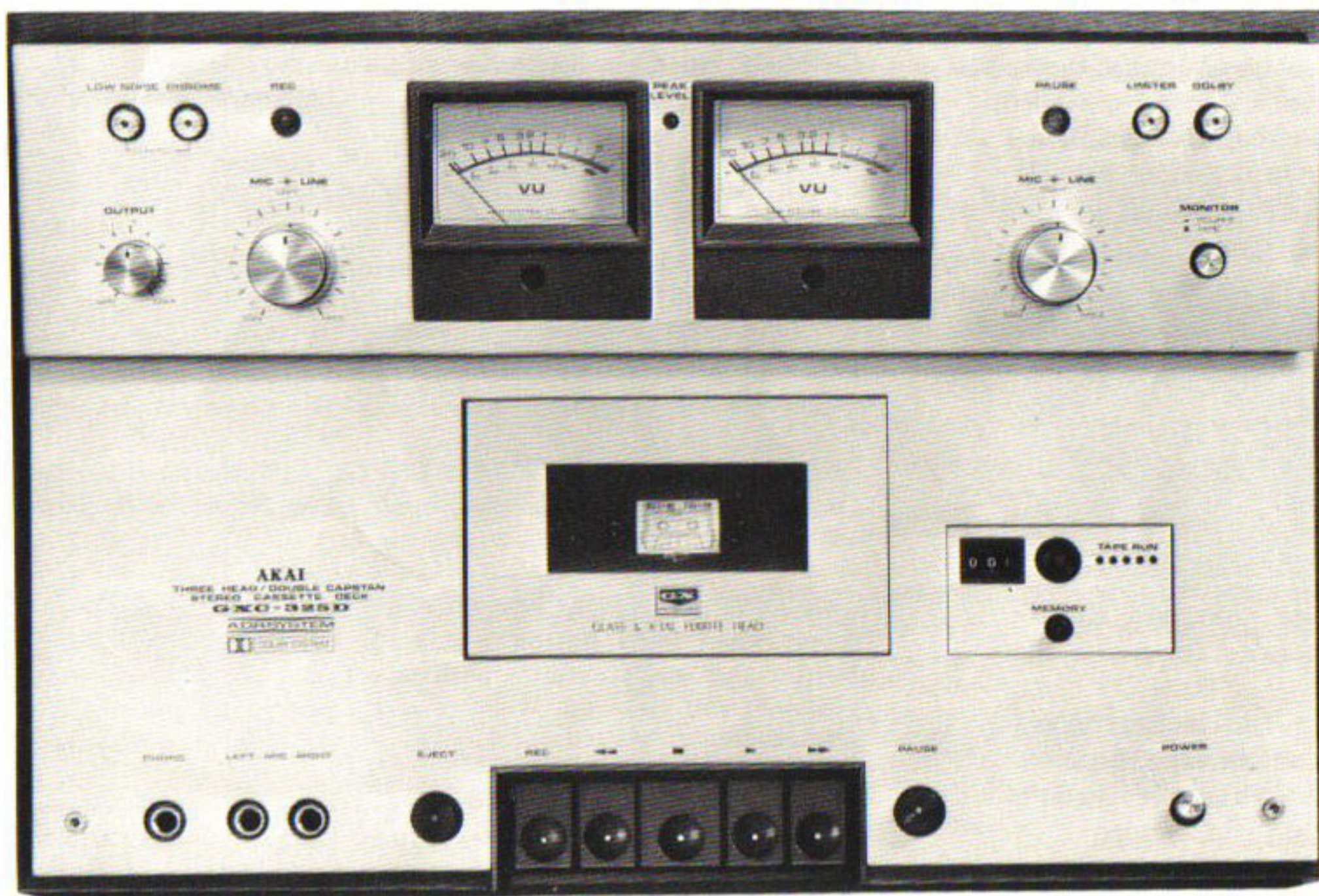


GXC-325D

CASSETTE STEREO TAPE DECK

OPERATOR'S MANUAL



CEE, CSA, UL, and LA standard models are not equipped with a Voltage Selector. Therefore, voltage conversion is not necessary. If your machine corresponds to any of these standards, please disregard all references to voltage adjustment throughout this manual.

