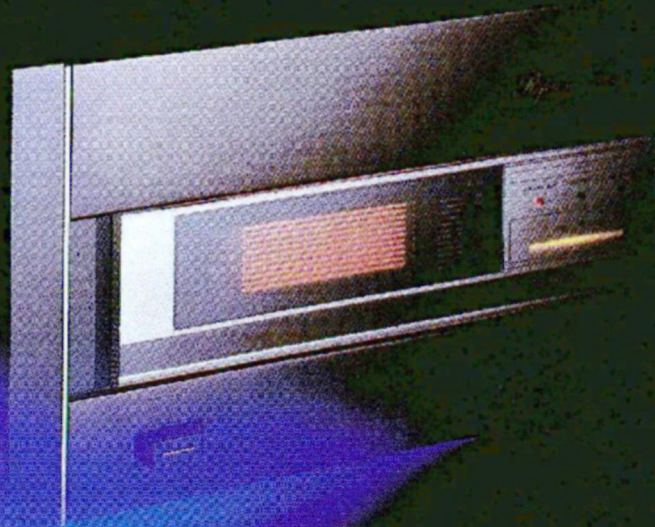
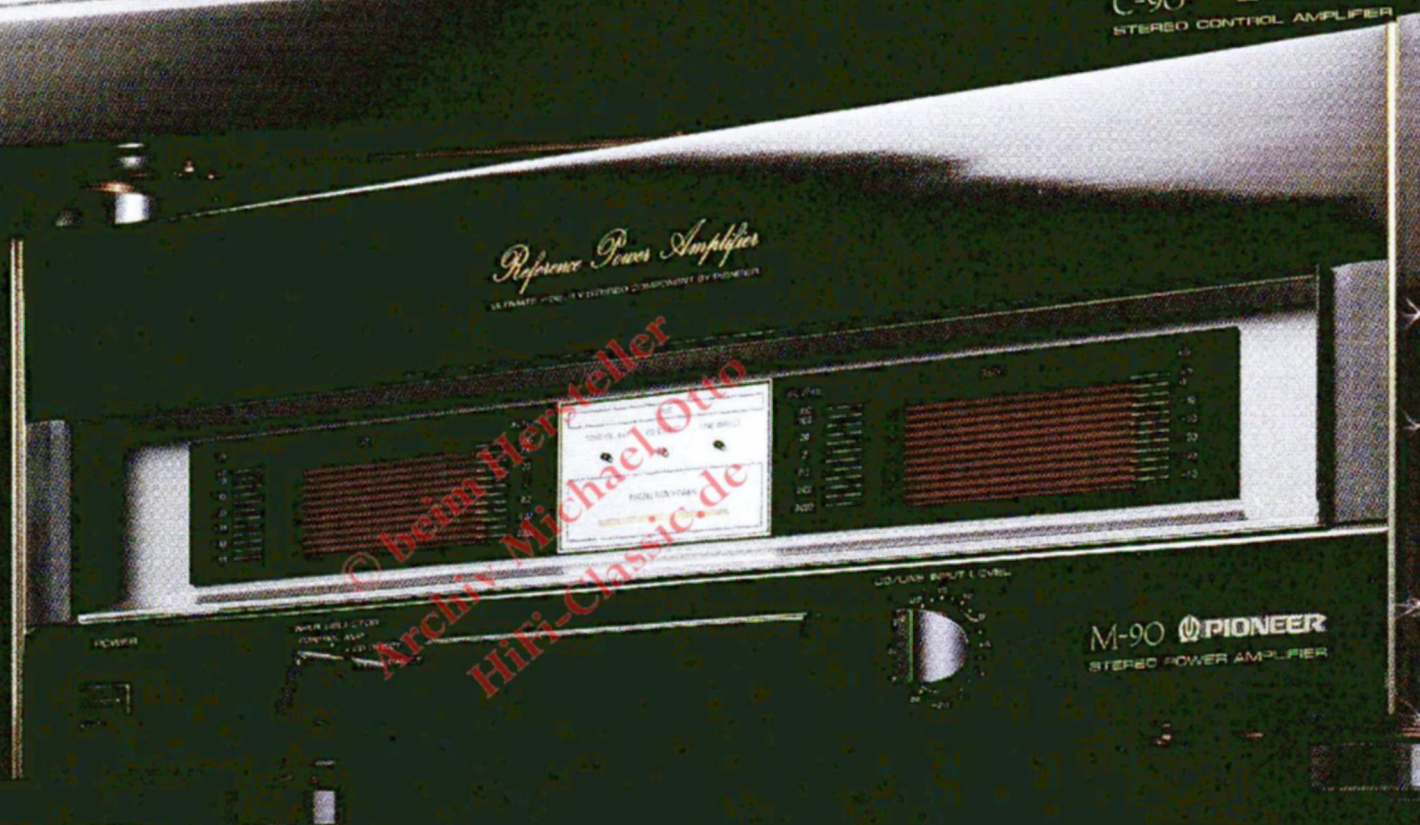


PIONEER HI-FI COMPONENTS

REFERENCE AMPLIFIERS/COMPACT DISC PLAYERS/RECEIVERS/
AMPLIFIERS & TUNERS/CASSETTE DECKS/TURNTABLES/
SPEAKER SYSTEMS/ADD-ON EQUIPMENT/HI-FI ACCESSORIES



 **PIONEER**
The future of sound and vision.



SPECIAL "Exchange Catalog" Special Order Item

CATALOG "Exchange Catalog" Item

AAFES AAFES Stock Assortment Item

NEX Navy Exchange Item

PIONEER — MEETING THE CHALLENGE OF THE DIGITAL AGE.

In our latest generation of Compact Disc players, Pioneer has established new standards designed to meet the new digital challenge squarely. Right from the beginning, we've used only the best, most advanced electronics to ensure superb digital sound. And now, by combining that advanced technology together with the experience and knowhow we have accumulated since, Pioneer is ready to introduce a whole new generation of players — models made to withstand mistracking due to vibration, resonance and acoustic feedback. CD players that guarantee that the digital sound you hear is accurate and musical.

Our new amplifiers, too, provide performance for the digital age. They feature extremely low noise and distortion, and are designed to provide an exceptional low-impedance driving capability and high dynamic power — two properties that just make them especially suited for digital reproduction.

Also included in Pioneer's lineup of hi-fi components are cassette decks with dynamic ranges to rival that of CDs and speaker systems featuring digital-ready high power capacities.

Pioneer — new standards for tomorrow's technology.



LaserDisc (CD/LD) Players
CLD-909(BK)
LD-717(BK)



VCR
VH-800(BK)



CD Players
PD-M6(BK)
PD-7030(BK)
PD-6030(BK)



Cassette Decks
CT-S99WR(BK)
CT-3070R(BK)
CT-2070R(BK)



FM/AM/TV Tuner
TX-V1160(BK)

Monitor Receivers
SD-P40
SD-2601(BK)

Pioneer SR

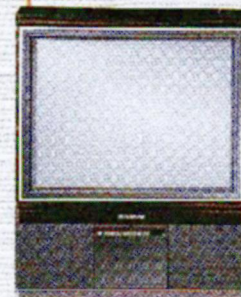
Remote control units provided with Pioneer audio and video products are designed to control other products carrying the Pioneer "SR" (System Remote) logo in addition to the components they come with originally. For example, the remote for the C-90 (BK) control amplifier or VSX-5000(BK)/VSX-4000(BK) receivers control the products shown at right. With an SR system, you can conveniently control a number of Pioneer products from a single remote unit. Please note, however, that some functions on remotes may not work for certain components.



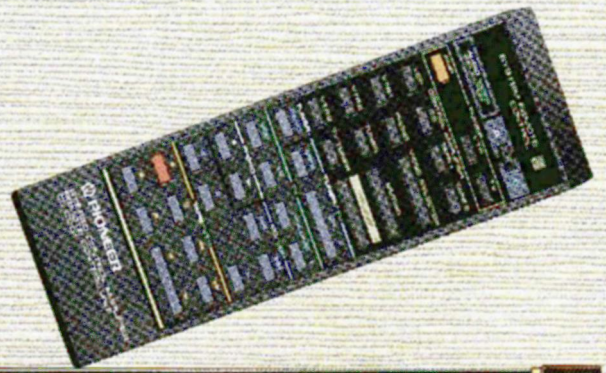
Amplifier or Receivers
C-90(BK)
VSX-5000(BK)
VSX-4000(BK)



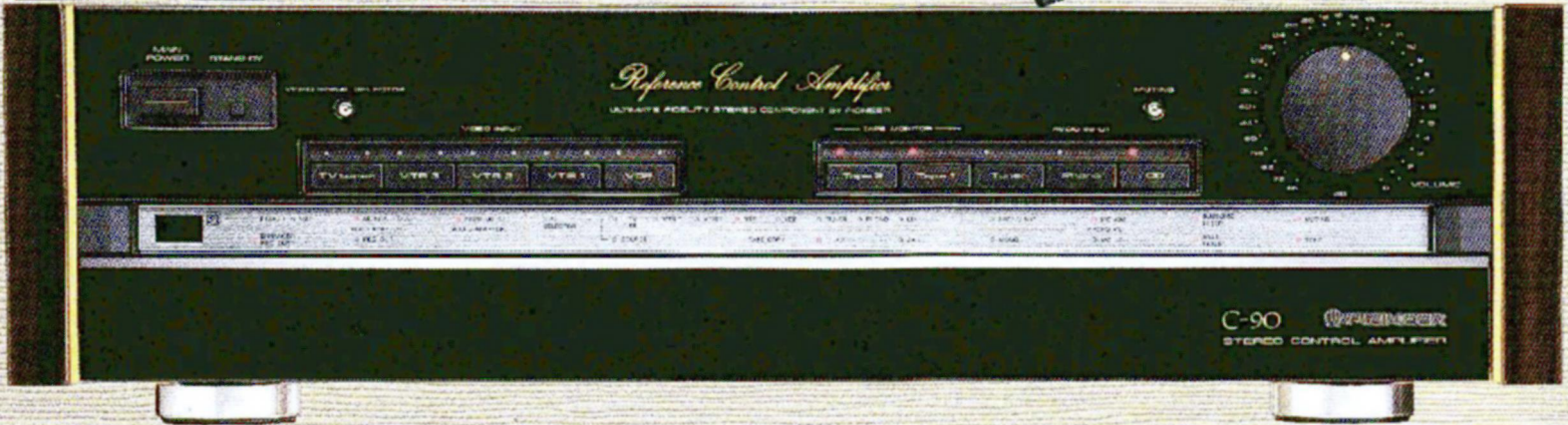
System Remote Control Unit



REFERENCE AMPLIFIERS



CATALOG AAFES NEX CRC No. 9751231



C-90(BK) SR

Reference Control Amplifier

The C-90(BK) Pioneer Reference Control Amplifier embodies our idea of simplicity, flexibility, and performance — simplicity for purer sound, flexibility for integrated A/V control, and performance for a truly musical experience.

Elaborate separate power-supply design

Its twin-mono-amp configuration features separate power supplies and chassis layouts for the left and right channels. This elaborate construction shuts out mutual interference between channels, thus dramatically reducing intermodulation distortion. There's another independent power supply using a third transformer exclusively for video circuits, displays, relays, and microcomputers. Separate chassis layout and grounding lines are used for the audio and video circuits, to prevent sound degradation.

Made for low resonance and vibration

A control preamplifier handles very delicate signals so that it's susceptible to external disturbances in general and vibrations in particular. When subjected to vibration, parts vibrate in sympathy, resulting in the type of distortion called "microphonics." Though extremely subtle, this can be discerned with the tremendously wide dynamic range of digital reproduction. To combat this distortion, we've isolated the circuits in the C-90(BK) from the external world by making the feet from polycarbonate, a material which offers optimum shock absorbing response. We've also anchored the circuit boards to the chassis by rubber dampers, and used flexible copper-plated screws to cushion shocks.

Circuits and designs for "cleaner" signals

We also tried to make the signal paths as short as possible by using relays and electronic switches. This has led to a drastic reduction of wiring, which keeps signal loss and signal deterioration to a minimum.

Low outputs from moving-coil cartridges are boosted and equalized by a "hybrid" booster, combining a quality transformer and an optimum-gain phono equalizer. In a

nutshell, our "hybrid" booster assures a flat response from lows to highs and well-damped sound.

We use quality parts throughout the amplifier, from circuit boards to wiring, and from capacitors to semi-conductors. The copper-plated chassis and screws, for instance, reduce subtle magnetic distortion.

Connections for 6 video and 9 audio components

The C-90(BK) is not, however, designed for quality sound alone; besides nine audio components, it connects, switches and controls six video components — two play-only units (videodisc players, TV tuners, etc.), three VCRs, and one processor unit. In addition, it provides two monitor outputs, and a 5-pin output for connection of an optional RF converter (JA-RF5) that allows you to watch pictures on an ordinary TV. And since we've added to the amplifier a sharpness, detail and noise reduction control, you can even enhance the video as you watch or dub.

Remote control and classy looks

Finally, the C-90(BK) comes with a remote control that permits volume control, input selection and control of other Pioneer audio/video equipment with the SR mark. To add a touch of a class, the aluminum front panel is finished with a lacquer-like luster. And it's clean and uncluttered, for secondary controls and terminals are hidden behind a flipdown panel.



Polycarbonate Foot



Moving-Coil Transformer



M-90(BK) NON SWITCHING AMP* Reference Power Amplifier

Now that Compact Discs have made possible an incredibly wide dynamic range, the demand for a reliable power amplifier has never been higher. The M-90(BK) Reference Power Amplifier is made for this digital age.

High power to do justice to digital sound

Speaker systems have a nominal impedance of 6 or 8 ohms, but when they play music with dynamic variations, the actual impedance can become much lower, especially at low frequencies. With the wide dynamic range of digital sound, this means an amplifier must be equipped with a power supply that performs reliably even under the heaviest load. The M-90(BK) meets this qualification perfectly: it features two outsize transformers (one for each channel), large electrolytic capacitors (for a total capacitance of 48,000 μ F) and four bridged rectifier circuits using fast-recovering diodes. This power supply is so capable it can supply as much as 47A of current to the power transistors instantly. And speaking of power transistors, we use 16 of them (8 per channel) in a "four-in-parallel" configuration. What the well-built power supply and an array of high-power transistors add up to is awesome: the amp delivers dynamic power of 800 watts at 2 ohms (with EIA dynamic test signal). Thanks to this "power to spare," the sound of the M-90(BK) is incredibly real and powerful.

For higher purity and better signal integrity

Care has been taken to keep the signal paths as short as possible to ensure signal integrity. For instance, the volume control for CD is linked by a long shaft to a potentiometer located behind the input terminals. And quality parts are used throughout for quality sound, like gold-plated terminals, OFC (Oxygen-Free Copper) wiring, and copper-plated PC boards.

Direct input for CD and "return output" for preamp

In addition to the input for a control preamp, the M-90(BK) has an input for direct Compact Disc player connection to allow you to enjoy even purer digital sound.

The CD input has its own volume control constructed from non-magnetic parts to prevent magnetic distortion. One more line-level direct input is provided for the future addition of another digital component. Outputs are included to return the signals from the CD player or line component to the preamp for equalization or recording.

Pioneer Non-Switching* Circuit Type II for low distortion

The power amp uses our exclusive Non-Switching Circuit Type II that puts an end to switching distortion. In the M-90(BK) we further elaborated on this to reduce distortion across a wider power output range. Thermal distortion was also drastically reduced by stabilizing the idling current supplied to power transistors.

Lacquer-like front panel with power indicators

A large pair of fluorescent power output indicators (switchable) show momentary output channel by channel. The aluminum front panel has a deep lacquer-like finish that emphasizes the old-world craftsmanship that went into this amp. It has an exceptionally clean look for secondary switches and terminals are hidden behind a flipdown door.

*Non-Switching is a trademark of Pioneer.

COMPACT DISC PLAYERS

COMPACT
disc
DIGITAL AUDIO

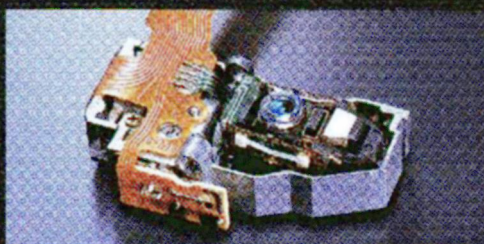
When it comes to sound quality and ease of use, perhaps no other CD player outperforms Pioneer's. Each is equipped with a number of super convenience features — like auto program edit, add-on programming and multiple track programming. And each is designed for high resistance to vibration and resonance to ensure better tracking and better sound, with new features like the new Disc Stabilizer, a honeycomb chassis, and a low-center-of-gravity optical pickup drive. Convenience and high accuracy — the best of both worlds means not compromising on either.



