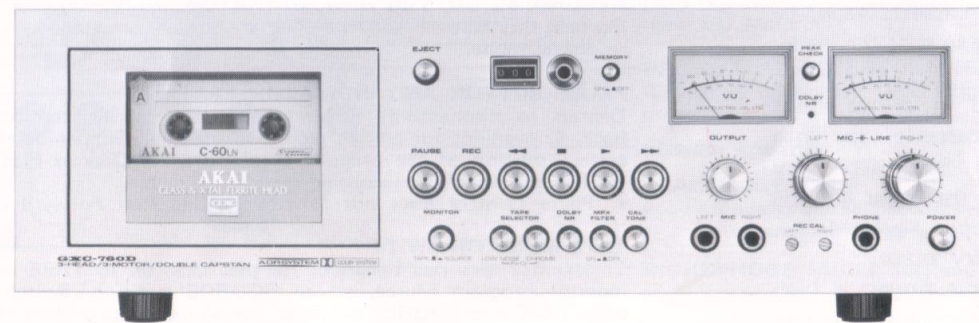


GXC-760D

CASSETTE STEREO TAPE DECK

OPERATOR'S MANUAL



Warning:

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

AKAI

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TECHNICAL DATA

Track System	4 track 2 channel stereo system
Tape	Philips type cassette
Tape Speed	1-7/8 ips.
Wow and Flutter	Less than 0.06% WRMS Less than 0.17% (DIN 45500)
Frequency Response	30 Hz to 15,000 Hz (± 3 dB) using low noise tape 30 Hz to 16,000 Hz (± 3 dB) using CrO ₂ tape 30 Hz to 19,000 Hz (± 3 dB) using Fe-Cr tape
Distortion	Less than 1% (1,000 Hz "0" VU) using Low Noise tape.
Signal-to-Noise Ratio	Better than 51 dB (measured via tape with peak recording level of +5 VU) Dolby Switch ON: Improves up to 10 dB above 5 kHz
Erase Ratio	Better than 70 dB
Bias Frequency	100 kHz
Heads	GX recording/playback head and erase head (3 head system)
Motor	One AC Servo outer-rotor motor for capstan drive, and two DC motors for reel drive.
Fast Forward and Rewind Time	70 seconds using a C-60 cassette tape.
Output Jacks	Line (2): 0.775V ("0" VU). Required load impedance: More than 20 k ohms. Phone (1): 50 mV/8 ohms
Input Jacks	Microphone (2): 0.3 mV, Required microphone impedance: 600 ohms Line (2): 70 mV/100 k ohms
Semi-conductors	Transistors 82, Diodes 125, FETs 8, ICs 8
Power Requirements	CSA, UL and LA Models: 120V, 60 Hz only CEE Models: 220V, 50 Hz only. Other Models: 100V to 240V, 50/60 Hz, (switchable)
Dimensions	440(W) x 142(H) x 306(D) mm (17.3 x 5.6 x 12.0")
Weight	11.1 kg. (24.4 lbs.)

* For improvement purposes, specifications and design are subject to change without notice.

* "DOLBY" and the Double D symbol are trademarks of Dolby Laboratories, Inc. (Under License from Dolby Laboratories, Inc.)



