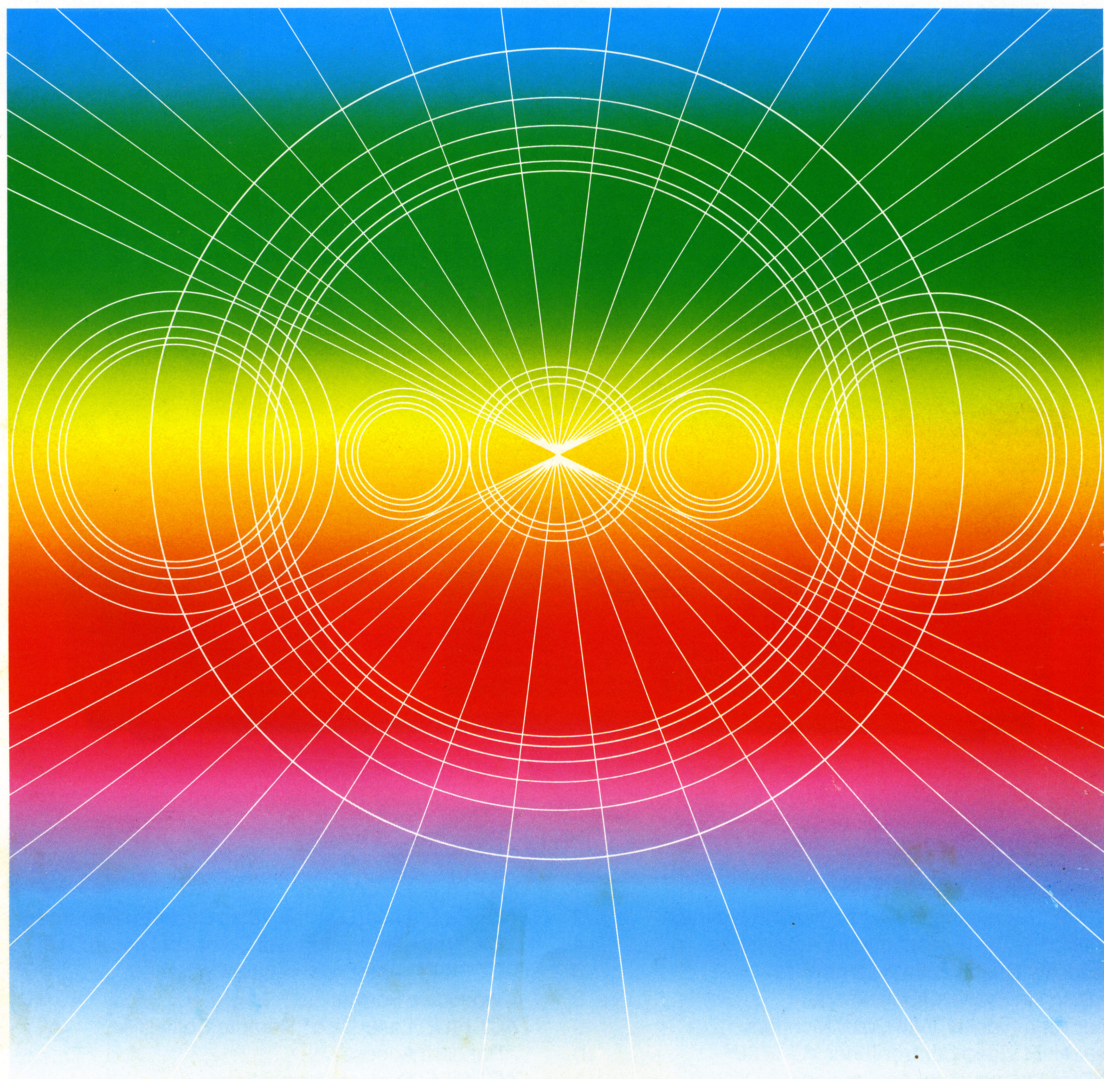


LaserDiscTM

A Guide for Selling



 **PIONEER®**



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To Our Distributors and Dealers,

As always, we appreciate your kind assistance and sincere efforts in making Pioneer a sales leader in the field. Since the foundation of Pioneer nearly a half-century ago, we've always followed the idea of bringing "good music to more people." We've tried to make electronics products that can re-create original program sources with the highest possible fidelity. We hope that our efforts have contributed to the improvement of society in general, and in the quality of life in particular.

Now that life is changing and the "information-communication age" is upon us, Pioneer is ever more deeply involved in the multiple aspects of audio-video communications, and we are extending our concern for high-quality, high-fidelity performance in this direction. Our laser-optical videodisc system we call LaserDisc*, with its incredibly vast capabilities as an audio-video medium of superior quality, is just one aspect of that extension.

We are fully committed to utilizing the best of our electronics technology and other resources in helping LaserDisc* achieve the success it deserves. After more than 10 years of research and development on the laser-optical videodisc system, we began marketing consumer-use LaserDisc* players in America in the summer of 1980. Japan was the next consumer market opened up to LaserDisc*, in October of the following year. Next, in 1982, came Great Britain.

Other important aspects of our growing involvement in video include our TVM Color Monitors*, our total-system hi-fi audio-video products, and the interactive CATV system, a form of closed-circuit TV with virtually unlimited interactive information-communication capabilities.

Now that we are fully into the audio-video age, we believe that our activities have even more bearing on the future of society as a whole. Thus our commitment to LaserDisc* and the other video-related products, no less than our commitment to continuing to lead in the hi-fi audio field as well, is total. This specially prepared booklet should give you all the basic information required to help you build a strong and successful LaserDisc* sales structure and join us in this exciting new phase of business.

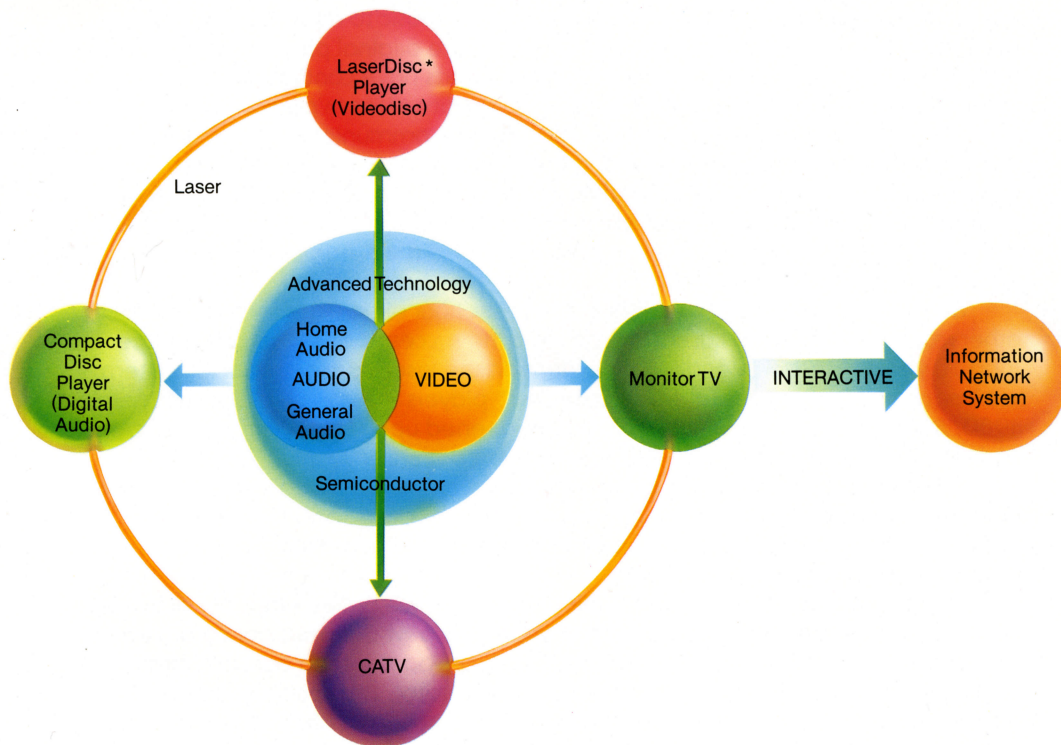
Cordially,

A handwritten signature in black ink, reading "Seiya Matsumoto". The signature is fluid and cursive, with the first name "Seiya" and last name "Matsumoto" clearly distinguishable.

Seiya Matsumoto,
President
PIONEER ELECTRONIC CORPORATION

LaserDisc*—Leading the Audio-Video Revolution

The Pioneer Audio-Video Master Plan



Positioning LaserDisc* in Consumer Electronics

As our technologically intensive world grows even more complex, the need for an integrated information network is increasing. The chart above clearly shows how LaserDisc* fits into the Pioneer master plan aimed at creating such a network.

The first Pioneer LaserDisc* players were designed for industrial use (General Motors, IBM, etc.) and such applications are growing every day. But it is in the consumer market, where LaserDisc* is considered basically a home entertainment product, that the greatest growth in sales is now taking place.

But because LaserDisc* is much more than a passive entertainment product—it's a videodisc system capable of interactive and participative enter-

tainment—it is ideally positioned to share in that portion of the consumer electronics industry which will most likely be dominated over the next few years by such participative entertainment products as personal computers, video games, and portable VCRs.

Profile of LaserDisc* Buyers

Pioneer's own market research in America shows the current "typical" LaserDisc* buyer to be male (about 90% of customers) and relatively young (61% are between the ages of 18 to 35; 83% are 18 to 44). This confirms the appeal of LaserDisc* among young adults.

Other interesting demographics resulting from recent research are given in the accompanying graphs, such as the fact that about 43% of actual buyers

have already owned VCRs; when broken down for the actual buyers of the LD-1100, this percentage increases greatly to 60%. By far the majority already owned high-fidelity systems at the time they purchased LaserDisc*, and some 54% owned more than one color TV. These data indicate that the high fidelity audio-video quality of LaserDisc*, the non-degrading durability of the discs, and the high technology incorporated in LaserDisc* are highly appreciated in the marketplace.

Another interesting fact is that about 45% of actual LaserDisc* buyers are subscribers to cable TV and/or one or another "pay TV" programming services, putting them in the rapidly-growing ranks of "New Media" buffs.

