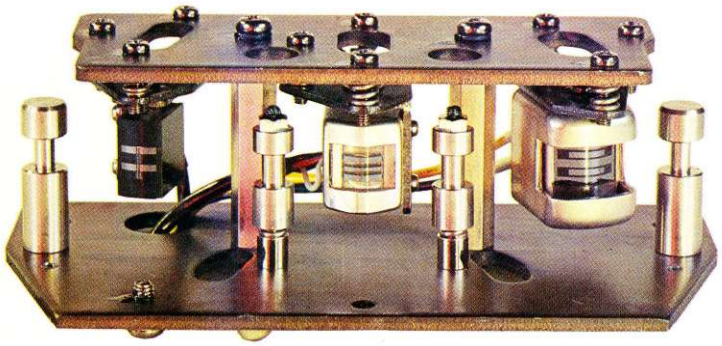
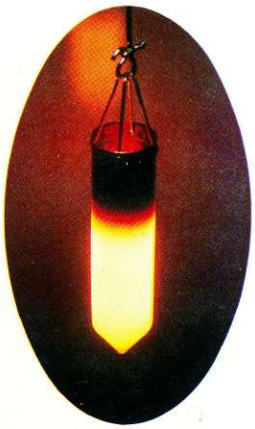
AKAI GX-650D STEREO TAPE DECK

A close look at performance specifications will confirm your opinion of the sound quality exhibited by this 3 Head, 3 Motor stereo tape deck. Efficient Closed Loop Double Capstan AC Servo Motor system. Quality parts and precise processing throughout.



GX HEAD CLOSED LOOP DOUBLE CAPSTAN SYSTEM. WIDE 30 TO
NOISE RATIO BETTER THAN 58 DB. WOW/FLUTTER LESS THAN 0.

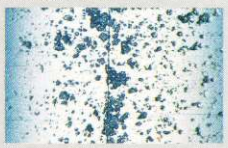




Platinum crucible during AKAI's ferrite melting process



Gap environs of crystal ferrite head



Gap environs of poly-ferrite head

After equal use (enlarged to 800 times actual size)

BETTER SIGNAL-TO-NOISE RATIO, EXTENDED HIGH FREQUENCY AND A MORE DYNAMIC RANGE WITH AKAI'S GX HEAD

The recording and playback heads of this model are Akai's famous GX (glass and crystal ferrite) heads. The non-porous characteristic of this special crystal ferrite material means that there are no particles to eventually separate and cause head gap damage. This material also permitted construction of a perfectly lineal, shallow head gap and an acute head surface angle contour for a sharply focused magnetic field. This special processing resulted in a system which eliminates sound drop-out, improves head sensitivity, and minimizes high range loss for a more dynamic range with vastly improved high range frequency characteristics. Also signal-to-noise ratio is improved and distortion minimized. Further, the core of the GX Head is mounted and set in glass of the same extraordinary hardness and wear-free features for lasting new machine performance.

3 SPEED PROFESSIONAL SYSTEM

The GX-650D operates on 15, 7-1/2, and 3-3/4 ips tape speed. 15 ips tape speed, top quality parts and performance specifications, and 10-1/2" reel capacity assure professional recording results with the utmost in convenience.

FEATHER-TOUCH DIRECT FUNCTION CHANGE CONTROL

Feather-touch controls feature instantaneous direct function change control. The necessity of depressing the Stop Button prior to changing operating mode is eliminated. Direct function change to recording mode enables easy add-on recording.

3 MOTOR SYSTEM INCLUDES SELF-LUBRICATING AC SERVO MOTOR FOR CLOSED LOOP DOUBLE CAPSTAN DRIVE

• electronic governing circuit

Akai's exclusive CPG (center pole generated) system inner-rotor AC Servo Motor is employed in this model for double capstan drive. With this system, the voltage supplied to the stator winding is pulse detected and precisely controlled for stabilized motor revolutions and constant tape speed. The use of this powerful electronic governing circuit not only means that proper revolutions, unaffected by external load conditions as well as ideal torque is attained, but also that perfect protection from hum is realized for quiet motor operation.

• precise processing

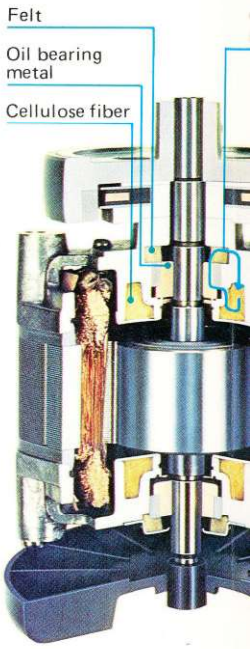
Precise processing of parts, and especially the motor shaft, also contributes to smooth revolutions and endurance. The motor shaft of this model exhibits a 60 degree hardness (Rockwell C scale) and a 0.10μ (10/100,000 mm) degree of roundness. Surface roughness is less than 0.5μ.