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STANDARD ACCESSORIES

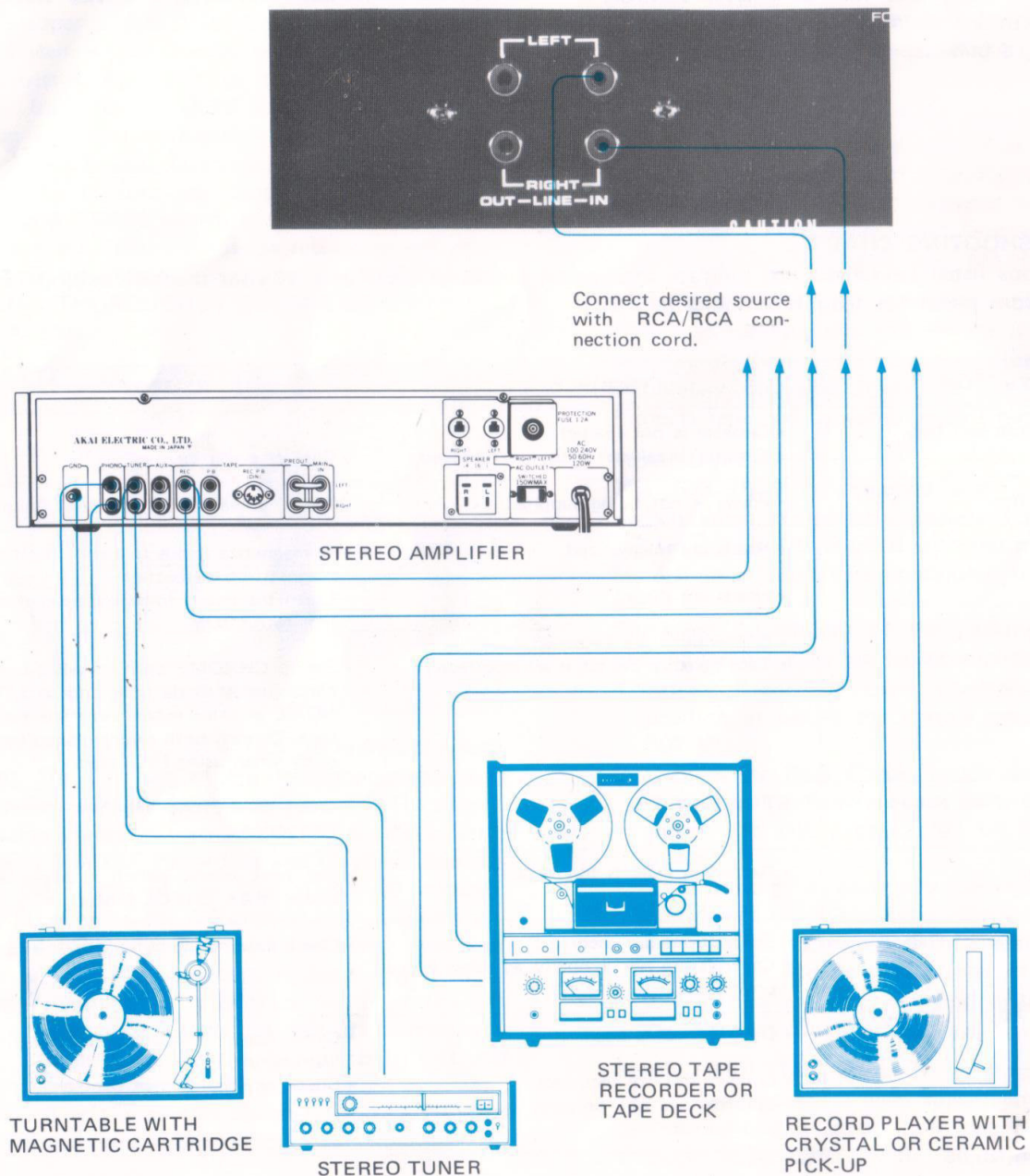
Connection Cords	1 set
Spare Fuses	1 set
Operator's Manual	1

* Spare fuses not included with CSA, CEE, UL
and LA models.



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CONNECTIONS FOR RECORDING



REGULAR RECORDING

Connect desired program source to appropriate inputs as shown in CONNECTIONS FOR RECORDING.

- A. Connect power cord and turn on Power Switch.
 - B. Depress Eject Button and load a tape (new tape gives best results).
 - C. Set Index Counter to "000".
 - D. Set Monitor Switch to SOURCE position.
 - E. Adjust and balance recording input level with appropriate Recording Level Controls while observing VU Meters.
 - F. When an optimum recording level has been determined, while holding the Recording (REC) Button at depressed position, depress PLAY ► Button to begin recording.
- * Automatic Stop will be effected at the end of the tape. To stop tape during recording, depress STOP ■ Button.