New Disc Stabilizer



Honeycomb Chassis



Optical Pickup Mechanism

Digital filter

The PD-7030(BK) employs a high-tech digital filter to isolate high-frequency sampling signals from the audio signal. A conventional analog filter can do the job, but at the cost of phase delay in the audio range. This adds distortion and causes loss of clear imaging. But Pioneer's digital filter sharply cuts the sampling frequencies by a technique called oversampling. The result is clear, sharply focused sound.

Zero-resonance concept

To ensure superb disc tracking and great sound, we've come up with the "zero-resonance concept." This concept is expressed in our Compact Disc players in three ways.

■ New Disc Stabilizer

Our new Disc Stabilizer clamps the disc not just at its center but also at each node of vibration to dampen resonance. The stabilizer is itself made of a special resin that features an exceptionally high vibration damping response. Moreover, the stabilizer is equipped with a set of additional ball bearings that automatically align the center of the stabilizer with that of the rotating disc, while preventing the disc from slipping. This eliminates the vibration that can occur when the stabilizer and disc do not share a common center.

■ Honeycomb chassis

The chassis of our CD players are made using a ribbed honeycomb construction. This design not only increases rigidity but also protects the pickup and disc drive system inside from vibration generated by speakers and other external influences.

■ Low-center-of-gravity floating optical pickup mechanism

We have floated the optical pickup mechanism using rubber dampers to protect it from external vibration and to ensure utmost tracking accuracy. Moreover, we've lowered the center of gravity of the entire pickup mechanism. This improves the stability of the chassis, which results in the best possible tracking accuracy.

Wireless remote control

A wireless remote control lets you operate most of the functions from the comfort of your chair. A numeric keypad is an extra convenience when accessing a track directly or programming tracks.

Programmed play of 24 tracks

You can program up to 24 tracks (32 with the PD-M6(BK)) and play them in any order. And any track can be accessed directly using the numeric keypad on the unit or remote control. With the PD-7030(BK), even pauses can be programmed, a convenience when dubbing tracks from disc to tape.

Auto program edit

This is a feature that comes in handy when dubbing from disc to tape. When you specify the length of a tape you're going to record on, the player automatically counts the number of tracks that can be recorded within the specified amount of time and shows the total playing time from the beginning of a disc or a selected track.

Add-on programmed play and direct programming

Add-on programmed play means that you can program as you listen to a track, so you can switch from normal play to programmed play mode with no interruption. Direct programming means you can program a current track at the touch of a button. This allows you to program a number of tracks as you sample each quickly and efficiently.



CATALOG AAFES NEX

CRC No. 9258237

PD-M6(BK) SR

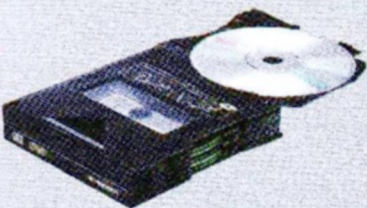
Multi-Play Compact Disc Player

- Random programmed play of 32 tracks: A total of 32 tracks from six discs can be random accessed and played back in any order.
- 6-disc magazine and single-disc loader: To allow you enjoy both multi-disc and single-disc play. The magazine holds each disc with perfect safety, and stores six of them in a cartridge with the height of just three "jewel box" cases.
- "Random Play": For getting away from the monotony of hearing tracks in the same order.
- Direct programming: Program as you play — it's an easy alternative way to listen to programmed tracks.
- Programmable pause: You can even program pauses between recorded tracks to make a clean dub easily.
- 4-way repeat: A single track, programmed tracks, all tracks on a single disc, and all tracks on all six discs.
- Wireless remote control: Complete with numeric keypad. Controls include DISPLAY, REPEAT, RANDOM PLAY, DISC NUMBER, PLAY, PAUSE, TRACK SEARCH, MANUAL SEARCH, CHECK, CLEAR and MEMORY.
- Two-speed manual search.
- Large concentrated fluorescent display: Shown are disc and track numbers, total play time, elapsed play time, the order of programmed tracks.
- Disc Stabilizer: Eliminates vibration and acoustic feedback problems.
- Pioneer exclusive technologies:
 - Linear Servo System — for errorfree playback of scratched or damaged discs.
 - Focus Parallel Drive — for better control of the tracking focus.
 - Cross Parallel Suspension — to play warped or eccentric discs accurately.
- Headphone output with volume control.
- Special subcode output: Built in for future use in combination with your monitor TV.

JD-M6(BK)

Multi-Play Magazine

Every PD-M6(BK) comes with a magazine that holds up to six discs. This saves you from having to load discs each time you want to play them, and doubles as a convenient storage box. Spare magazines are available as options.



CATALOG AAFES NEX

CRC No. 9254400



CATALOG AAFES NEX CRC No. 9755810

PD-7030(BK) SR

Compact Disc Player

■ **Digital filter:** Using an oversampling technique, eliminates spurious frequencies to make clear sound and well-defined image possible.

■ **New Disc Stabilizer with self-centering ball bearings:** Improves disc tracking by eliminating vibration and preventing disc slippage.

■ **Honeycomb chassis:** For more chassis rigidity and better protection of pickup from vibration and acoustic feedback.

■ **Low-center-of-gravity floating optical pickup mechanism:** For better isolation and more chassis balance.

■ **Wireless remote control:** Complete with numeric keypad. Controls include PLAY, PAUSE, STOP/CLEAR, MEMORY, TRACK, SEARCH, MANUAL SEARCH, REPEAT, EDIT, INDEX SEARCH and TIME.

■ **Random programmed play of 24 tracks:** You can hear up to 24 tracks in any order, or access any directly using the remote.

■ **Programmable pause:** You can even program pauses between recorded tracks to make a clean dub easily.

■ **Auto program edit:** Specify the length of a tape you want to dub a disc on, and the display shows how many tracks can be recorded within the specified time, along with total play time.

■ **Add-on programmed play:** Switch from normal play to programmed play with no break in music.

■ **Direct programming:** Program as you play — it's an easy alternative way to listen to programmed tracks.

■ **3-way search:** Track, index and 3-speed manual (5, 20 and 60 times normal speed).

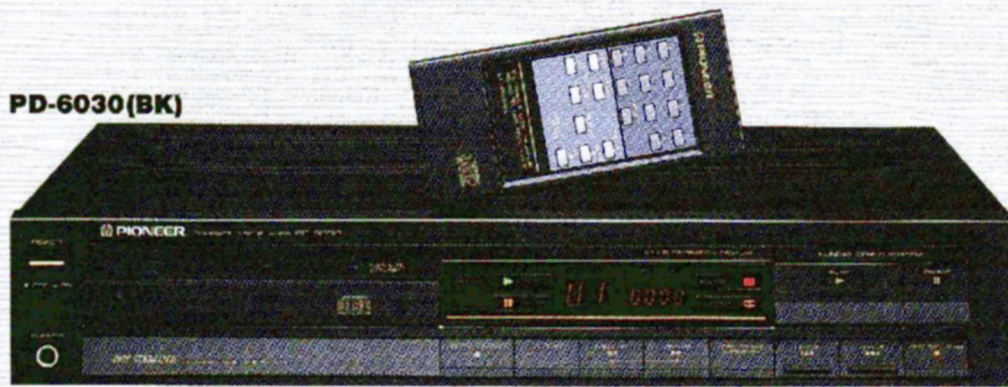
■ **3-way repeat:** All tracks, programmed tracks and a single track.

■ **Timer start:** Wake up with digital sound every morning.

■ **8-digit fluorescent display:** Shown are track number, index number, elapsed time, remaining play time, total play time, etc. Remaining play time is shown when you program tracks for play or dubbing.

■ **Headphone output with volume control.**

■ **Special subcode output:** Built in for future use in combination with your monitor TV.

PD-6030(BK)

SPECIAL NEX CRC No. 9595737



NEX

PD-5030(BK)**CLD-909(BK)**

CATALOG AAFES NEX

CRC No. 9519638

PD-6030(BK) SR

Compact Disc Player

- New Disc Stabilizer with self-centering ball bearings: Improves disc tracking for better sound.
- Honeycomb chassis: For more chassis rigidity and better protection of pickup from vibration and acoustic feedback.
- Low-center-of-gravity floating optical pickup mechanism: Another way to ensure better tracking for clear sound.
- Wireless remote control.
- Random programmed play of 24 tracks.
- Add-on programmed play: Switch from normal play to programmed play with no pause.
- 2-way search: Track and 3-speed manual.
- 3-way repeat: All tracks, programmed tracks and single track.
- 6-digit LED display: Shown are track number, elapsed time, total play time.
- Timer start and headphone output.
- Special subcode output.
- Slim 3-1/8 inch (80mm) height.

PD-5030(BK)

Compact Disc Player

- New Disc Stabilizer with self-centering ball bearings: Improves disc tracking by eliminating vibration and preventing disc slippage. Better tracking results in better sound.
- Honeycomb chassis: For more chassis rigidity and better protection of pickup from vibration and acoustic feedback.
- Low-center-of-gravity floating optical pickup mechanism: Isolated pickup and more stable chassis balance mean better tracking for clear sound.
- Random programmed play of 24 tracks.
- 2-way search: Track and 3-speed manual.
- 3-way repeat: All tracks, programmed tracks and single track.
- Timer start.
- 6-digit LED display: Shown are track number, elapsed time, total play time.
- Headphone output.
- Slim 3-1/8 inch (80mm) height.

CLD-909(BK) SR

LaserDisc* Compact Disc/LaserVision Player

- Combination LaserVision and Compact Disc player in a single compact unit: Plays 12-inch or 8-inch LV videodiscs or Compact Discs. Format is automatically detected and selected.
- Digital sound playback: The player plays LV videodiscs with wide-dynamic-range "Digital Sound."
- Full-function wireless remote control.
- CX** noise reduction system.
- Headphone jack with volume control.
- Full-time on-screen display: Clear text on blue background.
- LV player functions: 3-way search (chapter, frame, time), scan (forward and reverse), chapter skip and program, multispeed play, 4-way repeat, pause, stop (eject), still/step.
- CD player functions: Pause, stop (eject), scan (forward and reverse), 4-way repeat, program play, 3-way search (skip, time and track).

* LaserDisc is a trademark of Pioneer.

**CX is a trademark of CBS, Inc.

AUDIO/VIDEO RECEIVERS

The home of today is becoming an "electronics palace."

Component TVs, personal computers, and video equipment are quickly becoming an essential part of our daily life, just as the TV and radio did years ago.

As our name implies, we at Pioneer are now leading the way in the field of audio and video integration.

Our new receivers are designed to serve as comprehensive organizers of integrated audio/video home entertainment systems.

Yet, despite their immense versatility,

new Pioneer receivers are easier to use than ever, thanks to computerization.

A/V remote control

The VSX-5000(BK) and VSX-4000(BK) each come with a full-function audio/video remote control. With its 44 keys you can control as many as 59 functions, including operation of any TV monitor, VCR, turntable, Compact Disc player, videodisc player or cassette deck with the Pioneer SR logomark.

Video connection

The VSX-4000(BK) connects and controls three video inputs — 2 VCRs and 1 videodisc player, for instance. The VSX-5000(BK) accepts one more — a video adaptor like a color corrector. With either receiver, dubbing is possible between VCRs or from videodisc player to VCRs. Both receivers are equipped with a 5-pin DIN socket that accepts an optional RF modulator (JA-RF5) for connecting a regular TV (NTSC channel 3 or 4).

Video signal selector

When you watch a video, you can use the convenient video signal selector with positions VCR1, VCR2 and VDP/VCR3, to change the sound you hear to that of the input of your choice. So it's a cinch to record a simulcast, or add personal touches to your video productions.

Cable FM input

The VSX-5000(BK) and VSX-4000(BK) let you tune a cable FM channel and preset it for later one-touch recall. So you are saved from switching between cable and FM antennas each time you want to listen to airborne FM or cable-transmitted FM.

Dolby Surround* sound

The VSX-5000(BK) is equipped with a Dolby surround sound processor that adds realism to your videos. Three positions are offered: STUDIO for music, STADIUM for live music and sports, and DOLBY for the increasing number of Dolby-processed videos. The VSX-4000(BK) features a speaker matrix surround system.

Simulated Stereo, Stereo Wide and Dynamic Expander

Simulated Stereo lets you enjoy fuller sound from video software with mono soundtracks. Stereo Wide boosts separation for better stereo sound. And the Dynamic Expander widens the dynamic range lost during the mastering process: loud sounds come out louder and soft sounds softer. All three features make video sound exciting and real.

Video enhancer with split screen function

While you view or dub videos, a video enhancer lets you make edges in the picture sharper and clearer. The split screen control lets you compare the processed and unprocessed picture on the same screen.

Acoustic memory

You can create three customized response curves using bass and treble controls, and commit them to the computer memory for instant recall at the touch of a button.

Station ID display

As you preset a station, you can also assign it a four-letter ID (letters and numbers) and commit it to the memory. Use this convenient feature to assign titles like "JAZZ" and "NEWS," too.

Non-Switching Amp Type II eliminates switching distortion**

The VSX-5000(BK) and VSX-4000(BK) are equipped with Pioneer's revolutionary Non-Switching power amplifier (Type II), contained in an IC. With it, the power transistors are never switched off; therefore, switching distortion is totally avoided, overall distortion is dramatically reduced, and music is reproduced faithfully with a new sense of clarity. Moreover, the new Type II reduces thermal distortion and improves linearity in output thirtyfold. As a bonus, our Non-Switching Amps have the ability to drive low-impedance loads, which makes them ideal for the reproduction of highly transient digital sound.

Quartz-PLL digital synthesizer tuning with presets

Quartz-PLL digital synthesizer tuning guarantees that stations, once tuned, will never drift out of tune. More convenient, it lets you preset as many as 20 FM and AM stations in any combination and later instantly recall any at the touch of a button.

Simplified operation

Simple operation is the key design concept common to our receivers, particularly so with the VSX-5000(BK) and VSX-4000(BK). This is because each uses microcomputer control based on an 8K 8-bit microcomputer, and a full complement of easy-to-read indicators.

* "Dolby Surround" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

** Non-Switching is a trademark of Pioneer.

CATALOG AAFES NEX

CRC No. 9765819



VSX-5000(BK) SR NON SWITCHING AMP™

Audio/Video Quartz-Synthesizer Non-Switching Receiver

- **Stereo mode:** Continuous average power output of 100 watts per channel, min., at 8 ohms, from 20Hz to 20,000Hz with no more than 0.005% total harmonic distortion.
- **Surround mode:** Continuous average power output of 70 watts per channel, min., at 8 ohms, from 40Hz to 20,000Hz with no more than 0.007% total harmonic distortion (front); 10 watts per channel, min., at 8 ohms, from 40Hz to 15,000Hz with no more than 0.3% total harmonic distortion (surround).
- **44-key, 59-function A/V remote control:** A single remote lets you operate not only the receiver itself but also a Pioneer TV monitor, VCR, turntable, Compact Disc player, LaserDisc videodisc player or cassette deck with the SR mark.
- **4 video inputs:** 2 VCRs, 1 videodisc player, 1 video adaptor, with two-way dubbing and 4 video outputs.
- **Video signal selector:** Lets you combine any picture of your choice with any audio input. Useful when viewing or recording simulcasts, or making home videos.
- **Cable FM input:** Cable channels and matched FM are preset and recalled at the touch of a button.
- **Station ID display on large LCD display:** Helps you identify each station at a glance.
- **Dolby surround sound:** Allows you enjoy realistic and exciting video sound. Three settings — DOLBY for Dolby processed videos originally made for theaters, STUDIO for music videos, and STADIUM for live music and sports events.
- **Simulated Stereo and Dynamic Expander:** The first to turn mono sound into exciting stereo, the second to make the loud sound louder and the soft sound softer.
- **Video enhancer:** Lets you add more detail to picture you watch or dub. Split screen function lets you compare processed and unprocessed picture.
- **Acoustic memory:** Offers three customized responses, each available at a touch.
- **Exclusive Non-Switching Circuit Type II:** Ends switching distortion, improves thermal stability and linearity.
- **Random preset of 20 FM/AM stations.**
- **60/30-minute sleep timer.**

AAFES NEX CRC No. 9462003



JA-RF5
RF Modulator

Even if yours is a plain old TV with no video inputs, you can connect it to our A/V receivers or C-90 control amplifier. The JA-RF5 is an RF modulator that converts baseband video signals into RF signals for the antenna input of a regular TV.





