HARRIS
COMMUNICATION AND
INFORMATION PROCESSING

THE HARRIS 9000 PROGRAM CONTROL SERIES

• Three distinct systems available, offering the broadcaster a complete selection to meet his particular requirements • MULTI-FILE™ Program Memory saves you time...and money • Easy-to-understand video display of current system status • Conversational messages • No special skills required to operate system • Live-assist features and ease of operation meet the needs of today's fast-paced combo operator • Advanced micro-computer design • Operationally and environmentally proven... hundreds of Harris' systems in field use.

The Harris 9000 Program

The purpose of radio program control equipment is to maximize station profits through greater operating efficiency and through the presentation of a more saleable program product. That's pretty basic, but that's what it's all about...saving time...improving your product...increasing your profits.

That's what the Harris 9000 Program Control is all about, too. It has been designed to give you the best tool available to increase the efficiency and effectiveness of your staff, while providing the opportunity to improve your sound—whatever your format may be.

As the originator of micro-computer program automation, Harris has drawn on its years of experience, and taken the next step forward to give you more flexible, more convenient, more reliable, and easier to operate systems than any available before. Harris 9000 systems will handle any format flawlessly, yet are so easy to understand, and so easy to program that even the most non-technical person in your station will readily see how they work and appreciate their help.

With many exclusives, from live-assist features to the truly advanced MULTI-FILE™ Program Memory, the Harris 9000 Series is definitely the most advanced concept in program automation, and the best there is at its job—helping you improve your results, on the air and on the bottom line.

UNLIMITED FLEXIBILITY TO HANDLE ANY FORMAT....

With the wide variety of program formats that are on the air today, a system must have great versatility if it is to be able to handle any one of them. Harris' 9000 systems have that versatility. No programming is too complicated—or too simple. They will faultlessly handle everything from fast-paced "lots-of-music, lots-of-talk" programming to a more simple sequence of reel-to-reel events integrated with commercials at the proper times. In addition, the Harris 9000 enables management to achieve its goal of minimizing the time and errors associated with entering commercials and other schedule changes.

EFFICIENCY AT EVERY STAGE....

The Harris 9000 aggressively pursues maximum efficiency at every stage of station operation. The video terminal provides necessary information—**very complete yet very simple**—for schedule entry and review. Even during editing, a status display informs the operator of the on-air situation, alerting him to possible problems. Conversational messages provide easy-to-understand prompting regarding the nature of errors. The keyboard layout, developed from Harris' experience in hundreds of installations, is aimed at fast and reliable scheduling.

SIMPLIFIED SCHEDULE ENTRY WITH MULTI-FILE PROGRAM MEMORY....

The need to separate commercials from repetitive format elements was partially satisfied with the use of sub-routines, a concept developed by Harris and now widely copied throughout the industry. With the MULTI-FILE Program Memory, Harris' 9000 has vastly improved on a good idea, providing a real solution to an error-prone, time-consuming problem.

Commercial schedules, music rotations, repetitive format elements and special programs are all independent schedules which must be integrated to create the broadcast day. MULTI-FILE Program Memory provides **independent** files for these schedules, eliminating the need to refer to unrelated material. Traffic, for instance, no longer needs to know where to go after a commercial cluster. Traffic keeps the commercial file, the music director keeps the playlist file, etc. This is a real time-saver.

The Harris 9000 with MULTI-FILE Program Memory keeps things simple by integrating these various schedule files, according to plan and always on time. The operator can highlight on the video screen the look-ahead display of entries from any particular file; in addition, a bar graph can be displayed, distinctly illustrating the integration of upcoming schedule files. The innovative use of graphics

Control

MORE VERSATILE, MORE EFFICIENT THAN ANYTHING YOU'VE SEEN BEFORE

in the Harris 9000 is not only of great assistance to the operator, but minimizes effort in the area of operator training.

IMPECCABLE EXECUTION....

