

# AKAI



**System M800/System M600/System M400/  
System M393/System M373/System M353/  
System M333/System M230/GX-95/GX-75/GX-W45/  
GX-R35/GX-65/GX-32/HX-25W/CD-73/CD-62/  
CD-55/CD-25/AM-95/AM-75/AM-65/AM-55/AM-35/  
AM-25/AM-15/AT-93/AT-56/AT-25/AA-V25/EA-25/  
AP-A305/PJ-W29CD/PJ-W28SR/PJ-W59/AJ-W279/  
AJ-W259/AJ-R219/AJ-209/PM-R9/8**

## Audio '90-'91

Akai—Creative At Heart.

# Setting New Standards of Excellence for the Entire Industry — and Reaching New Levels of Enjoyment for Every Music Lover and Audio Enthusiast



The history of Akai is a roll of honourable achievements over 60 years long, where innovation and engineering excellence are a tradition. Now, in the new era of digital programme sources, Akai's mastery of electronic engineering and unique audio knowhow is the motive force behind our prestigious Reference Series and the dramatically different FX-Series. Akai is proud to offer a range of audio equipment that in features, performance and sheer musicality, is showing the way ahead for the audio industry.



# Separate Digital Components, Optically Linked



## System M800

Akai's advanced digital technology gives the M800 System its unique ability to make CDs and other digital sources sound their incredible best. Take the AM-M800 super-amp. It's packed with state-of-the-art digital and audio engineering advances. Then there is the Optical Linkage of the separate components, transferring the pure digital sound along a beam of light to the digital amplifier, free from noise and distortion. And then there is the digital intelligence that lets the system talk to you — from a friendly greeting when you switch on, through helpful prompts on how to operate the controls, to a final "See you again" when you switch off. Plus full wireless remote control. The AM-M800 Super-Amp is a digital masterpiece with twin digital-to-analogue (D/A) 18-bit

### System M800

Digital Integrated Amplifier: AM-M800  
 Quartz Synthesizer Tuner: AT-M600/L  
 Compact Disc Player: CD-M600  
 Dual Cassette Deck: HX-M800W  
 Fully Automatic Turntable: AP-M600  
 3-Way Speaker System: SR-H770\*  
 Graphic Equalizer: EA-M800\*\*

\* Speaker systems may differ in certain markets.  
 \*\* Optional

superconverters — one for each stereo channel — that give an accurate and sharply detailed stereo "image." The digital filters also use 18-bit data processing, two more than the 16 bits of the digital signal. The two "extra" bits increase fidelity four-fold.

These eight-times oversampling digital super-filters multiply the sampling frequency by eight, making each digital "step" that much smaller, and therefore much closer to the smooth original signal, and lifting noise way out of the audible frequency range. The system is ready now for DAT decks and direct broadcast satellite (DBS) signals, with



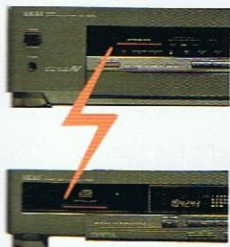
three separate digital inputs and automatic switching between sampling frequencies. The super-power output — 900 Watts (peak music power output or PMPO) from each channel — gives tremendous reserves of power for realistic listening levels.

# linked into Superb Intelligent Systems

Akai's own Dynamic Turbo Equalizer combines "loudness" compensation for realistic reproduction at low listening levels with the "stereo wide" function that gives a concert hall effect. Finally, ample power and the choice of two different A/B speaker systems let you spread enjoyment to a different area of a large room or even to an adjoining room.



The Digital-Optical Link is incomparably the best way to ensure complete purity of sound. It avoids the losses and noise that can affect analog links, and the digital noise generated if the CD digital output is transmitted electrically. The Digital-Optical Link Display is an



attractive feature that reminds you of the optical advantage with a moving pattern of light that links the CD player with the digital amplifier... The intelligent CD Auto-Edit function gives you three options to prepare cassettes from CDs – including the best tracks from several of your top CDs – for car-audio use. You can even use programme selection to make it easier.

**Fade:** This keeps the same track order as your CD, and when all of a track cannot be fitted onto side one, fades it out and restarts it from the beginning on side two.

**Time:** If the next track will not fit into the remaining time on either side of the cassette, another track that does fit will be recorded if possible.

**Cross:** This fades one track out and fades the next track in. It also fits in shorter tracks whenever necessary and possible.

All three functions can be used with programmed CD playback, and will operate in the same way: i.e., with Time and Cross, the selected programme order will be changed if a better "fit" is possible.

The large, 10-character display on the Intelligent Tuner normally shows station frequencies but doubles as a window into the "mind" of this intelligent system, asking questions and giving replies.

Intelligent Station Memory combines Auto Tuning with 24 preset memories to store stations automatically for

instant access—a convenience you will love.

Conventional Auto Tuning and manual preset of individual stations is also possible.

The multi-program timer allows for absent recordings, alarm-clock settings, or automatic switch off after you've given yourself time to get to sleep. Comments from the tuner help to simplify timer setup.

The superb double-cassette dual-reverse deck offers everything the most demanding audio enthusiast could need: Recording and auto-reverse on both drives; Both the popular Dolby B noise reduction system and the more advanced Dolby C NR system; Full-logic control, giving rapid and positive response with only the lightest of touches; Full remote control of all main functions. The three-way SR-H770 speaker system's woofer, midrange and tweeter units cover the entire audio spectrum, from the firm underpinning of ultra-deep bass to the brilliant sheen of the strings and brass, for truly excitingly realistic sound. Bass-reflex design for enhanced low-frequency response.

## Optional Components

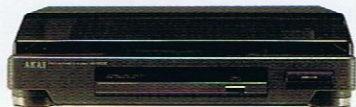
### EA-M800 Graphic Equalizer

A superb and flexible unit for the ultimate in personally tailored audio control. Ideal for recording cassettes with frequency response matched for car-audio use. (For M800/M600 only)



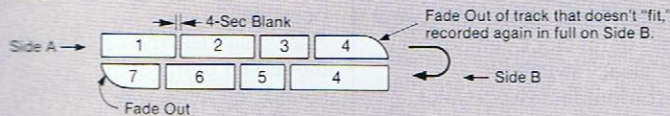
### AP-M600 Turntable Unit

A fully automatic unit with record size sensor for playback at the touch of a button. High-performance phono cartridge helps even older LPs and 45 rpm EPs to sound their best.

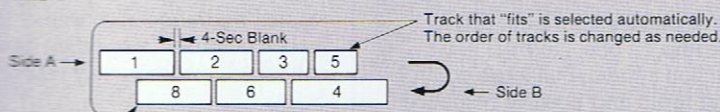


## Intelligent CD Edit M800/M600/M400

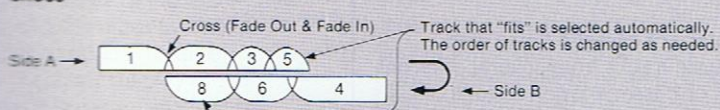
### FADE



### TIME



### CROSS





## System M600

### System M600

Digital Integrated Amplifier: AM-M600 Quartz Synthesizer Tuner: AT-M600/L  
 Compact Disc Player: CD-M600 Dual Cassette Deck: HX-M600W  
 Fully Automatic Turntable: AP-M600 3-Way Speaker System: SR-H580\*  
 Graphic Equalizer: EA-M800\*\*

\* Speaker systems may differ in certain markets.  
 \*\* Optional

The AM-M600 digital amplifier, like the AM-M800, is packed with state-of-the-art digital and audio engineering advances like twin 16-bit digital-to-analogue (D/A) converters – one for each stereo channel. Then there are the 16-bit D/A converters that use a four-times oversampling digital filter to multiply the sampling frequency by four, making each digital 'step' that much smaller, and therefore much closer to the smooth original signal, and lifting noise way out of the audible frequency range. Output power is also generous, with 700 W PMPO from each channel. The Digital-Optical Link is incomparably the best way to ensure complete purity of sound. It avoids the losses and noise that can affect analog links, and the digital noise generated if the CD digital output is transmitted electrically. The Digital-Optical Link Display is an attractive feature that reminds you of the optical advantage with a moving pattern of light that links the CD player with the digital amplifier. . . As the attractive, eye-catching display Digital Optical Link draws

attention up from the CD player to the digital amp, so the glorious, optically pure CD sound begins. The large, 10-character display of the Intelligent Tuner that normally shows station frequencies doubles as a window into the 'mind' of this intelligent system, asking questions and giving replies. Intelligent Station Memory allows you to combine Auto Tuning with 24-station preset memory – a convenience you will love. Multi-program timer allows for absent recordings, alarm-clock settings, or automatic 'sleep' switch off. This superb double-cassette deck offers everything the most demanding audio enthusiast could need: Auto-reverse playback on both drives, recording on one; Dolby B noise reduction system; Full-logic control, giving rapid and positive response with only the lightest of touches, and full remote control of all main functions. To prepare cassette tapes with favourite tracks from several different CDs, or cassette-tape versions of CDs for car-audio use, the intelligent CD

Auto-Edit Functions are a real attraction. There are the same three options as the M800: Fade, Time, and Cross. **Fade:** Keeps the same track order as your CD, restarting a track on side two when all of it will not fit at the end of side one. **Time:** Substitutes a track that will fit in remaining time for one that will not. **Cross:** Fades one track out and fades the next track in. It also fits in shorter tracks whenever necessary and possible. Especially designed to do justice to the digital purity of the System M600 sound, the three-way SR-H580 speakers offer the realistic sound that only a combination of cone-type woofer, midrange and tweeter units makes possible. Bass-reflex design for enhanced low-frequency response.



### System M400

Digital Integrated Amplifier/Dual Cassette Deck/Graphic Equalizer: AX-M400  
 Quartz Synthesizer Tuner: AT-M400/L Compact Disc Player: CD-M600  
 Fully Automatic Turntable: AP-M600 3-Way Speaker System: SR-H580\*

\* Speaker systems may differ in certain markets.

## System M400

The AX-M400 digital amplifier is packed with the latest digital and audio engineering advances like: Twin digital-to-analogue (D/A) converters – one for each stereo channel.

Ample power output – 600 W PMPO from each channel – for impressive listening levels.

"Surround" speaker outputs give tremendous sense of space in playback with optional AE-S91 speakers.

Built-in Graphic Equalizer provides complete control of sound quality – highly recommended for recording with the emphasised bass response needed for car audio.

Built-in dual-cassette deck (see below).

Optical linkage between CD player and amp is an established Akai advantage, proven in three product generations. You will appreciate both the crystal clarity of the CD sound quality and the attractive visual reminder of optical linkage.

The 5-character display of the Intelligent Tuner normally shows station frequencies but doubles as a

window into the "mind" of this intelligent system, asking questions and giving replies. Those longer than this "scroll" past the window at an easily readable speed.

Note the friendly power-on greetings: "Good Morning," "Good Afternoon," and even "Zzz, Zzz" for the hours after midnight.

Intelligent Station Memory allows you to combine Auto Tuning with 24-station preset memory – a convenience you will love.

The multi-program timer allows for absent recordings, alarm-clock settings, or automatic "sleep" switch off.

This superb double-cassette deck, built into the amplifier, is a key sales feature: Recording from one cassette to the other is simplicity itself; Dolby B noise reduction; Full-logic control, giving rapid and positive response, with only the lightest of touches, under computer control; Full remote control of all main functions.

To prepare cassette tapes with favourite tracks from several different CDs, or a cassette-tape version of a CD for car-audio use, the intelligent

CD Auto-Edit functions are a real attraction. There are the same three options as the M800: Fade, Time, and Cross.

The same high-quality speakers as are used with the System M600, the three-way SR-H580 speakers offer the realism that only a combination of cone-type woofer, midrange and tweeter units makes possible. Bass-reflex design for enhanced low-frequency response.

### Optional Components (M400 only)

#### AE-S91 Surround Speakers

Akai's unique backloaded horn design gives an exciting sense of space that turns the smallest room into a concert hall, with enhanced bass response, too!