CATALOG AAFES NEX CRC No. 9765314

VSX-4000(BK)



CATALOG NEX CRC No. 9764234

SX-1500(BK)

VSX-4000(BK) NON SWITCHING AMP™

Audio/Video Quartz-Synthesizer Non-Switching Receiver

- Continuous average power output of 60 watts per channel, min., at 8 ohms, from 20Hz to 20,000Hz with no more than 0.005% total harmonic distortion.
- 44-key, 59-function A/V remote control.
- 3 video inputs: 2 VCRs and 1 videodisc player, with two-way dubbing and 3 video outputs.
- Video signal selector: For simulcasts and home video productions.
- Cable FM input: You can preset cable FM channels with the antenna input automatically switched.
- Station ID display on large LCD display.
- Simulated Stereo and Stereo Wide: Add more excitement to video watching.
- Speaker matrix surround: Just add two more speakers to enjoy surround immediately.
- Video enhancer with split screen function.
- Acoustic memory: Offers three customized responses.
- Exclusive Non-Switching Circuit Type II.
- Random preset of 20 FM/AM stations.
- 60/30-minute sleep timer.

SX-1500(BK)

Quartz-PLL Synthesizer Receiver

- Continuous average power output of 45 watts per channel, min., at 8 ohms, from 40Hz to 20,000Hz with no more than 0.3% total harmonic distortion.
- Random preset of 20 FM/AM stations: Up to 20 FM and AM stations can be selected as presets.
- Simulated Stereo: Enhanced stereo is derived from any mono program. Useful when watching video with mono sound.
- Auto station search: The tuner automatically scans the FM band for the next strong station and tunes it in.
- 5-band graphic equalizer: To shape the music to your taste and to overcome aberrations in system response.
- 1 tape monitor, 2 AUX inputs, two-pair speaker hook-up.

INTEGRATED AMPLIFIERS & TUNERS

More than any other component, it's the amplifier that is subjected to great stress as the result of sound going digital. To accurately reproduce digital programs, an amplifier must offer high power, low noise and distortion, high stability, and high current supply capability. New Pioneer amps do just that.

The Digital Direct Decoder in our tuners is revolutionary, improving every possible tuner specification. The F-99X(BK) and F-77(BK) feature this innovative decoder, and they also enjoy the benefits of a host of other advanced technologies for better sound and operating feel.

A 3-transformer, 7-unit power supply

After all, it's the power supply system that makes or breaks an amplifier, so Pioneer lavished its most advanced technology on the one in the A-88X(BK) and A-77X(BK). It consists of three transformers and no fewer than seven separate power supplies. There is an independent power transformer for each channel of the power amplifier. The phono equalizer has its own power transformer — the third one in the overall scheme — to supply power to the left and right channels independently. The result of this elaborate power supply is uncommonly clean sound and extremely precise imaging.

Better low-impedance driving capability

Speakers have rated impedances of, say, 8 ohms, but, when they are playing music, they present to the amplifier an impedance that varies with frequency. With digital programs, the impedance can often reach as low as 2 ohms, because of digital audio's much wider dynamic range and faster transient response. Lower impedance requires that more current be sent by the power supply to the power amplifier. If the power supply cannot match momentary current demands, the result is, simply, distortion. With the A-88X(BK) and A-77X(BK), it won't happen, thanks to (1) our elaborate power supply, featuring oversized transformers and high-capacity electrolytic capacitors, and (2) an advanced triple- or double-parallel push-pull configuration. Both amps handle exceptionally high dynamic power of digital admirably.

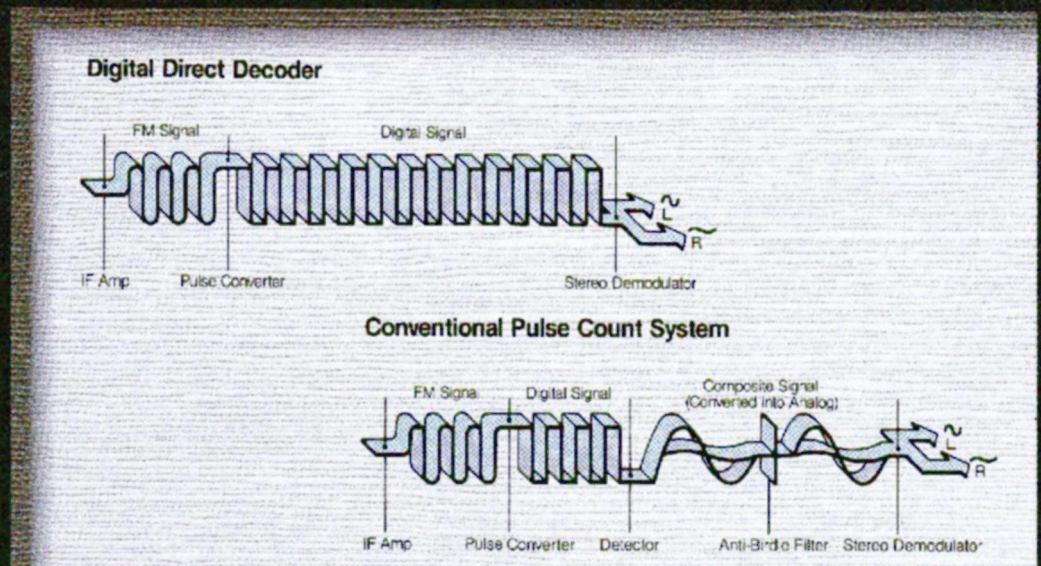


The new Non-Switching Circuit Type II

The power amplifier circuitry has been upgraded to the new Non-Switching Circuit Type II. Not only does it prevent common switching distortion — the type of distortion that adds gritty, metallic quality to the sound you hear — but it also reduces thermal distortion by instantly stabilizing quiescent currents. Moreover, by detecting and compensating for the error between the input and the output, the Type II has reduced non-linear distortion to 1/30 of our original circuit.

Digital Direct Decoder

In our innovative Digital Direct Decoder tuner, the signal from the output of the IF stage is converted into a digital signal by a pulse converter, and then directly added to the sine-wave subcarrier in the adder of the stereo multiplex decoder. In the process, the FM signal remains in digital form from the pulse converter until it reaches the stereo demodulator. In other words, the Digital Direct Decoder detects and demodulates an FM signal not in two steps, but in one. Moreover, since digital signals are intrinsically immune to noise and distortion, the Digital Direct Decoder dramatically improves every tuner specification, including signal-to-noise ratio, distortion, and separation. Our decoder has also made an anti-birdie filter — another source of signal degradation — redundant and unnecessary.





CATALOG | AAFES | NEX | CRC No. 9747700

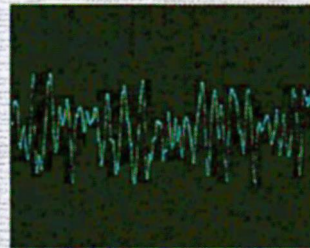
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A-88X (BK) NON SWITCHING AMP*

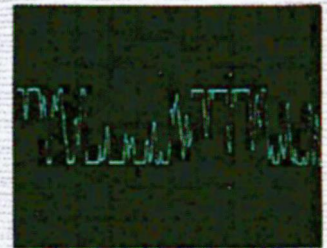
Non-Switching Stereo Amplifier

- Continuous average power output of 120 watts per channel, min., at 8 ohms, from 20Hz to 20,000Hz with no more than 0.003% total harmonic distortion. Dynamic power of 441W + 441W at 2 ohms (measured on EIA dynamic test signal).
- 7 power supplies using 3 transformers: Power to spare and minimum interference for better sound.
- Two-mono-amps-in-one construction: Separate circuitry for each channel reduces crosstalk, improves stereo imaging and adds clarity.
- Improved low-impedance driving capability: Elaborate power supply and triple-parallel push-pull output configuration make it possible to drive ultra-low impedance loads, for accurate reproduction of digital programs.
- Exclusive Non-Switching Circuit Type II: Ends switching distortion, improves thermal stability and linearity.
- "Hybrid" transformer/phono amp for MC cartridges: For lower noise, extended high-frequency response, smooth bass.
- Quality parts for quality sound: OFC (Oxygen-Free Copper) wires, tin-plated input/output terminals, large binding-type speaker terminals.

Power Supply Capability of A-88X (BK) at Low Impedance



A-88X (BK)
 Current supplying capability at peak:
 about 20A (about 800W/2 ohms)



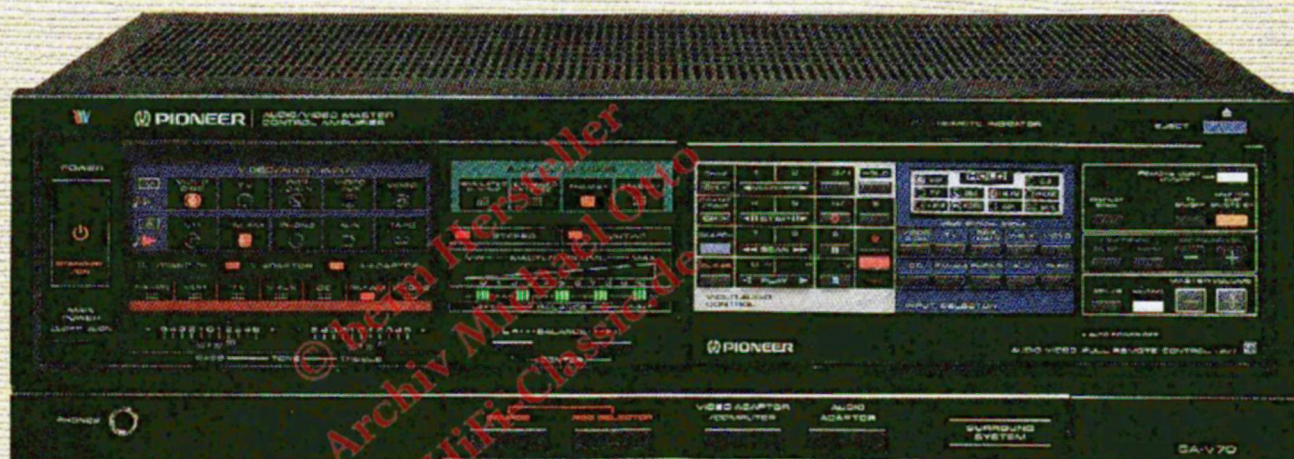
Conventional Pioneer Amp
 Current supplying capability at peak:
 about 12A (about 288W/2 ohms)

As shown, the A-88X (BK) provides sufficiently high current to handle dynamic peaks in music.



CATALOG AAFES NEX CRC No. 9748005

A-77X(BK)



CATALOG AAFES NEX CRC No. 9911702

SA-V70(BK)

A-77X(BK) NON SWITCHING AMP*

Non-Switching Stereo Amplifier

- Continuous average power output of 100 watts per channel, min., at 8 ohms, from 20Hz to 20,000Hz with no more than 0.003% total harmonic distortion. Dynamic power of 324W + 324W at 2 ohms (measured on EIA dynamic test signal).

- 7 power supplies using 3 transformers: Power to spare and minimum interference for better sound.

- Two-mono-amps-in-one construction: Separate circuitry for each channel reduces crosstalk, improves stereo imaging and adds clarity.

- Improved low-impedance driving capability: Elaborate power supply and parallel push-pull output configuration make it possible to drive ultra-low impedance loads, for accurate reproduction of digital programs.

- Exclusive Non-Switching Circuit Type II: Ends switching distortion, reduces distortion due to thermal instability, improves linearity for cleaner and more natural sound.

- Quality parts for quality sound: Oversized binding-type speaker terminals, tin-plated pin jacks, more.

SA-V70(BK) SR

Audio/Video Master Control Amplifier

- *Stereo mode*: Continuous average power output of 50 watts per channel, min., at 8 ohms, from 20Hz to 20,000Hz with no more than 0.09% total harmonic distortion.

- *Surround mode*: Continuous average power output of 25 watts per channel, min., at 8 ohms, from 20Hz to 20,000Hz with no more than 0.09% total harmonic distortion (front); 25 watts per channel, min., at 8 ohms, from 100Hz to 4,000Hz with no more than 1% total harmonic distortion (surround).

- Versatile in/output capabilities: Connects 5 video components and 5 audio components.

- 4 surround sound modes: Add realistic excitement to your video watching — THEATER to re-create moviehouse/theater ambiance, STADIUM to simulate the open-air feel of a stadium, SIMULATED STEREO to derive stereo from mono sound, and EXPANDED STEREO.

- Remote control: Most functions can be operated by remote control and confirmed by on-screen display on connected monitor.

- Recording selector function: Allows you to dub new audio onto a videotape while monitoring it.

- Video and RF outputs.

- Terminals for 1 audio and 1 video adaptor



CATALOG AAFES NEX CRC No. 9752007

F-99X(BK)



CATALOG NEX CRC No. 9859927

F-77(BK)

F-99X(BK)

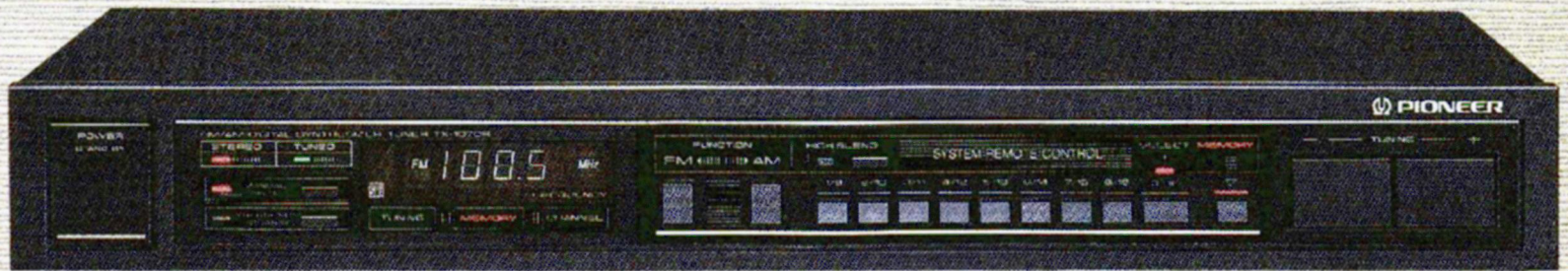
Digital Direct Decoder FM/AM Tuner

- Pioneer's Digital Direct Decoder Type II: Digital processing is combined with direct conversion from FM IF to left/right audio output to improve every major tuner specification. Type II further reduces noise and distortion.
- ID MOS FET in FM front end: For lower noise and distortion, higher sensitivity and better interference rejection.
- Twin varicaps and balanced mixer: To improve reception, stability and interference rejection capability.
- Random presets for 16 FM/AM stations: Favorite stations may be preset and recalled at a touch.
- FM IF bandwidth selector: "WIDE" for low-distortion hi-fi sound, "NARROW" for clean, interference-free reception.
- Select parts for better sound: Low-distortion semi-conductive capacitors, OFC (Oxygen-Free Copper) wire cables, etc.
- 3-point signal indicator.

F-77(BK)

Digital Direct Decoder FM/AM Tuner

- Pioneer's Digital Direct Decoder: Digital processing is combined with direct conversion from FM to left/right audio output to improve every major tuner specification.
- Linear front end: Features electronic twin-varicaps to reduce RF intermodulation distortion and expand dynamic range.
- "Pulse swallow" frequency synthesis: Using an ultrasonic reference frequency, it provides stable reception and a high signal-to-noise ratio.
- Random presets for 16 FM/AM stations: Favorite stations may be preset and recalled at a touch.
- Improved AM sound: A large loop antenna and an FET buffer for the tuning coil assure clean AM sound.
- 3-point signal indicator.



NEX

TX-1070R(BK)



NEX

TX-V1160(BK)

TX-1070R(BK) SR

Quartz-PLL Synthesizer FM/AM Tuner

- Random presets for 16 FM/AM stations: Any station may be preset and recalled at a touch.
- Quartz-PLL synthesizer front end: Every station is tuned precisely; station drift cannot occur so distortion remains low.
- Convenient four tuning modes:
 - Auto Station Search — automatically tunes in strong-signal stations.
 - Automatic Preset Scan — automatically monitors each preset station for five seconds.
 - Manual Preset Search — lets you tune in the next preset station up or down the tuning band.
 - Manual Tuning — lets you examine each frequency to locate weak-signal stations.
- High-blend: Reduces high-frequency noise from weak signals — programmable station by station.
- Ready for Pioneer SR (System Remote).
- PLL stereo demodulator: FM stereo will sound great for years thanks to this highly stable circuit.
- Fluorescent display: Tuned frequency and preset station number are shown.