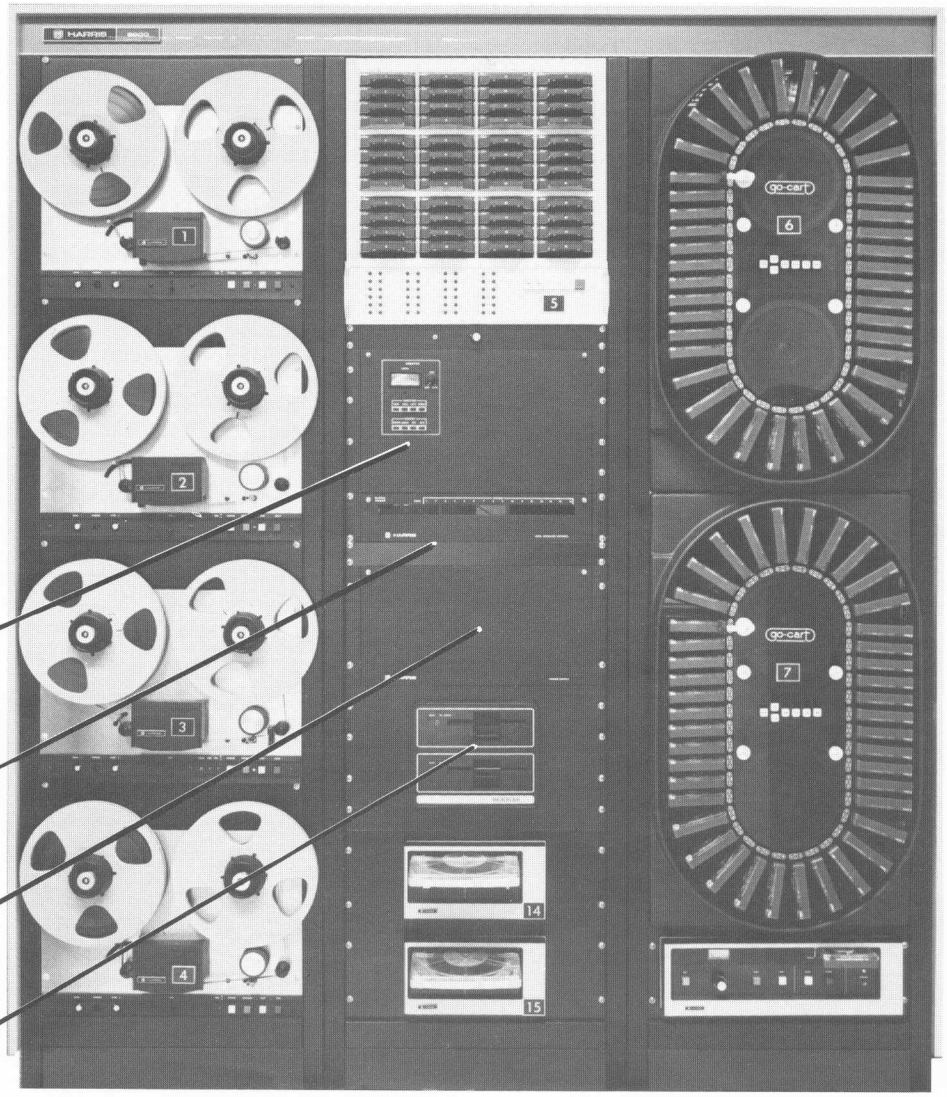
Today's competitive operation can't afford to waste time deciding whether or not a format change is possible. The Harris 9000 Program Control knows that any format is possible, and concentrates on impeccable execution. "Tighter playlist control...more consistent air sound...increased ratings" are broadcaster comments that are frequently made about Harris' program control equipment.

Live or automated operation is no longer the issue when the end result is a significant advantage in ratings and revenues. The Harris 9000 provides multiple overlaps, dependable voice-track synchronization, plus solid support for the fast-paced live announcer.

Live-assist means never having to keep a program log, stack carts or cue records. A countdown timer, complete with a ten-second warning, helps maintain a tight sound. Insertion of unscheduled material is easy. This is live-assist that really aids your on-air talent and encourages more creative performance.

The 9000 Series Control Electronics

At right is a typical system for use with a program service. Music is on reel-to-reel. Commercials (and other cartridge material) are in the instant access Instacart (5) and the random access Go-Carts (6 & 7). When time-announce is used, deck 14 has even numbered minutes and deck 15 has odd numbered minutes. The system electronics require only half of a standard rack for mounting.