## System M393

600 Watts Peak Music Power Output\*\* amplifier puts earthshaking power at the heart of System M393 for the dynamic range of today's music sources. Power that takes full advantage of the digital clarity of compact discs. The 16-bit CD player not only offers startling sound reproduction, its built-in auto functions make operations quick and easy. Double cassette deck gives continuous listening plus high-speed dubbing. Superb tuning accuracy and reception on the PLL synthesizer tuner puts 12 preselected stations at your fingertips (6 each on FM and AM plus 6 more on LW for the 'L' model). Sound can be tailored to reflect your tastes with the 5-band graphic equalizer. Semi-automatic turntable gives superb reproduction of your existing record collection. Rounding out System M393 are the three-way SW-M393 speaker systems, that deliver robust sound with a powerful bass, positive midrange and lustrous highs.

### Features that guarantee satisfying listening:

- Wireless remote control of power on/standby, volume, functions, CD operation, tuner waveband and

- preset station selector.
  - LED power level output display
  - Motor-driven volume control
  - CD repeat (One/All/A→B)
- \*\* 30 Watts × 2 power output (RMS).

## System M373

The 500 Watts (PMPO)\* amplifier is the dynamic centre of a system that offers the best of CDs, cassettes, records and broadcast music.

- 5 Preset stations per band (10 for

FM/AM AC-M373; 15 for FM/MW/LW 'L' type and FM/MW/SW 'S' type)

- Remote control of power on and standby, volume and tuner preset scan tuning
  - 5-band graphic equalizer
  - Amp power level LED indicator
  - CD repeat, 16-selection programme, random access and music calendar
  - High-speed dubbing
  - Semi-automatic turntable for maximum enjoyment of your record collection
  - Two-way SW-M373 speaker system for powerful bass and lustrous highs
- \* 25 Watts × 2 power output (RMS).





SW-M373 2-way speaker system gives satisfyingly powerful bass, tight midrange and shimmering highs. Wireless remote control gives you the convenience of instant power on/standby, volume control and preset scan tuning from the comfort of your chair. An optional semi-automatic turntable (AP-M353) extends the advantages of System M353 and System M333 to your record collection.

- LED power indicators
- \* 25 Watts  $\times 2$  power output (RMS).



## System M353/M333

Two striking systems that complement Akai's technological expertise with handsome, softly curved exteriors that look good anywhere. The spirited power of full-blooded 500 Watts (PMPO)\* amplification produces awesome power across the dynamic range. The double-cassette deck gives long hours of non-stop music with sequential play from Tape I to Tape II. High-speed dubbing cuts tape-to-tape editing time by half. Superb tuning accuracy in the PLL synthesizer tuner offers one-touch access to 5 preset stations per band (15 for FM/MW/SW AC-M353S/M333S).

Flexible bass and treble control in the 5-band graphic equalizer makes music sound the way you want it to. System M353's compact disc player features a high-performance 16-bit 3-beam laser pickup for enjoying the purity of digital sound. Auto functions include a 16-selection programme.



## System M230

For its combination of power and simplicity, System M230 can't be beaten.

- 280 Watts (PMPO) amplifier with 3-band graphic equalizer
- Wireless remote control
- Double-cassette deck with sequential play and high-speed dubbing
- 2-Band (FM/AM) tuner
- 2-Way speaker system (SW-M230)
- Optional semi-automatic turntable (AP-M353)

\* 10 watts  $\times 2$  power output (RMS).



# Cassette Decks that bring out the best in

*Reference Master*



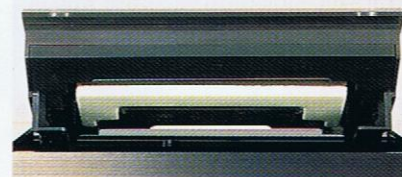
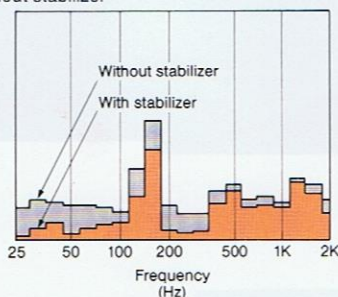
## GX-95

Stereo Cassette Deck

A range of useful features, superb performance and breathtaking sound. That's the Reference Master GX-95. A technological masterpiece and the culmination of Akai's experience in building high quality cassette decks. The design philosophy behind the GX-95 is simple – a cassette deck that achieves the ultimate in signal purity. The first step to its realization was elimination of electronically induced noise, by mounting the power supply, tape transport mechanism, microprocessor circuitry, bias oscillator, display and amplifier circuits in separately enclosed housings. The next to suppress vibration in the cassette itself. Sheet

steel and aluminium is bonded with Sorbothane, a newly developed material, to create a vibration-absorbing cassette stabilizer that cuts the modulation that lowers high-frequency performance. The tape transport system incorporates a "Dual Wide" ceramic composite tape

Comparison of cassette performance with and without stabilizer



Vibration-absorbing Sorbothane cassette stabilizer

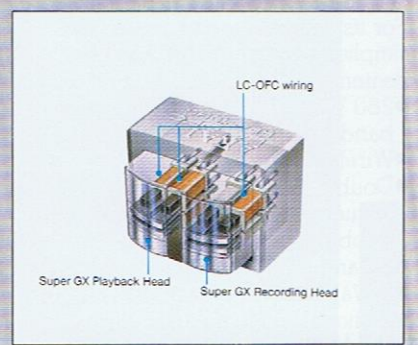
guide for extra-stable running that further damps vibration. Conventional capstan design is surpassed by the closed loop direct drive double capstan system. Flyhole radius is optimized, and different capstan shaft diameters avoid spurious resonance. The shafts are finished with inverse surface coarseness and improves tape grip.

## Super GX Head with LC-OFC

A 3-head system is definitely the choice of those desiring the very finest reproduction available from a home stereo component system. It has completely separated gaps – one exclusively for recording and another exclusively for playback. And Akai was able to optimize the design for truly excellent performance. A four micron recording gap-width and a one micron playback gap-width optimize magnetic field-strength during recording, assuring broad frequency response characteristics during playback with virtually no azimuth

loss.

The Twin Field Super GX Head also has separated gaps for recording and playback. Therefore the performance is almost equal to a 3-head system except for monitoring of the just-recorded signal. Linear Crystal Oxygen-Free Copper used in wiring reduces signal transmission distortion and provides better electrical linearity. This gives better recording purity, extended frequency response and wider dynamic range for rich resonance, the feeling of live sound.



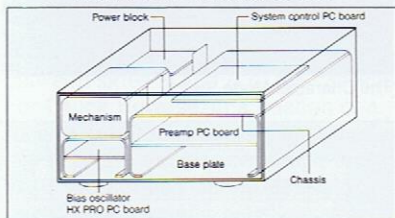
# taped music



Transport mechanism with new ceramic composite tape guides

The care devoted to the electronic circuitry matches the quality of construction. To preclude feedback loops, the equalization circuits, headphone amplifier and left- and right-channel Dolby circuits all have separate stabilized power sources. The DC amplifier construction does away with coupling capacitors that can degrade sound, and the amp section is fitted with a separate dedicated transformer that guarantees the power reserves needed for large signal peaks.

Separate Block Construction:  
All parts are individually housed

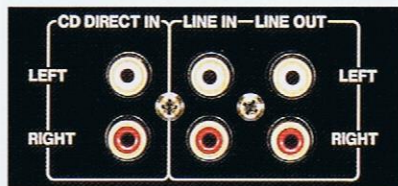


To assure veracity in recording, Akai's exclusive Super Bias system raises the recording bias from 100 kHz to 250 kHz, avoiding resonances with

high-order harmonics that can adversely affect quality. With the GX-95, you can even calibrate the bias and recording levels separately with built-in oscillators that provide reference frequencies of 400 Hz and 8 kHz. Recording from digital sources is enhanced by dedicated inputs that bypass the internal amp stage, eliminating yet another potential source of distortion.

Playback sound quality is immaculate. Akai's Super GX 3 Head System ensures a high quality music signal with LC-OFC (Linear Crystal Oxygen-Free Copper). LC-OFC minimizes distortion in signal transmission and provides superior electrical linearity. Dolby B and C noise reduction reduce tape hiss, while Dolby HX PRO gives even normal bias cassettes superb performance, especially in the high frequencies.

Operation is push-button convenient with the wireless remote control. Akai's IPSS (Instant Programme Search System) lets you skip up to 16 selections forward or backward from anywhere on the tape. With spot erase, microprocessor precision makes erasing sections from tapes simplicity itself.



CD direct terminal

- Dedicated CD and DAT inputs
- Wireless remote control
- Feather touch controls and virtually silent operation
- Fluorescent display on/off control

## GX-75

**Stereo Cassette Deck**  
(220 V model only)

- Complete direct coupled DC amp construction
- Separate EQ, Dolby circuits and headphone amp power supplies
- Dual wide ceramic composition tape guide
- Closed loop, double capstan direct drive tape transport
- Super GX 3 head system with LC-OFC for superb sound quality
- Exclusive Super Bias System
- Dedicated CD and DAT inputs
- IPSS (Instant Programme Search System)
- High precision spot erase function
- Feather touch controls and virtually silent operation
- Fluorescent display on/off switch
- Optional wireless remote control capability

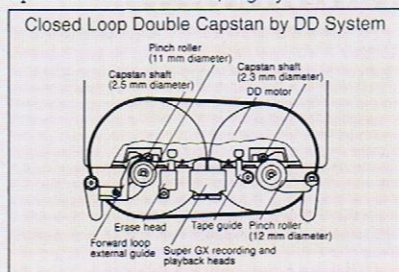
## Reference Master



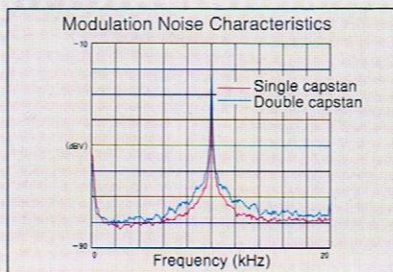
### Closed Loop Double Capstan System by Direct Drive

In this sophisticated system, two pairs of capstans and pinch rollers isolate the tape near the heads. This stabilizes tape tension and speed at the point of head contact, regardless of irregularities in the reels. A direct drive system uses an FG servo motor to turn the capstan to maintain stable tape tension at all times. The GX-8 features a quartz lock servo circuit for even greater rotational stability. The capstans are processed with Akai's Inverse Current Hard Chrome finish for

extra durability and running precision. The result of all these improvements is optimum head contact, highly accurate



tape transport, and a minimum of modulation noise that can cause distortion.

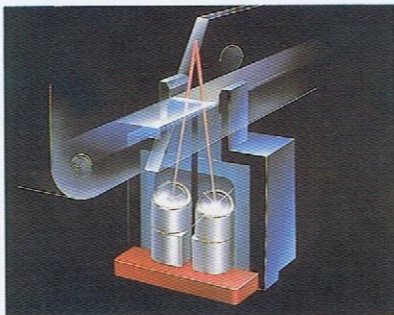




## GX-W45 Stereo Double-Cassette Deck

The GX-W45 double-cassette deck is ideal for the many music lovers who listen to their cassettes in several different ways—at home, using headphones players, and with car stereo. It was created so that you can enjoy the best possible standards of musical reproduction literally wherever you go!

First, there is everything you could need for truly superb sound quality using the GX-W45 itself, including special Akai features like the Twin Field Super GX heads, with independent gaps for recording and playback, used in both drives. This means that both recording and playback can be made with optimum quality on either of the drives. This is a dual-reverse double-cassette deck, offering virtually uninterrupted recording and playback of both sides of the two cassettes, and sequential playback from both drives for endless enjoyment. Akai's infrared detectors spot the join between the magnetic tape and the non-magnetic leader



The infrared detectors that spot the end of the tape for instant reverse.

tape and instantly reverse the tape drive so that your enjoyment will not be interrupted while it reverses. At the same time, the Bi-directional Symmetrical Precision (BSP) mechanism ensures that sound quality achieves the identical high standards in both forward and reverse directions.

With the same superb performance from both drives, in both directions, dubbing quality is excellent, ideal for making cassettes to use in the car or on headphone players. Here, the GX-W45 provides Character Mode control.