TX-V1160(BK) SR

Quartz-PLL Synthesizer FM/AM/TV Tuner

- Multichannel TV Sound (MTS) decoder: For reception of SAP (Second Audio Program) and stereo broadcasts.
- Random presets for 24 FM/AM stations: Any station may be preset and recalled at a touch.
- Random presets for 12 TV channels: For one-touch selection of TV channels.
- FM/AM/TV simulcast reception: Record FM/AM on soundtracks of videotape, while recording video from TV.
- RF and video outputs: You can connect a TV and a monitor TV, and record TV on a tunerless VCR.
- Quartz-PLL synthesizer front end: Every station is tuned precisely; station drift cannot occur so distortion remains low.
- Wireless remote control: You can recall any of 24 FM/AM stations and 12 TV channels, and turn on/off Pioneer color monitors with the SR logo.

CASSETTE DECKS

Today, "digital," as applied to audio, is often used to refer to digital recording/playback systems — Compact Discs and PCM systems. When applied to cassette decks, it refers to a microcomputer based on digital electronics.

The newest generation of Pioneer decks are digital in both senses of the word: they are capable of recording digital programs without limiting digital's wide dynamic range; and they are controlled by microcomputer to make operations simpler and more convenient.

Simplified operating conveniences, courtesy of microcomputers

Digital microcomputers are employed extensively in the new Pioneer cassette decks to simplify operation and make possible useful additional operating modes. The following paragraphs tell just how.

Quick auto-reverse: An optical end-of-tape detection system assures that the breaks between sides are so short that they are almost unnoticeable.

Relay recording/playback:

The CT-S99WR(BK) double-cassette deck lets you automatically record or play both sides of first one tape, then the other. Using two C-90 cassettes, you can record up to three hours of music, or replay the program up to 6 times (17 hours 15 minutes) non-stop. The CT-1270WR(BK) and CT-1170W(BK) offer relay playback of tapes.

Random access programming:

The CT-S99WR(BK) and CT-3070R(BK) let you choose up to 10 songs from each side of a tape and play them in any order. Tape controls double as numeric keys that allow you to directly access any song on the tape.

Normal/double speed dubbing: With the double-cassette decks you can dub the tape in one transport onto another at normal or double speed. Further, the CT-S99WR(BK) lets you dub programmed songs at normal or double speed.

Parallel recording: The CT-S99WR(BK) allows you to record two tapes simultaneously, one for home use, one for the car or portable, for instance.

Music Search: Allows you to easily locate any song on a tape in either direction. Music/Skip Search in the CT-S99WR(BK) lets you zero in on a song up to 10 away, forward or back.

Blank Skip: Skips any blanks (longer than 8 seconds) at the beginning or end of a tape so that reverse side play starts more quickly.

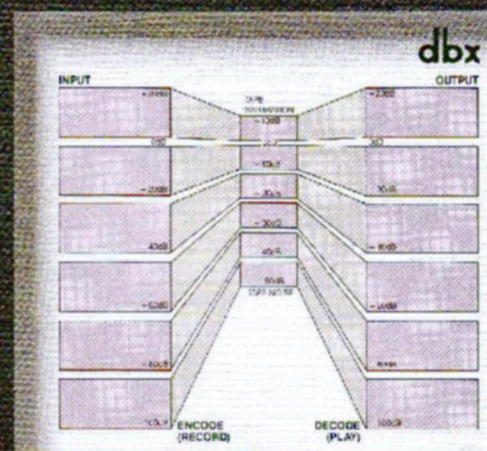
dbx* for 110dB dynamic range permits recording of digital programs

By itself, a cassette deck offers only a narrow 60dB or so dynamic range, which pales in comparison with the over 90dB range of digital programs. So in the CT-S99WR(BK), CT-3070R(BK) and CT-2070R(BK), we've incorporated the dbx noise reduction system, in addition to Dolby B/C NR, that's capable of expanding the dynamic range to an amazing 110dB and reducing noise by 30 to 40dB at any audible frequency. It does so by compressing the music signal in a 2-to-1 ratio during recording, then expanding the music back during playback. Now our best cassette decks let you enjoy the full 90dB or higher dynamic range of digital programs — including Compact Discs and the digital soundtracks of LaserDisc videodiscs — with headroom to spare.

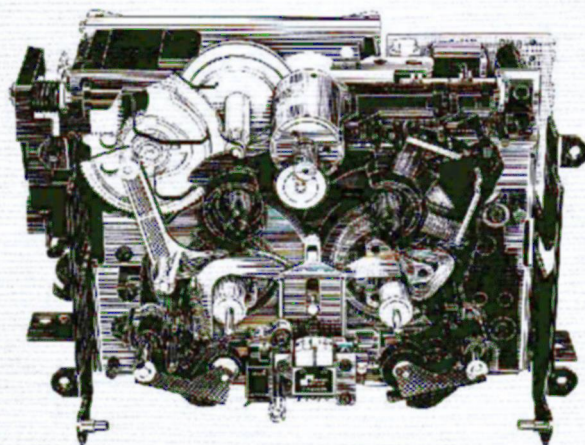
The Reference Master Mechanism: the new standard

The "Reference Master Mechanism" in the CT-A9X(BK) is the Pioneer version of the sophisticated closed-loop dual-capstan drive. Using two sets of capstan/pinch rollers, the mechanism provides constant tape tension for better tape-to-head contact. Wow and flutter, modulation noise, level variations and dropouts are all dramatically reduced for better definition, higher clarity, and flat, smooth frequency response.

*dbx is a trademark of dbx, Incorporated.



Reference Master Mechanism





CATALOG AAFES NEX CRC No. 9753518

CT-S99WR(BK) dbx

Double Quick Auto-Reverse Cassette Deck

- Two quick auto-reverse cassette transports: Both transports record and play in both directions for the ultimate in taping and dubbing convenience. Optical sensors assure quick reverse for non-stop recording and play.
- Random access programming: Up to 10 songs on each side of the tape may be programmed and played back in any order.
- Programmed dubbing: All or just programmed songs on both sides of a tape can be dubbed at normal or double speed.
- Parallel recording: For making two tapes simultaneously — one for home listening, one for car audio, for instance.
- Relay recording and play: Automatically record both sides of first one tape, then the other, for up to three hours (using two C-90s). Relay play offers up to 17 hours 15 minutes of uninterrupted music from two C-90s.
- Full-logic tape transports: For comfortable touch operation and direct change of modes.
- dbx noise reduction: Expands dynamic range to 110dB and improves the signal-to-noise ratio to 92dB. You can now record digital programs whole without limiting dynamic range.
- Dolby B/C noise reduction: Reduces noise by 10dB and 19dB (at 5kHz), respectively, for comfortable, hiss-free sound.
- Auto rec mute: Adds 4-second blanks between songs.
- Music/Skip Search: Lets you zero in on a song up to 10 away, forward or back.
- Blank Skip: Skips any blanks longer than 8 seconds.
- Timer record/play standby.

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NEX



CT-A9X(BK)

CATALOG AAFES NEX CRC No. 9763335



CT-1270WR(BK)

CT-A9X(BK) Ribbon Sendust Head

"Reference Master Mechanism" Cassette Deck

■ Pioneer "Reference Master Mechanism":

Staggered-resonance closed-loop dual-capstan drive: Uniform tape tension and smooth tape running eliminate dropouts, modulation noise and level variations.

Quartz-PLL servo direct-drive motor for capstan: A coreless DC motor, precision FG and quartz reference combine to achieve ultra-low wow and flutter of 0.018% (WRMS).

Optically aligned head base: For smooth head-to-tape contact.

Digital feedback servo motor drive mechanism: To provide silky-smooth operating feel.

■ Exclusive Ribbon Sendust Heads: For better transient response, lower noise, wider dynamic range.

■ 3-head design: For tape monitoring during recording.

■ Auto BLE (Bias, Level and Equalization) with MOL Balance: For optimum results from any tape, any type of music.

■ Easy-to-use conveniences: Auto loading/power eject, fluorescent peak level indicators, real-time counter, more.

CT-1270WR(BK)

Double Auto-Reverse Cassette Deck

■ Two auto-reverse cassette transports: One plays, the other both plays and records.

■ Soft-touch tape control: For comfortable operation.

■ Synchro-start tape dubbing: At normal or double speed at the touch of a button thanks to Synchro Start function.

■ Relay play: For long musical sessions.

■ Dolby B/C noise reduction: For low-noise recording.

■ Cue & Review (Deck I): To skip songs.

■ Rec mute: To add smooth breaks between recorded songs.

■ Timer-controlled recording (Deck II) and play (Deck I/II).

■ Auto tape selector (Deck I).

CT-1170W(BK)

CATALOG NEX CRC No. 9764820

CT-3070R(BK)

CATALOG AAFES NEX
CRC No. 9761313

CT-2070R(BK)

CATALOG NEX CRC No. 9760802

CT-1170W(BK)**Double Cassette Deck**

- Synchro-start tape dubbing: Dubbing can be performed at normal or double speed at the touch of a button.
- Dolby B/C noise reduction: For low-noise recording.
- Relay play: Two tapes can be automatically played back one right after the other.
- Cue & Review (Deck I): Helps you find what you're looking for on the tape.
- Timer-controlled recording (Deck II) and play (Deck I/II).
- One-touch recording (Deck II), Auto tape selector (Deck I), LED level meters, Manual level control.

CT-3070R(BK) SR dbx**Quick Auto-Reverse Cassette Deck**

- Quick auto-reverse cassette transport: Optical sensor assures quick reverse for non-stop recording and play.
- Random access programming: Up to 10 songs on each side of the tape may be programmed and played back in any order.
- Full-logic tape transport: For comfortable touch operation and direct mode change.
- dbx noise reduction: Expands dynamic range to 110dB and improves the signal-to-noise ratio to 92dB.
- Dolby B/C noise reduction.
- Oversized fluorescent display: Included are 2-color, 12-segment level meters and 4-digit tape counter.
- Auto rec mute: Adds 4-second blanks between songs.
- Music/Skip Search: Lets you zero in on a song up to 10 away, forward or back.
- Blank Skip: Skips any blanks longer than 8 seconds.

CT-2070R(BK) SR dbx**Quick Auto-Reverse Cassette Deck**

- Quick auto-reverse cassette transport: For automatic recording and playback of both sides of a tape.
- Full-logic tape transport: For comfortable operation.
- dbx noise reduction: Permits recording of digital programs on cassette tape with wide dynamic range.
- Dolby B/C noise reduction: For low-noise recording.
- Music Search: To find a song you want quickly.
- Rec mute: Adds silences between recorded songs.
- One-touch record standby: Just touching the REC button sets the deck in the record pause mode, ready to start.
- LED level meters, one for each channel.
- Timer record/play standby.

TURNTABLES

PL-88FS(BK)

Programmable Front-Loading Turntable

■ Stackable front-loading design: Constructed to support up to an 88-pound (40kg) load on top.

■ Computer-programmed automatic operation:

Programmed Play — Up to 8 tracks on a record may be chosen and programmed for up to 14 plays.

Index Scan — The first ten seconds or so of every song can be played, one right after the other.

Skip Play — Any programmed track may be skipped.

Repeat Play — Any song or songs you've programmed can be repeated.

■ Double Eye and Address Sensors: For accurate random access cueing, and speedy automatic operation.

■ Quartz-PLL servo system: Detects and accurately corrects the most minute fluctuations in platter speed.

■ Coreless DC direct-drive motor with Stable Hanging Rotor*: Provides smooth rotation and perfect stability.

■ High-output moving-coil cartridge (PC-41MC): Directly connects to amp's MM phono terminals.

PL-3F

Quartz-PLL Fully Automatic Turntable

■ Pioneer-exclusive Dynamic Resonance Absorber (DRA) on tone arm: To eliminate resonance-induced vibration, adding clarity to sound.

■ Straight PG* tone arm: Because it is rigid and hard, resonance is no longer a problem and tracking is improved.

■ Quartz-PLL servo system: Detects and corrects the most minute fluctuations in platter speed.

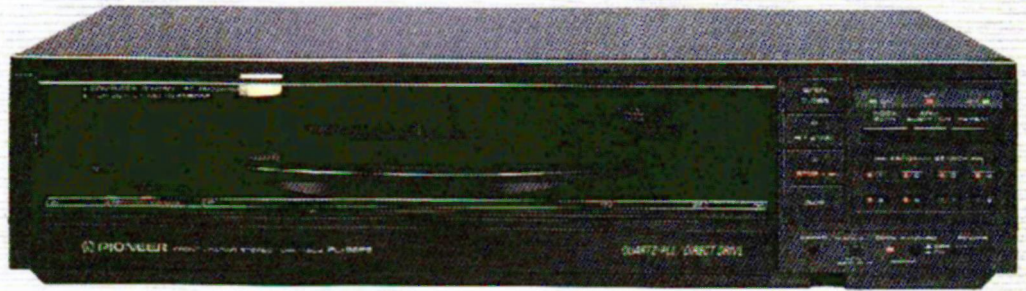
■ "Flat-torque" coreless DC direct-drive motor with Stable Hanging Rotor: Provides more uniform torque for smoother rotation. Pioneer Stable Hanging Rotor reduces spindle wobble.

■ Double Suspension System: Stops both vertical and horizontal vibration and acoustic feedback, so sound has better clarity, especially in the critical midrange region.

■ Computer control: For easy, error-free operation and full protection of stylus, record and tone arm.

■ Front operation including manual cueing.

■ Repeat.



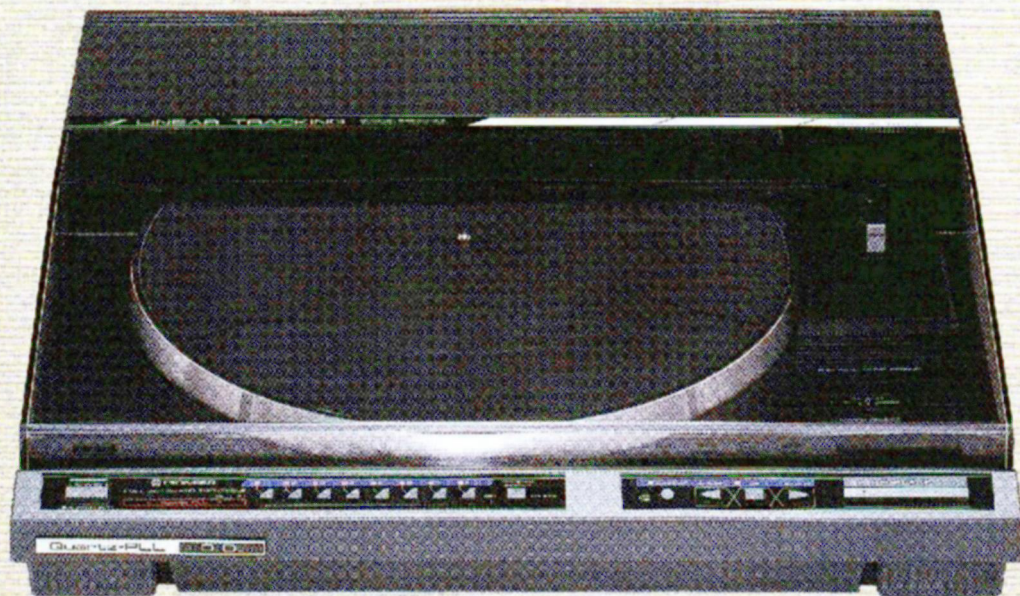
CATALOG AAFES NEX CRC No. 9723537



REPLACEMENT STYLI FOR PIONEER SYSTEMS & TURNTABLES

System	Turntable	Stylus	System	Turntable	Stylus	Turntable	Stylus	Turntable	Stylus	
SYSTEM AV 1, X-770	PL-X505(BK)	PN-295T	SYSTEM G9	PL-930	PN-3MC	PL-X505(BK)/PN-295T	PL-7	PN-3MC		
SYSTEM CD9, SYSTEM CD7	PL-670(BK)	PN-295T	SYSTEM G7	PL-750	PN-3MC	PL-3F	PN-7MC	PL-5	PN-3MC	
SYSTEM E3000	PL-550Z(BK)	PN-295T	SYSTEM G5	PL-430	PN-3MC	PL-950(BK)	PN-305T	PL-4	PN-3MC	
X-330	PL-X557(BK)	PN-295T	S-90, S-50, S-4	PL-X50	PN-3MC	PL-L70	PN-301	PL-L1000A	PN-4MC	
SC550, SC-5	PL-05	PN-3MC	M-80	MX-80	PN-110/B	PL-L50	PN-300T	PL-L1000	PN-600A	
SYSTEM V9	PL-L70	PN-301	M-40	MX-40	PN-K85	PL-88FS(BK)/PN-41MC	PL-630	PN-600A	PL-630	PN-600A
SYSTEM V7	PL-960(BK)	PN-305T	SYSTEM 990	PL-720	PN-3MC	PL-88FS	PN-41MC	PL-620	PN-150	
SYSTEM P2000	PL-221L	PN-290T	SYSTEM 770	PL-420	PN-3MC	PL-88F	PN-41MC	PL-400	PN-150	
X-300	PL-X21L	PN-290T	SYSTEM 550	PL-320	PN-3MC	PL-44FS	PN-3MC	PL-255	PN-110/B	
X-27W, X-70W, X-7W	PL-X200	PN-290T	MS-850, KH-850	KH-8855	PN-K85	PL-44F	PN-3MC	PL-200	PN-110/B	
FORESIGHT 70	PL-V70	PN-291	MS-550, KH-550	KH-5077	PN-K85	PL-L800S	PN-4MC			
SYSTEM A900, SYSTEM A770	PL-950	PN-3MC	SYSTEM 900, SYSTEM 99	PL-440	PN-150	PL-L800	PN-4MC			
SYSTEM E600	PL-200Z	PN-250T	SYSTEM 700, SYSTEM 77	PL-255	PN-110/B	PL-707	PN-6MC			
S-550, S-505	PL-X5	PN-220	SYSTEM 900, SYSTEM 55	PL-250	PN-110/B	PL-570	PN-5MC			
SYSTEM A9, SYSTEM A7	PL-740	PN-3MC	MINI-100, MINI-150	PL-3000	PN-150	PL-850	PN-3MC			
SYSTEM E66	PL-110	PN-K85	SYSTEM 70	PL-518X	PN-110/B	PL-9	PN-3MC			
S-707	PL-K7	PN-31MC	SYSTEM 50	PL-516X	PN-110/B	PL-8	PN-3MC			

* Stable Hanging Rotor and PG (Polymer Graphite) are trademarks of Pioneer.