A. The computer mainframe includes the monitor panel and control electronics.

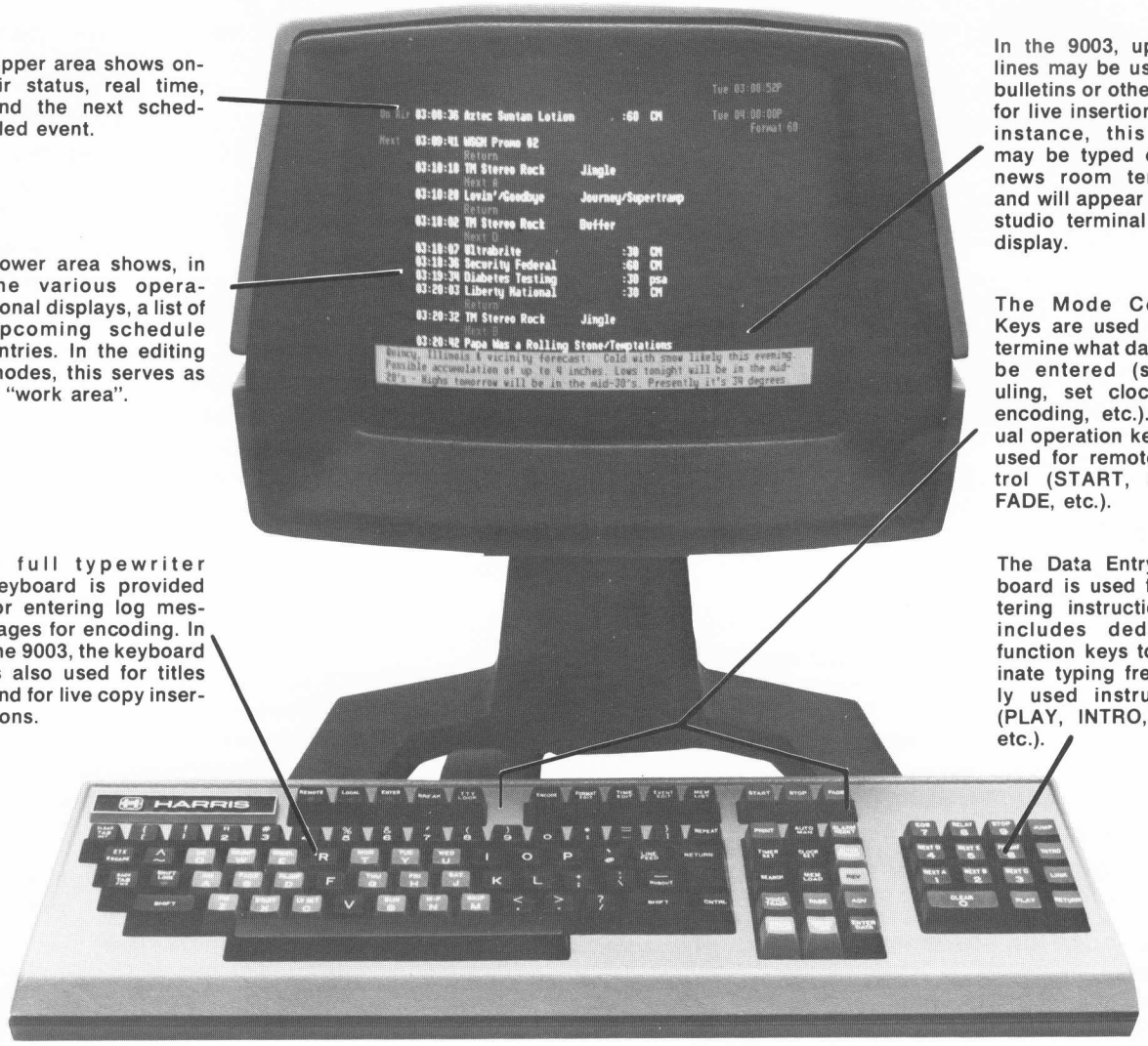
B. The solid-state Audio Switcher houses source modules, dual silence sensors, program amplifiers, faders and 25 Hz filters.

C. Computer-grade power supply.

D. Dual flexible-disk drives for increased memory storage capabilities (9002 and 9003).

The 9000 Series Control Terminal

Programming and operating instructions are communicated to the system from a terminal that may be located up to 150 feet from the system electronics. The terminal provides continuous video display of various operational functions, and is also used for editing purposes.



YOUR CHOICE OF SYSTEMS TO MEET YOUR PARTICULAR REQUIREMENTS. The Harris 9000 Series is composed of three distinct systems, each showing a progressive increase in programming capability. The 9001 is a basic program control system which can be used for any automation requirement. It uses a single video terminal, and has a 1,999-event memory, which is expandable up to 9,999 events. The 9002 fills all program control requirements, plus has the ability to interface with an external business system, and can be programmed from totally independent terminals. It has a 1,999-event memory, expandable up to 9,999 events. The 9003 handles even the most sophisticated format faultlessly—plus has the ability to **generate** a programming schedule!

