Now you can have
all the information
you've always wanted.
Ready to use.

It's precisely what decision-makers are looking for.

From now on, the 7600 Optical Storage Subsystem will make a big difference in the way you make business decisions. Simply because you can now put your finger on all the background data and past experience you need. Precisely and in seconds.

The contrast between the before-and-after is startling. Just think of all the pertinent business data you had to discard over the past years because of high data storage costs. And if you did decide on keeping your most valuable information, think of how little you actually used it because it took too long to retrieve.

Shedding new light on an old problem.

While computer science has made great strides in data storage and retrieval using magnetic tapes and disks, the cost has gone up as well.

In terms of space and cost of information, we are fast approaching the technological limits of magnetic data storage density. In addition, this type of storage has always been in danger of erasure and loss due to sabotage, updating and human error. The time for a better way to keep valuable records has come.

Optics and a new reliable recording media provided the answer. Storage Technology pooled resources to concentrate on finding the solutions, dedicating a special development team and a new building to this program. Thus, the people responsible for perfecting present-day technology for information storage and retrieval found a way to the future.

A look into the future of doing business.

All projections indicate that the volume of business information managed by computers will increase dramatically in the future. Without a viable alternative to the present high-cost data storage, more valuable information will vanish in stacks of paper and finally end up in the shredder. And just because information is over ninety days old does not necessarily make it less useful for today's decision-making process. It's this kind of information that helps you determine past trends and predict the patterns of the future. Patterns such as competitive pricing, demand and market growth. You may need a complete set of these factors to give your business clear direction in today's fast changing marketplace. All information and its analysis are prerequisites to survival in the present business environment. The Optical Storage Subsystem gives you the means: cost-effective data storage and fast access to all permanent historical information.

You can now afford to keep your entire universe of past information and experience. You can use it routinely to make decisions and shape the future of your business. Our application of optical technology is revolutionizing the entire permanent data storage field. It's a revolution that's sure to affect every sector of business, science and industry. The 7600 Optical Storage Subsystem is a versatile tool that can give you a competitive edge in your particular business.

Using more information adds up to improved efficiency and service.

Any service operation can now take advantage of this new source of valuable data and improve customer relations. Large ordering catalogs, for example, can be made available to display pictures of the merchandise.

Physicians and hospital administrators will be able to quickly refer to patient files and transmit life-saving information, as well as pertinent billing data.

Complex engineering and architectural drawings can be stored in electronic files for use by the approving agencies and local inspectors.

Banks can rely on the 7600 Optical Storage Subsystem to record large volumes of transactions that are available for audits and inspection by customers. Receiving monthly bank statements that picture the actual written checks could be a feasible alternative to present methods.

The 7600 Optical Storage Subsystem can widen the horizon of many businesses using on-line transaction processing systems. These businesses now have the means to log and retrieve volumes of customer transactions for further evaluation. By analyzing all available data, management will be able to make more precise decisions on pricing, schedules, capital investments and product offerings.

The legal system can benefit, too, since it is based on a large body of previous decisions rendered in precedence-setting cases. By retrieving such records in a matter of seconds, legal research can be greatly accelerated.

What is true in these cases also applies to all organizations that depend on large reference data banks to function. Credit bureaus, insurance companies, educational institutions and all branches of government can now find better solutions in our low-cost, permanent data storage and retrieval system. In simple terms, the electronic manila folder containing notes, drawings and past records is no longer a fantasy. It's here now and definitely a change for the better.

Our examples demonstrate how businesses and professions can add more value to their service offerings or create entirely new customer conveniences that allow them to become more competitive and profitable. Now and in the long run.

A better system to explore inner and outer space.

In addition to storing alphanumerics, the 7600 Optical Storage Subsystem can store complex graphics, renderings, x-rays, electrograms, charts and diagrams which aid advanced medical research, as well as the development of other scientific categories.

Satellites exploring deep outer space are sending back a continuous stream of data on the worlds beyond. With conventional storage devices, the storage and retrieval of this large volume of information is very costly. Optical storage is the solution to storing and retrieving such large volumes of data.

Down to earth, valuable seismic data is still waiting to be collected and analyzed. Our future energy supply and lifestyle depends on its fast evaluation. Our subsystem helps speed up this vital process.

Weather satellites and geophysical institutes collect a wealth of new information. Its quick analysis can help us prepare for any impending climatic changes which in turn determine the world's agricultural prospects. Starvation or abundance can depend on using more data more efficiently. Our subsystem points the way to a better, faster solution.

More effective research: A function of how fast you can get all the facts.