CATALOG AAFES NEX CRC No. 9306838

PL-L70

Programmable Linear Tracking Turntable

■ Computer programmed automatic operation: A microcomputer and a precise optical music sensor ("Double Eye Sensor") offer the following easy-to-use features.

Programmed Play — Up to 8 tracks on a record may be chosen and programmed for up to 15 plays.

Skip Play — Any programmed track may be skipped.

Repeat Play — Programmed tracks can be played back automatically for up to 8 cycles.

■ Pioneer-exclusive Dynamic Resonance Absorber (DRA) on tone arm: This complex resonator eliminates resonance-induced vibration, adding clarity to sound.

■ Linear tracking: Reduces tracking error for lower distortion and better definition.

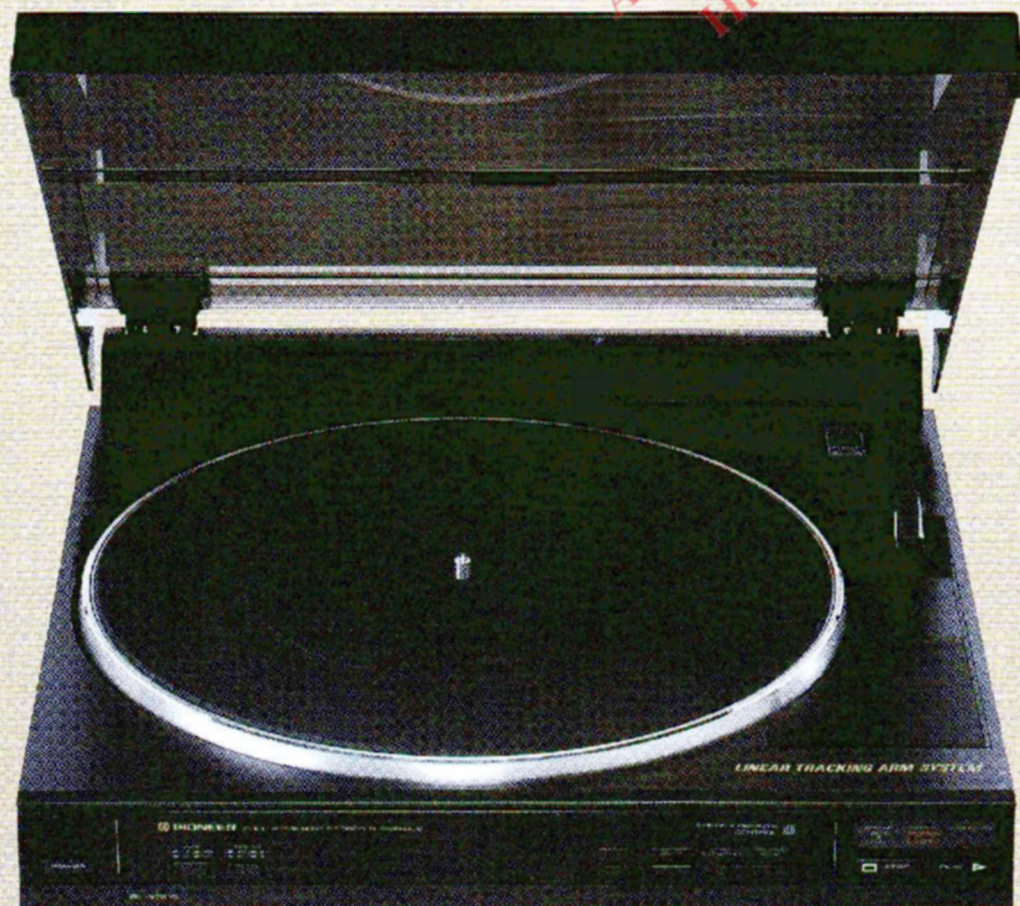
■ "Flat-torque" coreless Quartz-PLL direct-drive motor: For smooth and stable platter rotation. Pioneer Stable Hanging Rotor reduces spindle wobble.

■ Automatic disc size/speed selector.

■ Manual cueing controls.

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NEX



PL-X505(BK)

Fully Automatic Linear Tracking Turntable

■ Linear tracking: Reduces tracking error for lower distortion and better definition.

■ Fully automatic operation: You never need to touch the tone arm to enjoy music.

■ DC-servo motor: Provides smooth and silent platter rotation.

■ Quick play for repeat: To hear a record as many times as you like.

■ T4P-mount plug-in cartridge connector: Just snap on the cartridge; there no chance of wiring errors, and you don't have to adjust tracking force or overhang.

■ Front operation: All controls are located on the front panel for easy access.

■ T4P-mount plug-in cartridge (PC-295T) supplied.

■ 14-3/16 inches (360mm) wide: Matched dimensions with Pioneer midi-sized component systems.

 T4P

This is the standard logo mark for the plug-in cartridge connector system. Any cartridges carrying this mark are compatible with any turntables or tone arms carrying the same mark.

SPEAKER SYSTEMS



CATALOG AAFES NEX CRC No. 9347519

CS-907

Bookshelf Speaker System with 15-3/4-inch Woofer

■ Extra large 15-3/4-inch (40cm) woofer with EBD (Electronic Bass Drive): Use of heat-resistant voice coil and a large strontium ferrite magnet assures powerful, efficient reproduction of crisp lows down to 30Hz. Using two sets of voice coils, EBD effectively doubles the amount of usable low-frequency output for you to enjoy.

■ 6-1/2-inch (16cm) cone midrange: A large magnet and high-temperature voice coil ensure natural and powerful reproduction of vocals and other midrange sound.

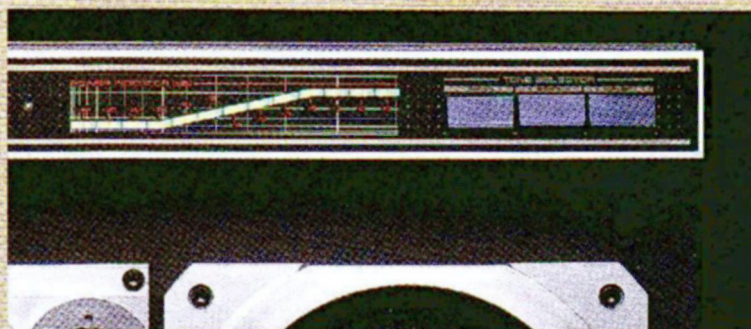
■ Horn tweeter: For crisp and straightforward highs. An acoustic lens provides well-dispersed highs for excellent definition. A self-restoring protection circuit prevents voice coil burnout.

■ Four piezo supertweeters: Extend high-frequency response beyond the audible range to ensure power and realism. Four units are driven in parallel to improve power handling capability.

■ Three tone selectors: NATURAL for flat and uncolored sound, SOFT for classical and background music, CRISP for pops and rock. Choose the position that's best for each type of music.

■ 13-LED power indicators: Show input level and warn of imminent overload.

■ Extra wide frequency response: From 30Hz to 25,000Hz; extra high power capability, 400 watts maximum power.



CS-707



CATALOG AAFES NEX

CRC No. 9335720

CS-707

Bookshelf Speaker System with 15-3/4-inch Woofer

■ Extra large 15-3/4-inch (40cm) woofer with EBD (Electronic Bass Drive): Use of heat-resistant voice coil and a large strontium ferrite magnet assures powerful, efficient reproduction of crisp lows down to 30Hz.

■ 4-3/4-inch (12cm) cone midrange: Equipped with a large strontium ferrite magnet for high power and forward sound.

■ Horn tweeter: An acoustic lens provides well-dispersed highs for excellent definition. A self-restoring protection circuit prevents voice coil burnout.

■ Twin piezo supertweeters: Extend high-frequency response beyond the audible range to ensure power and realism.

■ Three tone selectors (NORMAL, SOFT and CRISP): Choose the position that's best for each type of music.

■ 11-LED power indicators: Show input level and warn of imminent overload.

■ Wide frequency response: From 30Hz to 25,000Hz; high power capability, 300 watts maximum power.

CS-607



CATALOG AAFES NEX

CRC No. 9348335

CS-607

Bookshelf Speaker System with 12-inch Woofer

■ Large 12-inch (30cm) woofer with EBD (Electronic Bass Drive): Pioneer's exclusive EBD and large, powerful magnet provide crisp and gutsy lows down to 35Hz.

■ 4-3/4-inch (12cm) cone midrange: Equipped with a large strontium ferrite magnet for high power and forward sound.

■ Horn tweeter: An acoustic lens provides well-dispersed highs for excellent definition. A self-restoring protection circuit prevents voice coil burnout.

■ Twin piezo supertweeters: Extend high-frequency response beyond the audible range to ensure power and realism.

■ 11-LED power indicators: Show input level and warn of overload.

■ Wide frequency response: From 35Hz to 25,000Hz; high power capability, 210 watts maximum power.



DSS-7



NEX

DSS-5



CATALOG NEX

DSS-9D

3-Way Bass-Reflex Speaker System

- PG cone woofer (12-inch/30cm diameter): Provides excellent transient response and low distortion.
- Boron cone midrange (4-3/4-inch/12cm): Offers improved frequency response and extended dynamic range.
- Pioneer beryllium ribbon tweeter: For improved transient response and low distortion.
- Linear-Drive Magnetic Circuit: For accuracy and wide dynamic range from the loudest to softest sound.
- Dynamic Response Suspension: The woofer responds to dynamic changes in the input level more accurately.
- Electronic Bass Drive: To extend bass response.
- Round cornered baffle: For clearer stereo imaging.
- Tone selectors for mids and highs.
- High power, 300 watts (maximum power), 80 watts (rated).



DSS-7

3-Way Bass-Reflex Speaker System

- PG cone woofer (12-inch/30cm diameter): Provides excellent transient response and low distortion.
- Boron cone midrange (2-1/2-inch/6.6cm): Offers improved frequency response and extended dynamic range.
- Pioneer beryllium ribbon tweeter: For improved transient response and low distortion.
- Linear-Drive Magnetic Circuit: For accuracy and wide dynamic range from the loudest to softest sound.
- Dynamic Response Suspension: The woofer responds to dynamic changes in the input level more accurately.
- Electronic Bass Drive: To extend bass response.
- Tone selectors for mids and highs.
- High power, 210 watts (max. music power), 70 watts (rated).



DSS-5

3-Way Bass-Reflex Speaker System

- 3-way bass reflex design: 10-inch (25cm) cone woofer, 2-1/2-inch (6.6cm) cone midrange, 3/4-inch (2cm) dome tweeter.
- Linear-Drive Magnetic Circuit: For accuracy and wide dynamic range from the loudest to softest sound.
- Dynamic Response Suspension: The woofer is suspended by a responsive damper so it can accurately respond to dynamic changes in the input level.
- Electronic Bass Drive: To extend bass response to the lowest frequencies while improving transient response.
- High power, 120 watts (max. music power), 40 watts (rated).

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HiFi-Classics.de

ADD-ON EQUIPMENT



CATALOG AAFES NEX CRC No. 9721127

SG-90(BK)



NEX

GR-870(BK)



SPECIAL AAFES NEX CRC No. 9389008

GR-470(BK)

SG-90(BK)

17-Band Graphic Equalizer

- 2/3-octave 17-band equalization: Provided are 17 controls per channel, covering a range from 16Hz to 25kHz.
- Ultra-low distortion: 0.001% from 20Hz to 20,000Hz (all controls at flat position).
- Auto fader: Helps you create tapes with smooth fade-ins and fade-outs between recorded songs.
- Adjustable control level: ± 12 dB for normal use, ± 6 dB for more critical adjustment.
- "Normal/Reverse" switch: Equalized response may be reversed to permit automatic noise reduction on tape.
- 2-deck connection: Lets you apply equalization as you dub tapes.

GR-870(BK)

7-Band Graphic Equalizer/Spectrum Analyzer

- 7 frequency bands for both channels — 60Hz, 150Hz, 400Hz, 1kHz, 2.4kHz, 6kHz and 15kHz.
- ± 10 dB control range for each center frequency.
- Built-in 7-band spectrum analyzer: Bands displayed match frequency equalizer controls, permitting precise monitoring of frequency makeup of sound. It lets you see music as you actually hear it. Resolution is 3dB per fluorescent dot.
- LED-lit equalizer controls: Graphically depict equalized response. You can visually check the "curve" you've created at a glance.
- Equalizer on/off switch.
- Tape monitor on/off switch.

GR-470(BK)

7-Band Graphic Equalizer

- 7-band equalization: Permits boost and cut at 7 frequency bands — 60Hz, 150Hz, 400Hz, 1kHz, 2.4kHz, 6kHz and 15kHz — channel by channel.
- ± 10 dB control range for each center frequency.
- LED-lit equalizer controls: Graphically depict equalized response. You can visually check the "curve" you've created at a glance.
- Equalizer on/off switch.
- Tape monitor on/off switch.



CATALOG AAFES NEX CRC No. 9722331

EX-9000(BK)



CATALOG AAFES NEX CRC No. 9720335

SR-60(BK)



CATALOG AAFES NEX CRC No. 9351602

DT-570(BK)

EX-9000(BK)

Dynamic Expander

- Dynamic expansion: Increases over-all dynamic range of any music source to match digital's.
- 3-band adjustment: Expansion level is adjustable band by band — lows, mids and highs.
- "Music Character" buttons: "HARD" for very dynamic programs, "SOFT" for programs with little dynamic variation.
- Fluorescent expansion indicator: Attractive two-color design, and divided band by band for convenience.
- Noise reduction: Noise in any program material can be reduced.
- Two input levels: 0dB and -6dB, the latter to prevent distortion due to an excessively high input signal.

SR-60(BK)

Reverberation Amplifier

- Effect selector: Three positions are offered.
 - Reverb — Turns listening room into a concert hall.
 - Echo — Applies echo to all signals.
 - Duet — Makes a solo singer sound like a duo.
- Reverb level control: Continuously adjusts the reverb time over 0 to 3 second range.
- BBD (Bucket Brigade Device) amp: For natural, low-distortion application of reverberation to any program material.
- Time/depth display: Shows the amount of reverb as a pleasing visual effect.
- Reverb recording: Allows you to record music with reverb added.
- Line output.