Car-stereo listening is affected by low-frequency noise from wind, tires and the road, by resonances, and by absorption of high frequencies in the upholstery, etc. Choose the Car Stereo recording mode, and the dubbed cassette will be given the ideal frequency response to counteract these unpleasant effects. It's the same for the Headphone Stereo mode: this gently boosts bass and treble to compensate for the limitations of in-ear headphone listening. A feature doubly valuable in view of the limited tone-control capabilities of many car and headphone stereos.

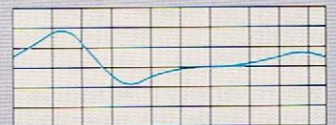
### Other important features:

- Edit dubbing pause for simultaneous pauses on both drives at a touch
- Dolby HX-PRO (Tapes I and II) for improved high frequency dynamic range even with normal tapes
- Dolby B and C noise reduction
- Simultaneous recording on Tape I and II
- Real-time and double-speed dubbing

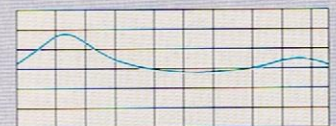
- Instant Program Search System (IPSS) for convenient selection of any item on a tape, skipping up to 29 intermediate items.
- Auto tape selection
- Wireless remote control of Tapes I and II
- High-speed DC amps for ideal response to digital sources



The Character Mode Switch



**Car stereo mode frequency characteristics**  
60 Hz region: Boost to counteract masking by engine and road noise.  
300 Hz region: 4 dB cut to reduce "thickening" of the sound in the car.  
10–20 kHz: Boost to counteract deterioration in tape performance with outdoor use.



**Headphone player frequency characteristics**  
Other important features include:  
60 Hz region: Boost to counteract leakage losses common with in-ear headphones.  
10–20 kHz: Boost to counteract deterioration in tape performance with outdoor use.



## GX-R35

### Stereo Cassette Deck

In features, performance, and sheer audio excellence, the GX-R35 is a demonstration of Akai's two decades of expertise in reversible cassette decks.

The advantages of auto reverse mean that you no longer have to interrupt tape audition half-way through to turn the cassette over (nor, more important, do you have to interrupt recording and lose vital seconds of music). It also means you can listen to the same tape as many times as you like without even touching the wireless remote control unit provided.

Akai's technical expertise gives you these benefits free of both delays in reversing and differences in quality between sides A and B of the cassette. For Quick Reverse, in a fraction of a second, infrared detectors spot the join between the magnetic tape and the non-magnetic leader tape and switch over instantly, hardly missing a beat of the music. At the same time, the Bi-directional Symmetrical Precision (BSP) mechanism ensures that sound quality achieves the identical high standards in both forward and reverse directions.

Probably the most important single factor ensuring top quality recordings with the GX-R35 is Computer Recording Level Processing (CRLP). This sophisticated system uses a tiny 'computer-on-a-chip' to set the maximum possible recording level allowing for the type of tape being used, the characteristics of the programme source, the presence or absence of noise reduction, and the tape's maximum output level (MOL). Never again will you have to put up with the distorted peaks and high noise levels of recordings made at levels too high or too low. CRLP can be selected automatically on the front panel or from the wireless remote control unit.

The GX-35R's sorbothane cassette stabilizer is another important Akai detail that pays off in improved performance. Its vibration-absorbing support prevents the muddying of the sound that is caused by cassette-shell vibration.

#### Other important features:

- Twin Field Super GX Heads for optimum recording and playback
- Recording bias adjustment for best possible response with all types of tape
- DC amps for ideal response to digital programme source
- Direct CD/DAT inputs
- Dolby HX-PRO for increased high frequency "head room" and Dolby B and C noise reduction
- Auto tape selector
- IPSS for item selection skipping up to 15 intermediate items
- Multiplex filter for recordings from FM broadcasts
- Full wireless remote control

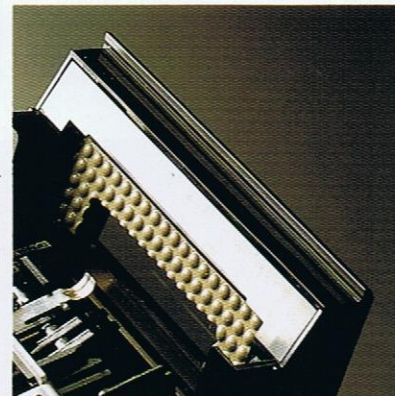
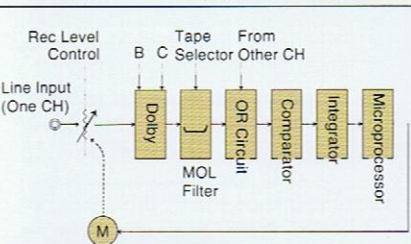


The indicator lights, and the electrical volume control is turned to the optimum level.



The CRLP switch on the front panel

#### Block diagram of the intelligent CRLP system



Vibration-absorbing sorbothane cassette stabilizer



## GX-65 Stereo Cassette Deck

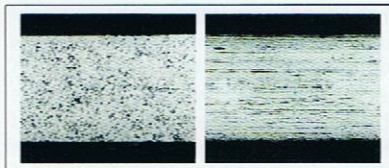
A cassette deck that offers the finest in home stereo sound, with outstanding sound reproduction and recording qualities enhanced by a wide range of functions.

The Crystal Ferrite Head Core of the Super GX 3-Head system combines ideal recording bias characteristics and superb current focussing with exceptional durability. Completely separate recording and playback heads not only enable you to monitor recordings while they are in progress but also eliminate the compromises of dual-purpose recording and playback heads.

Linear Crystal Oxygen-Free Copper wiring minimizes distortion in the signal and provides highly efficient electrical linearity.

Closed loop double capstans maintain constant torque and absolutely stable speed.

The cassette shell is cradled in a special damping material which absorbs the vibrations that can muddy the sound. Excellent sound reproduction is further guaranteed by the DC construction of the recording equalizer amp, playback equalizer



Ordinary copper  
crystal structure

LC-OFC crystal  
structure

amp and headphone amps, completely free of coupling capacitors that could degrade sound quality.

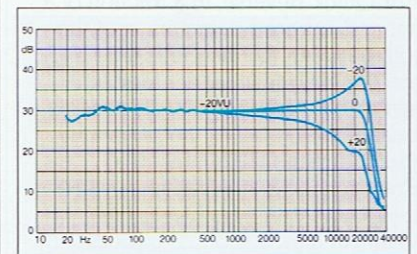
Dolby B is provided for compatibility with this popular and widely used system, and Dolby C for even higher noise reduction in your own recordings. Dolby HX-PRO automatically adjusts bias levels, giving even normal tapes extra "headroom" for loud, high frequency sounds. The result is clearer, cleaner peaks of sound.

For further fine-tuning of the response, the bias adjust function gives plus or minus 20% adjustment from the Normal, CrO<sub>2</sub> and Metal positions. This not only achieves perfect matching for virtually all tapes on the market, it also makes it possible to experiment with sound and improve recording/playback quality. Other features that add to the pleasures of the GX-65 include an

electronic tape counter, memory stop/start — so that you can have the tape stop, or start, at a preset counter setting — and the Auto Tape Monitor System that automatically switches between source and tape during recording and playback.

### Other important features:

- Auto tape selector
- Optional wireless remote control lets you control the GX-65 from anywhere in the room.



Bias control frequency characteristics

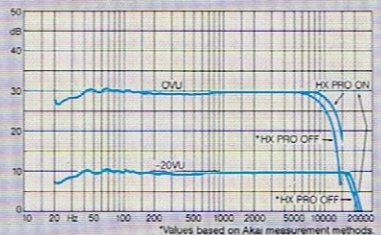
### Dolby HX PRO

This system allows lowered bias levels which result in more headroom for high-frequency recording. During recording, the Dolby HX PRO monitors the recording signal. When high frequency peaks are detected, bias is reduced to accommodate them, when these peaks are no longer

present, bias is restored to the normal level.

The system improves recording saturation levels, so that even normal tapes attain high-frequency signal levels that approach those of CrO<sub>2</sub> and metal tape performance.

### Frequency response comparison: Dolby HX PRO ON vs. OFF



\*Values based on Akai measurement methods.



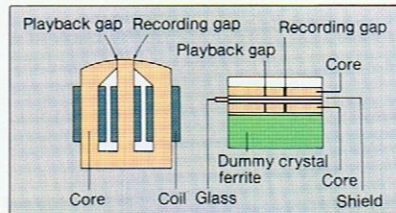
## GX-32

Stereo Cassette Deck

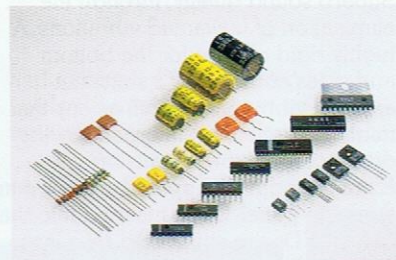
A deck that demonstrates Akai's commitment to quality across the cassette deck range. Full-bodied performance and a host of attractive features put the GX-32 far in front of any other decks in its class. Take the Twin Field Super GX heads. With independent gaps for playback and recording, they give optimum no-compromise quality for both. Then there is the Linear Crystal Oxygen-Free Copper wiring – minimising distortion and providing highly-efficient electrical linearity. Another unusual and important feature is variable recording bias, allowing 'fine tuning' of the response with different types of cassette tape. Dolby B noise reduction is provided for

compatibility with this widely used system, and Dolby C for even greater freedom from tape hiss in your own recordings. Control of tape transport is coordinated by a sophisticated microprocessor – a 'computer on a chip' – that protects precious tapes from excess tension and spillage. For unpaired recordings from FM, there is a multiplex filter that gets rid of annoying interference.

- Instant Programme Locating System (IPLS)
- Auto Play System
- Auto mute
- Large FL display and peak level meters
- Elegant aluminium front panel and large, vibration damping feet.
- Switch selects recording or playback for timer-controlled start



Twin Field Super GX Head



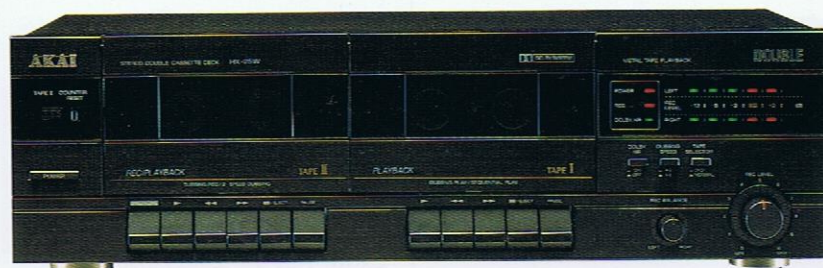
High quality electronic components

## HX-25W

Stereo Double-Cassette Deck

Creating and editing original tapes is simplicity itself on the HX-25W double-cassette deck. Both drives can be run at double the normal speed for high-speed dubbing that cuts the time required in half. Sequential play brings you hours of uninterrupted listening pleasure, while Akai's high density (HD) heads draw out top performance. Dolby B noise reduction system reduces tape-hiss and provides compatibility with the many prerecorded tapes using this popular system. Multiplex (MPX) filter ensures top quality recordings from FM

broadcasts with no interference from the FM stereo pilot signal. 5-LED peak level meters give a clear indication of peak levels, making it easy to set recording levels high enough to avoid unnecessary noise but not so high as to produce distortion at peaks.



# Akai CD players. The breathtaking quality

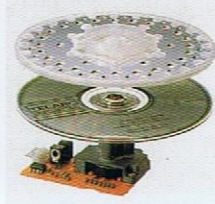


*Reference Master*

## CD-73 CD Player

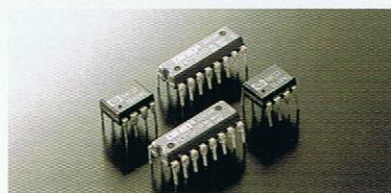
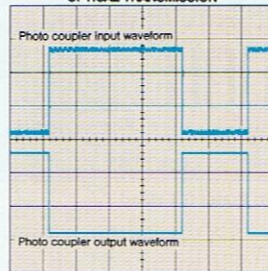
Superb sound quality, through the elimination of unwanted vibrations. A highly rigid chassis for the bottom and sides of the CD-73 shuts out external vibrations as well as any that might be generated internally by the disc motor or power transformer. Extra strength is supplied by the 1 mm thick top panel. Once inserted into the player, CDs are supported by a large vertical clamp that suppresses any remaining extraneous vibration. The optical pickup, which must accurately track the tiny pits that carry the digital data, uses a precision linear motor with sophisticated servo circuits to maintain perfect tracking and rapid transit to each new track as it is commanded. Electromagnetic distortion and interference between adjacent circuit blocks is avoided by sophisticated internal design feature. Signal integrity is assured by independent transformers and

Large vertical clamp



separate power supplies to the digital and analog sections. Innovative double-sided shielding boards protect against stray digital pulses.