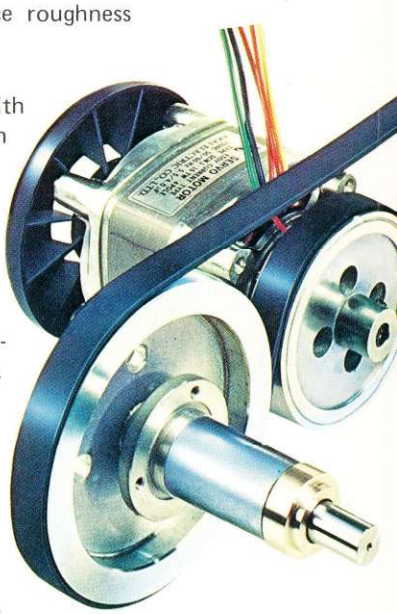
• self-lubricating

Two oil circulating mechanisms with cellulose fibers are installed within the interior of the motor. This oil-circulating system assures smooth and stable shaft revolutions. Also, because oil circulating speed is adjusted naturally according to motor revolutions and temperature, trouble resulting from oil circulation suspension does not occur.

• oil purified in cleaning process

The cellulose fibers also function as filters to keep the oil clean during the circulating process, adding to revolutionary long lasting performance. Two 6-pole eddy current anti-vibration outer rotor reel drive motors complete the perfect drive system of this model.

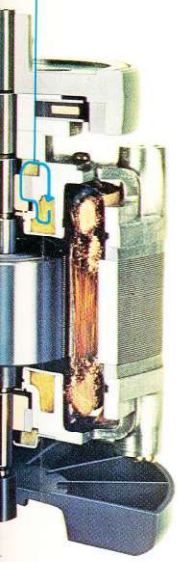






TO 30,000 HZ FREQUENCY RESPONSE. SIGNAL-TO-0.04% RMS. DISTORTION LESS THAN 0.4%.

AKAI



CLOSED LOOP DOUBLE CAPSTAN SYSTEM REDUCES WOW AND FLUTTER TO 0.04 % RMS

This model employs a unique closed loop double capstan drive system. With this system, 2 each capstans and pinch rollers are utilized. One each is positioned on either side of a symmetrically designed head block. Thus, adverse influence from outside of the "closed" area between capstans is shut out for stable tape travel and perfect head-to-tape contact. Tape tension levers on either side of the head block also contribute to tape stability. Wow and Flutter reduced to 0.04 % RMS at 15 ips.

SUPERIOR SYSTEM CONTROL SECTION

The system control section, including the recording head switching mechanism, is comprised of 6 relays and 4 plungers and a logic circuit which drives them. Because, to avoid clicking noise, all the parts employed, including the solenoids, are silencer type parts, unpleasant shock noise is eliminated. This system works integrally with the other many superior mechanisms of the GX-650D for attaining professional performance.



TOP GRADE CIRCUITRY IN AMPLIFIER SECTION

The recording amplifier section, including a constant and stable voltage circuit as well as first stage equalizer, is of top grade design. The playback amplifier employs a PNP-NPN type transistor direct coupled circuit for low noise and a more dynamic margin.

DUAL MONITORING

The 3 head system and a Tape/Source Monitor Switch facilitate dual monitoring (comparing the recording being made with source signals during recording) for more professional recording results.

AUTOMATIC STOP

Automatic stop is effected at the end of the tape or in case the tape should be accidentally broken. Especially convenient if the machine is left unattended.

TAPE SELECTOR SWITCH

A Low Noise/Wide Range Tape Selector Switch sets the equalization according to the tape being used.

SOUND MIXING

A built-in microphone and line mixing circuit and independent line and microphone recording level controls and input jacks enable signals from separate sources to be blended and recorded simultaneously on the tape.



SOUND-ON-SOUND RECORDING

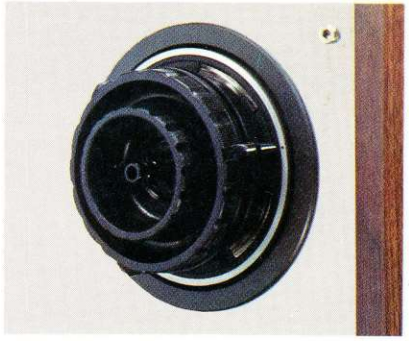
Accumulate as many recordings on a single track as is desired with Sound-On-Sound! The technique of recording on one channel while transferring monitored sound from the other is unique and easy to accomplish. Convenient for language training or interesting musical compilations.

QUICK PAUSE CONTROL

Pause Control is especially convenient for editing tape. When this switch is depressed, tape travel is suspended. However, the tape remains in contact with the head for a quick and smooth re-start.