CEE Models: 220V, 50 Hz

CSA Models: 120V, 60 Hz

UL and LA Models: 120V, 60 Hz

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

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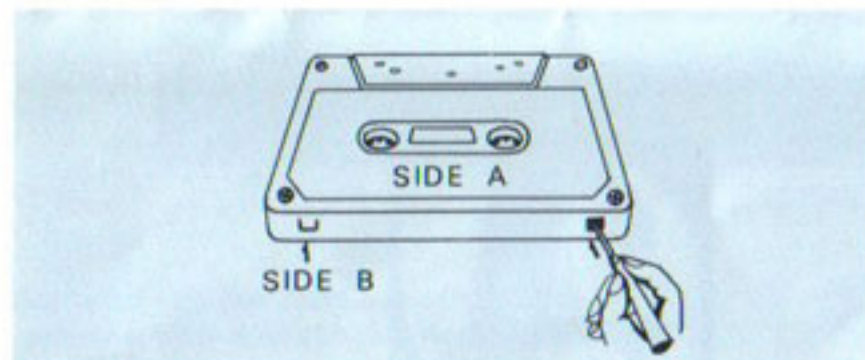
CONTROLS

OPERATE 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.
- * Before using a cassette tape, check to confirm whether tape slack exists. As tape slack causes the tape to twist or tangle around the pinch wheel and capstan, take up slack if necessary.



- * 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.



PEAK LEVEL INDICATOR

At normal recording, VU Meter response is usually accurate, but when pulsive signals enter, such as signals from percussion instruments, etc., response is slow and lower than actual volume is registered. This peak level indicator acts as a warning device by lighting at excessive input. Because, for recording with the least noise possible, it is advantageous to keep the recording level as high as possible not to exceed the level at which distortion occurs due to excessive input, for best recording results, the level range in which this light flickers at largest input parts only is most ideal. (This indicator lights at +7 dB above "0" VU).

TAPE SELECTOR SWITCHES

Depress LOW NOISE Switch when using low noise tape and depress CHROME Switch when using chromium dioxide tape.
 * Depressing these two switches simultaneously facilitates the use of new FeCr tape.
 * Low noise tape is standard for this machine. The use of ordinary tape will result in inferior performance.

RECORDING INDICATOR LAMP

Lights when REC Key is depressed.

OUTPUT LEVEL CONTROL

Adjusts output Volume at playback time.

LEFT MIC/LINE RECORDING LEVEL CONTROLS

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

CASSETTE RECEPTACLE LID (with Tape View Window)

Opens when Eject Button is depressed. To load a tape, depress Eject Button and insert cassette with tape facing the heads (toward front of machine) and close lid. When properly positioned, pressure from lid will set cassette.

EJECT BUTTON

Depress to eject cassette tape. Because the Eject Button will not operate during recording or playback mode, first depress the Stop Key and then the Eject Button.

MICROPHONE JACKS (Left/Right)

HEADPHONE JACK

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

RECORDING KEY

Depress this key and the Play Key simultaneously to effect recording mode.

REWIND KEY

Rewinds tape at high speed.

STOP KEY

Depress to stop tape travel.

PLAY KEY

Advances tape for playback or recording mode.

FAST FORWARD KEY

Advances tape at high speed.

AC CORD

VOLTAGE SELECTOR (CEE, CSA, UL and LA Models not equipped with this facility)
 See VOLTAGE CONVERSION procedure.

LEFT VU METER
 Indicates left channel recording and playback levels.

RIGHT VU METER
 Indicates right channel recording and playback levels.

PAUSE INDICATOR LAMP
 Lights to indicate Pause mode.

LIMITER SWITCH

Set this switch to ON position to limit recording input level and prevent over-recording and cut distortion when recording at a high volume level. Especially effective when recording from microphones at close range.