DT-570(BK)

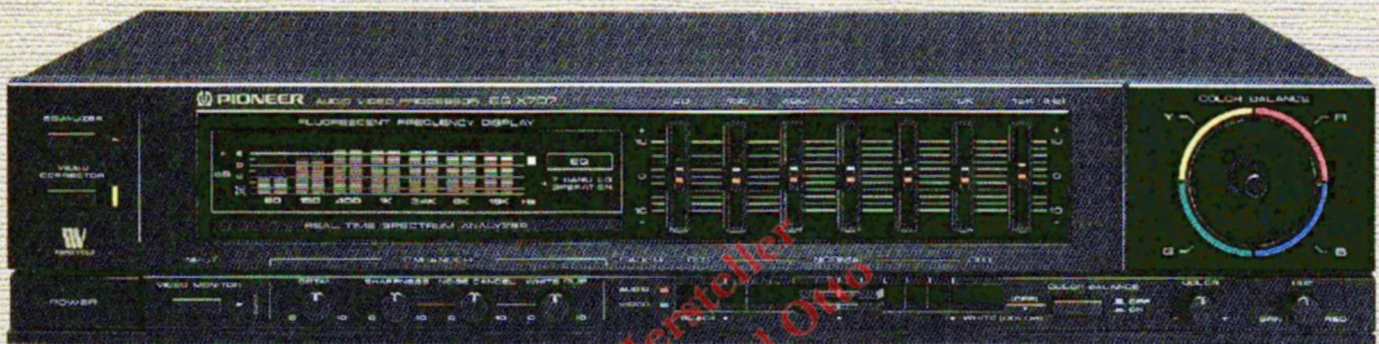
Audio Digital Timer

- 24-hour cycle design: Lets you turn your entire hi-fi system (or just a deck and tuner for unattended off-the-air recording) on and off once every day.
- 1-minute accuracy: Controls connected equipment at precisely the right times.
- Sleep timer: Automatically turns off connected equipment after 1 minute to 1 hour 59 minutes, settable in 1-minute increments.
- Time adjust controls: SECOND, RESET, REVERSE, FAST and SLOW.
- Manual AC on/off mode.
- 2 AC outlets.



NEX

SP-X707 (BK)



CATALOG AAFES NEX CRC No. 9518408

EG-X707 (BK)



NEX

VS-60 (BK)

SP-X707 (BK)

Surround Amplifier

■ 4 surround sound modes: For video sound at its most realistic.

Dolby Surround — for theater-release videos with Dolby Stereo.

Theater — for musical videos.

Stadium — for live music and sports.

Simulated Stereo — for credible stereo from mono programs.

■ Super-Bass Synthesizer: Low frequencies are synthesized to add punch and bite to video sound.

■ Dynamic Expander: For expanded dynamic range.

■ Full-function remote control.

■ Built-in stereo amplifier with continuous average power output of 30 watts per channel, min., at 8 ohms, from 100Hz to 6,000Hz with no more than 3% total harmonic distortion: No need to add an extra amp to enjoy video surround.

EG-X707 (BK)

7-Band Graphic Equalizer/Video Enhancer

■ 7-band graphic equalizer: Helps you shape sound to taste. Center frequencies are 60Hz, 150Hz, 400Hz, 1kHz, 2.4kHz, 6kHz and 15kHz.

■ 7-band spectrum analyzer: Bands displayed match frequency equalizer controls, permitting precise monitoring of frequency makeup of sound.

■ Delay-line video enhancer: To sharpen edges and lines of dubbed videos. It's complete with controls for detail, sharpness, noise cut and white clip.

■ Joystick color corrector: Helps accurately balance colors.

■ Color and hue controls: The first to adjust color intensity, the second to change color phase.

■ Fade-to-color control: For smooth scene transitions, with audio fade.

VS-60 (BK)

Audio/Video Selector

■ 2 sets of video inputs and 2 sets of video in/outputs.

■ Stereo audio inputs: Permits Hi-Fi VCR recording.

■ RF and video (monitor) outputs: The RF output is for connection with any ordinary TV, the video for direct connection with a monitor or monitor TV.

■ Versatile recording selectors: Permit dubbing between two VCRs, recording videodiscs or TV on the VCRs, routing audio signals to a Hi-Fi VCR.

■ DNR* (Dynamic Noise Reduction): To cut hiss dynamically without eliminating high frequencies in program materials.

■ Simulated Stereo: For stereo-like sound from mono video programs.

*DNR is a trademark of National Semiconductor Corporation.



CATALOG AAFES NEX CRC No. 9461815

CU-AX001

AV Full-Function Remote Control Unit

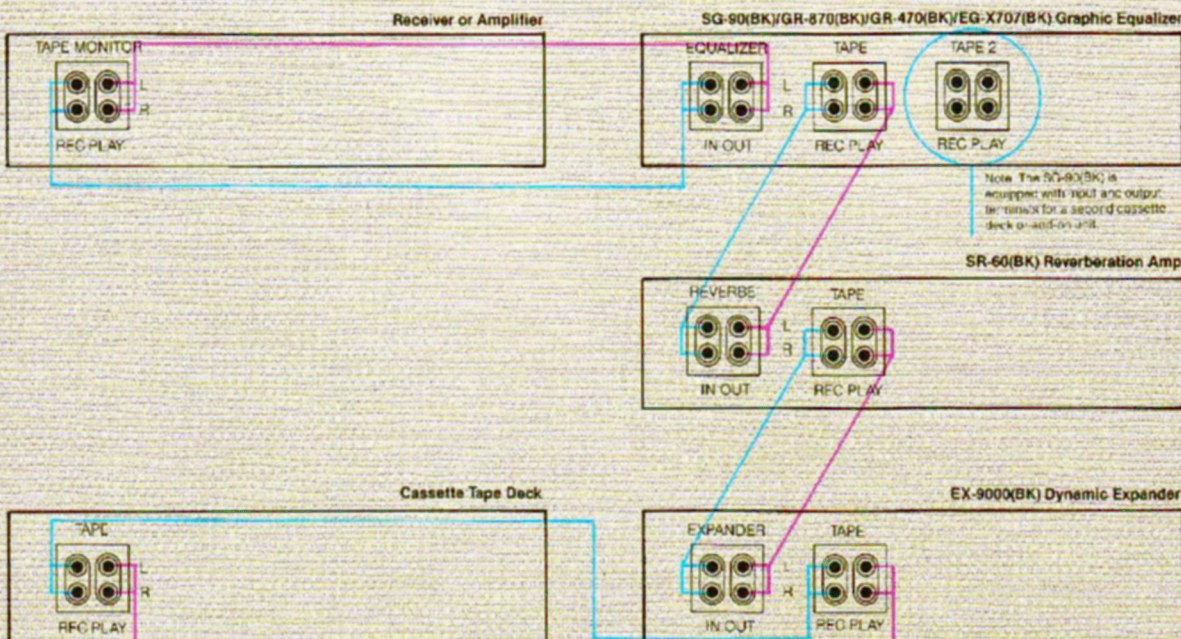
■ For remote operation of Pioneer components carrying the SR logomark; nearly all functions can be remote controlled.

■ Total control of the "SR" components: Playing and programming Compact Discs, tuning FM and AM stations, controlling tapes in the cassette deck, playing records, enjoying versatile LaserVision videodisc playback, recording and playing the VCR, and tuning TV channels.

■ Synchronized operation of controlled components.

■ Comprehensive liquid crystal display.

HOW TO CONNECT ADD-ONS



Note: Shown above is a connection diagram for hooking up three separate units to a receiver or amp. If at one time, SG-90(BK)/GR-870(BK)/GR-470(BK)/EG-X707(BK) Graphic Equalizer, SR-60(BK) Reverb Amp, EX-9000(BK) Dynamic Expander, hooked up in this manner, any single unit or any combination of the three may be operated.

SPECIFICATIONS

Reference Amplifiers

C-90(BK)	
AUDIO SECTION	
Rated Output:	8V (20—20,000Hz, 10k ohms, T.H.D. 0.01%)
Input Sensitivity/Impedance	
PHONO (MM):	2.5mV/50k ohms
(MC):	0.25mV/40 ohms or 0.125mV/30 ohms
CD, TUNER, TAPE, AUX:	150mV/50k ohms
Output Level/Impedance	
PRE OUT:	1V/600 ohms
"APE REC":	150mV/1k ohms
Total Harmonic Distortion:	0.002% (20—20,000Hz, 10k ohms, output 1V)
Intermodulation Distortion:	0.002% (output 1V)
(50Hz: 7,000Hz = 4:1)	
Frequency Response	
PHONO (RIAA Equalisation):	20—20,000Hz ±0.2dB
CD, TUNER, TAPE, AUX:	20—20,000Hz 0dB, -0.1dB
Tone Control	
BASS:	±9dB (100Hz)
TREBLE:	±9dB (10kHz)
Filter	
LOW (SUBSONIC):	7Hz (-6dB/oct.)
HIGH:	10kHz (-6dB/oct.)
-20dB	
Signal-to-Noise Ratio (IHF, A-network)	
PHONO:	96dB (MM), 96dB (MC)
CD, TUNER, TAPE, AUX:	109dB
VIDEO SECTION	
Input Sensitivity/Impedance	
VCR, VCR, TV Tuner, Acceptor	1Vp-p/75 ohms
Output Level/Impedance	
Monitor, Adaptor, REC Monitor:	1Vp-p/75 ohms
Frequency Range:	10—10MHz 0dB -3dB
MISCELLANEOUS	
Power Requirements:	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	40W
Dimensions (W x H x D):	457 x 125 x 435 mm
(without package)	18 x 4-15/16 x 15-15/16 inches
Weight (without package):	9.7kg/21 lbs. 5 oz

M-90(BK)

POWER AMPLIFIER SECTION	
Continuous Power Output:	200W + 200W (20—20,000Hz, T.H.D. 0.003%, 8 ohms)
Total Harmonic Distortion:	0.003%
(20—20,000Hz, 8 ohms)	(continuous rated power output)
Intermodulation Distortion:	0.002%
(50Hz: 7,000Hz = 4:1, 8 ohms)	(continuous rated power output)
Input Sensitivity/Impedance	
CONTROL AMP:	1V/50k ohms
CD DIRECT, LINE DIRECT:	1V/50k ohms
Output	
SPEAKERS:	A, B, A+B, Off
HEADPHONES:	Low Impedance
Frequency Response:	20—20,000Hz 0dB, -0.1dB
Signal-to-Noise Ratio	
(IHF, A-network)	125dB
MISCELLANEOUS	
Power Requirements:	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	430W
Dimensions (W x H x D):	457 x 154 x 430 mm
(without package)	18 x 6-1/16 x 16-15/16 inches
Weight (without package):	20.4kg/44 lbs. 14 oz.

Amplifiers

AMPLIFIER SECTION	A-86X (BK)	A-77X (BK)	SA-V70 (BK)
Continuous Power Output:	120W + 120W (8 ohms) 150W + 150W (6 ohms) (20—20,000Hz, T.H.D. 0.003%)	100W + 100W (8 ohms) 120W + 120W (6 ohms) (20—20,000Hz, T.H.D. 0.003%)	50W + 50W (8 ohms) 20—20,000Hz, T.H.D. 0.09% SURROUND MODE (Front) 25W + 25W (8 ohms, 20—20,000Hz, T.H.D. 0.09%) (Rear) 25W + 25W (8 ohms, 100—4,000Hz, T.H.D. 1%)
Total Harmonic Distortion:	0.003% (20—20,000Hz, continuous rated power output)	0.003% (20—20,000Hz, continuous rated power output)	0.09% (20—20,000Hz, continuous rated power output)
Intermodulation Distortion:	0.003% (50Hz: 7,000Hz = 4:1, 8 ohms) (continuous rated power output)	0.003% (continuous rated power output)	0.003%
Damping Factor:	100 (20—20,000Hz, 8 ohms)	100 (20—20,000Hz, 8 ohms)	—
Input Sensitivity/Impedance			
PHONO (MM):	2.5mV/50k ohms	2.5mV/50k ohms	2.5mV/50k ohms
(MC):	0.15mV/30 ohms or 0.25mV/40 ohms	0.2mV/100 ohms	—
CD, TUNER, AUX, TAPE:	150mV/30k ohms	150mV/30k ohms	150mV/50k ohms
PHONO Overload Level:	250mV/15mV (3 ohms), 22mV (40 ohms) (T.H.D. 0.003%)	200mV/16mV (T.H.D. 0.003%)	—
Output Level/Impedance			
SPEAKERS:	150mV/2.2k ohms	150mV/2.2k ohms	150mV/2.2k ohms
HEADPHONES:	A, B, A+B, OFF Low Impedance	A, B, A+B, OFF Low Impedance	Front Front + Rear (Surround) Low Impedance
Frequency Response			
PHONO (RIAA Equalisation):	20—20,000Hz ±0.2dB	20—20,000Hz ±0.2dB	—
CD, TUNER, AUX, TAPE:	10—100,000Hz 0dB, -3dB	10—100,000Hz 0dB, -3dB	—
Tone Control			
BASS:	±8dB (100Hz)	+8dB (100Hz)	—
TREBLE:	±8dB (10kHz)	+8dB (10kHz)	—
Filter (SUBSONIC):	15Hz (-6dB/oct.)	15Hz (-6dB/oct.)	—
Hum and Noise (IHF, A-network)			
PHONO (MM/MC):	89dB/76dB	88dB/70dB	73dB
CD, TUNER, AUX, TAPE:	110dB	109dB	91dB
VIDEO SECTION			
Input Sensitivity/Impedance			
VCR, VCR, TV, DBS/CATV:	—	—	1Vp-p/75 ohms unbalanced
Output Level/Impedance			
VCR (REC), Monitor TV:	—	—	1Vp-p/75 ohms unbalanced
MISCELLANEOUS			
Power Requirements:	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	670W	530W	180W
Dimensions (W x H x D):	18 x 5-1/8 x 16-13/16 inches 457 x 155 x 427 mm	18 x 5-1/8 x 16-13/16 inches 457 x 155 x 427 mm	16-9/16 x 5-1/8 x 15-5/16 inches 420 x 129 x 389 mm
Weight (without package):	39 lbs. 11 oz./18kg	33 lbs. 12 oz./15.3kg	22 lbs. 1 oz./10kg

CLD-909(BK)

System:	LaserVision videodisc and Compact Disc, digital audio system
Maximum Playing Time:	CAV: 60 min. both sides CLV: 120 min. both sides CD: over 60 min. stereo
Audio Characteristics:	Stereo or two-channel, analog or digital
VHF Output:	Channel 3 or 4 (switchable)
Video Format:	NTSC
Video Output:	1V p-p/75 ohms
Power Requirements:	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	50W
Dimensions (W x H x D):	16-9/16 x 4-3/4 x 16-1/16 inches
Weight (without package):	24 lbs. 4 oz.