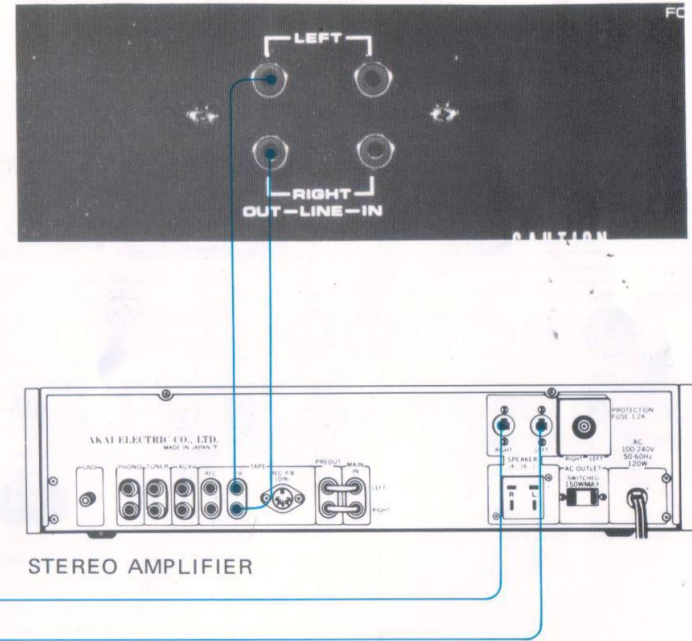
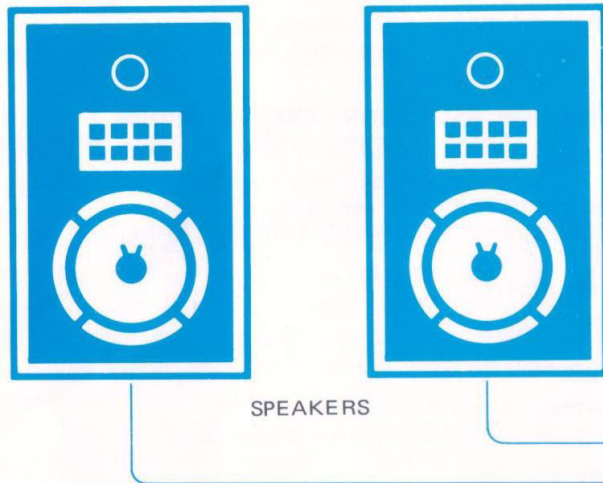
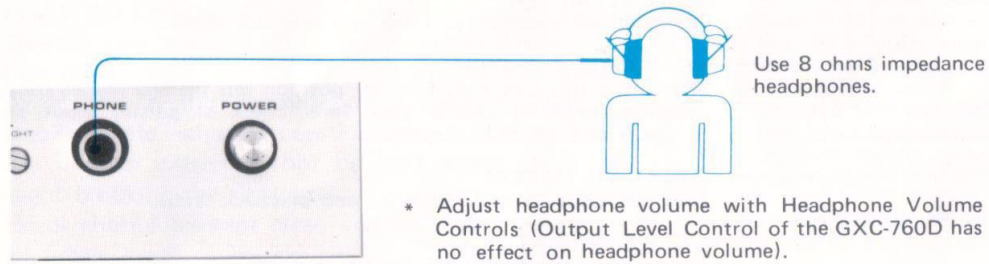
DOLBY RECORDING CIRCUIT

Your machine is also equipped with a Dolby Recording Circuit and Recording Calibration Adjusters, etc. for precise Dolby recording level adjustment according to the kind of tape being used. Therefore, the following adjustment is necessary prior to Dolby recording.

Dolby Recording Level Adjustment

1. Load a tape and set Tape Selector Switch according to kind of tape being used.
 2. Depress Tape Monitor Switch to SOURCE position.
 3. Depress Cal Tone Switch and set Line Recording Level Controls to obtain a "0" VU Meter indication on both channels.
 4. Set Tape Monitor Switch to TAPE position.
 5. Depress Recording (REC) and PLAY ► Buttons simultaneously to set deck to recording mode.
 6. With a minus driver, adjust REC CAL Adjusters and set meter indication to "0" VU on both channels.
Caution: Do not move Recording Level Controls. (These controls must be left at previously adjusted positions.)
 7. Release Cal Tone Switch.
 8. Your machine is now adjusted for Dolby Recording. Depress Dolby NR Switch and follow regular recording procedure through step D. Then continue as follows:
E. While holding the Recording (REC) Button at depressed position, depress PLAY ► Button to begin recording.
- * Once Dolby Recording Level Adjustment has been carried out, re-adjustment is not necessary unless a different kind of tape is used or a REC CAL Adjuster is moved.