DOLBY NR SWITCH AND INDICATOR LAMP

Setting the Dolby NR Switch to ON position activates the Dolby circuit to raise low level signals before they are recorded and lowers them by precisely the same amount during playback, thus reducing the extraneous and superimposed noise, resulting in the reduction of tape hiss to a completely inaudible level.
 * When using a tape recorded with the Dolby process, it is necessary that the switch be set to ON position at playback also.
 * "Dolby" and the Double D symbol are trademarks of Dolby Laboratories, Inc. (Under license from Dolby Laboratories, Inc.)

TAPE MONITOR SWITCH

To monitor recorded signals or for playback, set to TAPE position, and 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 (dual monitoring) for a more professional recording.
 * Monitoring through a speaker system during recording cannot be accomplished when using the Din Jack; however, monitoring using headphones can be accomplished.

RIGHT MIC/LINE RECORDING LEVEL CONTROLS

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

TAPE RUN INDICATOR

This directional signal indicates tape direction and speed. Thus, confirmation of Play, Fast Forward, Rewind, or Stop mode can be determined at a glance.

MEMORY REWIND BUTTON

Set Index Counter to "000" and depress the Memory Rewind Button for automatic stop from Rewind at any place on the tape.

POWER SWITCH

INDEX COUNTER AND RESET BUTTON

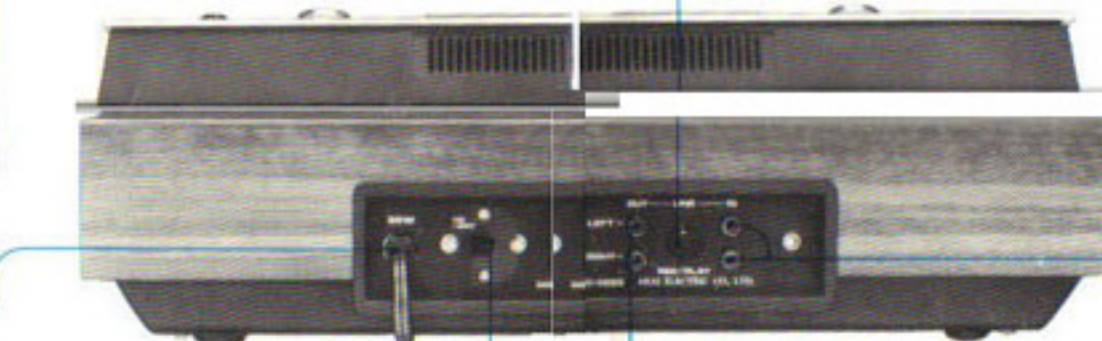
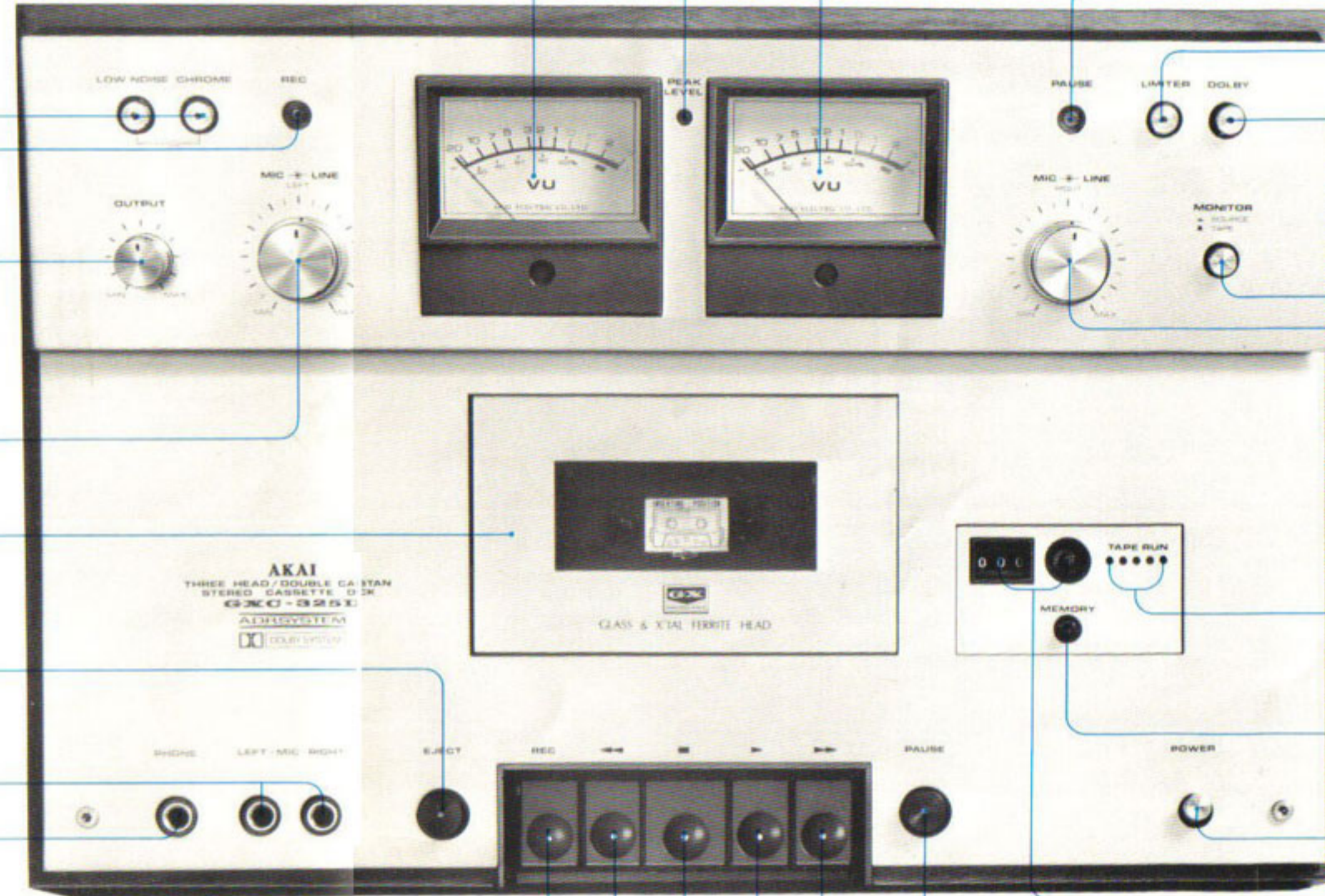
Tape indexing is made easy with this 3-digit Index Counter. Provides an easy reference for quickly locating positions on the tape. To reset to "000", depress Reset Button.

PAUSE BUTTON

Depress to momentarily suspend tape travel during recording or playback. Convenient for editing tape. Simply depress when a certain portion of the program is not desired. Depress again to release.

DIRECT FUNCTION CHANGE CONTROL SYSTEM

This model employs full direct function change control for speedy mode selection. The necessity of depressing the STOP Key prior to changing modes is eliminated.



DIN JACK

Enables inter-connection with an external amplifier through the use of a single Din connection cord.
 * Monitoring through a speaker system during recording cannot be accomplished when using the Din Jack; however, monitoring using headphones can be accomplished.

INPUT JACKS (Left/Right)

Connects to tape outputs of external source.