Successful LaserDisc® Marketing Techniques

Pioneer recognizes the growing competition from broadcast and cable TV, rental VCR and other movie-delivery systems. Thus it is our policy to stress the many *other* uses of LaserDisc®—musical concerts in hi-fi stereo, education and information programs, TV games and so on, all making use of the Random Access and related advantages that no other video source can provide so well.

This policy is paying off in a big way. Music-oriented LaserVision® videodiscs are extremely popular. And as more and more specialized programming becomes available, the wide-ranging capabilities of the system are being discovered by a rapidly growing consumer public.

Further Sales Opportunities

LaserDisc® presents many other opportunities for increased sales and profits. We've confirmed that most LaserDisc® buyers also purchase as many as three or four LaserVision® discs at the same time as their players, and they keep coming back for more: LaserDisc® owners are averaging as many as 25 to 30 LaserDisc® album purchases each year.

Also, some 13 % of LaserDisc® customers buy a new TV set along with their players and discs—an important thing to remember when you set up your displays and plot your sales strategies.

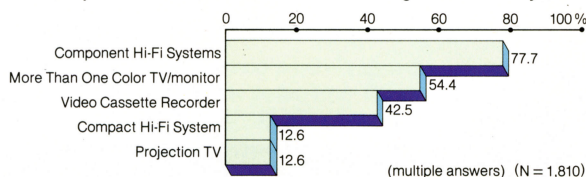
It may also be interesting to point out that LaserDisc® has unique computer-interface capabilities and that in the most recent surveys in America it was found that almost 32 % of Laser-

Disc® buyers owned some sort of personal computer; this particular market segment is growing fast in America, and in other countries, too.

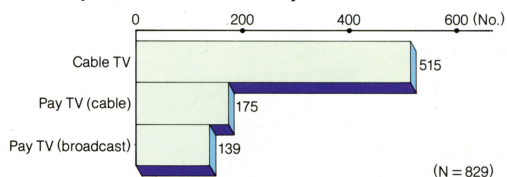
Apply Your Own Sales Experience

As always, Pioneer encourages you to apply the experience and knowhow you've already gained in your specific market to add to and help interpret research data such as provided here. Likewise, it goes without saying that when it comes to selling LaserDisc®, you are wise to take maximum advantage of the high reputation enjoyed by the Pioneer brandname in the consumer electronics field, and always to be proud that you are handling a product that is at the very vanguard of the audio-video revolution.

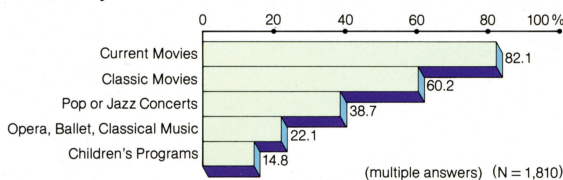
Ownership of Related Audio-Video Products Among LaserDisc® Buyers



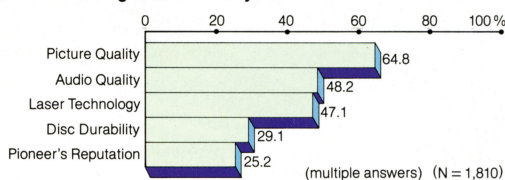
LaserDisc® Buyers Subscribe to Cable/Pay TV



LaserDisc® Buyers' Software Preferences



Factors Influencing LaserDisc® Buyers



LaserDisc*—The System and Its Advantages

Until Pioneer perfected LaserDisc*, the thought of video ever becoming a medium of true high-fidelity image reproduction was pretty farfetched. The odds against it were just too great. Interference and video noise seriously affect picture quality when the program comes from a distant TV transmitter or an underground cable. Video tape recording, though it is improving, is also far from the ideal video source when it comes to true picture fidelity.

But LaserDisc* has changed all that. It's a "video turntable" system featuring extremely high fidelity in both audio and video. Moreover, LaserDisc* is the only videodisc system, available right here and now, incorporating state-of-the-art technical advances that anticipate the future of video for decades to come.



LaserDisc* Player LD-660 •



LaserDisc* Player LD-1100

It's Hi-Fi Forever

How can LaserDisc* deliver a level of fidelity in audio-video reproduction no other video program source can ever match? It's because our LaserDisc* Players use the only videodisc system which employs a fully electronic, **non-contact** laser-optical system and a **non-deteriorating** audio-video information storage medium.

*This means there is absolutely no chance of physical wear on the disc itself, and no deterioration of picture or sound quality no matter how many times a LaserVision** disc is played.*

How LaserDisc* Works

Simply mount a disc, close the cover and push a button. The low-powered laser pickup glides under the rapidly spinning disc, never touching it, and shines a tightly focused beam on the surface.

LaserDisc* is, by the way, the first product of any kind to put laser hardware directly into the home. In this high-tech system, laser light reflected from the billions of microscopic indentations or "pits" in the disc is converted to high-resolution color video images and high-fidelity sound signals through an ingenious optical lens-mirror system perfected through original Pioneer efforts in optoelectronics.

The information permanently stored on the disc is protected from fingerprints and dust by a 1.2mm layer of acrylic, making LaserVision** discs more durable than ordinary audio records. By the way, the thousands of individual frames on those discs can be displayed one at a time using the STILL/STEP facility *without the least bit of distortion or "video noise."*

The Software Story

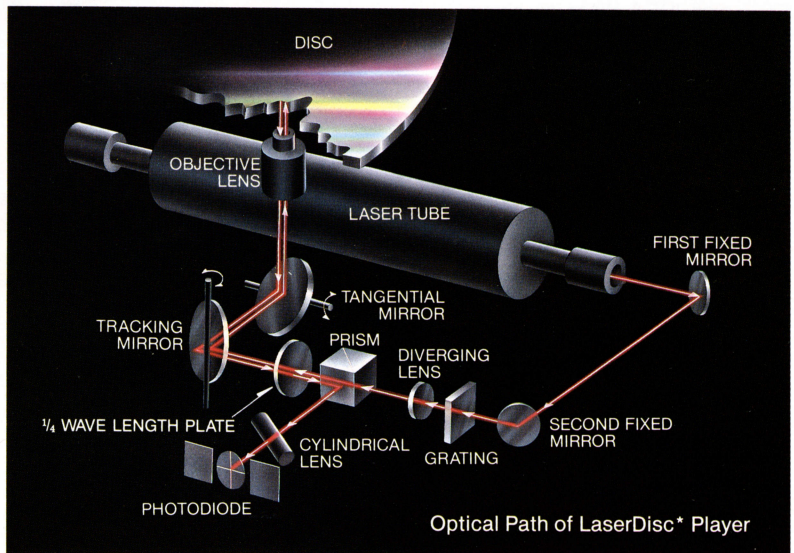
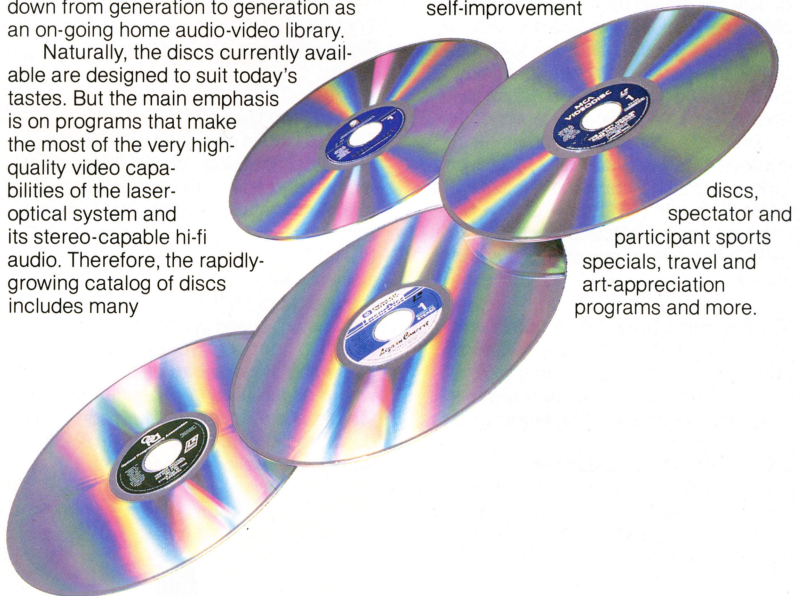
LaserVision** discs are now available in a wide variety at reasonable cost. They bring the best in educational, informational and entertainment programming into your life in vivid color and dynamic stereo sound to enjoy whenever, and as often, as desired. And because they are non-deteriorating, they can be passed down from generation to generation as an on-going home audio-video library.

Naturally, the discs currently available are designed to suit today's tastes. But the main emphasis is on programs that make the most of the very high-quality video capabilities of the laser-optical system and its stereo-capable hi-fi audio. Therefore, the rapidly-growing catalog of discs includes many

special recordings of thrilling on-stage performances by super-stars in all fields of music, bringing all the wide dynamic sound of the concert *in hi-fi stereo*.

Also high on the list of LaserVision** discs are exciting feature and classic feature films, special television movies, "how-to" programs on a wide number of subjects, informational, educational and self-improvement

discs, spectator and participant sports specials, travel and art-appreciation programs and more.



High-Fidelity Quality & Easy Control

TRUE HI-FI SOUND

In addition to superb picture quality, LaserDisc* also offers true hi-fi sound, in keeping with Pioneer's firmly established leadership in the high-fidelity audio industry. The audio frequency range can be as wide as 40 Hz to 20,000 Hz, far wider than even the best quality FM stereo broadcasts now available. The Total Harmonic Distortion (THD) is as good as or better than the performance offered by a high-fidelity system. (Audio is not heard during Still/Step, Slow, Fast or Scan operations.) LaserDisc* extends dynamic range and improves the signal-to-noise ratio even further, thanks to the use of the CX† Noise Reduction System. A simple two-cable hookup with your present stereo hi-fi system lets you enjoy this superior sound.

Stereophonic Sound Reproduction

All LaserVision** discs have two audio channels, and many programs take advantage of this to offer very wide-range stereophonic audio reproduction.

CX† Audio Noise Reduction

Pioneer LaserDisc* Players incorporate the newly developed and highly effective CX Noise Reduction System which improves the audio signal-to-noise ratio of reproduced discs by as much as 10 dB for a total of 72 dB, measured at 1 kHz, 100 % mod. IHF A. When you play a CX-encoded disc, simply press the CX button to enjoy noise-free sound with the widest possible dynamic range.

(† CX is a trademark of CBS, Inc.)