CONNECTIONS FOR PLAYBACK



PLAYBACK

Make the necessary connections as shown in CONNECTIONS FOR PLAYBACK.

- A. Connect power cord and turn on Power Switch.
- B. Depress Eject Button and load a pre-recorded tape.
- C. Set Monitor Switch to TAPE position.
- D. Depress PLAY ► Button to begin playback.
- E. Adjust Output Level Control and external amplifier controls.

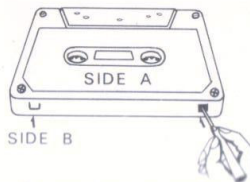
* Automatic Stop will be effected at the end of the tape. To stop tape travel during performance, depress STOP ■ Button.

* For playback of Dolby recorded tapes, depress Dolby NR Switch. (Leave at OFF position for regular playback.)

CONTROLS

OPERATING PRECAUTIONS

- * Operate this machine in a level horizontal position only.
- * Avoid setting this machine on a vacuum tube amplifier, etc. which generates heat, or operating the unit in extremely hot or cold places. Also avoid blocking the ventilator.
- * Heads should be kept clean and demagnetized at all times.
- * This machine is designed for utilization of low noise tape as standard. The use of ordinary tape will result in inferior performance.
- * As the base of C-120 tapes are thin and easily damaged, they are not recommended for use with this machine.
- * Recording cannot be made on the leader tape. Therefore, when using a new cassette tape, be sure to forward the tape slightly so that the leader tape is not in the head path.
- * Tapes which have been stored in a hot moist place for a period of time or cassette tape with bent cases should not be used. Such tape may curl or have greasy places on the tape altering tape speed and preventing proper performance. Always store tapes in a cool, dry place.
- * Do not touch the tape with your fingers as high frequency signals cannot be recorded in places which are not clean on the tape.
- * When using a tape recorded with the Dolby process, it is necessary to depress the Dolby NR Switch at playback time also. Keep the Dolby NR Switch at OFF position at all times except during Dolby recording or playback.
- * Cassette tapes are equipped with a break-out tab for both A and B sides. When these tabs have been removed to protect an important recording, no further recording can be made on the tape unless the cavities are plugged or covered with a piece of tape.



CASSETTE RECEPTACLE LID

- Opens when Eject Button is depressed. To load a tape, depress Eject Button and insert cassette with tape facing the heads and then close lid.
- * This machine features "double action" Eject for easy tape loading (When the Eject Button is depressed, the cassette receptacle moves away from the machine and outward).
 - * The GXC-760D features a tape loading safety mechanism located inside the cassette receptacle which prevents the cassette tape from being loaded upside down by mistake.
 - * This machine also features Automatic Tape Setting wherein when a tape is loaded, the supply reel motor is activated and the tape is rewound slightly to take up any existing slack for a perfectly stable tape start.

FAST FORWARD ►► BUTTON AND INDICATOR LAMP

Advances tape at high speed.

PLAY ► BUTTON AND INDICATOR LAMP

Advances tape for playback or recording mode.

STOP ■ BUTTON

Depress to stop tape travel.

REWIND ◀◀ BUTTON AND INDICATOR LAMP

Rewinds tape at high speed.

RECORDING BUTTON AND INDICATOR LAMP

Depress this button and the Play ► Button simultaneously to effect recording mode.

PAUSE BUTTON AND INDICATOR LAMP

Depress to momentarily suspend tape travel during recording or playback. Convenient for editing recording program. Simply depress when a certain portion of the program is not desired. Depress Play ► Button for Pause release and recording re-start.

- * Pause Control does not function during Fast Forward or Rewind.

TAPE MONITOR SWITCH

To monitor recorded signals or for playback, set to TAPE position. To monitor program source, set to SOURCE position. Switching to and from TAPE and SOURCE positions during recording enables the operator to compare signals just recorded with the program source.