OUTPUT JACKS (Left/Right)

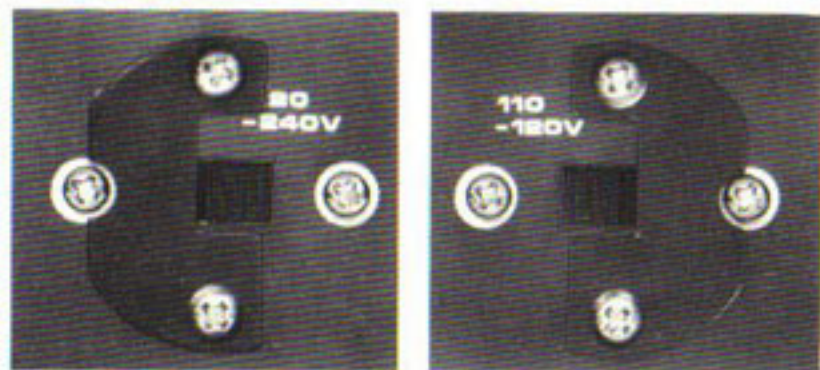
Connects to tape inputs of external amplifier or tape recorder.

INTRODUCTION

Your new GX Head unit 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-head system featuring 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.

VOLTAGE CONVERSION

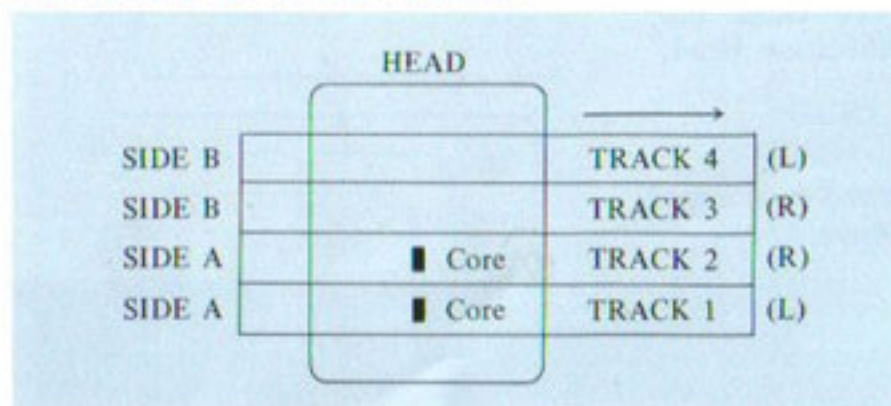
Your machine is equipped with a Voltage Selector which can be set to 110-120V or 220-240V AC. This Selector is preset at the factory according to destination. However, the operator is requested to reconfirm setting and, if necessary, reset as follows:



1. Remove Switch Holding Plate Screws and set switch to proper position according to area voltage.
2. Re-position Switch Holding Plate and re-install screws (plate covers voltage not in use).

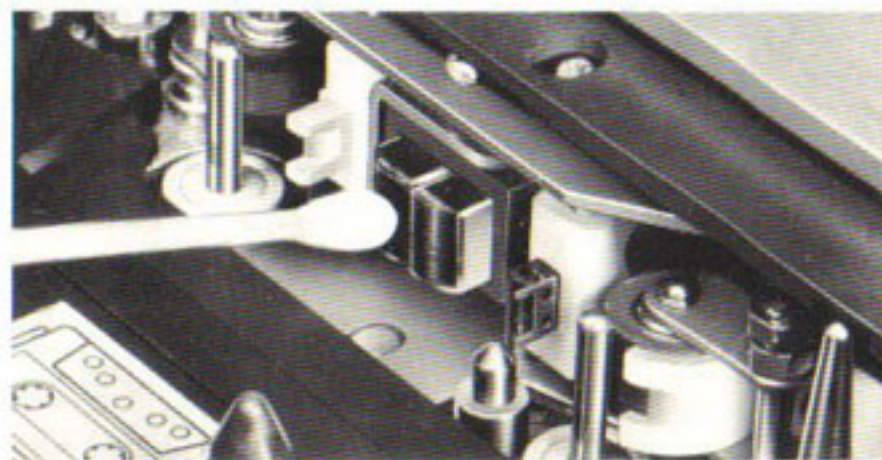
Caution: CEE, CSA, UL and LA Models not equipped with Voltage Selector.