Research thrives on the experience gained from past experiments and on examining all available data. It's the only way to test theories, draw conclusions and explore new directions. Until now, gathering facts and figures of previous, related test cases was a slow, time-consuming process. And in our result-oriented society, time is quickly translated into costs, especially when the continuation of research grants hinges on presenting new findings. Our Optical Storage

Subsystem is the new key to opening all available data sources. By offering a low-cost, permanent and tamperproof record of past test data In any given field of science and the humanities, research can now accelerate its pace.

High-capacity, low-cost, but also removable, shippable, long-lasting and quickly accessible.
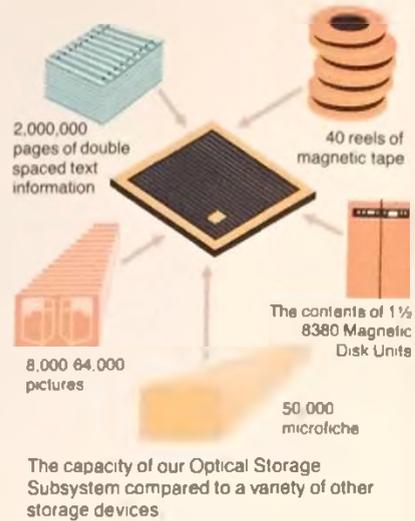
What are the advantages of the new 7440 Optical Media Unit?

First and foremost, it is today's newest low-cost, high-volume storage media that is readily accessible (see our comparison chart).

It's also removable. The lightweight, optical cartridge can be easily taken off the drive and distributed very quickly to other locations.

2,000,000 pages of double spaced text information

40 reels of magnetic tape

8,000 64,000 pictures

The contents of 1½ 8380 Magnetic Disk Units

50,000 microfiche

The capacity of our Optical Storage Subsystem compared to a variety of other storage devices.

Once the information is written and verified, it is protected. The media's projected life is 10 years which is significantly longer than any current computer-accessible media.

How about access? With our subsystem, you can locate your information sequentially or randomly, at a speed comparable to fast non-removable disks. And your data is transferred at a rate of up to 3 megabytes per second.

Your information is free of errors and remains secure.

Our subsystem is programmed to correct and re-write your data the instant an error occurs. Once the information is written and verified, it is ready for quick recalls and audits at any time. It cannot be erased or altered, only amended elsewhere. Thus, your valuable data is secure and virtually tamperproof. Each platter bears an unalterable manufacturer's identification number from Storage Technology that can be read by the 7640 Optical Storage Unit. This number can be kept on file to provide identification of any unauthorized copy.

It can be stored in a fraction of the space now occupied by tapes and disks. It's not affected by magnetic fields and does not require the special care required by other media. This way, it is also a convenient and economical backup to other data storage devices.

A storage technology that's right on the beam.

On the outside, our optical drive looks much like a magnetic disk drive. It has a drive motor that spins our platter and a read/write mechanism.

However, optical technology makes a big difference. A coherent light beam is used to write and read the information to and from the recording media. The beam records the data with pinpoint precision, using a much smaller recording space than on other media. The resulting recorded marks are immediately read by a second coherent light beam that follows the recording beam. This way, the information is read as soon as it is committed to the platter making error detection a simultaneous process.
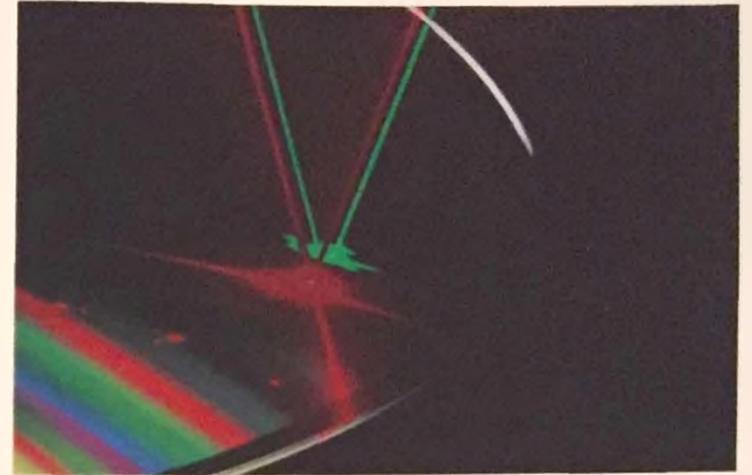
Hard and soft facts about our system.

Although the 7600 Optical Storage Subsystem utilizes new technology, it fits comfortably into your present information computer system, in terms of hardware and software. It's designed to function with any processor capable of running Multiple Virtual Storage (MVS) SP 1.3.

Computer programmers will be pleased to know that our host software offers the many functions available with existing access methods.

In comparison to conventional magnetic disk drives, the Optical Storage Subsystem holds more data per square foot of floor space than any other computer storage device available today. While the subsystem does not have to replace existing equipment, it can share the workload and certainly eliminate future large-scale purchases of other space-consuming tape reels for permanent data storage.