TAPE SELECTOR SWITCHES

Depress the LOW NOISE Switch when using low noise tape and depress the CHROME Switch when using chromium dioxide tape. Depress both switches simultaneously when using Ferri-chrome tape.

- * Low noise tape is standard for this machine. The use of ordinary tape will result in inferior performance.

DOLBY NR SWITCH

Setting the Dolby NR Switch to ON (in) position activates the Dolby circuit to raise low level signals before they are recorded and lowers them by precisely the same amount during playback. This process reduces extraneous noise, which also results in the reduction of tape hiss to a completely inaudible level.

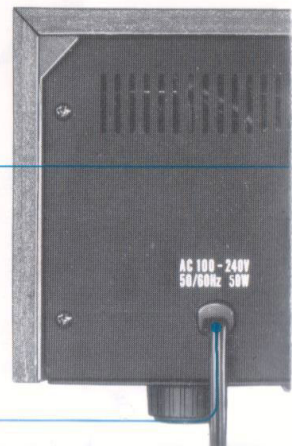
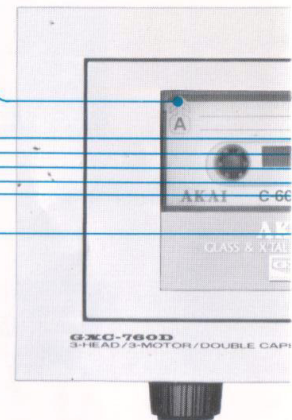
- * When using a tape recorded with the Dolby process, it is necessary to set the Dolby NR Switch to ON position at playback also.

UNIVERSAL VOLTAGE SELECTOR (CEE, CSA, UL, and LA models not equipped with this facility)

AC CORD

EJECT BUTTON

Depress to eject tape that the Stop Button to ejecting the tape mode.



It is recommended
be depressed prior
during an operating

INDEX COUNTER AND RESET BUTTON

Tape indexing is made easy with this 3-digit Index Counter. Provides an easy reference for quickly locating positions on the tape. To reset to "000", depress Reset Button.

MEMORY REWIND BUTTON

Set Index Counter to "000" and depress Memory Rewind Button. Automatic Stop at this setting can then be effected from Rewind.

LEFT VU METER

Indicates left channel recording and playback levels.

PEAK CHECK SWITCH

Depressing this switch to ON (in) position sets the VU Meters for quick response, enabling precise peak level check of pulsive input signals.
* See PEAK CHECK procedure.

RIGHT VU METER

Indicates right channel recording and playback levels.

DOLBY INDICATOR LAMP

Lights when the Dolby NR Switch is depressed.

OUTPUT LEVEL CONTROL

For left/right line output volume adjustment.

LEFT MIC/LINE RECORDING LEVEL CONTROLS

Controls left channel recording input level. Adjust while observing left VU Meter.

RIGHT MIC/LINE RECORDING LEVEL CONTROLS

Controls right channel recording input level. Adjust while observing right VU Meter.

REC CAL ADJUSTERS (left and right)

Recording Calibration Level Adjusters (Refer to Dolby Level Adjustment procedure).

POWER SWITCH

HEADPHONE JACK

Accommodates stereo headphones of 8 ohms impedance for monitoring or private headphone listening.

MICROPHONE JACKS (left and right)

600 ohm impedance microphones are recommended.

CAL TONE SWITCH

Activates a built-in oscillator to supply a 400 Hz recording signal for Recording Calibration Adjustment. (Refer to Dolby Recording Level Adjustment procedure).

* Keep at OFF position at all other times.

MPX FILTER SWITCH

Prevents disturbance caused by the 19 KHz pilot signal during FM stereo broadcast recording with the Dolby System through an FM receiver.

* Keep at OFF position at all other times.