CONTROL VERSATILITY UNLIMITED

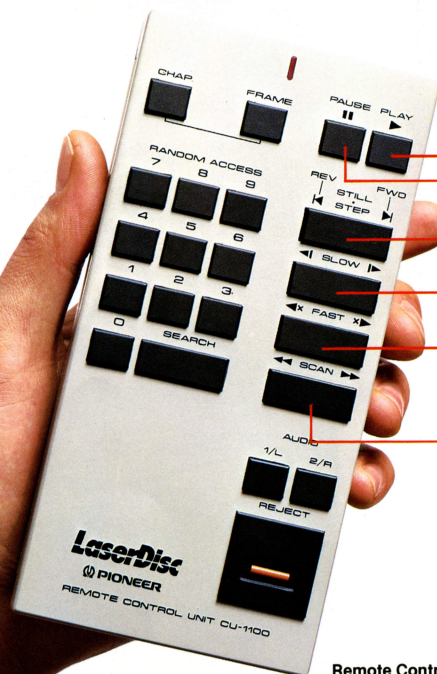
The features and functions of the LaserDisc* Players put full access to the system's capabilities at the user's fingertips and combine to make the LaserDisc* experience even more worthwhile. Thanks to recent advances in microelectronics and high-technology engineering, these new-generation Pioneer players are extremely easy to use.

Micro-Chip Control

The LD-1100 is equipped with the latest in microprocessing "chips" to permit the fast and accurate Random Access functions that make LaserDisc* unique and highly versatile. Micro-chips in the LD-1100 (and in the LD-660* which is currently available in the U.S.) also give the user fingertip control to instantly slow down, speed up for scanning or return to normal playback speed any sequence of video frames encoded anywhere on the disc, in either direction. (These and other control functions are described in detail on pages 28 & 29 and elsewhere in this guidebook.)

Just as easily, you can "freeze" a given frame for leisurely inspection. In-depth study of fast action or complicated subject matter, and "page-by-page" viewing of certain encyclopedia-like programs for training and education, are among the many practical uses of this capability.

We repeat that because no pickup stylus or mechanical head ever touches the disc, "freezing" of any of the individual frames on either side of an Active-Play (CAV) disc for long periods of time is possible without any risk of damage to the disc or the player, and *without the least interference from video "noise."* That is, the snowy, static-generated "noise bars" you experience with even the best of VCRs in slow, still or search modes are gone forever with LaserDisc*.



PLAY: To begin play

PAUSE: To interrupt play

STILL/STEP: To "freeze" motion; move one frame with each push

SLOW: To play as slow as one frame per second

FAST x 3: To play at triple normal speed

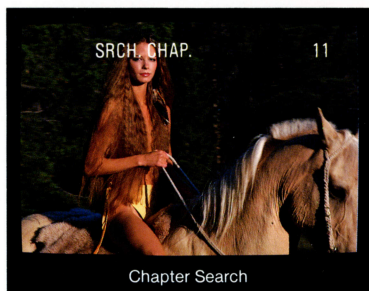
SCAN: To display disc contents at super-fast speed for review. SCAN takes 20-30 seconds to move across the entire disc

Remote Control Unit CU-1100 for LD-1100

RANDOM ACCESS

The rapid retrieval and precise reproduction of information contained in LaserVision** software is easy with the LD-1100 LaserDisc* Player and its sophisticated Random Access functions. When playing LaserVision** discs encoded with frame and chapter numbers, you simply "punch in" your commands on the calculator-like buttons of the Remote Control unit. The practical applications of Random Access combined with the laser-optical system are truly exciting. As the Random Access procedures are detailed elsewhere in this guidebook (pages 28 & 29), here is just a summary for quick reference:

Chapter Search/Display—Both kinds of LaserVision** discs can be factory-encoded with Chapter numbers, making it simple to subdivide lengthy program material for convenience and quick reference. Push the CHAPTER button and, as you view, the appropriate number will appear on the screen.

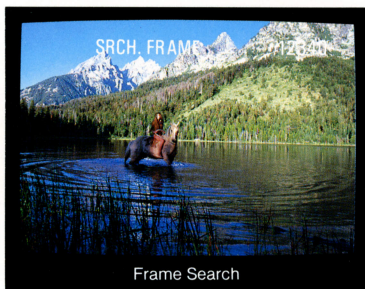


Chapter Search

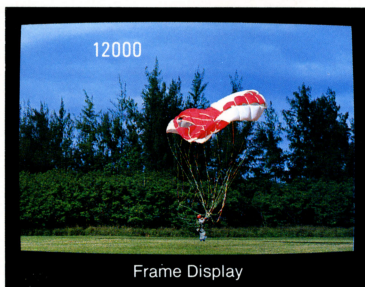


Chapter Display

Frame Search/Display—Each frame on an Active-Play (CAV) LaserVision** disc can be encoded with Frame numbers. As you view an encoded disc, push the FRAME button once and the frame number will be displayed on the screen.



Frame Search



Frame Display

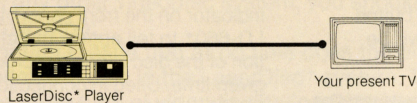
Elapsed-Time Display—An additional convenience on Long-Play (CLV) discs is the display of the playing time elapsed since the program's beginning, measured in real-time terms, regardless of whether special functions or the Search facility have been used.

Position Indicator (LD-660*)

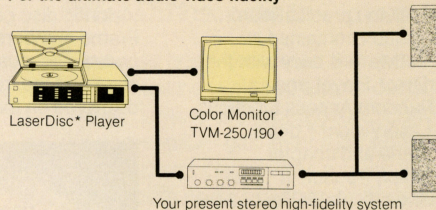
Unlike ordinary audio records, LaserVision** discs are not visible during play. We've therefore provided a position indicator on the front panel of the LD-660* to tell approximately what portion of the disc is being reproduced at a given time. Used in connection with the SCAN function, it is also helpful in locating a particular part of the program in forward or reverse directions at high speed.

LaserDisc* in System Application

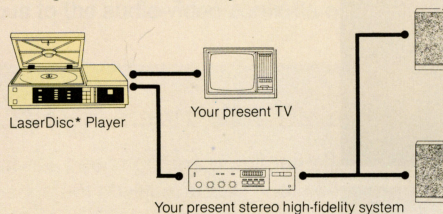
For higher video fidelity



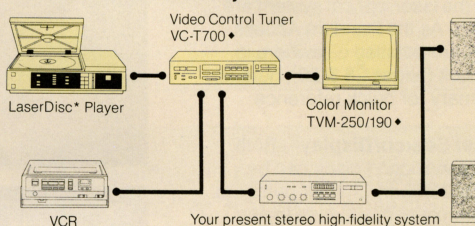
For the ultimate audio-video fidelity



For higher audio-video fidelity



The total home audio-video system



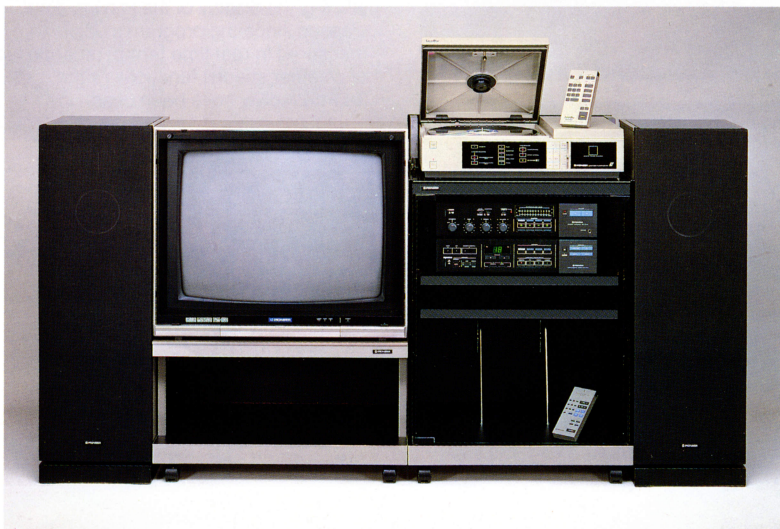
It's easy to connect a Pioneer LaserDisc* Player LD-1100 or LD-660♦ to an ordinary color TV set and enjoy audio-video reproduction equal to or better than the finest broadcast quality available. Picture signals pass from the player to the TV set via an easy-to-attach coaxial cable; rear-panel facilities include antenna in/out terminals so that automatic switching between LaserDisc* and regular TV broadcast sources is possible from the player itself.

Sound signals also pass through that cable and may be reproduced through the TV set's audio system. However, to take full advantage of the stereophonic, hi-fi sound capabilities of the LaserDisc* system, the Audio Out terminals on the rear of the player can be used to send the sound to a stereo hi-fi system for reproduction. Output jacks and cables are provided for simple connection. (Examples of various system arrangements, including connections with VCR units, begin on page 30 of this guidebook.)

For Still Better Quality

To realize the full potential of LaserDisc*, and to achieve the best-possible audio-video quality from broadcast, CATV and any other video sources, we recommend the Pioneer Color Monitors TVM-250♦ and TVM-190♦ and our Video Control Tuner VC-T700♦, with 127-channel VHF/UHF/CATV digital tuning and full-system control capabilities.

There is an output terminal on the rear of each player marked Video Out; it may be used for sending the LaserDisc* picture directly on through to such equipment for recording, or to a color monitor for extremely high-quality video display.



Pioneer High-Fidelity TVM Color Monitors*



Color Monitor TVM-250 •

In order to display images from Laser-Disc* and other video sources with the highest possible fidelity, our approach was not to make a "better TV set" but to create separate-component Color Monitors* that make significant contributions to the state of the art. At present, these monitors are available only in the U.S. and Japan.

Like the TV screens found in the control room of a video studio, Pioneer Color Monitors TVM-250* and TVM-190* have no built-in tuner sections. They use comb filters (see caption at right), black-level stabilizing, velocity-modulation, linear deflection and auto color-temperature control circuitry among other high-technology developments to deliver a very high-quality video image with the least possible aberration in color, definition and resolution.

Higher Resolution and Definition

For example, while the ordinary television set has about 280 lines of horizontal resolution (NTSC), the Pioneer TVM-250* has 400 and the TVM-190* has 350. High-density images, in which color tone is reproduced with maximum fidelity and shadow detail remains amazingly clear and sharp, are the results. But unlike special professional-type monitors, which typically cost from five to ten times as much as the average home-use TV, ours are well within reach of the average consumer's budget.