What goes into our machine.

The 7640 Optical Storage Unit contains a drive with its own dedicated control electronics and works completely self-sufficiently as a "head-of-string" device. It also houses your 7440 Optical Media Unit during operation. The 14-inch precision platter offers 4 billion characters of data storage (4 Gigabytes) on one side of the platter, complete with self-centering hub for easy automatic record loading and unloading. The recording media utilizes an aluminum substrate disk covered by a special coating. The platter is encased in a protective cartridge, bearing a unique identification that is operator or machine-readable.

A Storage Technology 8880 Controller performs all interface functions with the IBM channels (S. 370 OEMI) and executes the control logic via the IBM protocol (CTLI). The 7640 Optical Storage Unit can be geared to transfer rates from 1.5 to 3 megabytes per second. It also provides inline or offline diagnostics, local or remote maintenance, channel command interpretation, as well as protocol CTLI control.
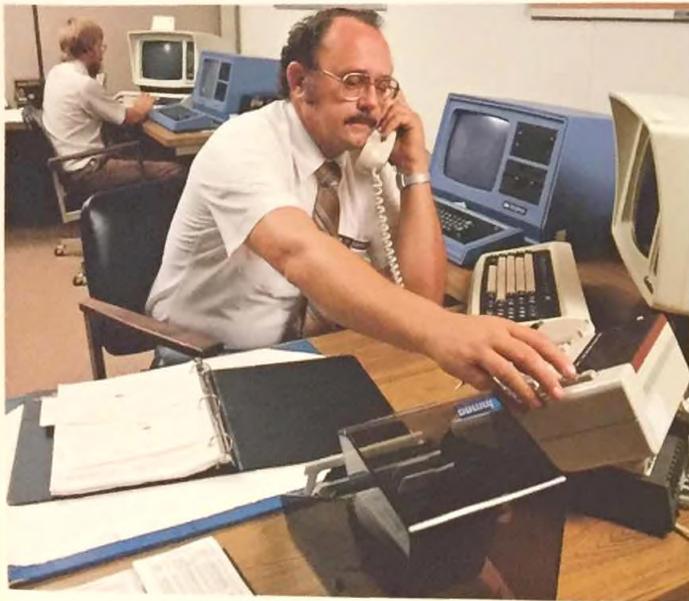
Product reliability starts with the design and continues throughout the manufacturing cycle. Our recording media is made in a Class 10 clean room that's ten-times cleaner than those built for magnetic devices. It resembles the particle-free environment used by NASA in the manufacturing of space flight components.

The Remote Diagnostic Center. It adds the extra value of reliability to your investment.

The Storage Technology Remote Diagnostics Center (RDC) is committed to keeping your Optical Storage Subsystem up and running.

The technical means used in maintaining the Subsystem's reliability are unique. The remote diagnostics of our Center can be directly connected to your Subsystem. On-board diagnostics, host-resident diagnostics, plus two maintenance ports are all dedicated to respond to the commands from our Center. A continuous log keeps track of the performance status of each subsystem component which helps identify and isolate problems before they can cause downtime. Thus, even parts fatigue or any abnormal behavior of certain critical components can be corrected. Our field engineer is dispatched with the proper replacement part, knowing in advance what service must be performed. And since this service takes place at the device level, problems are ironed out without tying up your channel or control unit.

The majority of all hardware problems are diagnosed by our remote diagnotics connection. This procedure is initiated by you, the customer, to make certain that your data and system security are well protected.

The ongoing analysis and logging of your subsystem's performance history enhance reliability now and in the future, adding even more value to your data storage and retrieval system.

Look for years of cost-effective information storage and retrieval.

From now on, the new 7600 Optical Storage Subsystem can make substantial contributions to your business and decision-making process. It can add new dimensions to your existing customer service offerings and provide more efficient records management. In simple terms, the system can provide all the information you need to give you a decisive, competitive edge in your marketplace.

Contact us today for an analysis of your particular permanent storage and access needs.

The 7600 Optical Storage Subsystem Physical and Performance Specifications.

Size	52″ (132 cm) wide x 32″ (81.2 cm) deep x 55″ (139.7 cm) high	Net available data capacity	4 GBytes disk
Power	60 HZ 12 amps, 1 phase 200, 208, 220, 230, 240 VAC 50 HZ 12 amps, 1 phase 200, 220, 230, 240 VAC	Data transfer rate	1.5 to 3 MBytes/sec
Connector	R&S 3720 (Plug) R&S 3913 (Receptacle)	Minimum single-track seek	1 msec
Heat Dissipation	5800 btu/hr	Average seek time (to any track)	61.9 msec
Drives per storage director	8	Projected media life	10 years
Storage directors per storage control unit	2 or 4		

Storage Technology