### DIGITAL NOISE REDUCTION THROUGH D/A OPTICAL TRANSMISSION



Opto-coupler and independent L/R D/A converters

One side also acts as a ground, the complete defence against digital noise. Conversion from digital to analogue is through independent left- and right-channel glitchless D/A (digital to analogue) converters, and optical couplings in each channel transfer the signal with unimpaired purity. This advanced technology



Digital output terminal

permits an exceptionally wide dynamic range while improving phase accuracy and lowering distortion in the higher frequencies. Every nuance and all the verve of the original performance is attained by 4-times oversampling 18-bit digital filters that assure superior phase and distortion characteristics. In addition to conventional analogue output sockets, optical and coaxial digital outputs are also available, making it possible to transmit the digital signal direct to amplifiers with their own digital inputs, avoiding the noise that affects analogue transmission. For total listening pleasure, the 10-key wireless remote control gives instant access to all modes. There's programme control for up to 20 tracks, repeat, skip forward and backward and more. And all the operating information is displayed on the large fluorescent display.

# Quality of digital sound taken to new heights

## CD-62

### CD Player

Stunning sound, capturing the delicacy and the power of your favourite music. Dual D/A converters, one for each channel, eliminate phase shifts between left and right channels, resulting in improved stereo imaging. True 18-bit D/A conversion restores the full 16-bit signal encoded in the disc and boosts dynamic range and S/N performance. Any quantization noise is shifted beyond the audible frequency band by the 8-times oversampling filter, protecting the higher order harmonics that give natural character to the music. This enables use of a low-pass analogue filter with a gentle slope, preserving



accurate phase right up to the highest frequencies for clearly etched transients.

- Highly rigid chassis and large pedestal feet protect against vibration.
- Optical digital signal output
- Linear-motor driven 30-beam laser pickup system
- 20-Track programme play
- Auto space, programme edit, skip

search, index search, timer play and repeat functions.

- 10-Key wireless remote control

Optical fibre cable



## CD-55

### CD Player

Excellence and convenience. Eight-times oversampling 18-bit D/A conversion using independent left-right D/A converters provide a stable stereo image with full-bodied sound quality. Optical and coaxial digital outputs allow digital signals to be sent direct to digital amplifiers for purist signal and sound quality. Features for convenience and pleasure include: Auto programme

edit calculates the number of tracks that can be dubbed to any given tape length; Peak Level Search automatically searches for the highest signal peaks on a CD, making it quick

and easy to set accurate recording levels; 32-track programmed or random play; Skip & index search; Repeat (entire disk, programme, or between points A & B)



## CD-25

### CD Player

A 4-times oversampling 16-bit digital filter and independent left/right D/A converters give clear, detailed sound with superior stereo imaging. High frequency phase alignment is further improved by an analogue filter with a gentle roll-off slope. Ten-key remote control provides the convenience of 32-track programmed/random playback, with programme 'calendar' display of all selections.

- Digital coaxial output
- Skip & index search
- Timer controlled play

- Repeat programme/all
- Headphone output with volume control

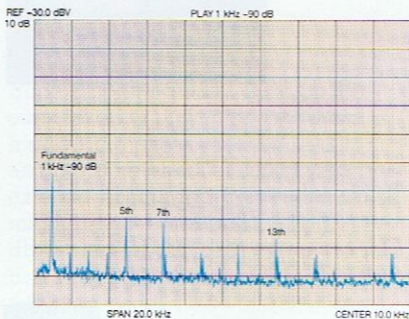


# Unrivalled sound quality output

## AM-95/75 Digital Integrated Amplifier

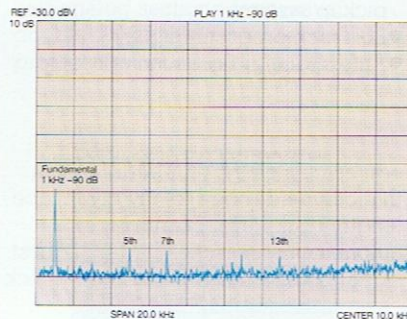
The apex of digital amplification. Handsome yet rugged, the AM-95/75 houses cutting-edge technical innovations. Innovations such as the newly-developed MASH (Multi-Stage Noise Shaping) digital-to-analog converter. As opposed to conventional D/A converters, the analog signal is restored by transforming the digital data into a pulse-width modulation signal of 11

Comparison of signal composition during low level playback. DIGITAL AMP (8FS 18BIT)



different widths, a signal that totally precludes zero-cross distortion by principle and does away with sample-and-hold circuits and high order analog filters. Linearity is improved, even at minute signal levels, and digital data tolerance distortion, amplifier and phase distortion are all reduced. Further advanced technology is featured in the AM-95/75's Digital Noise Reducing Construction with Dual PLL circuits. The active PLL circuit turns on to synchronize the incoming digital source signal. When

Comparison of signal composition during low level playback. DIGITAL AMP (PWM MASH)



synchronization is achieved, the active PLL turns off, and another high-precision PLL eliminates jitter (fluctuations along the time axis) in the output. A further precaution against digital noise is advanced circuitry that turns off the active PLL circuitry when no digital input is present. What's more, the newly-developed active muting system constantly checks for the presence of any input signal, and mutes the final analog stage when none is present. The D/A converter circuitry is enclosed in a separate case, floated from the amplifier chassis, to provide a dual shield that both cuts out external noise, and suppresses noise-leakage from the D/A converter itself. Digital noise can also leak into the analog sections through the power supply. To eliminate any possibility of this occurring, the AM-95/75 boasts totally separate power supplies for the digital and analog sections, with a reference current for the rectifier circuits from LEDs, providing constant current with extremely low noise. Generous physical proportions, in combination with effective

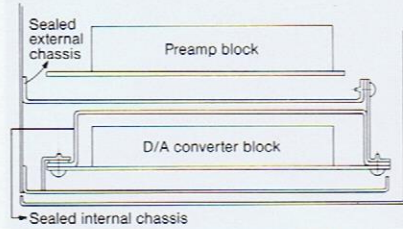


# STEREO INTEGRATED AMPLIFIER

*Reference Master*

shielding also contribute to the AM-95/75's superior sound quality. A further refinement is to ground all circuits at a single point, preventing interference between the PCBs.

AM-95

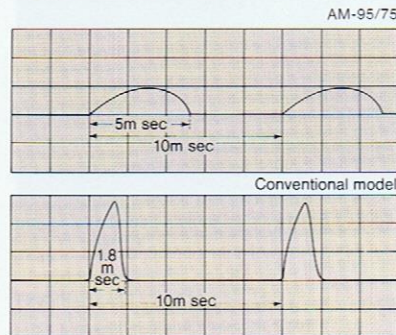


Super Active Power Supply increases the interval in which the power supply rectifier diodes pass current to the capacitors by approximately 3 times. This lowers power supply impedance and provides regulation superior even to that of Class A amplifiers. Simple, completely symmetrical parallel in/single push-pull design eliminates high frequency distortion and provides high power to handle the dynamic range of digital sources. In the AM-95, the power supply features a low impedance, low leakage toroidal transformer with a "floating" configuration to suppress vibration.

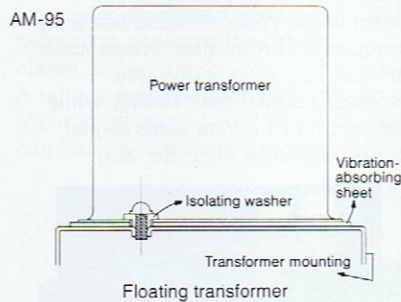
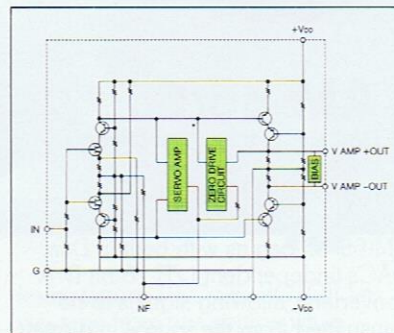
Different components are all physically separated as far as possible to eliminate interference, and the circuit boards of the current amp and voltage amp are also completely



ON TIME CHARACTERISTICS OF SUPER ACTIVE SUPPLY RECTIFIER DIODE



COMPLETELY SYMMETRICAL STRUCTURE VOLTAGE AMP (CASCADE CONNECTION)



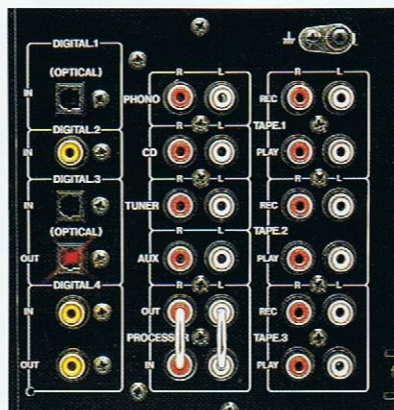
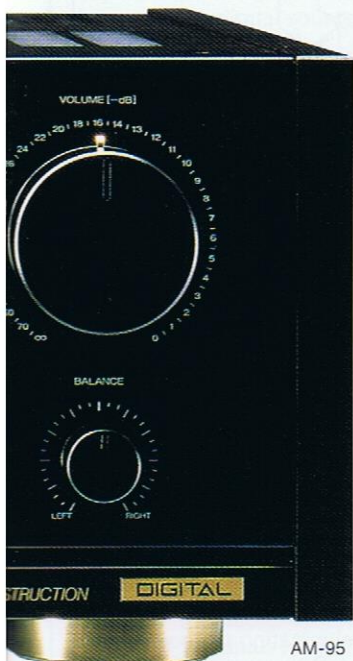
isolated to stop spurious interactions between them. Operation is, of course,

superb, enhanced by features like Direct Operation, allowing you to route any sound sources directly to the power amplifier block, bypassing the preamp circuitry.

To take full advantage of digital sources, the AM-95 and 75 both have four digital inputs, two coaxial and two optical, and two digital outputs, one coaxial and one optical, allowing connection via optical fibre cable to advanced digital equipment.

Whatever your taste in music, both the AM-95 and AM-75 deliver sound so pure it will add new dimensions of realism to your listening.