Color Monitor TVM-190 •

Pioneer High-Tech Improves the Image

Indistinct picture resolution and "fringing" (cross-color interference) are two of the most serious problems in conventional color video, and both result from inferior separation of two entirely different kinds of signals contained in the total, complex video waveform. Those are the wide-band **luminance** signals for an image's relative brightness, and the **chroma** signals, which control color and which are present in the upper end of the carrier. In an ordinary TV set, luminance/chroma-signal separation is achieved by low-pass and band-pass filters respectively. But this results in the cutting off of some of the luminance signals: horizontal resolution is severely limited, and fine-line distinctions are lost.

Separate filtering also allows the leakage of some of the remaining chroma signals into the luminance signals and vice-versa, resulting in the annoying "fringing" (cross-color interference) effect, seen at its worst as a vibrating moire-pattern "rainbow," further limiting picture resolution.

To eliminate these problems entirely, Pioneer Color Monitors* employ a specially developed form of Comb Filter, normally found only in extremely expensive, professional-quality video monitors. It electronically "combs" the total waveform to separate the luminance signals from the color signals without cutting off any of the former, and without the least trace of leakage of luminance signals into the chroma band.

Pioneer Hi-Fi Video Control Tuner VC-T700*



Video Control Tuner VC-T700*

Our Video Control Tuner VC-T700*, currently available in the U.S., has been designed for the widest possible applications both now and in the future in any audio-video system. It offers extraordinarily high-quality performance, based on Pioneer-original technology and years of experience in home electronics. In addition to its TV/CATV tuning capabilities (see below), it can also serve as a video control unit for an entire audio-video system. Facilities are provided for selecting LaserDisc*, TV, Video-1 and Video-2 inputs and sending them to a connected color monitor, an ordinary TV and to audio amplification/reproduction equipment. Independent from the Function selectors are REC-OUT selectors, which send the program of choice to either one or both video recording units (or other appropriate equipment) connected at the rear panel.

All-Channel Tuning—VHF/UHF/CATV

The wide-band Pioneer VC-T700* Video Control Tuner employs a 127-channel, PLL-Synthesizer tuning system capable of pinpointing every VHF, UHF and CATV channel available in the area of use. Antenna input terminals are provided for the standard VHF and UHF channels (2 through 83) and also accept direct inputs from cable and "closed-circuit" sources, and from special adaptors handling "pay TV" and other special channels. High-technology support circuitry assures perfect tuning stability, while the on-board microcomputer makes possible full Memory Tuning. With these features, initial station tuning is quick and entirely automatic: As each station is found and tuned to its

optimum quality, its "address" is entered into the on-board microcomputer and memorized. Channel numbers are displayed on the easy-to-read digital readout, and for recalling any station, you may use MANUAL or AUTO SEARCH or the calculator-like buttons on the full-function remote control for full RANDOM ACCESS selection.

Full-Function, Wireless Remote Control Unit

This compact, wireless unit, makes it possible to control the VC-T700* and connected equipment from anywhere in the room. Channel search is possible via the CH Up/Down control at the upper right of the unit, or a particular channel may be selected by number and at random on the calculator-like buttons "0" through "9." To the right of the "0" button is a CH RETURN switch which will bring back the last channel tuned. There are buttons to turn on and off the

control tuner itself, and a connected TVM-250* Color Monitor, and VOL and MUTE (-20dB) buttons to adjust audio level when the VC-T700* is connected with the Pioneer SA-V700* Stereo Pre/Main Audio Amplifier (see photo).



Remote Control Unit AWX-244

- Simulated Stereo—Add Ambience to Mono Audio
- Lock Buttons—Prevent Unauthorized Use of Tuner and Connected Components
- TV MPX Adaptor Terminals & many other features

Pioneer SA-V700 Stereo Pre/Main Audio Amplifier*

This special audio-video component offers a continuous average power output of 50 watts per channel min., at 8 ohms, from 20 to 20kHz, with no more than 0.05% THD. **Inputs:** phono, tuner, VC tuner, tape 1, adaptor/tape 2; **Outputs:** tape 1, adaptor/tape 2.



Stereo Pre/Main Audio Amplifier SA-V700*

LaserDisc* in Industrial Applications

The Pioneer LaserDisc* Players LD-1100 and LD-660*, though they are used largely as "home-entertainment" products, inherit many of their amazing capabilities from Pioneer-perfected systems designed for service to American and international industry. LaserDisc* has absolutely no peers in industrial communications applications, thanks to its fast and accurate Random Access and to the extraordinary high-fidelity quality of its sound and picture.

Both these advantages stem from the non-contact, laser-optical format of LaserDisc*, and no other video source—not Beta or VHS tape or CED videodisc—can come close to matching them. Pioneer supplies LaserDisc* players and custom-produced software for industrial purposes using up-to-date systems expertise and attentive after-sales services. Our customers include those mentioned below.

Among the Pioneers—IBM & General Motors

LaserDisc* is an extremely valuable tool in sales promotion and employee training programs, as was discovered several years ago by such firms as International Business Machines (IBM) and General Motors, who were among the first to make LaserDisc* the centerpiece of their audio-video communications programs. Their successes with the system have encouraged other large commercial and industrial organizations to join the LaserDisc* family.

American Motors—Sales Promotion for Automobiles

Using LaserDisc* to present audio-video dramatizations of the key points in a salestalk for automobiles was found by General Motors to be equal if not superior to actual demonstrations. Accordingly, American Motors also adopted LaserDisc* in their sales promotion activities.

In AM's pilot program, they introduced Random-Access-capable LaserDisc* players, and appropriate custom-produced software, into some 600 of their 2,000 dealerships across the country. The success of that program has prompted them to expand the use of LaserDisc* to their entire sales network as well as into their employee training activities.

Apple Computers—Sales Promotion for Personal Computers

Apple Computer is enthusiastically employing LaserDisc* players and software in the demonstration of personal computers. They find the system extremely useful in supporting dealer activities.

In their system, a LaserDisc* player is interfaced with an Apple personal computer and a color monitor with a touch-sensitive screen. The entire Apple lineup of products is then displayed on the screen from a specially produced LaserDisc* and the viewer needs merely touch the photo of a given model to cause the LaserDisc* player to display the details of that model via its Random Access capability.

AT & T and Wang Labs—Still More Innovative Applications

American Telephone and Telegraph (AT & T) is using LaserDisc* systems to demonstrate PBX (Private Branch Exchanges) hardware in their showrooms, and is now the second largest industrial user of LaserDisc*, after General Motors. Likewise, Wang Laboratories, regarded as the "pioneer" of word-processing equipment throughout the world, has introduced a sales-promotion system employing LaserDisc* players and nine mainframe computers.

In both these systems, the Random Access capabilities of LaserDisc* are central to their effectiveness in sales promotion, and the key to even further industrial applications of this, the most versatile and dependable audio-video system yet conceived.

A Suggested 10-Point Salestalk on LaserDisc*

Telling the LaserDisc* story is easy. Deciding where to begin is the first step, and this sample salestalk begins with the obvious: LaserDisc* is a whole lot different, *and a whole lot better in playback quality*, than other home video products. The salestalk then moves on toward the successful closing in a clear and logical flow. So, our first reminder is—

Be sure to tell the LaserDisc* story **clearly**.

You've probably already discovered that LaserDisc* is the kind of rare product that literally "sells itself" *if you effectively demonstrate its advantages to your customer*. So, the next point to remember is to—

Encourage your customer to **"touch, look and listen."**

This sample salestalk can also help you "size up" your customer along the way. It gives you several opportunities to discover any specific objections and *turn them into positive points* so that your closing pitch is sure to hit the target. So, please remember to—

Be ready to answer objections **quickly and expertly**.

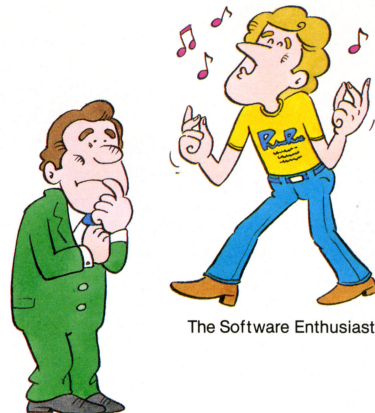
In each of the 10 steps, your customer is told how the *player and discs go together* to form a powerful source of entertainment, information and educational opportunity for everyone—now and in the future. But any talk about the future, or other abstract points, should be **balanced** with something concrete. For example, if you happen to mention what LaserDisc* is going to offer "tomorrow," remember also to—

Involve your customer in what the Pioneer LaserDisc* players offer **right here and now!**

Naturally, every customer is different. But a good salesperson knows that for a product like LaserDisc*, customers might be divided into three basic types—



The Technophile



The Software Enthusiast

The Careful Shopper

Using this as a guide, you can learn more and more about your customer and begin to zero in on his or her needs. LaserDisc* is such a fine product, with so many different points of market appeal, you're sure to find exactly the right combination by the time you reach the closing, and make your sale.

So, to begin, let's step over to the LaserDisc* display area where your first customer awaits, watching and listening to the disc now playing.....

Step 1

Be sure the disc you are playing on the LD-1100 is an Active-Play (CAV) type. Then, as you begin, push the STILL button on the Remote Control unit to freeze the picture and stop the sound. Now point out that Pioneer LaserDisc* players of course have STILL ("Pause" on VCR) and many other useful control features—just like video cassette recorders. But LaserDisc*, like any video-disc system, is for *playback only*—it doesn't have a recording facility.

VCRs are convenient, but what you gain via the recording capability, you often lose in reproduction quality.

This is because VCRs use a slim band of video tape inching across a spinning head. Videodiscs, of course, are *permanent* recordings, something like audio discs.

Overall, be sure to stress that LaserDisc* offers a *combination of very high picture and sound quality*. The use of a laser beam instead of a stylus gives LaserDisc* lots of advantages VCRs *don't* offer.

Never talk about videodisc *versus* videotape. Pioneer believes there's a place for *both* in your home audio-video system—just like there is for both records and tapes in a home audio-only system.

LaserDisc* is for HIGH-FIDELITY PLAYBACK only. It takes its place in your system along with the VCR you use for recording convenience. With LaserDisc* you can't record, but picture and sound quality is much higher than VCR can offer, of course. And, LaserDisc* offers lots more features.