Compact Disc Players

	PD-M6 (BK)	PD-7030 (BK)	PD-6030 (BK)	PD-5030 (BK)
System:	Compact Disc digital audio system	Compact Disc digital audio system	Compact Disc digital audio system	Compact Disc digital audio system
Frequency Response:	4—20,000Hz +0.5dB, -1dB	4—20,000Hz ±0.5dB	4—20,000Hz ±0.5dB	4—20,000Hz ±0.5dB
Signal-to-Noise Ratio (EIAJ):	98dB	99dB	97dB	97dB
Dynamic Range (EIAJ):	94dB	95dB	95dB	95dB
Channel Separation (EIAJ):	92dB	94dB	92dB	92dB
Wow and Flutter (EIAJ):	Unmeasurable, ±0.001% (weighted peak)	Unmeasurable, ±0.001% (weighted peak)	Unmeasurable, ±0.001% (weighted peak)	Unmeasurable, ±0.001% (weighted peak)
Distortion (EIAJ):	0.005%	0.004%	0.004%	0.004%
Output Voltage (EIAJ):	2V ±0.5V	2V ±0.5V	2V ±0.5V	2V ±0.5V
Power Requirement:	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	16W	12W	12W	12W
Dimensions (W x H x D):	18 x 3-7/8 x 12-3/8 inches 457 x 100 x 315 mm	18 x 3-1/4 x 11-3/8 inches 457 x 84 x 290 mm	16-9/16 x 3-1/8 x 11-7/16 inches 420 x 80 x 290 mm	16-9/16 x 3-1/8 x 11-7/16 inches 420 x 80 x 290 mm
Weight (without package):	14 lbs. 12 oz./6.7kg	11 lbs. 11 oz./5.3kg	9 lbs. 4 oz./4.2kg	9 lbs. 4 oz./4.2kg

Tuners

	F-99X (BK)	F-77 (BK)	TX-1070R (BK)	TX-V1160 (BK)
TV TUNER SECTION				
Audio				
50dB Quieting Sensitivity Mono/Stereo:	—	—	—	15 μ V/75 ohms
Muting Threshold:	—	—	—	10 μ V/75 ohms
Signal-to-Noise Ratio: Mono/Stereo:	—	—	—	65dB/60dB (56% Mod.)
Stereo Separation:	—	—	—	35dB (1kHz, black burst)
Distortion (1kHz): Mono/Stereo:	—	—	—	0.3% (100% Mod.) 0.5% (56% Mod. black burst)
Output (Level/Impedance):	—	—	—	500mV/3.9k ohms
Video				
Output:	—	—	—	1vp-p/75 ohms
Signal-to-Noise Ratio:	—	—	—	47dB
Antenna VHF, UHF:	—	—	—	75 ohms unbalanced
RF Converter: (Output Level/Impedance):	—	—	—	1V/75 ohms
FM SECTION				
Usable Sensitivity (mono):	10.8dBf (0.95 μ V, 75 ohms)	10.5dBf (0.95 μ V, 75 ohms)	11.2dBf (1.0 μ V, 75 ohms)	11.2dBf (1.0 μ V, 75 ohms)
50dB Quieting Sensitivity Mono/Stereo:	15.3dBf (1.6 μ V, 75 ohms) 35.9dBf (17 μ V, 75 ohms)	15.3dBf (1.7 μ V, 75 ohms) 37.3dBf (20 μ V, 75 ohms)	36.2dBf (17.6 μ V)	17.3dBf (2 μ V, 75 ohms) 38.2dBf (22.2 μ V, 75 ohms)
Signal-to-Noise Ratio Mono/Stereo:	94dB/87dB (at 80dBf)	86dB/81dB (at 80dBf)	78dB/75dB (at 80dBf)	80dB/75dB (at 85dBf)
Distortion 100Hz (mono/stereo):	0.015%/0.02%	0.05%/0.08%	—/0.35%	—/0.2%
1kHz (mono/stereo):	0.0095%/0.02% (narrow; 0.08%/0.5%)	0.05%/0.08%	—	—
6kHz (mono)/10kHz (stereo):	0.02%/0.07%	0.05%/0.15%	—	—
Frequency Response:	20—15,000Hz -0.2dB, -0.8dB	20—15,000Hz +0.4dB, -1.0dB	30—15,000Hz +0.5dB, -1.5dB	30—15,000Hz -0.5dB, -0.7dB
Capture Ratio:	0.8dB	1.0dB	—	1.0dB
Alternate Channel Selectivity:	85dB (400kHz)	56dB (400kHz)	67dB (400kHz)	65dB (400kHz)
Spurious Response Ratio:	80dB	70dB	—	—
Image Response Ratio:	70dB	50dB	50dB	50dB
IF Response Ratio:	100dB	80dB	110dB	110dB
AM Suppression Ratio:	70dB	65dB	50dB	—
Subcarrier Product Ratio:	60dB	60dB	—	—
Muting Threshold:	25.2dBf (5 μ V, 75 ohms)	25.2dBf (5 μ V, 75 ohms)	—	—
Stereo Separation:	65dB (1kHz), 55dB (20—10,000Hz)	60dB (1kHz), 50dB (20—10,000Hz)	40dB (1kHz)	40dB (1kHz)
Antenna Input:	75 ohms unbalanced	300 ohms balanced, 75 ohms unbalanced	300 ohms balanced, 75 ohms unbalanced	300 ohms balanced, 75 ohms unbalanced
AM SECTION				
Sensitivity I/F, Loop antenna:	150 μ V/m	150 μ V/m	300 μ V/m	300 μ V/m
Selectivity:	18dB	40dB	22dB	20dB
Signal-to-Noise Ratio:	50dB	50dB	52dB	50dB
Image Response Ratio:	40dB	40dB	40dB	40dB
IF Response Ratio:	60dB	60dB	50dB	50dB
Antenna:	Loop antenna	Loop antenna	Loop antenna	Loop antenna
AUDIO SECTION				
Output (Level/Impedance): FM (100% Mod. Fixed): AM (30% Mod. Fixed):	650mV/900 ohms 150mV/900 ohms	650mV/1.4k ohms 150mV/1.4k ohms	650mV/3.5k ohms 150mV/3.5k ohms	650mV/3.5k ohms 150mV/3.5k ohms
MISCELLANEOUS				
Power Requirements:	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	20W	9W	9.5W	17W
Dimensions (W x H x D): (without package)	18 x 2-1/2 x 12-5/16 inches 457 x 63.5 x 312 mm	16-9/16 x 2-3/8 x 8-11/16 inches 420 x 61 x 221 mm	16-9/16 x 2-3/8 x 8-5/8 inches 420 x 60 x 219 mm	16-9/16 x 2-5/16 x 12-1/2 inches 420 x 59 x 318 mm
Weight (without package):	9 lbs. 15 oz./4.5kg	5 lbs. 1 oz./2.3kg	5 lbs. 5 oz./2.4kg	9 lbs. 11 oz./4.4kg

Cassette Tape Decks

	CT-S99WR(BK)
Type:	4-track, 2-channel double stereo cassette tape deck (recording/playback x 2)
Motors:	DC-servo motor for capstan drive x 2, DC motor for reel drive x 2, DC motor for power assist x 2
Heads:	"Hard Permalloy" recording/playback head x 2, Ferrite erasing head x 2
Fast Winding Time (C-60 tape):	100 seconds
Wow and Flutter (WRMS):	0.06%
Frequency Response:	Normal tape (-20dB): 25—17,000Hz Chrome tape (-20dB): 25—17,000Hz (0dB): 25—9,000Hz Metal tape (-20dB): 25—18,000Hz (0dB): 25—14,000Hz
Signal-to-Noise Ratio NR off*: ctk on:	57dB 92dB
Harmonic Distortion (0dB):	1.0%
Inputs (Sensitivity/Impedance): MIC: LINE:	— 63mV/78k ohms
Outputs (Reference level/Load impedance): LINE: HEADPHONES:	316mV/4.6k ohms 0.24mW/8 ohms
Power Requirements:	120/220/240V (switchable) 50-60Hz
Power Consumption:	29W
Dimensions (W x H x D): (without package)	18 x 4 x 12-3/8 inches 457 x 101 x 315 mm
Weight (without package):	13 lbs. 14 oz./7.2kg
*S/N is improved by 13dB with Dolby B on, and by 19dB with Dolby C on, both at 5kHz.	

Speaker Systems

	CS-907
Enclosure:	Base-reflex bookshelf type
Unit Layout:	—
Speakers:	—
Woofer:	15-3/4-inch (40cm)
Midrange:	6-1/2-inch (16cm)
Tweeter:	Horn type with acoustic lens
Supertweeter:	Four pinza supertweeter
Impedance:	8 ohms
Frequency Range:	30—25,000Hz
Sensitivity (1m):	98dB/W
Maximum Music Power:	—
Maximum Power:	400W
Rated Power:	100W
Crossover Frequencies:	2,000Hz (Low/Mid) 4,000Hz (Mid/High) 11,000Hz (High/Supertweeter)
Dimensions (W x H x D): (without package)	17-1/16 x 25-9/16 x 10-9/16 inches 450 x 725 x 269 mm
Weight (without package):	46 lbs. 3 oz./21kg

CT-A9X(BK)	CT-1270WR(BK)	CT-1170W(BK)	CT-3070R(BK)	CT-2070R(BK)
4-track, 2-channel recording and playback stereo cassette tape deck	4-track, 2-channel double auto-reverse stereo cassette tape deck (recording/playback and playback)	4-track, 2-channel double stereo cassette tape deck (recording/playback and playback)	4-track, 2-channel auto-reverse recording and playback stereo cassette tape deck	4-track, 2-channel auto-reverse recording and playback stereo cassette tape deck
Quartz-PLL direct-drive motor for capstan drive x 1, Coreless DC motor for reel drive x 1	DC-servo motor x 2	DC-servo motor x 2	DC-servo motor for capstan drive x 1, DC motor for reel drive x 1, DC motor for power assist x 1	DC-servo motor for capstan drive x 1, DC motor for reel drive x 1
"Ribbon Sendust" recording & playback combination head, Special alloy erasing head x 1	"Hard Permalloy" recording/playback head x 1, "Hard Permalloy" playback head x 1, Ferrite rasing head x 1	"Hard Permalloy" recording/playback head x 1, "Hard Permalloy" playback head x 1, Ferrite erasing head x 1	"Hard Permalloy" recording/playback head x 1, Ferrite erasing head x 1	"Hard Permalloy" recording/playback head x 1, Ferrite erasing head x 1
90 seconds	110 seconds	110 seconds	100 seconds	90 seconds
0.018%	0.07%	0.075%	0.045%	0.07%
20—21,000Hz 20—22,000Hz 20—11,000Hz 20—23,000Hz 20—16,000Hz	20—15,000Hz 20—15,500Hz 20—11,000Hz 20—16,000Hz 20—15,000Hz	30—14,500Hz 30—15,000Hz 30—11,000Hz 30—15,000Hz 30—14,000Hz	25—17,500Hz 25—17,500Hz 25—10,500Hz 25—18,500Hz 25—16,000Hz	25—15,000Hz 25—16,000Hz 25—10,000Hz 25—17,000Hz 25—15,000Hz
58dB	57dB	56dB	58dB	58dB
—	—	—	92dB	92dB
0.8%	0.7%	0.8%	0.7%	0.7%
—	—	—	0.25mV/600 ohms 54mV/96k ohms	0.5mV/600 ohms 70mV/100k ohms
63mV/100k ohms	70mV/100k ohms	70mV/100k ohms	—	—
630mV/7k ohms 0.45mV/8 ohms	316mV/3.9k ohms 45mV/8 ohms	316mV/5k ohms —	316mV/5.2k ohms 0.25mV/5 ohms	316mV/4k ohms —
120/220/240V (switchable) 50-60Hz	120/220/240V (switchable) 50-60Hz	120/220/240V (switchable) 50-60Hz	120/220/240V (switchable) 50-60Hz	120/220/240V (switchable) 50-60Hz
40W	16W	15W	26W	17W
18 x 5-1/8 x 14-3/4 inches 457 x 130 x 374 mm	16-9/16 x 4-1/2 x 10-5/16 inches 420 x 115 x 262 mm	16-9/16 x 4-7/16 x 10-5/16 inches 420 x 113 x 262 mm	18 x 4 x 12-1/2 inches 457 x 101 x 318 mm	16-9/16 x 4 x 8-5/16 inches 420 x 101 x 211 mm
22 lbs. 1 oz./1.0kg	11 lbs./5kg	10 lbs. 2 oz./4.6kg	14 lbs. 2 oz./6.4kg	8 lbs. 10 oz./3.9kg

- NOTE:**
- Reference tape: Normal and LH tapes are DIN 45513 (Fe). Chrome tape is DIN 45513 (Cr).
 - Reference recording level: is meter 0dB level; 1.60 mV/m magnetic level; Philips cassette reference level.
 - Reference signal is 315Hz.
 - Wow and Flutter: at 3kHz, WRMS (JIS), at 3.150Hz weighted PEAK (DIN 45507).
 - Frequency Responses are measured at -20dB and at 0dB levels respectively for reference recording level, Dolby off. Level deviation is ±6dB (where not indicated). (DIN 45500)
 - Signal-to-Noise Ratio: Measured at the third harmonic distortion 3% level, weighted (DIN 45513/BLATT7)
 - Sensitivity: Input level (mV) for reference recording level measured with input (recording) level control set at maximum position.
 - Maximum allowable input level (mV) is measured at the point where the output signal wave is clipped while gradually turning the input level control.
 - Reference output level is LEDs display's 0dB level.
 - Maximum output (Playback) level: Output level to reference recording level, measured with an output (Playback) level control set at maximum position.
- *Specifications quoted for "metal" tapes are approximate. See manufacturers' data for individual tapes.**

CS-707	CS-607	DSS-9D	DSS-7	DSS-5
Bass-reflex bookshelf type	Bass-reflex bookshelf type	Bass-reflex bookshelf type	Bass-reflex bookshelf type	Bass-reflex bookshelf type
—	—	Symmetrical	Symmetrical	Symmetrical
15-3/4-inch (40cm) cone type 4-3/4-inch (12cm) cone type Horn type with acoustic lens Twin piezo supertweeters	12-inch (30cm) cone type 4-3/4-inch (12cm) cone type Horn type with acoustic lens Twin piezo supertweeters	12-inch (30cm) PG ^M cone type 4-3/4-inch (12cm) horn cone type Beryllium ribbon type —	12-inch (30cm) PG ^M cone type 2-1/2-inch (6.6cm) horn cone type Beryllium ribbon type —	10-inch (25cm) cone type 2-1/2-inch (6.6cm) cone type 3/4-inch (2cm) dome type —
8 ohms	8 ohms	6 ohms	8 ohms	8 ohms
30—25,000Hz	35—25,000Hz	30—50,000Hz	30—50,000Hz	38—30,000Hz
96dB/W	96dB/W	91dB/W	91dB/W	91dB/W
300W	210W	300W	210W	120W
70W	50W	80W	70W	40W
1,500Hz (Low/Mid) 4,000Hz (Mid/High) 11,000Hz (High/Supernigh)	2,000Hz (Low/Mid) 5,000Hz (Mid/High) 11,000Hz (High/Supernigh)	650Hz (Low/Mid) 4,000Hz (Mid/High)	850Hz (Low/Mid) 4,500Hz (Mid/High)	1,200Hz (Low/Mid) 5,000Hz (Mid/High)
17-11/16 x 28-9/16 x 10-9/16 inches 450 x 725 x 269 mm	16-1/8 x 25-7/16 x 11-1/4 inches 410 x 646 x 285 mm	15-3/8 x 26-3/4 x 13-7/8 inches 390 x 680 x 353 mm	14-9/16 x 25-9/16 x 13-9/16 inches 370 x 650 x 345 mm	12-1/3/16 x 22-7/16 x 11-7/16 inches 325 x 570 x 290 mm
44 lbs. 1 oz./20kg	35 lbs. 4 oz./16kg	57 lbs. 5 oz./26kg	49 lbs. 10 oz./22.5kg	31 lbs. 15 oz./14.5kg