- 180 watts per channel output power (AM-95)/150 watts per channel output power (AM-75) (DIN 4 ohms)
- MM/MC cartridge compatibility (AM-95)
- Handles all standard sampling frequencies: 48 kHz (DAT); 44.1 kHz (CD), 32 kHz (DBS/DAT)
- REC selector independent of the input selector
- Gold-plated terminals
- Large pedestal feet



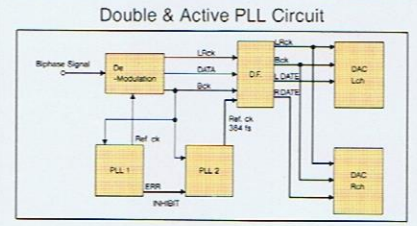
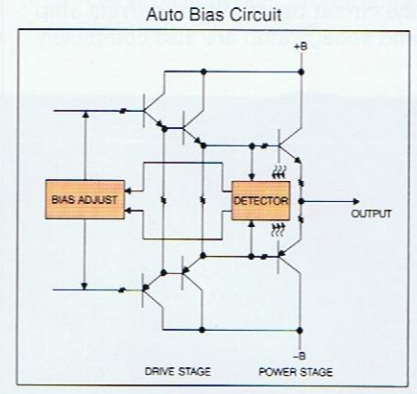
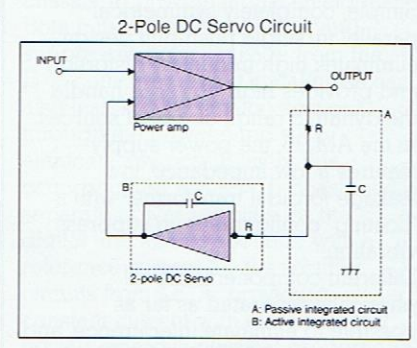
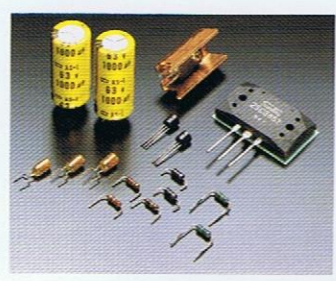


AM-65

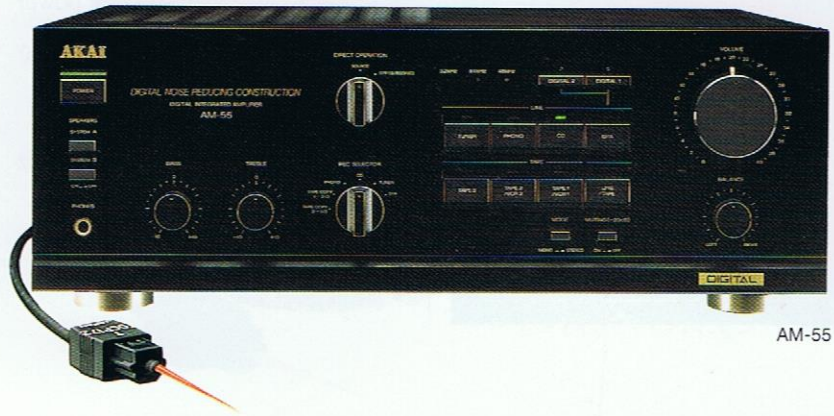
## AM-65/55 Digital Integrated Amplifier

Two amplifiers ready for state-of-the-art digital sound. The quality of the AM-65/55 begins with built-in Dual DACs (independent L/R 18-bit D/A converters), allowing signals to be transmitted from the source in digital form. This eliminates one possible source of signal degradation, and assures the signal arrives at the amplifier stages in its purest possible form. By using Dual DACs, phase deviation between the left and right channels is eliminated, resulting in superior stereo imaging. The 18-bit 8-times oversampling digital filter

shifts unwanted noise generated in the D/A conversion process to a much higher frequency band, eliminating the need for a high order analog filter and its undesirable effects on sound quality. The use of an analog filter with a gentle cutoff slope gives superior phase characteristics, especially in the high frequencies that generate the stereo image. The Double & Active PLL circuit is designed to reduce digital noise. Its unique synchronization system uses the first PLL to lock onto the incoming digital data stream, while the second PLL eliminates digital noise caused by jitter etc., and

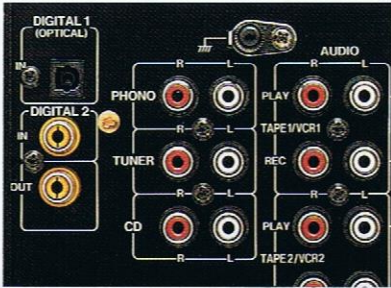


maintains correct synchronization. Also, during analog signal input, non-essential digital circuits are all turned off, eliminating unnecessary digital noise. Power supplies for the



AM-55

## STEREO INTEGRATED AMPLIFIER



digital and analog sections are kept completely separate. With a total of eight independent stabilized power supplies, stable power and

elimination of interference through the power supply is assured. To prevent interference between the digital and analog signals, the D/A converter board is shielded, and circuit boards above the main amplifier section are mounted vertically to minimize induced distortion. Akai's attention to detail extends to an optical digital input that complements the conventional coaxial digital input and output, plus a monitor-out terminal and audio/video compatibility that makes it possible to connect up to two VCRs, to make the AM-65 or AM-55 the heart of a home

audio/video entertainment system.

- 240 watts of Dynamic Power (150 watts  $\times$  2 power output, DIN 4 ohms): AM-65
- 180 watts of Dynamic Power (120 watts  $\times$  2 power output, DIN 4 ohms): AM-55
- Dual pole DC servo amplifier
- Auto (non-adjustable) bias circuit—prevents bias current fluctuations following power-on and during high output
- Direct Operation Switch/Subsonic Filter
- Rec selector

### AM-35

#### Stereo Integrated Amplifier

"Simple and straight construction" is the design philosophy behind the AM-35. The signal path is as simple as possible and the number of connection points kept to an absolute minimum. In fact, with the Direct Operation switch, the signal can be routed directly to the power amplifier circuits, avoiding unnecessary circuitry. The vertical PCB setup orients the circuit boards to minimize exposure to flux from the main transformer.

The power unit uses strictly selected filter capacitors, while the transformer is large enough to give the amplification circuits all the power they need for digital sources. The



result is 140 watts of Dynamic Power\* that delivers sound of tremendous clarity. Large pedestal feet soak up externally generated vibrations, helping to preserve the dynamic clarity of the sound. A unique feature of the AM-35 is its triple input/output tape terminals that can handle just about anything in

home taping. REC SELECTOR lets you tape from one source while listening to another. Tape a radio show while you are listening to a CD, or dub from tape deck one to two while listening to deck three.  
\* 90 watts  $\times$  2 output power (DIN 1 kHz, 4 ohms)

### AM-25/15

#### Stereo Integrated Amplifier

The AM-25 DC amplifier offers 270 watts\* of music power, and the AM-15 weighs in with 160 watts\*\* of music power, to give you plenty of power to suit all music sources. Five independent inputs for CD, phono, tuner, tape, VCR or AUX make either amp ideal for use as the heart of an integrated home audio/video entertainment center. Bass and treble controls with  $\pm 10$  dB adjustment let you tailor sound to your listening preferences, and subsonic filter and high-cut filter allow precise matching to source conditions. External processor terminals let you connect a graphic equalizer or an audio



AM-25

processor for extra special effects.  
\* 60 watts  $\times$  2 output power (DIN 1 kHz, 8 ohms)  
\*\* 35 watts  $\times$  2 output power (DIN 1 kHz, 8 ohms)

- Speaker selector (2 systems)
- Subsonic and high-cut filters (7 kHz,  $-6$  dB/oct)
- Large pedestal feet

AM-15



# Pure FM broadcast sound with the best in advanced synthesizer tuners

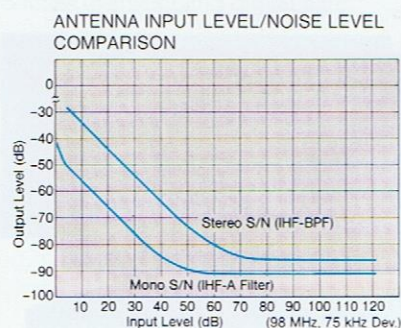


*Reference Master*

## AT-93

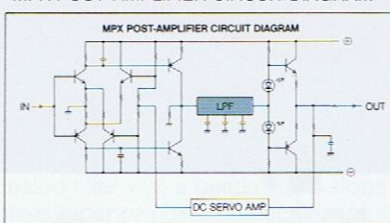
Quartz Synthesizer Tuner

Akai's Reference Master AT-93 incorporates cutting edge technology for outstanding radio reception in all atmospheric conditions. Quartz microprocessor tuning locks onto incoming signals with unerring accuracy, automatically selecting one of two antenna settings, narrow or wide IF bandwidth, and Hi-Cut bandwidth if necessary. Depending on signal strength, the low-loss jointless antenna selector with pin diodes in place of the traditional relay type, may even blend left and right signals.



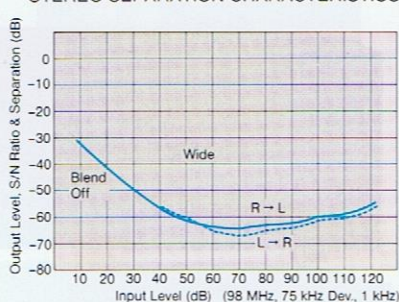
Front-end microprocessor control is bolstered by high voltage twin-variable capacitor diodes in all tuning stages, and high capability dual-gate MOS FETs in both the RF and mixer stages. An advanced linear phase IF filter increases stereo separation and reduces distortion in the signal. Loss of sound quality in the demodulation phase is prevented by

## MPX POST-AMPLIFIER CIRCUIT DIAGRAM



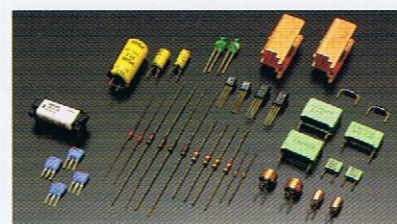
a highly efficient, low-noise schottky barrier diode. The MPX system replaces traditional amp/capacitor sequencing. In both the preamp and post-amplifier sections, all coupling capacitors from the demodulation stage right through to audio output are eliminated by the open loop DC servo amplifier. Clear,

## STEREO SEPARATION CHARACTERISTICS



clean sound almost indistinguishable from the original broadcast signal is the result. Muting circuitry employing a reed-relayed mute in place of transistors and FETs removes annoying noise between channels. Unlike most tuners, which use a single power supply, the AT-93 has separate supplies for the high frequency front end circuitry and the audio section,

with IF sections to prevent crosstalk and distortion. The power supply is further refined by low noise Zener diodes to assure constant voltage generation. Stable current to the Zener diodes is provided by FETs, and an oversized transformer is also used, to achieve the fullest dynamic range possible.



- 20-station random preset memory
- Record calibration system
- Preset scan
- Sequential station call allows reception of up to 3 stations in order with a timer

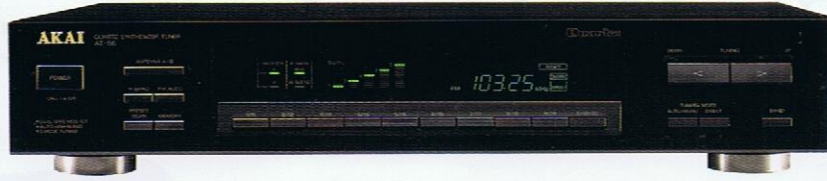
## AT-56

Quartz Synthesizer Tuner

- Quartz synthesizer tuner with high-precision tuning. A heavy-duty chassis with vibration-damping construction and superior components throughout to produce superior sound

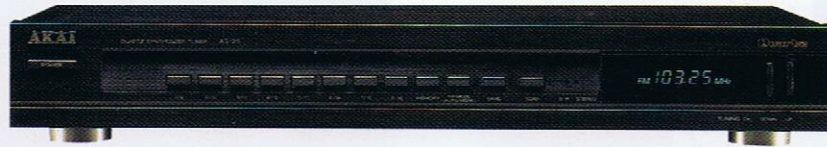
# STEREO A/V SURROUND RECEIVER TURNTABLE STEREO GRAPHIC EQUALIZER

- 20-station random preset memory
- Preset scan
- FM IF band selector
- FM AUTO/MONO SELECTOR
- ANTENNA A/B switch
- 5-segment signal strength meter and large FL display



## AT-25 Quartz Synthesizer Tuner

Digital quartz synthesizer tuning assures razor sharp tuning accuracy with a minimum of distortion and interference. Up to 16 FM and AM (MW/LW) stations can be set



randomly and stored in the backup memory for instant, pushbutton recall. With PRESET SCAN, these stations

can be quickly and conveniently scanned. Special circuitry eliminates irritating static between stations.

## AA-V25 Stereo A/V Surround Receiver

Exceptional value in a combined High Power amplifier and quartz synthesizer tuner. Surround Sound system is available with optional surround speakers and sound balance controls. Inputs for 2 video and 3 audio sources allow easy recording not only from audio but video sources as well.

- 16-channel random preset tuner
- 3-band FM/MW/LW tuner (2-band FM/AM in some areas)



- DC construction amplifier
- 35 watts\* × 2 power output (8 ohms, 0.3%)

- Independent bass, treble and balance controls
- \* 200 watts × 2 of music power

## EA-25 Stereo 7-band Graphic Equalizer

The texture and tone of your music can be tailored to your mood and taste with the EA-25. Independent left and right 7-band controls let you bring out full-bodied bass, add an

edge of power to the mid-ranges, or emphasize the sizzle of cymbals.