CASSETTE TRACK SYSTEM

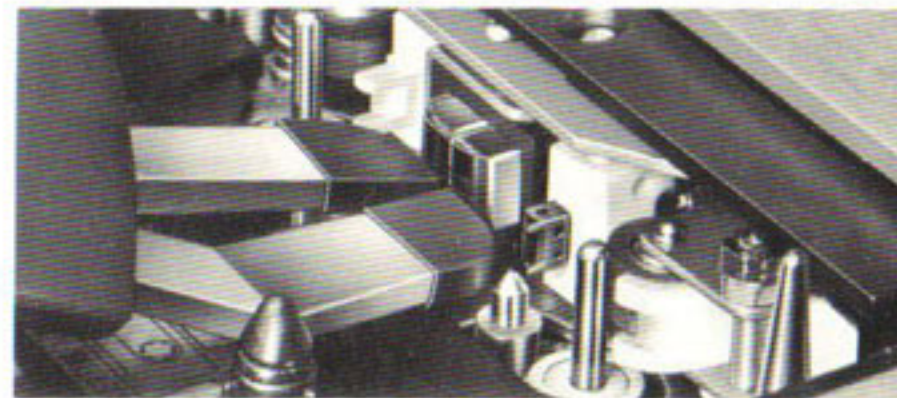


This model employs a 4-track recording/playback system. The first half of the stereophonic recording or playback takes place on tracks 1 and 2. The second half takes place on tracks 3 and 4 after the cassette tape has been inverted. Recording and playback depends upon the length of the tape (C-30, 30 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, when a stereo cassette is played on a monaural recorder, 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.

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 deteriorate sound quality. This model is equipped with GX recording and playback heads and, while GX Head cleaning is not normally necessary, if old tape or splicing tape, etc. is used GX Head cleaning is also recommended.



1. Turn off Power Switch.
 2. Remove cassette from receptacle and depress cassette holder to flat horizontal position.
 3. Remove cassette lid (tape view window) from cassette lid frame by bringing toward front of machine and lifting upward.
 4. With Play Key depressed, clean recording/playback and erase heads with a cotton swab stick dipped in Akai Cleaning Fluid (from Akai Head Cleaning Kit HC-500). Also clean pinch wheel and capstan and other parts over which the tape travels. (Heads are most accessible when facing the rear panel of the recorder).
- * If Akai Cleaning Fluid is not available, use alcohol. Do not use other chemical cleaners as the rubber parts will deteriorate.

HEAD DEMAGNETIZING

Normally, the steel pole pieces which form part of the recording and playback heads as well as parts over which the tape travels become slightly magnetized and as a result, the tape is partially erased at high frequencies. Therefore, head demagnetizing is recommended periodically.

1. Turn off Power Switch.
 2. Remove cassette from receptacle and depress holder plate to flat horizontal position.
 3. Remove cassette lid (tape view window) from cassette lid frame by bringing toward front of machine and lifting upward.
 4. With Play Key depressed, demagnetize heads and other parts which the tape contacts with a bulk Head Demagnetizer by bringing the prongs of the demagnetizer close to the heads and making small circular motions over the entire head block area. (Heads are most accessible when facing the rear panel of the recorder).
- * Do not bring the demagnetizer close to the VU Meters.

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.

LUBRICATION

Although the Motor of this model is sufficiently oiled for prolonged use, for maximum service and optimum performance, please take your machine to your local authorized AKAI agent for occasional lubrication.

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 Key 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. * Tape slack.	* Check power cord and Power Switch. * Take up slack as mentioned in OPERATING PRECAUTIONS.
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 level indicator as explained under CONTROLS.
Playback cannot be effected.	* Connections are incorrect. * Controls are not properly adjusted or positioned. * Pause Button is at depressed position.	* Check external amplifier controls. * Release
Recording will not take place.	* Dirty recording head. * Connections are incorrect. * Controls are not properly positioned or adjusted. * Pause Button is at depressed position.	* Clean head following head cleaning instructions. * Check external source controls. * Release