Receivers

	VXS-5000 (BK)	VXS-4000 (BK)	SX-1500 (BK)
AMPLIFIER SECTION			
Continuous Power Output	100W + 100W (8 ohms, 20—20,000Hz, T.H.D. 0.005%) SURROUND MODE (front channel) 70W + 70W (8 ohms, 20—20,000Hz, T.H.D. 0.005%) (rear channel) 15W + 15W (8 ohms, 20—15,000Hz, T.H.D. 0.3%)	60W + 60W (8 ohms, 20—20,000Hz, T.H.D. 0.007%)	45W + 45W (8 ohms, 40—20,000Hz, T.H.D. 0.3%)
Total Harmonic Distortion (8 ohms)	0.005% (20—20,000Hz, continuous rated power output) 0.002% (1,000Hz, 100W per channel power output)	0.007% (20—20,000Hz, continuous rated power output) 0.002% (1,000Hz, 60W per channel power output)	0.3% (40—20,000Hz, continuous rated power output) 0.05% (1,000Hz, 22.5W per channel power output)
Input Sensitivity/Impedance PHONO (MM), CD, AUX, TAPE, ADAPTOR, VCR, VDP	2.5mV/50k ohms 150mV/30k ohms 150mV/30k ohms	2.5mV/50k ohms 150mV/30k ohms 150mV/30k ohms	2.5mV/47k ohms 150mV/22k ohms 150mV/22k ohms
PHONO Overload Level (1kHz) MM	140mV (T.H.D. 0.03%)	140mV (T.H.D. 0.03%)	130mV (T.H.D. 0.01%)
Output Level/Impedance TAPE REC, VCR, VDP, PRE OUT, SPEAKER, HEADPHONES	150mV/4.7k ohms 150mV/4.7k ohms 1V/470 ohms A, B, A+R, OFF Low impedance	150mV/4.7k ohms 150mV/4.7k ohms — A, B, A + B, OFF Low impedance	150mV — — A, B, A+B, OFF Low impedance
Frequency Response PHONO (RIAA Equalization), CD, AUX, TAPE, VCR, VDP	20—20,000Hz ±0.3dB 5—100,000Hz 0dB—3dB 5—100,000Hz 0dB—3dB	20—20,000Hz ±0.3dB 5—100,000Hz 0dB—3dB 5—100,000Hz 0dB—3dB	30—20,000Hz ±0.5dB 10—70,000Hz +0.5dB, -3dB —
Tone Control BASS, TREBLE	±8dB (100Hz) ±8dB (10kHz)	±6dB (100Hz) ±8dB (10kHz)	— —
Graphic Equalizer Equalizer Range Control Frequencies	— —	— —	±8dB 100, 330, 1k, 3.5k, 10kHz
VCR Noise Filter Low, High	50Hz (-6dB/oct.) 5kHz (-6dB/oct.)	50Hz (-6dB/oct.) 5kHz (-6dB/oct.)	— —
Loudness Contour (Volume at 40dB position)	+6dB (100Hz) +3dB (10kHz)	+6dB (100Hz) +3dB (10kHz)	— —
Signal-to-Noise Ratio (IHF, short-circuited A-network, 16Ω/7Ω) PHONO (MM), CD, AUX, TAPE, VCR, VDP	— 85dB/77dB 95dB/79dB 95dB/75dB	73dB/75dB 95dB/85dB 95dB/85dB	72dB 94dB 94dB
FM TUNER SECTION			
Usable Sensitivity (mono)	10.5dBf (0.95µV, 75 ohms)	10.8dBf (0.95µV, 75 ohms)	11.2dBf (1.0µV, 75 ohms)
50dB Quieting Sensitivity Mono Stereo	15.3dBf (1.5µV, 75 ohms) 37.1dBf (19.5µV, 75 ohms)	15.3dBf (1.5µV, 75 ohms) 37.1dBf (19.5µV, 75 ohms)	15.3dBf (1.5µV, 75 ohms) 36.3dBf (22.5µV, 75 ohms)
Signal-to-Noise Ratio Mono Stereo	80dB (65dB) 75dB (85dB)	80dB (65dB) 75dB (85dB)	78dB (85dB) 75dB (85dB)
Distortion (at 65dB) 100Hz (Mono/Stereo) 1kHz (Mono/Stereo) 6kHz (Mono/Stereo)	0.08%/0.2% 0.08%/0.15% 0.2%/0.3%	0.08%/0.2% 0.08%/0.15% 0.2%/0.3%	—/0.5%
Frequency Response	30—15,000Hz, +0.5dB, -1.0dB	30—15,000Hz, +0.5dB, -1.0dB	30—15,000Hz, +1dB, -2dB
Capture Ratio	1.0dB	1.0dB	—
Alternate Channel Selectivity	65dB (400kHz)	65dB (400kHz)	55dB (400kHz)
Stereo Separation 1kHz 30—15,000Hz	50dB 35dB	50dB 35dB	35dB
Antenna Input	(FM-A, normal) 300 ohms balanced 75 ohms unbalanced (FM-B, CA-TV) 75 ohms unbalanced	(FM-A, normal) 300 ohms balanced 75 ohms unbalanced (FM-B, CA-TV) 75 ohms unbalanced	300 ohms balanced 75 ohms unbalanced
AM TUNER SECTION			
Sensitivity (IHF, Loop Antenna) (IHF, External Antenna)	300µV/m 25µV	300µV/m 25µV	300µV/m
Selectivity	20dB	20dB	20dB
Signal-to-Noise Ratio	50dB	50dB	50dB
Antenna	Loop antenna	Loop antenna	Loop antenna
VIDEO SECTION			
Input (Sensitivity/Impedance) VCR, VDP, Adaptor	1Vp-p/75 ohms unbalanced	1Vp-p/75 ohms unbalanced	—
Output (Level/Impedance) VCR, Adaptor, Monitor TV	1Vp-p/75 ohms unbalanced	1Vp-p/75 ohms unbalanced	—
Frequency Response	5Hz—6MHz 0dB—3dB	5Hz—6MHz 0dB, 3dB	—
Crosstalk	55dB (3.58MHz)	55dB (3.58MHz)	—
Signal-to-Noise Ratio	55dB	55dB	—
MISCELLANEOUS			
Power Requirement	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz
Power Consumption	380W	240W	175W
Dimensions (W x H x D) (without package)	16-9/16 x 4-3/4 x 15 inches 420 x 121 x 361 mm	16-9/16 x 4-3/4 x 15 inches 420 x 121 x 361 mm	16-9/16 x 3-7/8 x 8-1/16 inches 420 x 98 x 220 mm
Weight (without package)	22 lbs. 12 oz./10.3kg	15 lbs. 7 oz./6.8kg	9 lbs. 8 oz./4.3kg

Add-On Components

SG-90 (BK)

Equalizer Range	±12dB ±6dB (switchable)
Center Frequencies	16, 25, 40, 63, 100, 150, 250, 400, 630, 1k, 1.6k, 2.5k, 4k, 6.3k, 10k, 16k, 25kHz
Total Harmonic Distortion	0.001% (20—20,000Hz, all controls flat, output 1V)
Gain	3dB (controls flat)
Frequency Response	10—100,000Hz ±3dB, 2dB
Signal-to-Noise Ratio (IHF A-network)	120dB (output 2V)
Input Impedance	1140Ω (output 1V)
Output Impedance	47k ohms
Power Requirements	110/120/220/240V (switchable) 50-60Hz 34 watts
Power Consumption	34 watts
Dimensions (W x H x D) (without package)	16-9/16 x 5-3/16 x 13-13/16 inches 420 x 131 x 351 mm
Weight (without package)	15 lbs. 14 oz./7.2kg

GR-870 (BK)

Inputs (Sensitivity/Impedance) _LINE IN, TAPE PLAY	150mV/50k ohms 150mV/50k ohms
Outputs (Level/Impedance) _LINE OUT TAPE REC	150mV/1k ohms 150mV
Graphic Equalizer Section	
Equalizer Range	±10dB
Center Frequencies	60, 150, 400, 1k, 2.4k, 6k, 15kHz
Frequency Response	5—100,000Hz 0dB, -3dB
Signal-to-Noise Ratio (IHF, A-network, output 1V)	106dB
Total Harmonic Distortion (20—20,000Hz, output 1V)	0.005%
Gain	0dB (controls flat)
Spectrum Analyzer Section	
Display Resolution	3dB (x 8)
Center Frequencies	60, 150, 400, 1k, 2.4k, 6k, 15kHz
Miscellaneous	
Power Requirements	110/120/220/240V (switchable) 50-60Hz 10 watts
Power Consumption	10 watts
Dimensions (W x H x D) (without package)	16-9/16 x 2-3/8 x 8-9/16 inches 420 x 60 x 217 mm
Weight (without package)	5 lbs. 12 oz./2.6kg

Turntables

	PL-88FS (BK)	PL-3F	PL-L70	PL-X505 (BK)
MOTOR				
Drive System:	Quartz-PLL direct-drive	Quartz-PLL direct-drive	Quartz-PLL direct-drive	Belt-drive
Motor:	Quartz-PLL, coreless DC-servo motor with Stable Hanging Rotor™	Quartz-PLL, coreless DC-servo motor with Stable Hanging Rotor™	Quartz-PLL, coreless DC-servo motor with Stable Hanging Rotor™	DC-servo motor
Speeds:	33-1/3 and 45 rpm	33-1/3 and 45 rpm	33-1/3 and 45 rpm	33-1/3 and 45 rpm
Wow and Flutter (WRMS):	0.025%, 0.012%*	0.025%	0.025%	0.05%
Signal-to-Noise Ratio (DIN B):	78dB	80dB	80dB	70dB
TONE ARM				
Type:	Statically balanced, direct-drive motor driven, low mass straight pipe arm	Statically balanced, low mass straight PG™ pipe arm with DRA	Statically balanced, linear tracking tone arm with DRA	Dynamic balanced, linear tracking tone arm
Effective Arm Length:	8-3/16 inches (208mm)	9-1/4 inches (235mm)	3-3/4 inches (95mm)	6-9/16 inches (141mm)
Overhang:	13/16 inch (20mm)	9/16 inch (15mm)	—	—
Usable Cartridge Weight:	Fixed (integrated)	3g (min.)—8.5g (max.)	Fixed (integrated)	Fixed (T4P type)
CARTRIDGE				
Type:	Integrated MC type (PC-41MC)	MC type (PC-7MC)	Integrated IM type (PC-301)	Plug-in (T4P) MM type (PC-295T)
Frequency Response:	10—35,000Hz	10—35,000Hz	10—33,000Hz	10—30,000Hz
Output Voltage:	2.5mV	0.2mV	2.5mV	2.5mV
Stylus:	0.3 x 0.7 mil diamond (PN-41MC)	0.3 x 0.7 mil diamond (PN-7MC)	0.3 x 0.7 mil diamond (PN-301)	0.6 mil diamond (PN-295T)
Tracking Force:	2g ±0.3g	2g ±0.3g	1.25g ±0.25g	1.25g ±0.25g
MISCELLANEOUS				
Power Requirements:	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	2W	7W	10W	8W
Dimensions (W x H x D): (without package)	16-9/16 x 3-7/8 x 13-3/16 inches 420 x 98 x 335 mm	16-1/8 x 6-3/4 x 16-1/8 inches 460 x 164 x 409 mm	16-9/16 x 4-1/4 x 14-3/8 inches 420 x 108 x 365 mm	14-3/16 x 3-15/16 x 14 inches 360 x 100 x 355.5 mm
Weight (without package):	22 lbs. 11 oz./10.3kg	19 lbs/8.6kg	11 lbs./5kg	7 lbs. 15 oz./3.6kg

*Measured directly from FG output.

GR-470 (BK)

Equalizer Range:	±10dB
Center Frequencies:	60, 150, 400, 1k, 2.4k, 6k, 15kHz
Total Harmonic Distortion:	0.03% (20—20,000Hz, output 1V)
Gain:	0dB (controls flat)
Frequency Response:	5—50,000Hz 0dB, -3dB
Signal-to-Noise Ratio:	106dB (IHF, A-network, output 1V)
Input Sensitivity/Impedance:	150mV/50k ohms
Output Level/Impedance:	150mV/3.3k ohms
LINE OUT:	150mV
REC OUT:	150mV
Power Requirement:	110-120/220-240V (switchable) 50-60Hz
Power Consumption:	6W
Dimensions (W x H x D): (without package)	16-9/16 x 2-3/8 x 8-11/16 inches 420 x 80 x 221 mm
Weight (without package):	4 lbs. 14 oz./2.2kg

EX-9000 (BK)

Dynamic Range (max.)			
	Low(50Hz)	Mid(500Hz)	High(5kHz)
Expansion Level:	17dB	12dB	17dB
Upward Gain:	+15dB	-7dB	+12dB
Downward Gain:	-2dB	-5dB	-5dB
Impulse Response:			
Attack Time:	4.7msec.		
Release Time:			
Hard Position:	68msec.		
Soft Position:	2.7 sec.		
Output Voltage (Distortion 0.8%):	50 ohms, expansion level max.)		
Low (50Hz):	7.0V		
Mid (500Hz):	7.5V		
High (5kHz):	5.5V		
Input Impedance:	50k ohms		
LINE IN, TAPE PLAY:			
Output Impedance (1kHz):			
LINE OUT:	1k ohms		
Signal-to-Noise Ratio:	96dB (output 1V)		
(IHF, A-network, 1kHz, all expansion level max.)			
Gain:	0dB (all controls minimum)		
Power Requirements:	110/120/220/240V (switchable) 50-60Hz		
Power Consumption:	28 watts		
Dimensions (W x H x D): (without package)	16-9/16 x 2-3/8 x 8-5/16 inches 420 x 80 x 212 mm		
Weight (without package):	7 lbs. 1 oz./3.2kg		

SR-60 (BK)

Reverberation Time (DEPTH volume control min.)	
Reverb:	0—3 sec. (400Hz)
Echo:	0—3 sec. (400Hz)
Delay:	100msec. (400Hz)
Maximum Output Voltage:	6.5V (1kHz, T.H.D. 0.01%)
Total Harmonic Distortion:	0.005% (1kHz, REVERB LEVEL min. output 1V)
Inputs (Sensitivity/Impedance)	
Reverb:	150mV/50k ohms
Tape Play:	150mV/50k ohms
Outputs (Sensitivity/Impedance)	
Reverb:	150mV/220 ohms
Tape Rec:	150mV/220 ohms
Frequency Response:	10—70,000Hz 0dB, -1dB
Signal-to-Noise Ratio:	104dB (output 2V)
(IHF, A-network)	98dB (output 1V)
Power Requirements:	110/120/220/240V (switchable) 50-60Hz 30 watts
Power Consumption:	30 watts
Dimensions (W x H x D): (without package)	16-9/16 x 3-7/8 x 13-3/8 inches 420 x 99 x 340 mm
Weight (without package):	10 lbs. 2 oz./4.6kg

DT-570 (BK)

Timer type:	24-hour type (12-hour display and AM/PM)
Timer Set:	Only one ON/OFF time setting in minimum units of minutes within a 24-hour period
Timer Setting Interval:	1 minute
Sleep Timer Set:	1 minute — 1 hour 59 minutes
Accuracy of timer:	±0.1 second (delay time to displayed time)
Accuracy of Sleep Timer:	No more than 59 seconds (delay time for OFF to display time)
AC Outlet Capacity Power:	1,200 watts (max.)
Power Requirements:	110/120/220/240V (switchable) 50/60Hz (Switchable)
Power Consumption:	6 watts
Dimensions (W x H x D): (without package)	16-9/16 x 2-1/16 x 5-11/16 inches 420 x 52 x 144 mm
Weight (without package):	3 lbs. 12 oz./1.7kg

SP-X707 (BK)

Continuous Power Output:	30W + 30W (8 ohms, 100—6,000Hz T.H.D. 3%)
Input Sensitivity/Impedance:	150mV/50k ohms
Power Requirements:	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	160W
Dimensions (W x H x D): (without package)	14-3/16 x 2-15/16 x 13-1/16 inches 360 x 75 x 332 mm
Weight (without package):	12 lbs. 9 oz./5.7kg

EG-X707 (BK)

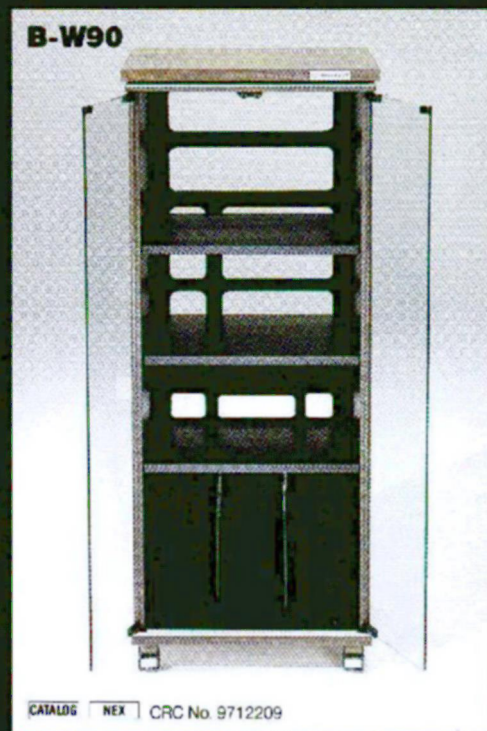
Video Section	
Signal Format:	NTSC
Input Level/Impedance:	1Vp-p/75 ohms
Output Level/Impedance:	1Vp-p/75 ohms
Video Signal:	+6dB (2MHz, sharpness max.)
Frequency Response:	+3dB (1MHz, detail max.)
Color Level Adjustable Range:	+6dB — -16dB
Hue Adjustable Range:	±45°
White Balance Adjustable Range:	±30%
Audio Section	
Equalizer Range:	±10dB
Center Frequencies:	60, 150, 400, 1k, 2.4k, 6k, 15kHz
Distortion:	0.05% (20—20,000Hz, output 1V)
Signal-to-Noise Ratio:	100dB (IHF, A short-circuit, output 1V)
Gain:	0dB (all controls flat)
Input Impedance:	47k ohms
Output Impedance:	1.5k ohms
Miscellaneous	
Power Requirements:	110/120/220/240V (switchable) 50-60Hz
Power Consumption:	17W
Dimensions (W x H x D): (without package)	14-3/16 x 2-15/16 x 13-1/16 inches 360 x 75 x 333.5mm
Weight (without package):	8 lbs. 13 oz./4kg

VS-60 (BK)

Video Inputs:	4 (VDP, AUX, VCR 1, VCR 2)
Signal-to-Noise Ratio:	
Video:	55dB
Audio:	100dB (IHF, A-network, output 1V)
Gain:	0dB
Power Requirements:	110/120/220/240V (switchable) 50-60Hz
Dimensions (W x H x D): (without package)	16-9/16 x 2-3/8 x 8-7/16 inches 420 x 60 x 215 mm
Weight (without package):	6 lbs. 3 oz./2.8kg

Note: Specifications and design subject to modification without notice.

HI-FI ACCESSORIES



In the Pacific and European areas, Pioneer products are available at Army & Air Force, Navy, Marine Corps Exchanges and also through: **EXCHANGE CATALOG** — Exchange Catalog Sales P.O. Box 222340 Dallas, Tex. 75222
 Note: Please check Exchange Catalog items in Exchange Catalogs at your nearest Exchange Counter.

PIONEER

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