## AP-A305 Turntable



Low-profile sophistication makes the AP-A305 an eye-catching complement to any stereo system. A DC servo motor guarantees rotational accuracy, while semiautomatic operation is simplicity itself. The low-mass straight tone arm virtually eliminates lateral tracking force for minimal record wear. Soft-touch operation is feather-light and the T4P plug-in cartridge gives quick and easy replacement.

T4P

# Good looks and good sounds in portab

## PJ-W29CD

CD Stereo Cassette Receiver

Four speakers, a powerful 36 watts (PMPO\*) amplifier and high performance player produce CD sound with all the fidelity of home components. CD Direct takes the signal directly to the amplifier for faithful reproduction of the original sound, or you can route it through the L/R independent 4-band graphic



equalizer and sculpt it to suit your own taste. In addition to CD excellence, the precision 3-band tuner gives you access to the best in radio in FM/MW/SW (or LW), while the double cassette deck offers a



COMPACT  
disc  
DIGITAL AUDIO

range of sophisticated functions, including sequential play from deck II to deck I and high-speed synchro dubbing.

\* 3 watts  $\times$  2 of rated power output (EIAJ)

### More exciting features

- All the features of home CD.
- Random programming of up to 16 selections, Repeat, Skip and Search functions, LC display
- CD out terminals
- Full auto stop mechanism
- One-touch recording
- Mic Mixing with Mic mixing volume



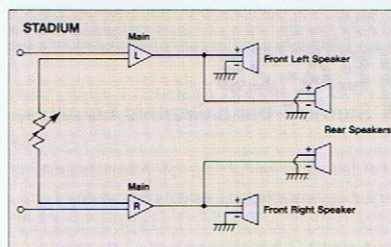
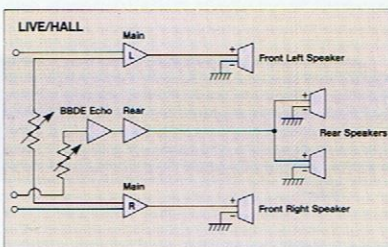
- Normal/High (Metal, CrO<sub>2</sub>) tape selector
- 8 cm CD-compatible tray

## PJ-W28SR

Stereo Cassette Receiver

Recreate the mood of your favourite music venue with the PJ-W28SR's surround system. Choose from Live, Hall or Stadium settings to get just the effect you desire. Whether it's the intimacy of a small club or the drama of an outdoor stadium, the 7 speakers and 80 watts peak music power output of 3 discrete amplifiers simulate the sound patterns you want and bring the immediacy of live sound to taped music. The 8-band sound processor\* gives you total control over the sound delivered to the separate front speakers,\*\* the 2 back load surround speakers and super bass center woofer. The result is scintillating sound quality with clear highs and superbly-defined bass.

\* 8-band sound processor: Super bass volume, Super bass boost, variable loudness, energizer,



4-band graphic equalizer

\*\* Speaker system: 3 watts  $\times$  2 (Front), 10 watts (Super Bass), 2 watts  $\times$  2 (Rear) of rated power output (EIAJ)

### Other exciting features:

- FM/MW/SW (or LW) 3-band tuner
- High-speed dubbing, synchro dubbing and sequential play
- Full auto stop mechanism
- One touch recording
- Metal/CrO<sub>2</sub> tape capability
- Mic Mixing with Mic mixing volume
- Line in terminals



## STEREO RADIO CASSETTE RECEIVER

# le packages

### PJ-W59

Stereo Cassette Receiver

A 4-band tuner designed for pinpoint tuning accuracy of your favourite radio stations. A 60 W (PMPO\*) amplifier with built-in 5-band graphic equalizer. A double-cassette deck packed with outstanding features – like perfectly matched tape-to-tape dubbing at high speed. Detachable, 2-way speakers that deliver dramatic sound. That's the unbeatable combination that makes up the PJ-W59 and guarantees you superlative music. Whenever you want it, wherever you go.

\* 5 watts  $\times$  2 of rated power output (EIA)

#### Additional exciting features

- Sequential play from tape I to tape II for extended listening pleasure
- Synchro-start in dubbing mode



- High-speed, one-touch dubbing and editing
- 125 mm woofer and 20 mm tweeter detachable speakers for optimum sound and positioning
- Mic Input and Mic Mixing
- AC/DC power
- CD/Aux connectors



### AJ-W279

Stereo Cassette Recorder

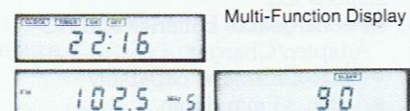
Flowing, attention-grabbing curves and a lot more. The convenience of a built-in timer for hands-off timer

recording, automatic timer playback and sleep timer playback/recording. A high performance 4-band\* digital synthesizer tuner for great radio reception. A 20 station preset function and lock-on Auto Tuning for one-touch setting. A double cassette deck perfect for dubbing and editing. All rounded out with a two-way speaker system powered by a 24 watt PMPO\*\* amp for full sound with a taut, well-defined bass.

\* 3-band tuner in some areas  
\*\* 2 watts  $\times$  2 of rated power output (EIA)

#### Other exciting features.

- Sequential playback from tape I to tape II
- High-Speed Dubbing and Synchro Dubbing
- Bass/Treble tone control
- Metal/CrO<sub>2</sub> tape capability
- Auto Stop
- AC/DC power supply



# STEREO RADIO CASSETTE RECORDER STEREO REVERSE HEADPHONE PLAYER

## AJ-W259

Stereo Cassette Recorder

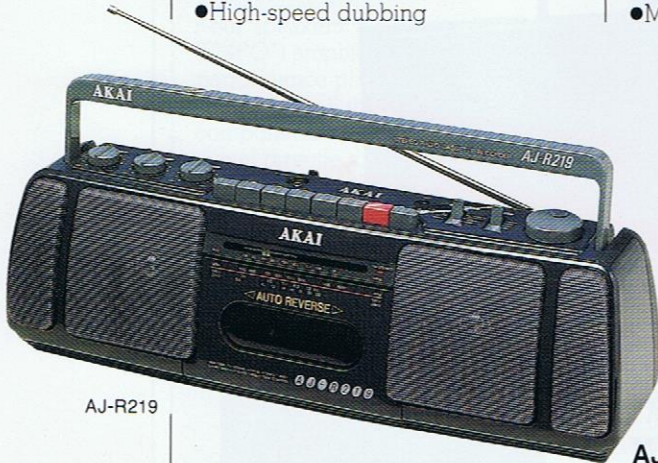
Exciting features in a handsome design bring you the satisfaction of full-bodied sound wherever you are.

- 4-band tuner\*
- 24 watt output (PMPO\*\*)
- 2-way speakers
- One-touch synchro dubbing and editing
- High-speed dubbing



- Sequential playback from tape I to tape II
- Bass/Treble tone control
- Metal/CrO<sub>2</sub> tape capability

- Auto stop
- AC/DC power supply
- \* 3-band tuner in some areas
- \*\* 2 watts × 2 of rated power output (EIA)



AJ-R219



AJ-209

## AJ-R219/209

Stereo Cassette Recorder

Elegant design and portable power come to single-deck radio cassette recorders with the AJ-R219 & AJ-209. Eye-catching molded curves and a superb finish house advanced electronics that produce a great sound.

### AJ-R219

Auto reverse playback leads a range of exciting features to bring you the best in listening pleasure.

### AJ-209

Great features and great looks you'll want to take with you everywhere.

- 4-band tuner\*
- 18 watts of output power (PMPO\*\*)(AJ-R219)
- 14 watts of output power (PMPO\*\*)(AJ-209)

- 2-way speaker system
- Independent bass and treble controls (AJ-R219)
- Tone control (AJ-209)
- Automatic level-control
- One-touch recording
- Auto stop
- Built-in condenser microphone
- \* 3-band tuner in some areas
- \*\* 1.6 watts × 2 of rated power output (EIA)
- \*\*\* 1.4 watts × 2 of rated power output (EIA)

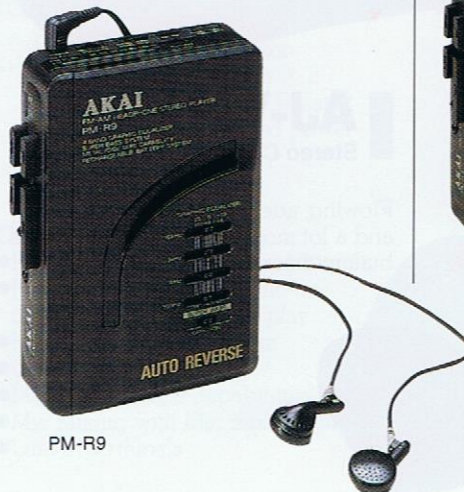
## Play-anywhere pleasure

## PM-R9/R8

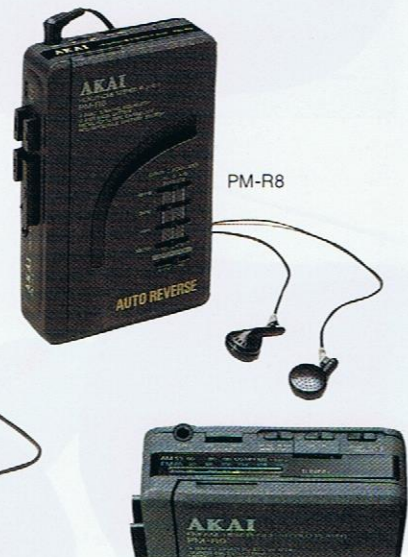
Stereo Reverse Headphone Player

Two lightweight personal stereo players you can slip into a pocket or bag for the freedom of play-anywhere music. Auto reverse extends listening time, and with built-in 4-band graphic equalizers and Super Bass, sound is fuller than on most personal stereos. The PM-R9's 2-band tuner keeps you in touch with your favourite radio stations too.

- Rechargeable Batteries and AC Adapter/Charger
- Metal/CrO<sub>2</sub> tape capability
- A slim 33 mm depth



PM-R9



PM-R8

## CASSETTE DECK

| MODEL  | HX-M800W  | HX-M600W  | HX-25W  | GX-32   |
|--|---|---|---|---|
| <b>Heads</b>   | HD head for recording & playback ×2, Erase head ×2  | HD head for recording & playback ×1, HD head for playback ×1, Erase head ×1 | HD head for recording & playback ×1, HD head for playback ×1, Erase head ×1 | Twin Field Super GX head for recording and playback ×1, Erase head ×1   |
| <b>Motors</b>  | Electronically speed controlled DC motor ×2   | Electronically speed controlled DC motor ×2                                 | DC motor ×2   | Electronically speed controlled DC motor ×1   |
| <b>Wow &amp; flutter</b>   | 0.06% (WRMS), 0.14% (DIN)   | TAPE 1: 0.09% (WRMS), 0.18% (DIN)<br>TAPE 2: 0.06% (WRMS), 0.14% (DIN)      | 0.16% (DIN)   | 0.05% (WRMS), 0.09% (DIN)   |
| <b>S/N (Metal)</b><br>Dolby B NR on<br>Dolby C NR on             | 57 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>Improves up to 15 dB at 500 Hz, 20 dB at 1–10 kHz | 57 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>—               | 57 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>—               | 57 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>Improves up to 15 dB at 500 Hz, 20 dB at 1–10 kHz |
| <b>T.H.D. (Metal)</b>  | Less than 0.7%  | Less than 0.7%  | Less than 0.9%  | Less than 0.9%  |
| <b>Frequency response</b><br>Normal<br>CrO <sub>2</sub><br>Metal | 30–14,000 Hz ±3 dB<br>30–15,000 Hz ±3 dB<br>30–15,000 Hz ±3 dB  | 30–14,000 Hz ±3 dB<br>30–15,000 Hz ±3 dB<br>—                               | 30–14,000 Hz ±3 dB<br>30–15,000 Hz ±3 dB<br>30–16,000 Hz ±3 dB              | 25–17,000 Hz ±3 dB<br>25–18,000 Hz ±3 dB<br>25–20,000 Hz ±3 dB  |
| <b>Dimensions (W×H×D)</b>  | 360×117×295 mm  | 360×117×295 mm  | 425×135×265 mm  | 425×112×352 mm  |
| <b>Weight</b>  | 3.2 kg  | 2.9 kg  | 4.4 kg  | 5.4 kg  |