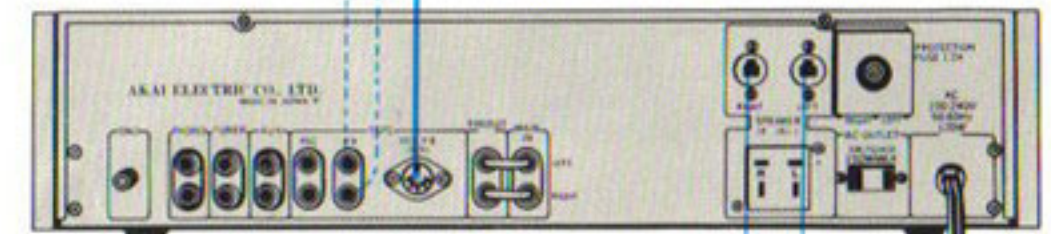
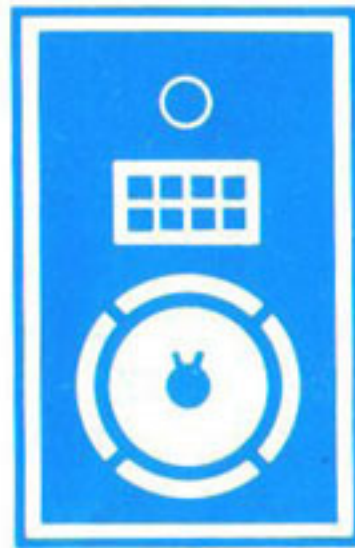
Should there be a problem with your machine, write down the model and serial numbers and all pertinent data regarding warranty coverage as well as a clear description of the existing trouble and contact your nearest authorized Akai Service Station or the Service Department of Akai Company, Tokyo, Japan.

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 Tape Monitor Switch to TAPE position.
 - D. Depress PLAY ► Key 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 ■ Key.



STEREO AMPLIFIER

The Din Jack can be used instead of the Line Jacks. This enables recording or playback with a single Din Cord.

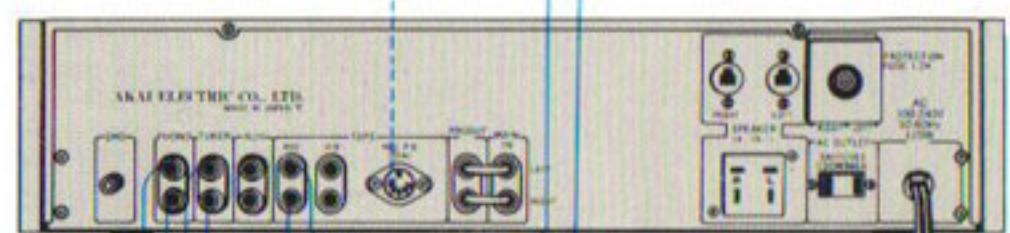
CONNECTIONS FOR RECORDING



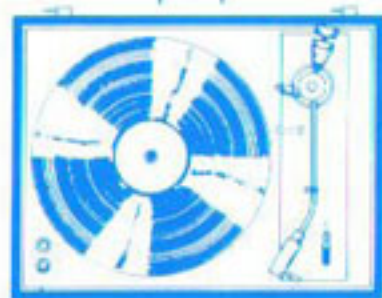
When using the Din Jack, recording input level is adjusted with Microphone Recording Level Controls.

When using the Din Jack, monitoring through the speaker system cannot be accomplished; however, monitoring using headphones can be accomplished.

Connect desired source with RCA/RCA connection cord.