REMOTE CONTROL JACK

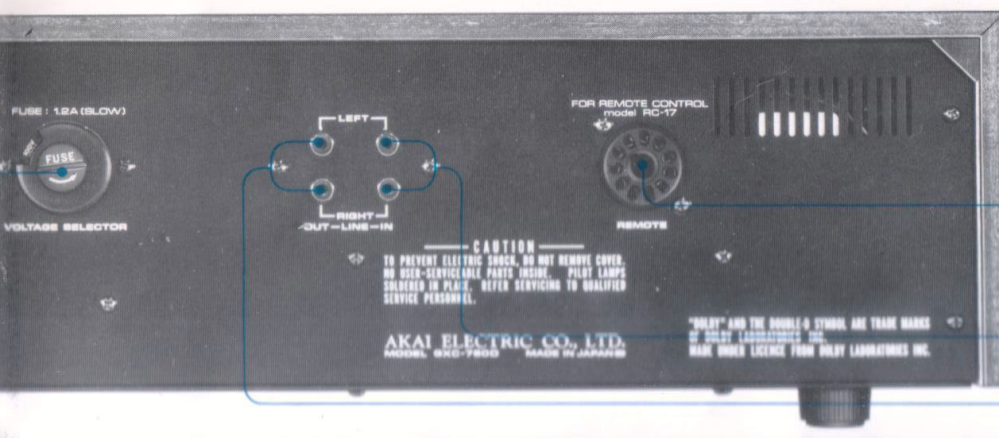
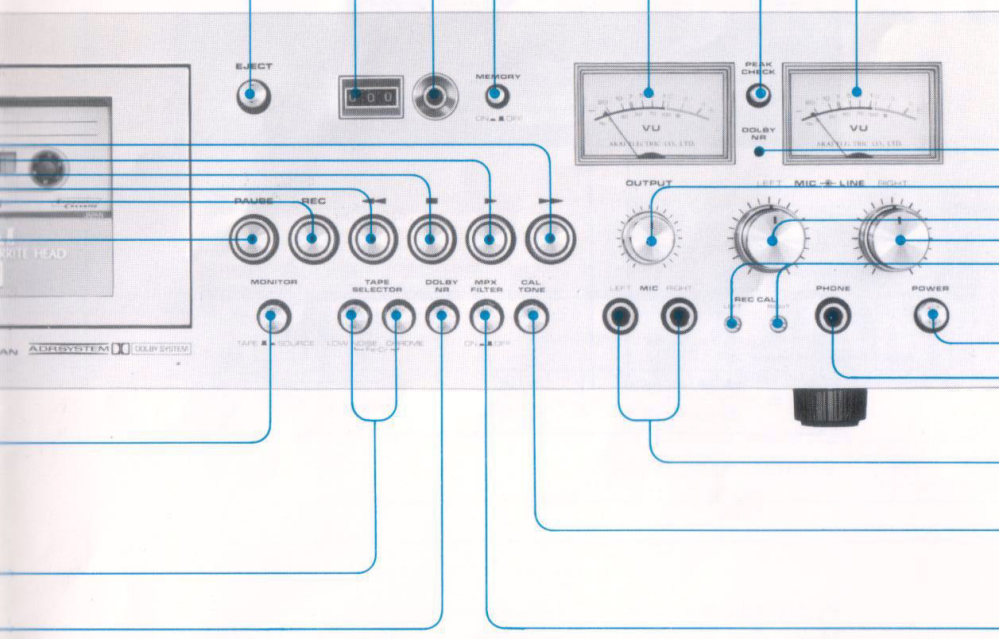
Remote control of all operating functions can be accomplished with optional accessory Remote Control Unit RC-17 or RC-18. Either of these remote control units can also be used together with a timer for absentee recording. (See TIMER RECORDING procedure).

LINE INPUT JACKS (left and right)

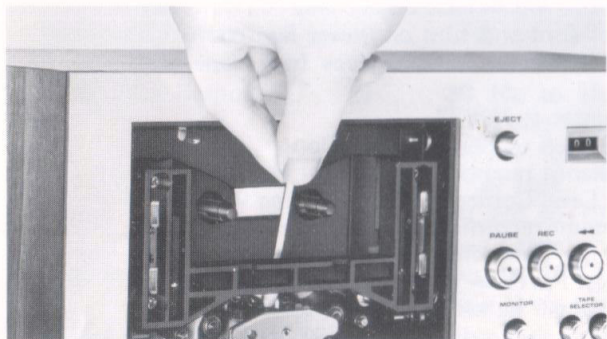
Connects to tape outputs of external source.