| MODEL  | GX-95/75   | GX-65   | GX-R35  | GX-W45  |
|--|--|---|---|---|
| <b>Heads</b>   | Super GX head for recording ×1, Super GX head for playback ×1, Erase head ×1                                       | Super GX head for recording ×1, Super GX head for playback ×1, Erase head ×1                                  | Twin Field Super GX head for recording and playback ×1, Erase head ×1   | Twin Field Super GX head for recording and playback ×2, Erase head ×2   |
| <b>Motors</b>  | FG servo DD motor for capstan drive ×1, DC motor for reel drive ×1, DC motor for cam drive & tape eject/loading ×1 | Electronically speed controlled DC motor for capstan drive ×1, DC motor for reel drive ×1                     | Electronically speed controlled DC motor for capstan drive ×1, DC motor for reel drive ×1                     | Electronically speed controlled DC motor ×2   |
| <b>Wow &amp; flutter</b>   | 0.025% (WRMS), 0.04% (DIN)   | 0.035% (WRMS), 0.06% (DIN)  | 0.045% (WRMS), 0.07% (DIN)  | 0.08% (WRMS), 0.13% (DIN)   |
| <b>S/N (Metal)</b><br>Dolby B NR on<br>Dolby C NR on             | 59 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>Improves up to 15 dB at 500 Hz, 20 dB at 1–10 kHz      | 57 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>Improves up to 15 dB at 500 Hz, 20 dB at 1–10 kHz | 56 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>Improves up to 15 dB at 500 Hz, 20 dB at 1–10 kHz | 56 dB<br>Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz<br>Improves up to 15 dB at 500 Hz, 20 dB at 1–10 kHz |
| <b>T.H.D. (Metal)</b>  | Less than 0.6%   | Less than 0.7%  | Less than 1.0%  | Less than 1.0%  |
| <b>Frequency response</b><br>Normal<br>CrO <sub>2</sub><br>Metal | 20–19,000 Hz ±3 dB<br>20–20,000 Hz ±3 dB<br>20–21,000 Hz ±3 dB   | 15–19,000 Hz ±3 dB<br>15–19,000 Hz ±3 dB<br>15–21,000 Hz ±3 dB  | 25–17,000 Hz ±3 dB<br>25–17,000 Hz ±3 dB<br>25–18,000 Hz ±3 dB  | 25–17,000 Hz ±3 dB<br>25–17,000 Hz ±3 dB<br>25–17,000 Hz ±3 dB  |
| <b>Dimensions (W×H×D)</b>  | 460×154×350 mm (GX-95)<br>425×154×350 mm (GX-75)   | 425×137×353 mm  | 425×137×353 mm  | 425×137×353 mm  |
| <b>Weight</b>  | 10.2 kg (GX-95)<br>9.2 kg (GX-75)  | 5.5 kg  | 5.5 kg  | 6.0 kg  |

## COMPACT DISC PLAYER

| MODEL                       | CD-M600                     |
|-----------------------------|-----------------------------|
| <b>Pickup system</b>        | 3-beam laser pickup         |
| <b>Number of channels</b>   | 2 channel stereo            |
| <b>Optical output level</b> | −22 dBm/660 nm              |
| <b>Wow &amp; flutter</b>    | less than measurable limits |
| <b>Dimensions (W×H×D)</b>   | 360×95×295 mm               |
| <b>Weight</b>               | 3.5 kg                      |

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

## COMPACT DISC PLAYER

| MODEL              | CD-73                           | CD-62                           | CD-55                           | CD-25                           |
|--------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Pickup system      | 3-beam laser pickup             | 3-beam laser pickup             | 3-beam laser pickup             | 3-beam laser pickup             |
| Sampling Frequency | 44.1 kHz                        | 44.1 kHz                        | 44.1 kHz                        | 44.1 kHz                        |
| Digital filter     | 18-bit, 4-times oversampling    | 18-bit, 8-times oversampling    | 18-bit, 8-times oversampling    | 16-bit, 4-times oversampling    |
| D/A converter      | 16-bit linear (L/R independent) | 18-bit linear (L/R independent) | 16-bit linear (L/R independent) | 16-bit linear (L/R independent) |
| Frequency response | 5–20,000 Hz $\pm$ 0.3 dB        | 4–20,000 Hz $\pm$ 0.5 dB        | 4–20,000 Hz $\pm$ 0.5 dB        | 4–20,000 Hz $\pm$ 0.5 dB        |
| Dynamic range      | 97 dB or more                   | 96 dB or more                   | 96 dB or more                   | 92 dB or more                   |
| S/N                | 106 dB or more                  | 104 dB or more                  | 108 dB or more                  | 100 dB or more                  |
| T.H.D.             | 0.0025% or less                 | 0.003% or less                  | 0.0028% or less                 | 0.013% or less                  |
| Wow & flutter      | less than measurable limits     | less than measurable limits     | less than measurable limits     | less than measurable limits     |
| Dimensions (W×H×D) | 460×112×330 mm                  | 425×110×330 mm                  | 425×141×343 mm                  | 425×121×343 mm                  |
| Weight             | 7.5 kg                          | 5.0 kg                          | 4.2 kg                          | 3.6 kg                          |

## AMPLIFIER

| MODEL  | AM-M800   | AM-M600   |
|--|---|---|
| Rated Power Output<br>40–20,000 Hz<br>1 kHz        | 54 watts $\times$ 2/0.2% (6 ohms)<br>63 watts $\times$ 2 (6 ohms) | 33 watts $\times$ 2/0.2% (6 ohms)<br>42 watts $\times$ 2 (6 ohms) |
| Music Power (Total)                                | 280 watts   | 190 watts   |
| PMPO (Total)                                       | 900 watts   | 700 watts   |
| S/N Ratio<br>Phono (MM)<br>CD, AUX                 | 73 dB<br>88 dB  | 72 dB<br>87 dB  |
| Channel Separation<br>(1 kHz)                      | 60 dB   | 60 dB   |
| Damping Factor<br>(1 kHz, 8 ohms)                  | 19.3  | 20  |
| Required speaker<br>Impedance<br>A and B<br>A or B | 12 to 16 ohms<br>6 to 16 ohms                                     | 6 to 16 ohms  |
| D/A Section<br>Digital filter<br>D/A converter     | 8 fs, 18-bit<br>18-bit, 2 DAC                                     | 4 fs, 16-bit<br>18-bit, 2 DAC                                     |
| T.H.D.   | 0.008%  | 0.004%  |
| Dynamic Range                                      | 95 dB   | 93 dB   |
| Dimensions   | 360×117×310 mm  | 360×117×310 mm  |
| Weights  | 6.4 kg  | 6.3 kg  |

## AMP.-DECK

| MODEL   | AX-M400   |
|---|---|
| <AMP. Section><br>Rated Power Output<br>40–20,000 Hz<br>1 kHz | 28 watts $\times$ 2 (6 ohms)<br>35 watts $\times$ 2/ % (6 ohms) |
| Music Power (Total)   | 170 watts   |
| PMPO (Total)  | 600 watts   |
| Graphic Equalizer   | 5-band, $\pm$ 8 dB  |
| D/A Converter   | 16-bit, 2 DAC   |
| <Deck Section><br>Mechanism                                   | Double  |
| Frequency Response<br>Normal<br>CrO <sub>2</sub>              | 30–14,000 Hz<br>30–15,000 Hz                                    |
| Wow & Flutter   | 0.09% (WRMS)/0.18% (DIN)  |
| Dimensions  | 360×236×310 mm  |
| Weight  | 7.5 kg  |

| MODEL  | AM-95  | AM-75  | AM-65   | AM-55  |
|--|--|--|---|--|
| Rated Power Output<br>20–20,000 Hz<br>1 kHz        | 180 watts $\times$ 2/0.1% (4 ohms)<br>180 watts $\times$ 2/0.7% (4 ohms) | 100 watts $\times$ 2/0.1% (4 ohms)<br>150 watts $\times$ 2/0.7% (4 ohms) | 100 watts $\times$ 2/0.05% (8 ohms)<br>150 watts $\times$ 2/1% (4 ohms) | 80 watts $\times$ 2/0.05% (8 ohms)<br>120 watts $\times$ 2/1% (4 ohms) |
| Dynamic Power                                      |  |  | 240 watts (2 ohms)  | 180 watts (2 ohms)   |
| S/N Ratio<br>Phono (MM/MC)<br>CD, AUX              | 85 dB/67 dB<br>100 dB  | 85 dB/–<br>100 dB  | 86 dB/–<br>102 dB   | 85 dB/–<br>101 dB  |
| Channel Separation<br>(1 kHz)                      | 60 dB  | 60 dB  | 60 dB   | 60 dB  |
| Damping Factor<br>(1 kHz, 8 ohms)                  | 30   | 30   | 45  | 45   |
| Required speaker<br>Impedance<br>A and B<br>A or B | 8 to 16 ohms<br>4 to 16 ohms   | 8 to 16 ohms<br>4 to 16 ohms   | 8 to 16 ohms<br>4 to 16 ohms  | 8 to 16 ohms<br>4 to 16 ohms   |
| D/A Section<br>Digital filter<br>D/A converter     | MASH   | MASH   | 8 fs, 18-bit<br>18-bit, 2 DAC   | 8 fs, 18-bit<br>18-bit, 2 DAC  |
| T.H.D.   | 0.003%   | 0.003%   | 0.002%  | 0.002%   |
| Dynamic Range                                      | 95 dB  | 95 dB  | 96 dB   | 96 dB  |
| Dimensions   | 461×177×452 mm   | 461×177×452 mm   | 425×159×370 mm  | 425×156×370 mm   |
| Weights  | 20 kg  | 17.7 kg  | 12 kg   | 10.8 kg  |

| MODEL  | AM-35   | AM-25                         | AM-15                         |
|--|---|-------------------------------|-------------------------------|
| Rated Power Output<br>20–20,000 Hz<br>1 kHz        | 60 watts ×2/0.05% (8 ohms)<br>90 watts ×2/1% (4 ohms) | 60 watts ×2 (8 ohms)          | 35 watts ×2 (8 ohms)          |
| Dynamic Power                                      | 140 watts (2 ohms)                                    | 270 watts (Total Music Power) | 160 watts (Total Music Power) |
| S/N Ratio<br>Phono<br>CD, AUX                      | 84 dB<br>100 dB                                       | 75 dB<br>100 dB               | 75 dB<br>100 dB               |
| Channel Separation<br>(1 kHz)                      | 60 dB   | 60 dB                         | 60 dB                         |
| Damping Factor<br>(1 kHz, 8 ohms)                  | 45  | 35                            | 35                            |
| Required speaker<br>Impedance<br>A and B<br>A or B | 8 to 16 ohms<br>4 to 16 ohms                          | 16 ohms<br>8 to 16 ohms       | 16 ohms<br>8 to 16 ohms       |
| Dimensions   | 425×156×370 mm  | 425×133×270 mm                | 425×133×270 mm                |
| Weights  | 9.6 kg  | 9.0 kg                        | 8.0 kg                        |

## TUNER

| MODEL  | AT-M600/M400        | AT-93                       | AT-56                       | AT-25               |
|--|---------------------|-----------------------------|-----------------------------|---------------------|
| FM Tuner Section<br>Usable Sensitivity<br>(300 ohms) | 13.2 dBf            | 11.2 dBf                    | 11.2 dBf                    | 18.0 dBf            |
| Capture ratio  | 2.0 dB              | 1.3 dB (Wide)               | 1.5 dB                      | 2.0 dB              |
| Selectivity (400 Hz)                                 | 60 dB               | 60 dB (Wide)/90 dB (Narrow) | 65 dB (Wide)/80 dB (Narrow) | 65 dB               |
| S/N (IHF) (Mono/Stereo)                              | 70 dB/65 dB         | 90 dB/80 dB                 | 80 dB/70 dB                 | 70 dB/65 dB         |
| T.H.D. (Mono/Stereo)                                 | 0.3%/0.7%           | 0.02%/0.07% (Wide)          | 0.08%/0.15% (Wide)          | 0.2%/0.5%           |
| Stereo Separation (1 kHz)                            | 40 dB               | 62 dB (Wide)/55 dB (Narrow) | 45 dB (Wide)/42 dB (Narrow) | 35 dB               |
| MW/LW Tuner Section<br>Usable Sensitivity            | 400 μV/m / 800 μV/m | 300 μV/m / 300 μV/m         | 400 μV/m / 800 μV/m         | 400 μV/m / 800 μV/m |
| Selectivity  | 20 dB/25 dB         | 40 dB/55 dB                 | 40 dB/40 dB                 | 35 dB/30 dB         |
| S/N  | 40 dB/30 dB         | 45 dB/40 dB                 | 40 dB/35 dB                 | 30 dB/30 dB         |
| Dimensions   | 360×95×315 mm       | 461×87×344 mm               | 425×90×335 mm               | 425×73×235 mm       |
| Weight   | 1.9 kg              | 6.3 kg                      | 3.6 kg                      | 1.9 kg              |