Step 2

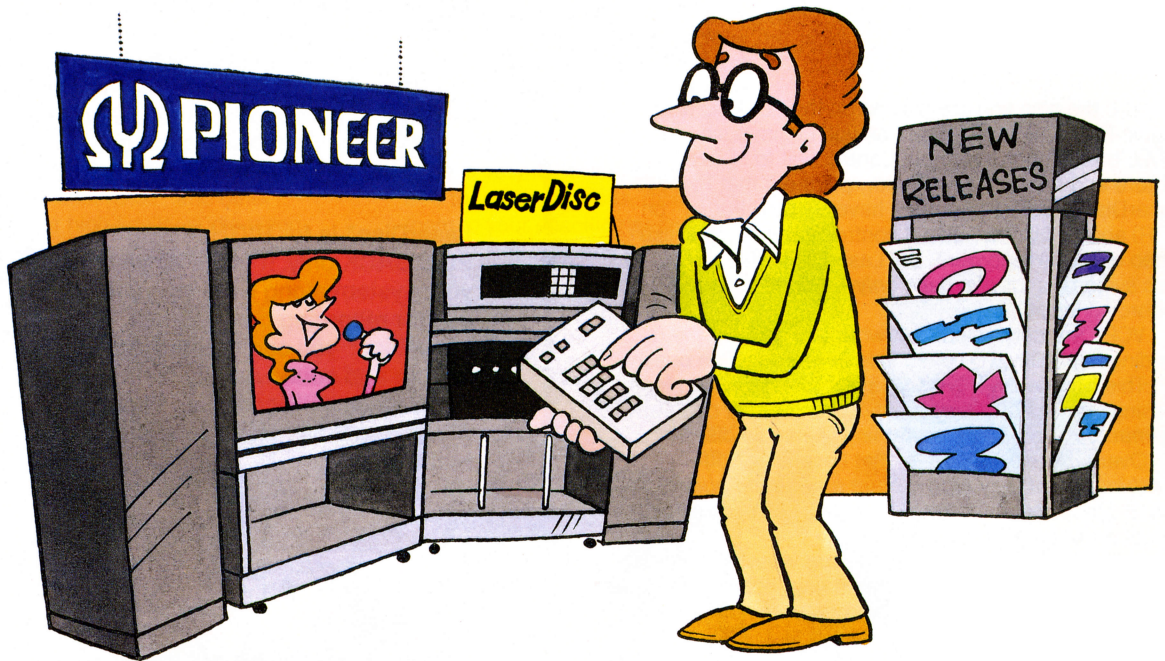
Now's a good time to mention that a LaserDisc* player is a kind of *"video turntable."* Sure, there are lots of other sources of audio-video programming around—broadcast and cable TV, videotapes and videotape rentals and so on. But with LaserDisc*, you can watch *what* you like, *when* you like, and always be assured of the very finest playback quality.

Compare videodiscs with audio-only discs to fix this *"video turntable"* idea in your customer's mind. Software Enthusiasts in particular will appreciate this point.

But don't lose track of the main point: LaserDisc* offers extremely high audio-video quality. Unlike CED videodisc system, LaserDisc* *does not* use a needle or stylus to grind away the original quality. To the Technophile, this point will be a winner.

And be sure to point out that in the long run, LaserDisc* gives you more for less, since once you own a disc, it's yours to enjoy *forever*. This point is sure to appeal to every type of customer, especially the Careful Shopper.

Think of the LaserDisc* player as a VIDEO TURNTABLE. The Discs you spin keep their original super-high quality because the laser pickup never physically touches the disc.



Step 3

After all this talk, it's time to **prove** it. You've built up an expectation, a desire to experience what LaserDisc* can really offer. Most customers will show strong curiosity at this point, and this is good, because it's a sign they're interested. Now reward them—**satisfy their curiosity**:

Invite your customer to push the PLAY button with their own finger. Every experienced salesperson knows the value of this sort of move, since it gets the customer **personally involved** with the product.

Point out the great picture quality—how sharp and clear it is, its depth and dimension. Even in the STILL mode, it's true and undistorted.

Only LaserDisc* can offer this kind of high-fidelity picture. Isn't it beautiful?

Ask your customer to operate the STILL/PLAY buttons a couple of more times. See how easy it is?

LaserDisc* offers a truly HIGH-FIDELITY PICTURE. Even cable or broadcast sources can't always provide this kind of sharp resolution, color accuracy and stability.

Step 4

Pioneer has over 40 years of experience in hi-fi. So, naturally, LaserDisc* offers **true high-fidelity sound**. As a matter of fact, the frequency response—one of the most important of all hi-fi specs—is even better than FM stereo!

All Pioneer LaserDisc* players have 2-channel, high-fidelity sound capability. This means great **hi-fi stereo music**, for one thing. It also means you can have bilingual programs—all sorts of exciting possibilities.

And here's another strong sales point: LaserDisc* uses essentially the same pickup system found in the new **Compact Discs**—a laser-optical beam instead of a needle. Technophiles will be interested in details; Software Enthusiasts will want to know more about this; even the Careful Shoppers will be assured that LaserDisc* has a bright future, and **won't become obsolete**.

LaserDisc* offers true HIGH-FIDELITY SOUND. It's far better than ordinary TV and it even has higher "fi" than FM stereo. All this and 2-CHANNEL/STEREO capability, too!

Step 5

Point out that the LaserDisc* picture/sound signal **can** go directly from the player to an ordinary TV set. **No special components, interfaces or other gadgets are required, even for bilingual programs.**

To enjoy the stereo/2-channel capabilities and the hi-fi sound quality, however, most LaserDisc* owners like to route the sound signal into their **home hi-fi stereo system**. It's very easy to do this.

And because the picture signal has such super-high quality, it might be a good idea to think about using a special television "monitor"—like the Pioneer TVM-190• or TVM-250• (see pages 8 & 9).

Now, **Technophiles please take note**: Pioneer also offers, in certain areas, special video control tuners and amplifiers (see page 10) to help you create a truly sophisticated audio-video system.

It's easy to use a LaserDisc* player with your present TV. NO ADDITIONAL EQUIPMENT is necessary. Or, hear the hi-fi sound through your home stereo, and view the picture on a high-class "monitor," if you like.

Step 6

Still using the same Active-Play (CAV) disc you started with, invite your customer to operate some of the other controls. And don't be in a rush—**give your customer time** to appreciate the real advantages in each basic function:

SLOW FWD and SLOW REV—point out how clear the picture is, without “noise bars” and fuzzy focus.

SLOW SPEED ADJUST—it ranges from normal to dead slow on a scale of five.

You can mention the FAST and SCAN functions, too. But hold off demonstrating them until later, along with Random Access, in Step 9.

STILL/STEP—Emphasize that it works in either direction. And point out that each “frame” is a separate and complete picture, unlike VCR.

LaserDisc* gives you COMPLETE CONTROL of your program. Pioneer's long experience in consumer electronics means they really know how to build a player that's EASY TO OPERATE and dependable.

Step 7

Continuing from the last point in the previous step, emphasize the amazing storage capacity of LaserDisc*. This is one of those “abstract” points that should be accompanied by a direct, real action—so eject the disc and **hand it to your customer**, saying something like:

“By the way, that disc you are holding can contain as many as 108,000 (!) separate still pictures.”

While the customer still holds the disc, mention the wide range of software available now and in the future on discs just like this. **Incredible possibilities** for entertainment, information, education.

If the disc you are holding were a picture book, you wouldn't be able to lift it—it would contain over ONE HUNDRED THOUSAND pages!



Step 8

Now encourage your customer to select their favorite *kind* of software from the selection of discs you have on hand. Ask the customer to insert their choice into the player *with their own hands* and push the PLAY button.

Needless to say, this is another way to discover what "type" of customer you have. A Software Enthusiast might select a music program. The Careful Shopper, on the other hand, might take some time in the selection, ending up with a recent movie.

In each case, try to slant your salestalk to the selection. For example, point out to the Software Enthusiast that there are many exciting in-concert discs now available, all with superior picture and hi-fi stereo sound.

Tell the Careful Shopper how relatively *inexpensive* it is to enjoy a movie at home—not just once, but as many times as desired, each time with perfect playback audio-video quality, thanks to the LaserDisc* system.

And don't overlook the advantage in building up a *home library* of favorite discs.

LaserDisc* really means OPPORTUNITY UNLIMITED in high-quality entertainment, information and educational programming. The discs are a good investment, too. One by one they build up a home audio-video library that's hi-fi forever.

Step 9

By now, you should have a very clear idea of what type of customer you're dealing with. Now, when you introduce the remote control unit and its **Random Access** capabilities, be sure to use an Active-Play (CAV) disc, and tailor your talk to suit the customer's range of interests—something like this:

To the **Technophile**: "Fast and accurate Random Access is the key to the fantastic future LaserDisc* offers. For one thing, it means unlimited versatility for computer interfacing and so on."

To the **Software Enthusiast**: "It's easy to skip over parts you don't want to view and get right to the parts you enjoy most."

To the **Careful Shopper**: "LaserDisc* is very easy to operate, and very practical and efficient, too. The extremely fast and accurate Random Access facility of LaserDisc* not only increases convenience and versatility, it also ensures that this is the one and only system that will survive long into the future!"

In each case, be sure to encourage your customer to operate the remote control by themselves. You might start with the FAST and SCAN functions, then carefully and clearly explain the chapter/frame SEARCH procedures.

LaserDisc* has a quick-acting, accurate and versatile RANDOM ACCESS facility. This gives you fantastic control capability and many other advantages right now and in the future.

Step 10

Now you've reached the most important step of all—the closing. Briefly review what you've covered so far, **slanting it toward what you've discovered about your customer**. LaserDisc* is the kind of rare product that literally "sells itself" *if* you keep your salestalk short and simple and concentrate on letting the customer actually experience what LaserDisc* can offer.

Keep each of your main points clear. Be attentive to your customer's questions and answer them confidently and completely, but don't introduce too much information at the early steps.

For the actual closing, **don't be shy—ask your customer to buy!**

It may help to assure your customer of the wide range of software available: present the latest catalogs at this point if necessary.

Finally, if your store's policies permit, offer to go to the customer's home to install their new LaserDisc* player. If your customer wants to wait, be sure to give them your card, and an appropriate reminder (give-away, brochure, software catalog, etc.). Get the customer's name and address and **follow up** with direct-mail literature, etc.