REEL SIZE SELECTOR AND QUICK TENSION FEATURE



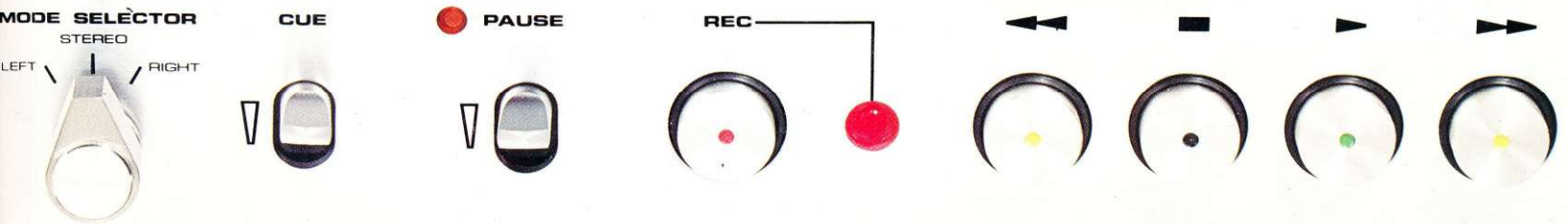


A Reel Size Selector which provides ideal take-up and back tension according to the size of reel being used, and standard accessory 10-1/2" Reel Hub Adapters enable the use of 10-1/2, 7, or 5" reels. Adjustable adapters are designed to accommodate metal or plastic reels with the same degree of stability. Further, a quick-tension mechanism supplies momentary high voltage to the reel motors at tape start time, preventing tape slack, etc.

CONNECT WITH ANY AMPLIFIER

Output Level Controls enable adjustment of output level to match amplifier input. Facilitates connection with any amplifier.

CONVENIENT LIFT-UP HEAD COVER FOR EASY HEAD BLOCK ACCESSIBILITY



AKAI

REMOTE CONTROL OF ALL OPERATING FUNCTIONS

A rear panel remote control jack accommodates Akai optional accessory Remote Control Unit RC-17 or RC-18 for remote control of all operating functions. Absentee recording can also be accomplished by using Model RC-17 or RC-18 Remote Control Unit together with a timer.





TECHNICAL DATA

Track System	4 track, 2 channel stereo/monaural system
Reel Capacity	Up to 10-1/2" reel
Tape Speed	15, 7-1/2 and 3-3/4 ips (±0.5%)
Wow/Flutter	Less than 0.04% RMS at 15 ips. Less than 0.055% RMS at 7-1/2 ips. Less than 0.07% RMS at 3-3/4 ips.
Frequency Response	30 to 30,000 Hz ± 3 dB at 15 ips using Akai LN-150 tape 30 to 26,000 Hz ± 3 dB at 7-1/2 ips using Akai LN-150 tape 30 to 20,000 Hz ± 3 dB at 3-3/4 ips using Akai LN-150 tape
Distortion	Less than 0.4% at 15 and 7-1/2 ips (1,000 Hz "0" VU) Less than 0.9% at 3-3/4 ips (1,000 Hz "0" VU)
Signal-to-Noise Ratio	Better than 58 dB (measured via tape with peak recording level of +6 VU)
Erase Ratio	Better than 70 dB
Bias Frequency	150 kHz
Heads	(3): One GX Playback Head, one GX Recording Head, and one Erase Head
Motors	(3): One AC Servo Motor for capstan drive, and two Eddy Current Motors for reel drive
Fast Forward and Rewind Time	120 sec. using a 2,400 ft tape
Output Jacks	Line (2): 0.775V (0 VU). Required load impedance: More than 20 k ohms Phone (1): 30 mV/8 ohms
Input Jacks	Microphone (2): 0.3 mV/Required microphone impedance: 600 ohms Line (2): 80 mV/100 k ohms
Semi-Conductors	Transistors 72, Diodes 61, IC 1
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	524 (H) x 442 (W) x 258 (D) mm (20.6 x 17.4 x 10")
Weight	26.2 kg (57.6 lbs)

STANDARD ACCESSORIES

Empty Reel (R-10M)	1
10-1/2" reel hub adapters	1 set
Connection Cords	1 set
Operator's Manual	1

RECOMMENDED OPTIONAL ACCESSORIES

Condenser Microphones	ACM-300 ACM-200 ACM-100
Electret Condenser Headphone	ASE-80C
Dynamic Type Headphones	ASE-26 ASE-24 ASE-22 ASE-20
Remote Control Unit	RC-18 RC-17
Dust Cover	DC-230
Tape Splicing Kit	SK-750
Cleaning Kit	HC-550

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

C04M7631076D1

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Compton, Calif., 90220, U.S.A.
TELEPHONE: (213)537-3880
TELEX: 67-7494

MANUFACTURED & DISTRIBUTED BY
AKAI ELECTRIC CO., LTD.
AKAI TRADING CO., LTD.
12-14, 2-chome, Higashi-Kojiya,
Ohta-ku, Tokyo, Japan

Printed in Japan