## RECEIVER

| MODEL   | AA-V25  |
|---|---|
| <AMP. Section><br>Rated power output (20–20,000 Hz)                               | 35 watts ×2/0.3% (8 ohms)   |
| Music power   | 200 watts ×2  |
| S/N ratio<br>Phono<br>CD/AUX  | 70 dB<br>90 dB  |
| Input sensitivity/Impedance<br>Phono<br>CD/Tape<br>VTR/V. Disc (Audio)<br>(Video) | 2.0 mV/47 kohms<br>150 mV/47 kohms<br>150 mV/47 kohms<br>1.0 Vp-p/75 ohms |
| <FM Tuner Section><br>Usable sensitivity (300 ohms)                               | 12.7 dBf  |
| Capture ratio   | 2.0   |
| Selectivity (400 Hz)  | 60 dB   |
| S/N (IHF)   | 70 dB (Mono)/60 dB (Stereo)   |
| <MW/LW Tuner Section><br>Usable sensitivity                                       | 300 μV/m/800 μV/m   |
| Selectivity   | 30 dB/40 dB   |
| S/N (IHF)   | 40 dB/35 dB   |
| Dimensions (W×H×D)  | 425×124×325 mm  |
| Weight  | 5.7 kg  |

## TUNER-AMP.-DECK

| MODEL   | AC-M393/L                                 | AC-M373/L/S   | AC-M353S  | AC-M333S  | AC-M230  |
|---|---|---|---|---|--|
| <AMP. Section><br>Rated power output<br>(T.H.D. 10%)<br>Peak music power<br>output<br>Graphic equalizer | 30 watts × 2 (8 ohms)<br>5-band, ±10 dB   | 25 watts × 2 (8 ohms)<br>500 watts<br>5-band, ±6 dB | 25 watts × 2 (8 ohms)<br>500 watts<br>5-band, ±6 dB | 25 watts × 2 (8 ohms)<br>500 watts<br>5-band, ±6 dB | 10 watts × 2 (8 ohms)<br>280 watts<br>3-band, ±10 dB |
| <Deck Section><br>Mechanism<br>Frequency Response<br>S/N<br>Wow & flutter                               | Double<br>100–10,000 Hz<br>50 dB<br>0.25% | Double<br>100–10,000 Hz<br>35 dB<br>0.3%            | Double<br>100–10,000 Hz<br>35 dB<br>0.3%            | Double<br>100–10,000 Hz<br>35 dB<br>0.3%            | Double<br>100–10,000 Hz<br>35 dB<br>0.35%            |
| <FM Tuner Section><br>Usable sensitivity<br>S/N (Mono/Stereo)<br>Stereo separation<br>(1 kHz)           | 2.5 μV/m<br>56 dB/50 dB<br>35 dB          | 10 μV/m<br>55 dB/50 dB<br>30 dB                     | 10 μV/m<br>55 dB/50 dB<br>30 dB                     | 10 μV/m<br>55 dB/50 dB<br>30 dB                     | 10 μV/m<br>50 dB/45 dB<br>30 dB                      |
| <CD Section><br>Random program<br>Skip/Index search   | –<br>Skip search only                     | Yes (16 tracks)<br>Yes                              | Yes (16 tracks)<br>Yes                              | –<br>–  | –<br>–   |
| <Turntable Section><br>Auto function<br>Tone-arm  | –<br>–                                    | Auto Return<br>Static-balanced<br>straight type     | –<br>–  | –<br>–  | –<br>–   |
| Dimensions (W×H×D)  | 350×325×335 mm                            | 350×422×351 mm                                      | 350×378×351 mm                                      | 350×293×351 mm                                      | 350×232×346 mm                                       |
| Weight  | 11.8 kg                                   | 10 kg   | 9.2 kg  | 6.5 kg  | 6.5 kg   |

## EQUALIZER

| MODEL              | EA-M800                           | EA-A25                            |
|--------------------|-----------------------------------|-----------------------------------|
| Center frequency   | 63/160/400/1 k/2.5 k/6.3 k/16 kHz | 63/160/400/1 k/2.5 k/6.3 k/16 kHz |
| S/N (IHF-A)        | 108 dB                            | 100 dB                            |
| Control range      | ±10 dB                            | ±10 dB                            |
| Dimensions (W×H×D) | 360×95×295 mm                     | 425×73×220 mm                     |
| Weight             | 2.7 kg                            | 1.7 kg                            |

## TURNTABLE

| MODEL              | AP-M393<br>(For AC-M393/L only) | AP-M353<br>(For AC-M353S/M333S/M230 only) |
|--------------------|---------------------------------|---|
| Motor              | DC servo                        | DC servo                                  |
| Cartridge          | MM type                         | MM type                                   |
| Wow & flutter      | 0.15% (WRMS)                    | 0.15% (WRMS)                              |
| Rumble             | More than 50 dB                 | More than 50 dB                           |
| Tone-arm           | Dynamic-balanced straight type  | Static-balanced straight type             |
| Dimensions (W×H×D) | 350×94×345 mm                   | 350×95×347 mm                             |
| Weight             | 2.5 kg                          | 2.5 kg                                    |

| MODEL              | AP-M600               | AP-305                        |
|--------------------|-----------------------|-------------------------------|
| Motor              | DC servo              | DC servo                      |
| Cartridge          | MM type               | VM type                       |
| Wow & flutter      | 0.12% (WRMS)          | 0.09% (WRMS)                  |
| Rumble             | 60 dB                 | More than 50 dB               |
| Tone-arm           | Dynamic-balanced type | Static-balanced straight type |
| Dimensions (W×H×D) | 360×97×345 mm         | 425×105×345 mm                |
| Weight             | 2.9 kg                | 3.1 kg                        |

## PORTABLE

| MODEL                   | PJ-W59   | PJ-W29CD   | PJ-W28SR  | AJ-W279/W259                                     |
|-------------------------|--|--|---|--|
| Peak music power output | 60 watts (Total)                                 | 36 watts (Total)                                 | 80 watts (Total)  | 24 watts (Total)                                 |
| Rated power output      | 5 watts×2  | 3 watts×2  | 3 watts×2 (Front)<br>10 watts (Super bass)<br>2 watts (Rear)                                      | 2 watts×2  |
| Speaker system          | 2-way speaker system<br>125 mm woofer<br>Tweeter | 2-way speaker system<br>100 mm woofer<br>Tweeter | 3D super bass system<br>100 mm super woofer<br>100 mm woofer<br>Tweeter<br>77 mm surround speaker | 2-way speaker system<br>100 mm woofer<br>Tweeter |
| Wow & flutter           | 0.2%   | 0.2%   | 0.25%   | 0.25%  |
| Frequency response      | 80–15,000 Hz (Metal)                             | 60–15,000 Hz (Metal)                             | 50–15,000 Hz (Metal)  | 80–10,000 Hz (Normal)                            |
| Dimensions              | 600×254×150 mm                                   | 660×197×206 mm                                   | 660×197×206 mm  | 560×147×165 mm                                   |
| Weight                  | 5.0 kg   | 5.2 kg   | 7.0 kg  | 3.0 kg   |

| MODEL                   | AJ-R219   | AJ-209  |
|-------------------------|---|---|
| Peak music power output | 18 watts (Total)                                | 14 watts (Total)                                |
| Rated power output      | 1.6 watts×2                                     | 1.4 watts×2                                     |
| Speaker system          | 2-way speaker system<br>77 mm woofer<br>Tweeter | 2-way speaker system<br>77 mm woofer<br>Tweeter |
| Wow & flutter           | 0.25%   | 0.25%   |
| Frequency response      | 100–10,000 Hz (Normal)                          | 100–10,000 Hz (Normal)                          |
| Dimensions              | 410×125×107 mm                                  | 410×125×107 mm                                  |
| Weight                  | 1.9 kg  | 1.8 kg  |

## STEREO HEADPHONE PLAYER


| MODEL           | PM-R9/R8                   |
|-----------------|----------------------------|
| Track system    | 4-track 2-channel (Stereo) |
| Frequency range | 40–15,000 Hz (Metal)       |
| Power output    | 35 mW per channel          |
| Power source    | AC/DC/Rechargeable battery |
| Dimensions      | 126×83×33 mm               |
| Weight          | 300 g                      |

## SPEAKER SYSTEM

| MODEL              | SR-H770   | SR-H580  | AE-S91  |
|--------------------|---|--|---|
| System             | 3-way 3-speaker system  | 3-way 3-speaker system   | Full range speaker system with back loaded horn |
| Speaker units      | 230 mm cone type woofer<br>100 mm cone type midrange<br>65 mm cone type tweeter | 185 mm cone type woofer<br>65 mm cone type midrange<br>50 mm cone type tweeter | 100 mm full range cone type                     |
| Rated impedance    | 8 ohms  | 8 ohms   | 8 ohms  |
| Max. input power   | 80 W (DIN: 15 MIN)  | 70 W (DIN: 15 MIN)   | 80 W  |
| Sensitivity        | more than 88 dB/W   | more than 87 dB/W  | more than 87 dB/W                               |
| Frequency range    | 35–23,000 Hz  | 45–23,000 Hz   | 45–15,000 Hz                                    |
| Enclosure          | Rear bass reflex type   | Rear bass reflex type  | Back loaded horn type                           |
| Dimensions (W×H×D) | 266×564×255 mm  | 230×467×189 mm   | 169×92×236 mm                                   |
| Weight             | 8.9 kg/pc   | 6.2 kg/pc  | 1.2 kg/pc                                       |

| MODEL              | SW-M393  | SW-M373  | SW-M230  |
|--------------------|--|--|--|
| System             | 3-way 3-speaker system   | 2-way 2-speaker system                             | 2-way 2-speaker system                             |
| Speaker units      | 160 mm cone type woofer<br>57 mm cone type midrange<br>57 mm cone type tweeter | 160 mm cone type woofer<br>50 mm cone type tweeter | 130 mm cone type woofer<br>50 mm cone type tweeter |
| Rated impedance    | 8 ohms   | 8 ohms   | 8 ohms   |
| Max. input power   | 80 watts   | 50 watts   | 15 watts   |
| Sensitivity        | more than 87 dB/W  | more than 89 dB/W                                  | more than 89 dB/W                                  |
| Frequency range    | 55–23,000 Hz   | 60–20,000 Hz                                       | 70–20,000 Hz                                       |
| Enclosure          | Closed type  | Closed type  | Closed type  |
| Dimensions (W×H×D) | 220×442×170 mm   | 220×375×171 mm                                     | 192×320×165 mm                                     |
| Weight             | 4.1 kg/pc  | 3.5 kg/pc  | 2.5 kg/pc  |

### NOTES:

- For improvement purposes, specifications and design are subject to change without notice.
- The contents of this catalog are not to be treated as representative as to current availability of products as described or as to products actually offered for sale.
- Recording and playback of material may require consent.
- 'Dolby' the double-D symbol, 'Dolby Surround' and 'HX PRO' are trademarks of Dolby Laboratories Licensing Corporation.
- dbx is a trademark of dbx incorporated.
- 'MASH' is the trademark of NIPPON TELEPHONE TELEGRAM currently under application for registration.
- The cassette tapes, compact discs and records shown in the photographs are optional accessories.
- The AP-A305 must be used with the  plug-in cartridge.

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