LaserDisc* has the state-of-the-art technology that will rule the future of audio-video hi-fi for decades to come. And it's READY TO ENJOY RIGHT HERE AND NOW. Take LaserDisc* home with you today.



Positive Answers to Challenging Questions

LaserDisc® has received lots of attention in the press, and your customer might have heard some confusing things about it. If you study this guidebook carefully, you can eliminate much of that confusion.

Still, there might be some questions that are hard to handle. Here are a few, with suggested answers:

Q: Will the amount of software really continue to grow?

A: Definitely yes. The world's leading entertainment, cultural and educational institutions are solidly behind LaserDisc® as the *one and only* state-of-the-art tool of modern high-fidelity audio-video communication. The catalog of discs has been growing steadily in America, Europe and Japan since the beginning, and now includes hundreds of titles.

Q: What about the dependability of the helium-neon gas laser pickup?

A: The dependability of the laser, and of the entire player for that matter, has been greatly improved since the early models. Refinements planned for the future include the use of solid-state laser diode pickups and so on—keeping compatibility with present software, of course.

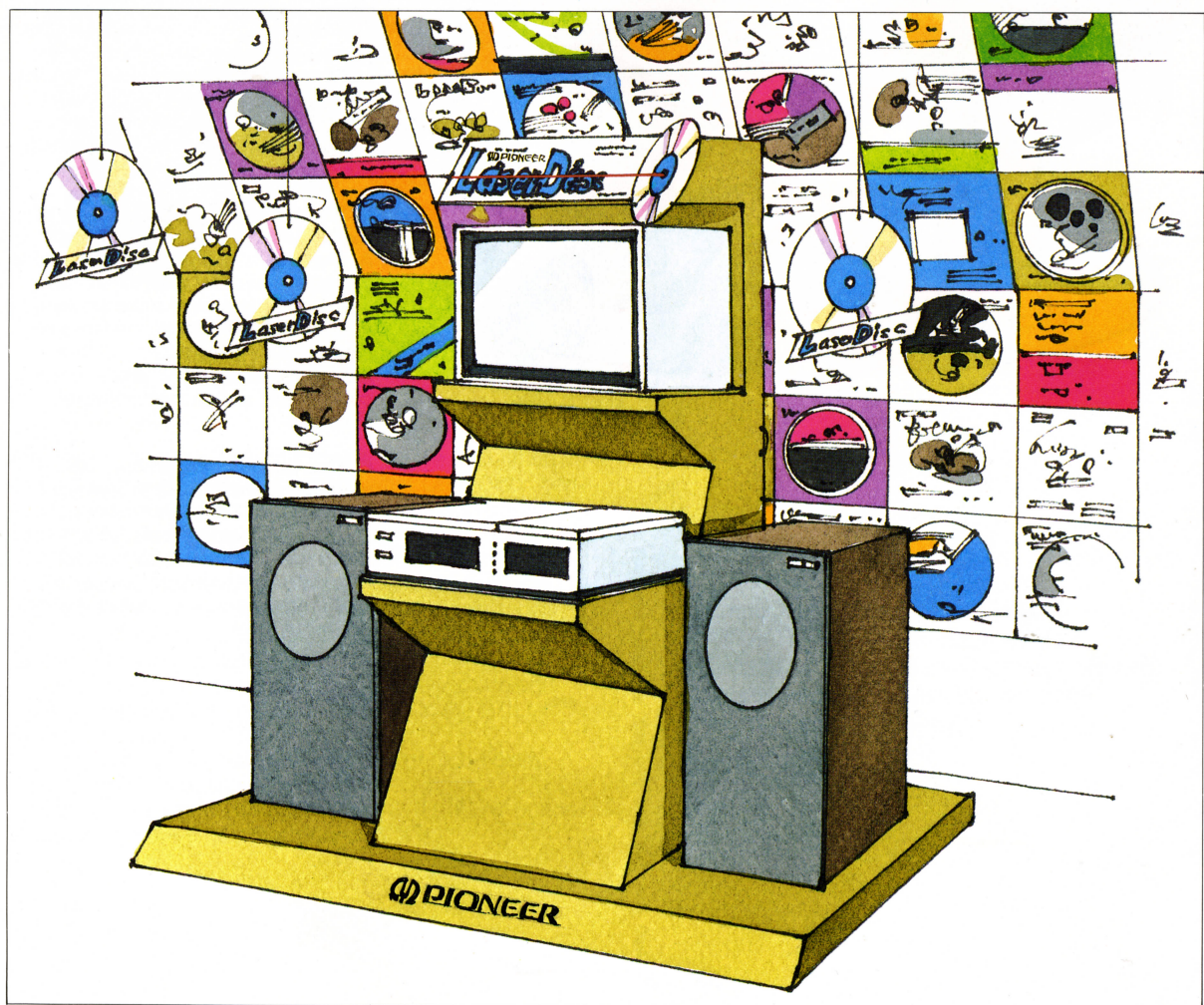
Q: Can LaserDisc® software be recorded to VCR using this player?

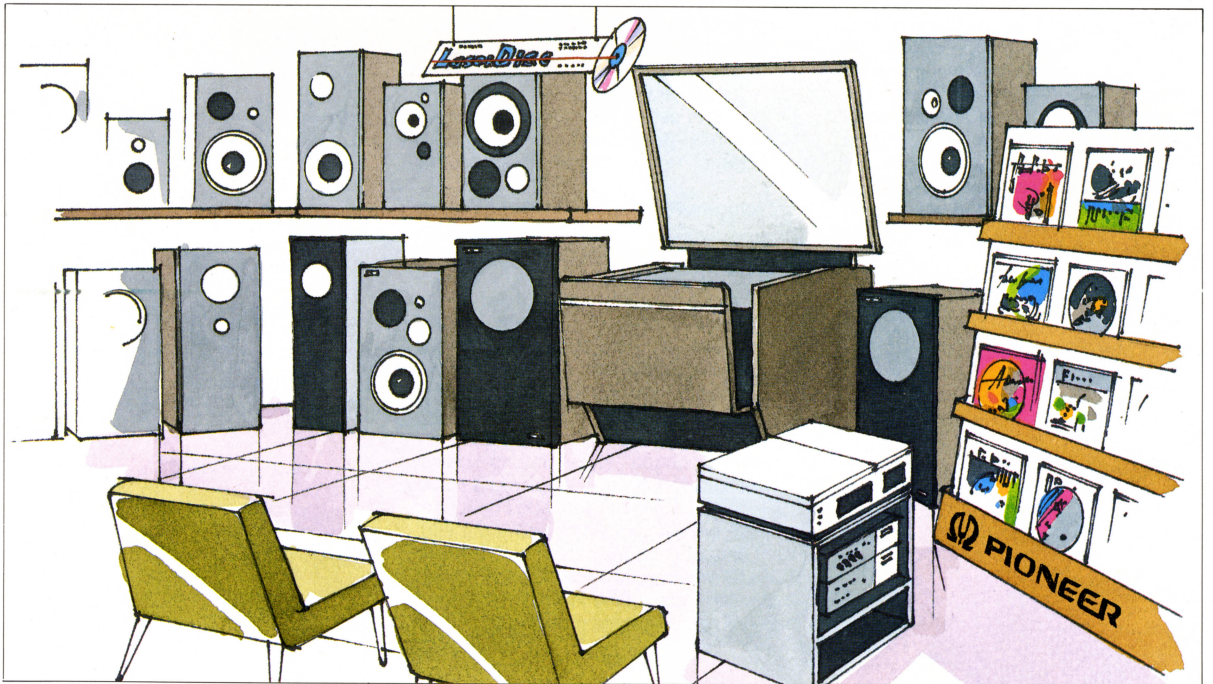
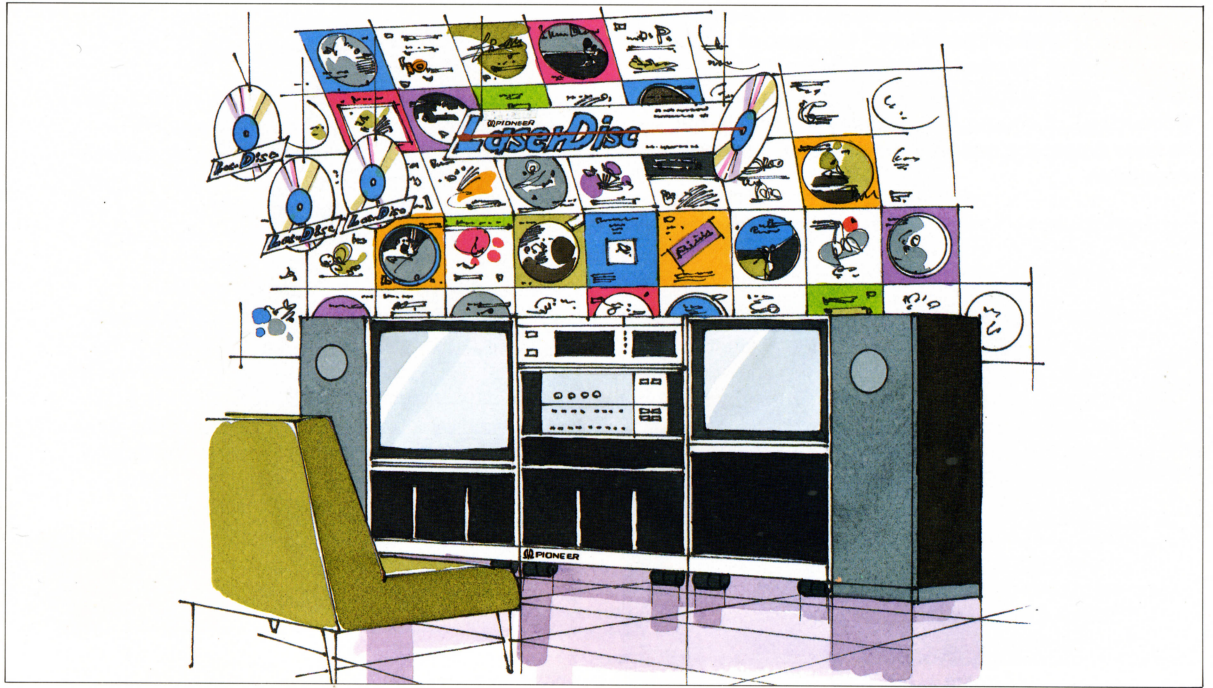
A: At present, LaserDisc® software contains no "guard signals" to prevent taping, thus it's technically possible to record from a LaserDisc® player to a VCR *if the user is sure not to violate copyright laws.*

Recommended In-Store Display

The importance of a well-designed in-store display cannot be stressed enough, for no other audio-video source component sells itself as easily as does LaserDisc*. once customers experience it with their own eyes and ears. Ideally, your display of LaserDisc* and other Pioneer high-fidelity audio-video products should be positioned to catch the attention of general store traffic, yet in a spot providing enough privacy so that customers

may watch and listen without distractions. On these pages we've illustrated a few examples of LaserDisc* "corners"; please notice that each of them provides ample space for the display of LaserVision** software, a very important point. Feel free to use these ideas, modifying them to your specific needs and local regulations. Any suggestions or ideas regarding display/p.o.p. materials will be welcome.