LINE OUTPUT JACKS (left and right)

Connects to tape inputs of external amplifier or tape recorder.



from Akai Head Cleaning Kit HC-500 or HC-550. Also clean pinch wheel, capstan and other parts over which the tape travels.



* If Akai Cleaning Fluid is not available, use alcohol. Do not use other chemical cleaners as the rubber parts will deteriorate.

HEAD DEMAGNETIZING

Prolonged use of the machine will gradually build up residual magnetism on the heads. The effect of magnetization is that it causes a considerable drop in high frequency response and introduces noise into your recordings. It is therefore, recommended that head demagnetizing be performed periodically.

1. Turn off Power Switch.
2. Remove cassette from receptacle.
3. Lift off cassette lid (with tape view window) by lifting upward.
4. Demagnetize heads and other parts which contact the tape with a Head Demagnetizer by bringing the prongs of the demagnetizer close to the heads and making small circular motions over the entire head block area.



* Avoid turning the power switch of the Demagnetizer on and off close to the tape deck.

TAPE ERASING

Any signals previously recorded on the tape will be automatically erased as a new recording takes place. For erasing only, no plugs should be connected to the input jacks and recording level controls should be kept at minimum. For quick and complete erasure, a bulk tape eraser is recommended.

TROUBLE SHOOTING CHART

The conditions listed below do not indicate mechanical failure of your unit. If your machine exhibits any of these conditions check for trouble as indicated.

SYMPTOM	TROUBLE	REMEDY
Recording Button will not function.	* Cassette is not loaded. * Cassette break-out tabs are removed.	* Plug or cover cavities.
Tape will not run.	* Power is not being supplied.	* Check power cord and Power Switch.
Noisy sound.	* Heads are magnetized. * Heads are dirty. * Connections are incorrect. * Tape Selector Switch is set incorrectly.	* Demagnetize heads following head demagnetizing instructions. * Clean the heads following head cleaning instructions. * Set to CHROME position when using chromium dioxide tape, and to LOW NOISE position when using low noise tape. Depress both switches simultaneously when using FeCr tape.
Previous recording will not erase.	* Erase head dirty.	* Clean heads following head cleaning instructions.
Distorted sound.	* Recording level is too high.	* Use peak check switch as explained under PEAK CHECK procedure.
Playback cannot be effected.	* Connections are incorrect. * Controls are not properly adjusted or positioned.	* Check external amplifier controls.
Recording will not take place.	* Dirty recording head. * Connections are incorrect. * Controls are not properly positioned or adjusted.	* Clean head following head cleaning instructions. * Check external source controls.

LUBRICATION

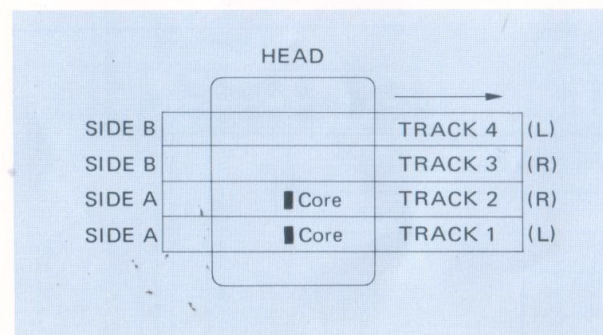
Although the motors of this tape deck are sufficiently oiled for prolonged use, for maximum service and optimum performance, please take your machine to your local authorized AKAI service station for occasional lubrication.

Should there be a problem with your machine, write down the model and serial numbers and all pertinent data regarding warranty coverage as well as a clear description of the existing trouble and contact your nearest authorized Akai Service Station or the Service Department of Akai Company, Tokyo, Japan.

INTRODUCTION

Your new GXC-760D Cassette Tape Deck is made of the very finest materials and incorporates the very latest in recording and playback techniques. In addition to the features outlined in this manual, AKAI's superior A.D.R (automatic distortion reduction) System which changes the recording equalizer characteristics according to the signal level of a certain frequency band to achieve low distortion over an extended frequency range is also incorporated in this model. This together with many other outstanding features including a 3-motor, 3-head system and AKAI's wear-free GX-Heads combine to bring you the finest in cassette recording and playback. We, therefore, urge you to READ THIS MANUAL THOROUGHLY BEFORE ATTEMPTING OPERATION.