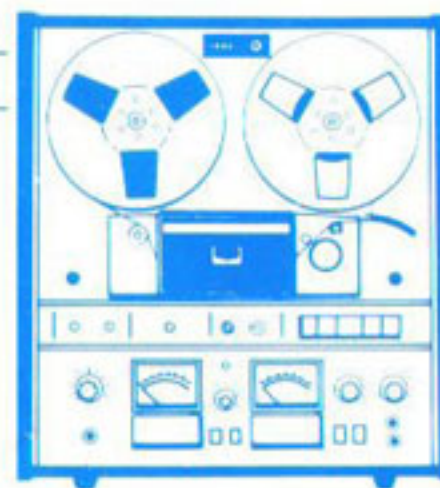
STEREO AMPLIFIER



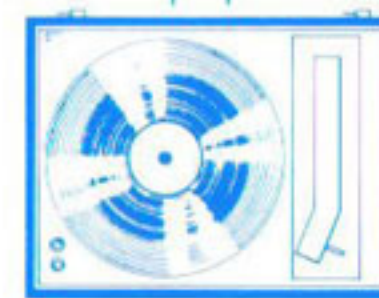
TURNTABLE WITH MAGNETIC CARTRIDGE



STEREO TUNER



STEREO TAPE RECORDER OR TAPE DECK



RECORD PLAYER WITH CRYSTAL OR CERAMIC PICK-UP

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 Tape Monitor Switch to SOURCE position.
 - D. Set Index Counter to "000".
 - E. Depress Recording (REC) Key.
 - F. Adjust and balance recording input level with appropriate Recording Level Controls while observing VU Meters.
 - G. When an optimum recording level has been determined, while holding the Recording (REC) Key at depressed position, depress PLAY ► Key to begin recording.
- * Automatic Stop will be effected at the end of the tape. To stop tape travel during recording, depress STOP ■ Key.
 - * Dual Monitoring (comparing signals just recorded with source) can be accomplished by switching the Tape Monitor Switch to and from TAPE and SOURCE positions. This enables more precise adjustment of input level for professional recording results.

MICROPHONE/LINE MIXING

Recording from two separate sources can also be accomplished with this machine. For this operation, connect microphones to Microphone Jacks and other source to Line Input Jacks. Follow above procedure, adjusting microphone input with Microphone Recording Level Controls and line input with Line Recording Level Controls.

- * Mixing can also be accomplished by using the Din Jacks and the Line Input Jacks. In this case, the Din input level is adjusted with Microphone Recording Level Controls.

TECHNICAL DATA

Track System	4 track 2 channel stereo system
Tape Speed	1-7/8 ips
Wow and Flutter	0.055% WRMS
Frequency Response	30 Hz to 15,000 Hz \pm 3 dB using Low Noise Tape; 30 Hz to 16,000 Hz \pm 3 dB using CrO ₂ Tape; 30 Hz to 19,000 Hz \pm 3 dB using Fe-Cr Tape
Distortion	Less than 1% (1,000 Hz "0" VU)
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	(2) : Three head system includes One Glass and Crystal Ferrite REC/P.B. combination Head, and One Ferrite Erase Head
Motors	(1) : A.C.Servo outer rotor motor.
Fast Forward and Rewind Time..	75 sec. using a C-60 Cassette Tape
Output Jacks	Line (2): 0.775 V ("0" VU). Required load impedance: more than 20 K ohms Phone (1) : 30 mV/8 ohms
Input Jacks	Microphone (2): 0.3 mV/8 K ohms Line (2): 70 mV/100 K ohms
Din Jack	0.775 V/2 mV
Semi-Conductors	Transistors 60, Diodes 51, FETs 4, IC 1
Power Requirements	U.S.A. and Canada (CSA, UL, and LA) Models: 120 V, 60 Hz only. CEE Models: 220 V, 50 Hz only. Other Models: 110 to 120 V/220 to 240V, 50/60 Hz (Switchable).
Power Consumption	30 W
Dimensions	442(W0 x 142(H) x 301(D)mm (17.4 x 5.6 x 11.9")
Weight	8.6 Kg (18.9 lbs)

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

STANDARD ACCESSORIES

Connection Cord	1
Operator's Manual	1



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AKAI ELECTRIC CO., LTD.
AKAI TRADING CO., LTD.

12-14, 2-chome, Higashi-Kojiya,
Ohta-ku, Tokyo, Japan

AKAI AMERICA LTD.

2139 E. Del Amo Blvd., Compton, Calif., 90220, U.S.A.
TELEPHONE:(213) 537-3880
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