FACT FILE: LaserVision** Software

We generally call the "software" used in Pioneer LaserDisc* Players "LaserDiscs." Because of trademark considerations, however, the description "LaserVision**" discs is preferred. You may also call them "videodiscs," of course, if it is clear you are referring to the laser types; the ordinary word "record" is also acceptable.

Disc Programming

LaserVision** discs are now available in a wide variety at reasonable cost, making the most of the very high-quality video and two-channel, hi-fi audio capabilities. The growing catalog offers the latest and best in educational, information and entertainment programming, in vivid color and dynamic stereo sound. And because certain LaserVision** discs can offer up to two hours' playing time, it's easy to enjoy a full-length motion picture as many times as desired, with perfect audio-video playback quality, in the comfort of your own home.

Tips on Handling Discs

LaserVision** discs are more durable than ordinary audio records and other video-discs, and minor surface mars have little or no effect on picture or sound quality. Fingerprints and dust can be wiped off with a soft, damp cloth; unless they are excessively dirty, they should cause no problem. However, the discs are not entirely unaffected by warping. To ensure best quality, the user should take the jacket out of the shrink wrapping as soon as possible and be sure to store it exactly vertically in a cool and dark place when not in use. Disc life is almost infinite if used properly; the display of a single frame ("still") is also almost infinite as far as the disc is concerned.

There are a number of important differences between the CAV (Active-Play) and CLV (Long-Play) discs in the LaserVision** format. The charts here outline the main differences.

LaserVision** Discs: Playing Time per Side

	CAV	CLV
Maximum Playing Time	36 min.	60 min.
Spindle Motor rpm	1500	1500-570

CAV & CLV Discs: Main Differences

	CAV	CLV
Basic Functions		
Play	#	#
Pause	#	#
Scan (Fwd/Rev)	#	#
Audio Channel (1/L, 2/R)	#	#
Additional Performance		
Features		
Fast x 3 (Fwd/Rev)	#	—
Slow (Fwd/Rev)	#	—
Still	#	—
Step (Fwd/Rev)	#	—
Random Access		
Frame No. Search	#	—
** Chpt No. Search	#	#
Frame Display	#	—
** Chpt No. Display	#	#
(Elapsed) Time Display	—	#
Elps. Time Search	—	#
*** Picture Stop	#	—
** Chapter Stop	#	#

** Only for discs with recorded chapter codes

*** Some CAV discs are encoded with Automatic Picture Stop: while reproducing in Play or Slow mode, picture freezes automatically where coded to permit special interactive uses (video games, etc.). To cancel this function, press another key (Play, Slow, Fast x 3, Scan or Step).

= can be provided

— = cannot be provided

FACT FILE: LaserDisc* & Video Cassette Recorder

As we have stated before, our policy is to encourage you never to talk about videodisc **versus** videotape. Pioneer believes there's a place for **both** in your home audio-video system. Naturally, there are distinct and important differences in the two, and the following information may be useful in your sales activities. Please remember that the LaserDisc* system has:

1. Very high picture and sound reproduction quality.
2. A practically indestructible medium of program storage.
3. A fast and accurate Random Access and many other facilities for interactive use.

LaserVision** Discs & Video Cassettes

	LaserDisc*	VCR
Recording Medium	Laser-optical disc of hard acrylic plastic	1/2 in. polyester based magnetic tape
Basic Function	Playback only	Recording/Playback
Picture Quality	350-line resolution	240-line resolution
Sound Quality	40Hz-20kHz Wide dynamic range	50Hz-7 kHz (Beta III & VHS Extended Play)
Functions	Instant Random Access and additional special functions.	No random access; limited special functions.
	No time limit on still-picture display.	Still display over a few minutes cancelled automatically.
Durability	Non-contact optical system ensures retention of original quality virtually forever.	Wear on tape and player can lead to some degradation in audio-video quality.
Prices of "Software"	LaserVision** discs are easily mass-produced and compare in cost to audio discs, considering the added video content.	Blank VCR tape is relatively costly; tape rental, etc. notwithstanding, pre-recorded video-cassettes are generally more costly.
Use	LaserDisc* is a kind of "Video Turntable" with the added ability to provide interactive functions.	Direct recording using a video camera is, of course, a strong feature of VCR systems.

rs, CX Noise Reduction and Compact Disc (CD)

LaserDisc* & VCR: Comparison of Audio Quality

	LaserDisc*	VCR
Frequency Response	40Hz-20kHz full hi-fi	50Hz-7kHz Beta III & VHS Extended Play; 50Hz-10kHz Beta & VHS Standard Play
S/N Ratio	72dB (CX† NR on) (1kHz, 100% mod. IHF-A)	about 40-43dB (NR on) (1/2" tape)

CX† NOISE REDUCTION

While a few video cassette recorders do offer noise reduction (Dolby††, etc.), all LaserDisc* Players employ the CX system. This highly effective system offers a very high audio signal-to-noise ratio from reproduced discs. When you play a CX-encoded disc, simply press the CX button on the player to enjoy noise-free sound with the widest possible dynamic range.

†CX is a trademark of CBS, Inc.

††Dolby is a trademark of Dolby Laboratories Licensing Corporation.

LaserDisc* & Compact Disc

Exciting progress has been made in high fidelity audio reproduction through a number of so-called "digital" techniques. The foremost of these is found in the Compact Disc (CD) players now being marketed by Pioneer and other makers in various parts of the world. At the present time, CD and LaserDisc* are not playback-compatible, but this too, in time, may come about, since both employ high-technology laser-optical information retrieval systems.

This highly accurate, non-contact system is at the very leading edge of technology and is the key to the superior performance of CD and LaserDisc* alike.

FACT FILE: LaserDisc*—Non-Contact Videodisc

LaserDisc* is the only *non-contact* videodisc format on the market today. We have already discussed the advantages of this at length, but to clearly differentiate LaserDisc* from any other videodisc system, you should know the following:

Non-contact means that at no time does the pickup actually touch the disc in the LaserDisc* system. This is not true for the type of videodisc called CED (Capacitance Electronic Disc). The latter employs a stylus-capacitance system in which a diamond stylus has to physically track the groove in the rapidly spinning disc. The side effects of this contact are potentially dangerous to the audio-video contents of the CED disc.

The Effects of Stylus-Disc Contact

It has been confirmed that the effect of the constant physical contact between the stylus and the disc in the CED videodisc system causes noticeable degradation in playback quality over a period of time.

This is particularly important when judging video quality: on videodiscs that can become worn or scratched (e.g., CED), the resulting audio noise may be no more noticeable than on an audio-only disc, but the video noise is much more annoying, due to the highly critical ability of the human eye.

Being the non-contact type, LaserDisc*, of course, causes no physical wear on the disc whatsoever. Thus disc life is virtually infinite, audio quality is *never* compromised, and picture resolution of the playback is extremely fine-grained and clear.

Great Differences in Pickup Life

It has also been confirmed that the CED stylus must be replaced after a certain limited number of playing hours. Conversely, the neon-helium gas laser tube now employed in LaserDisc* players has a rated life of 7,500 hours or more; when solid-state laser-diode pickups are employed, this life will be further increased.

LaserDisc* Has Virtually Infinite "Freeze" & Random Access

While the above factors are important, there are two other distinctive advantages in the LaserDisc* system.

One relates to the still ("freeze-frame") display of a single frame. With CED, a time limit is imposed because it uses a stylus in physical contact with the rapidly spinning disc, while with LaserDisc* there is no practical time limit whatsoever as far as the software is concerned.

The other vital factor is that the non-contact system of LaserDisc* permits the rapid and extremely accurate Random Access functions detailed elsewhere in these pages.

LaserDisc* vs. CED: Main Differences

	LaserDisc*	CED
System	Non-contact laser-optical system	Stylus capacitance (grooved)
Pickup	Non-contact laser beam	Diamond stylus
Playing time (Maximum on 1 side)	60 min (CLV) or 36 min (CAV)	60 min
Spindle Motor Rotation (rpm)	1,500-570 (CLV) or 1,500 (CAV)	450

FACT FILE: LaserDisc* Remote Control & Rando

In this "Computer Age," the unique Random Access capabilities of LaserDisc* are extremely useful, and the key to the many advantages LaserDisc* possesses over other video-reproduction systems. The Remote Control Unit CU-1100 makes these capabilities available to the user of the LaserDisc* Player LD-1100. Naturally, what use can be made of Random Access depends on the particular disc being played.

Because each track is a single frame, each can be viewed as long as one likes, using the STILL/STEP control. An Active-Play (CAV) disc can contain up to 54,000 frames **on each side** for a possible total of 108,000 separate still pictures of, for example, famous works of art.

Both CAV and Long-Play (CLV) discs can be factory-encoded with "Chapter Numbers" which are useful in locating the major divisions of the discs' contents. The "Chapter Stop" function is also possible on both kinds of discs. In addition, Active-Play (CAV) discs can be factory encoded with "Frame Numbers" for easy indexing, somewhat like the pages of a book. Another convenience is the elapsed-time codes in certain CLV discs.

As shown in the chart on page 23, CAV discs offer the additional performance features of "FAST $\times 3$," "Still/Step" and "Slow." The audio portion of the disc is not reproduced during these operations.



The CU-1100 Remote Control Unit

This unit has a self-contained power supply and its maximum range is about seven meters (23 ft.) from the player, more than sufficient for the average home installation. The system employs an infrared beam of a frequency selected to avoid mutual interference between LaserDisc* and TV remote control switching systems.