The Harris 9000 Series has been designed to expand as your needs expand. All 9000 Series models can easily be upgraded in the field to a higher numbered model.

THE HARRIS 9001. The 9001 has the full mainframe, audio switcher and heavy-duty power supply already in use in hundreds of installations worldwide. The 1,999-event memory (expandable to 9,999 events) and the 7-day clock allow you to program for a weekend or an entire week ahead. The simple keyboard and plain-text programming assure mastery of system operation by most station

personnel in less than a day. Dual-intensity video allows highlighting of the schedule items chosen by the operator. The types of highlighted entries could be commercial clusters, music sets, contest/promos—any file from the MULTI-FILE™ Program Memory.

Among the many other important 9001 features are: automatic power failure restart, time announce control, network join, ready sensing to prevent dead air, remote control and countdown clock for live-assist, bulletin insertion, "coffee pot" function relays, self-testing for on-site troubleshooting, and MULTI-FILE Program Memory.

THE HARRIS 9002. In addition to the many features of the 9001, the 9002 includes dual flexible-disk drives to increase the memory capability and to provide a permanent memory storage medium.

Another key innovation is the ability of the 9002 to support totally independent terminals. Using MULTI-FILE Program Memory, the traffic director and program director can have their own files in the program memory. Now they can both edit their respective areas of event memory simultaneously! And, while this is happening, data can be received or transmitted to an external business system using the port provided for this purpose.

THE HARRIS 9003. The Harris 9003 has revolutionized the role of program control in radio broadcasting by integrating the program system into the planning process—extending the benefits of program control beyond the operations level to everyone concerned with the on-air product.

The traffic director can enter scheduling requirements on any 9003 terminal; the system either accepts the entry and determines where the source material should be placed in the system, or advises the traffic director of a conflict. Back-to-back scheduling problems, formerly possible using random-access source equipment, are now avoided in the Harris 9003. For example, the system will alert you that deleting the airline spots, because of a plane crash, will result in a beer commercial adjacent to the Alcoholics Anonymous PSA.

With the plain-text title display feature, the music director no longer has to wonder if the system will air the recurrent record he wants following a commercial break. With Harris 9003 in charge of a random access music library, it is now possible to specify the names of the music selections. Instead of a "Play 05-27" indication, an operator will see that the scheduled selection is "Sara by Fleetwood Mac", along with other information, on the same line, such as intro/running time and chart position.

As more stations seek to better localize their syndicated programming, there is a need for periods of live programming; this may be for drive time or news blocks. In any case, the Harris 9003 is ideal for the live operator. The display shows the name of a song or commercial that is on the air, plus the names and starting times of upcoming scheduled events...and the countdown timer automatically gives the time remaining for the on-air event.

The system software is contained on the disk. In the unlikely event of disk failure, the system defaults to programmed Read-Only Memory (EPROM) chips located on the single 8080 CPU board; it would then operate similarly to the Harris 9002.

Going beyond the traditional role of the program system, the Harris 9003 brings significant benefits to the broadcaster—cost reduction due to reduced workload at the planning stage; improved on-air performance from scheduling flexibility; reduction in lost revenue due to scheduling errors; and improved operator performance due to easier system operation.