CASSETTE TRACK SYSTEM



This model employs a 4-track recording/playback system. The first half of the stereophonic recording or playback take places on tracks 1 and 2. The second half takes places on tracks 3 and 4 after the cassette has been inverted. Recording and playback depends upon the length of the tape (C-30, 30 minutes; C-60, 60 minutes, etc.). Monaural and stereo recorded tapes can be played back on either stereo or monaural cassette recorders without any loss in quality. Because the total track width of the left and right channels is equal to that of the monaural track, the playback head will scan both left and right channels together. This results in automatic mixing of left and right channels from the stereo tape for monaural reproduction.

TAPE SELECTION

This machine is equipped with Tape Selector Switches which set the machine to proper bias and

equalization according to the tape being used. Depress the LOW NOISE Switch when using low noise tape, and depress the CHROME Switch when using chromium dioxide tape. Depress both switches simultaneously when using Ferri-Chrome tape.

* Low noise tape is standard for this machine.

The use of ordinary tape will result in inferior performance.

DIRECT FUNCTION CHANGE CONTROL

This model features feather-touch Full Direct Function Change Control. The necessity of depressing the Stop ■ Button prior to changing modes is eliminated. The inclusion of direct function change to recording mode facilitates easy add-on recording.

AUTOMATIC STOP

This machine employs full release automatic stop wherein at the end of the tape, the head block completely separates from the tape and capstan. Protects tape and prevents pinch wheel wear.

PEAK CHECK

The GXC-760D is equipped with a Peak Check Switch. When this switch is depressed, the VU Meters are set to -8 dB (marked with red marker on VU Meters) in relation to a continuous 0 VU sinewave signal.

Therefore, adjustment of the peaking level of recording input signals can be accomplished as follows:

1. Adjust Recording Level Controls and set to position at which the normal recording level is "0" VU.
 2. Depress the Peak Check Switch and re-adjust so that only the heaviest peak parts reach, but definitely do not exceed, "0" on the VU Meter scales.
- * This feature is especially convenient for fine adjustment of pulsive input signal peaks (such as when recording from percussion instruments, etc.) so that the full dynamic range of the tape can be utilized without incurring distortion caused by over-recording.

SOUND MONITORING

For precise recording level adjustment, set Monitor Switch to SOURCE position and monitor signals through headphones while adjusting input level controls.

Dual monitoring can also be accomplished with this machine by switching the Monitor Switch to and

from TAPE and SOURCE to compare the signals being recorded with the input source. Separate recording and playback Dolby circuits extend this Dual Monitoring feature to cover Dolby recording as well.

For private headphone listening, connect stereo headphones and set Monitor Switch to TAPE position.

- * Set Monitor Switch to TAPE position for playback through a speaker system.
- * For monitoring during recording, the use of headphones is recommended.

SOUND MIXING

Independent line and microphone recording level controls and input jacks enable signals from microphones and from line sources to be blended and recorded simultaneously on the tape.

Connect microphones to Microphone Jacks and connect desired source to the Line Input Jacks. Follow recording procedure, adjusting both Line and Microphone Input Level Controls.

TIMER RECORDING

By using an external timer together with Akai Remote Control Unit RC-17 or RC-18, absentee recording can be accomplished with this machine. Connect Remote Control Unit to Remote Control Jack and properly load a tape. Plug in AC Cord through the external timer. Adjust input level following recording procedure and with the Power Switch turned ON and the Remote Control Unit REC and FWD Play Keys locked into recording mode positions, set timer, following manufacturers instructions. If timer is set to coincide with source timing, the GXC-760D will automatically begin recording according to setting.

* This machine features Automatic Stop which will be effected at the end of the tape.

HEAD CLEANING

It is important for the heads and the head block area to be kept clean at all times as dust adhering to these parts deteriorates sound quality.

1. Turn off Power Switch.
2. Remove cassette from receptacle.
3. Lift off cassette lid (with tape view window) by lifting upward.
4. Clean recording/playback and erase heads with a cotton swab stick dipped in Akai Cleaning Fluid