Basic Functions

1. PAUSE

Causes both video and audio reproduction to stop until another control (e.g., PLAY) is operated.

2. PLAY

Permits the normal reproduction of both video and audio information.

3. STILL

Stills are achieved by causing the laser beam to trace and retrace the same track. This retracing can be done any number of times, since the signals on the disc are not subject to wear or distortion from a physical pickup. This, as we've mentioned, is a unique advantage of LaserDisc*.

4. STEP

Frame-by-frame reproduction is done by transferring the laser beam from one selected track to another, either backwards toward the disc's center, or forward toward the edge.

5. SLOW

For slow-motion playback, the beam traces one track several times before moving on to another. (The lever type control on the player itself is used to adjust the speed of slow-motion from the normal 25 frames/sec. to a single frame/sec. in five steps.)

6. FAST $\times 3$

The beam traces only every third track when you select the Triple-Speed mode. This mode works in forward or reverse with Active-Play (CAV) discs.

7. SCAN

This permits the user to view an entire side of a disc (without sound) at a very high rate of speed—approximately 20 to 30 seconds to move across the entire disc.

Random Access Functions

Using the numbered buttons under the words "RANDOM ACCESS" on the CU-1100, the Random Access process is as described below. The wanted image is found and displayed within a few seconds. It is as easy—and sometimes quicker—than using the index of a printed book.

Push CHAPTER† or FRAME†† buttons at any time to display present number on screen without interrupting play.

CHAPTER SEARCH

To move to the beginning of wanted chapter†:

● Push SEARCH

Picture stops and words "SRCH. CHPT." together with last-entered number appear on screen. (Push CHAPTER BUTTON to display "SRCH. CHPT." if "SRCH. FRAME" appears.)

● Enter number of CHAPTER wanted on numbered buttons

● Push SEARCH again

Picture disappears. Player searches for, finds wanted CHAPTER; if disc is CLV, play automatically resumes when wanted CHAPTER is found; if disc is CAV, first frame of wanted chapter appears on screen in STILL mode—push PLAY.

FRAME SEARCH

To find a particular numbered frame††:

● Push SEARCH

Picture stops and words "SRCH. FRAME" together with last-entered number appear on screen. (Push FRAME BUTTON to display "SRCH. FRAME" if "SRCH. CHPT." appears.)

● Enter number of FRAME wanted on numbered buttons

● Push SEARCH again

Picture disappears. Player searches for, finds wanted FRAME and displays it on screen in STILL mode—push PLAY.

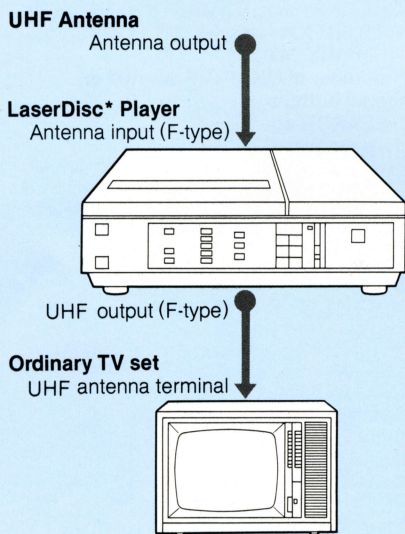
† Discs encoded with Chapter Numbers (CAV, CLV)

†† Discs encoded with Frame Numbers (CAV only)

FACT FILE: System Connections

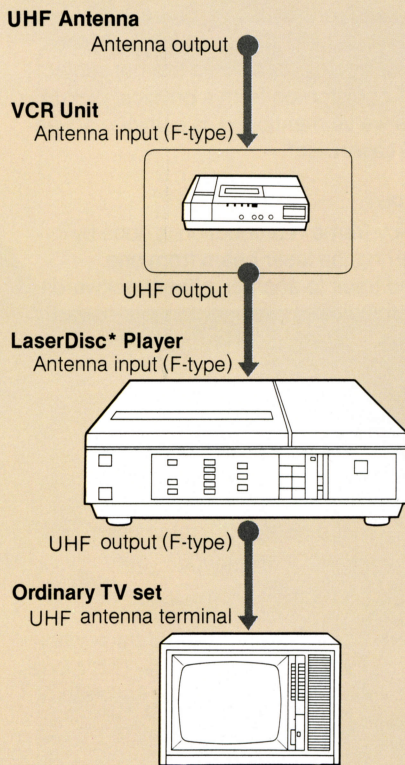
LaserDisc* & Ordinary TV Set

Any Pioneer LaserDisc* Player can be easily connected to any TV set by using an ordinary antenna feed (coaxial cable is recommended). Tune the TV set to any spare UHF channel (or "VTR" if provided); fine tuning of the spare channel may be necessary to obtain optimum video quality. The audio signal is conveyed to the TV set's audio section through the same feed as the video signal.



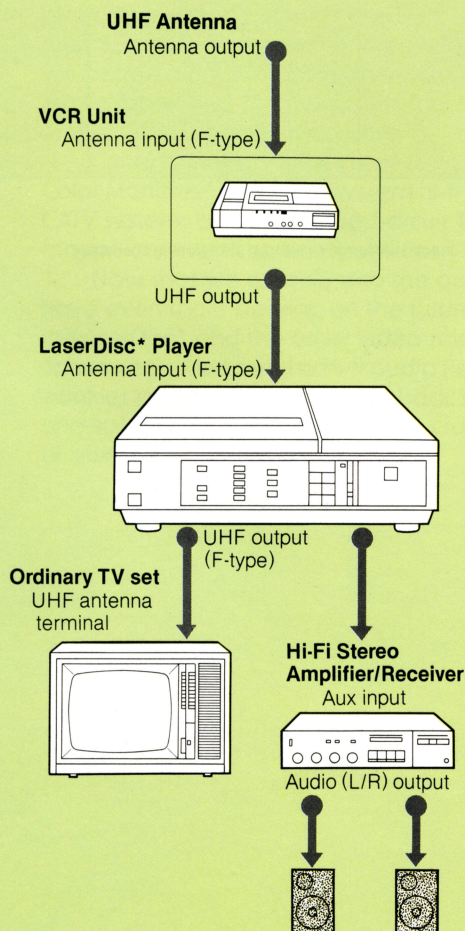
LaserDisc* & Ordinary TV Set + VCR

Follow the preceding procedure but connect the antenna to the VCR and the VCR's UHF output to the antenna input of the LaserDisc* player.



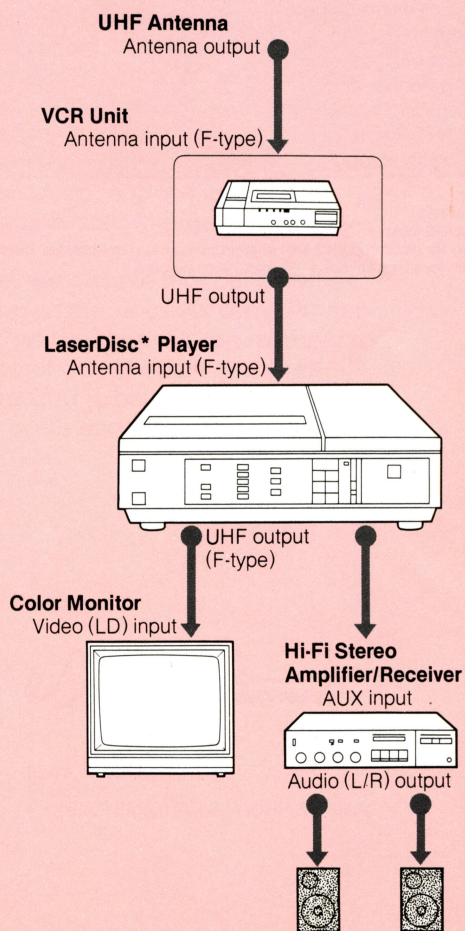
LaserDisc* & Ordinary TV Set + VCR + Stereo System

To enjoy LaserDisc* software having high-quality, stereophonic sound, use the audio output jacks on the LaserDisc* player to send the sound signal to a connected home stereo hi-fi system (use AUX inputs on receiver or amplifier, turn down TV set sound). This connection method can be used with or without the VCR, and, naturally, the audio portions can be sent to any component (deck, etc.) connected with the hi-fi system.



LaserDisc* + VCR + Color Monitor + Stereo System

To get the best of the superior picture quality offered by LaserDisc*, Pioneer suggests the use of a color monitor (i.e., a professional type television monitor without built-in tuner). When using a color monitor, LaserDisc* should be connected to video input terminal.



FACT FILE: LD-1100 & LD-660* Function Compa

Model		LD-1100		LD-660*	
Item	Disc	CAV	CLV	CAV	CLV
Basic functions					
Play		○	○	○	○
Pause		○	○	○	○
Scan (Forward/Reverse)		○	○	○	○
Special playback					
Fast × 3 F/R		○	—	—	—
Slow F/R		○ (Variable speed)	—	○ (Fixed speed)	—
Still/step F/R		○	—	○	—
Random access					
Frame No. search		○	—	—	—
Chapter No. search†		○	○	—	—
Elapsed-time search		—	○	—	—
Others					
Frame No. display		○	—	—	—
Chapter No. display†		○	○	—	—
Elapsed-time display		—	○	—	—
Picture stop††		○	—	—	—
Chapter stop†		○	○	—	—

○ : Available

— : Not available

† : Only for discs encoded with chapter numbers: with Chpt. No. displayed, SCAN in either direction automatically stops at beginning of chapter.

†† : Only for discs encoded with picture stop codes.

FOR YOUR REFERENCE

* LaserDisc is a trademark of Pioneer Electronic Corporation, used exclusively to distinguish reflective laser-optical videodisc players (Pioneer LaserDisc* players), and related products, from other videodisc systems and products.

** LaserVision is a trademark of the LaserVision Association, a trade association composed of firms promoting their own business and/or products compatibly related to the Reflective Laser Optical Video Disc Systems.

* The LD-660 is available only in the U.S. at the present time. A similar version, the LD-600, is marketed in Japan; the Pioneer TVM-250/190 Color Monitors, VC-T700 Video Control Tuner and SA-V700 and/or similar audio-video accessories also are available only in the U.S. and Japan at the present time.



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