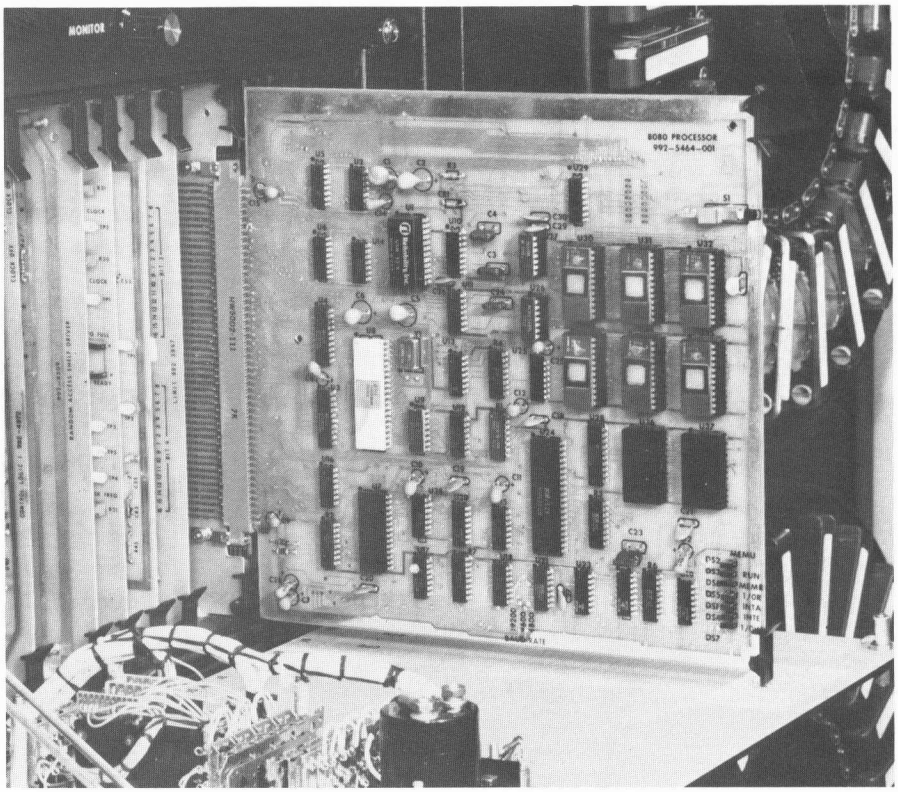
MAJOR SYSTEM CAPABILITIES

Harris 9000 Series Model	Standard No. of Days Operation (Walkaway)	Stand. No. of Days with Optional Memory Expansion	Interfaces with Business Automation	Countdown Clock	Independent Editing/Prog. Terminals	Logging Option	Program Scheduling	Plain-Text Programming	Plain-Text Title Display	Live Copy Display
9001	3*	15*	No	Program-mable	No	Yes	Manual	Yes	No	No
9002	3-15*	15-31*	Yes	Program-mable	Yes (Optional)	Yes	Manual	Yes	No	No
9003	31** (Minimum)	Not Appli-cable	Yes	Auto-matic	Yes (Optional)	Yes	Auto-matic	Yes	Yes	Yes

*Based on average of 50 events per hour **Based on average of 110 events per hour.
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

STANDARD FEATURES IN ALL HARRIS 9000 SYSTEMS...

- Video editing and display
- MULTI-FILE™ Program Memory
- Jock-assist countdown clock with 10-second warning
- Automatic power failure restart
- Internal diagnostic program for on-air troubleshooting
- Built-in time announce control
- Interfaces to all popular random access machines
- Ready sensing to prevent dead air
- Crystal-controlled 7-day clock
- Simple one-time bulletin insertion
- Operator "error sensing"
- Automatic voice track control
- Programmable fade-under for talk-over
- Software logic — your safeguard against future obsolescence
- Front panel access to test points and adjustments
- Full function monitoring and audition
- Optional logging, which provides discrepancy diagnostics
- 25 Hz detection included for all reel-to-reel sources
- Ready for most syndicated programming services
- Four "coffee pot" function relays included
- Micro-computer versatility
- Complete system remote control
- Dual silence sensors
- Stereo and sum-channel mono outputs
- Emergency back-up operation panel



All processing is accomplished by a single CPU board. Harris 9000 Series circuit boards are designed and tested by computer-controlled equipment.

A COMPLETE LINE...

The Harris 9000 Series has been designed for easy plug-in expansion to accommodate the growth you expect for your station. Starting with the Harris 9001, which is the basic control system, on through the Harris 9002 and 9003, you have a choice of models, depending on your initial application requirements. Each model is easily upgraded in the field to any higher model number. The 9001 features the same mainframe, audio switcher and heavy-duty power supply already in use in hundreds of installations worldwide. The 9002 adds dual-drive flexible-disk storage, independent-terminal circuitry, and business system interface hardware. The Harris 9003 integrates the program system into the planning process to extend the benefits of program automation to the management level. Additional sources may be added to all models, as may the sophisticated Harris logging system.

BUILT AND BACKED TO PROVIDE LONG-TERM VALUE....

The Harris 9000 Program Control is built using the latest computer-assisted techniques to assure outstanding reliability in the field. The quality of Harris' micro-computer program control is backed by the most experienced service organization in the industry, and is proven with the largest users' group in the country. Benefit from the experience of others. It all adds up to make the Harris 9000 Program Control a very secure investment for your station.

For a complete evaluation of your requirements, and a system proposal, please contact your Harris Radio District Sales Manager, or the Harris Radio Sales Department in Quincy, Illinois (217/222-8200).

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