

enter



AMPEX

ACR-25B
Automatic Video Cassette
Recorder/Reproducer



OFFICIAL SUPPLIERS
VIDEO RECORDERS
AND MAGNETIC TAPE
XXII OLYMPIAD

..... the new world



World of the ACR-25B



Your station looks better on the air than ever before.

There are more hours in your day.

There is a dramatic increase in the productive capability of your present staff and VTR equipment.

Your profit potential expands.

And, if you look forward to computer automation some day, you are ready for it.

All of these advantages are yours, with the ACR-25B automatic video cassette recorder/reproducer.

This unique, superlative tape machine matches the Ampex AVR-1 video recorder/reproducer in state-of-the-art excellence. And, as the AVR-1 did before it, the ACR-25B changes the world of television for the better.

The ACR-25B is the world's first random access automatic video cassette recorder/reproducer. It may be loaded and programmed with pushbutton ease and speed to play back cassettes in any desired order, random or sequential. It may also be used as a sophisticated production machine of almost unlimited versatility.

The advantages of the ACR-25B cannot be equaled by any other video cassette machine, or any combination of reel-to-reel equipment. This brochure tells some of the reasons why.

play

Spots, ID's, promos, billboards, PSAs, news inserts, editorials, any kind of short segments you can think of—all go into the ACR-25B. The machine accommodates 24 cassettes at a time. The programming logic permits you to program up to 40 events in any order, which means that cassettes can be played more than once without moving them. A saturation schedule requires only one cassette and a few seconds of programming.

Because the ACR-25B uses the same signal electronics as the AVR-1, as well as a new digital time base corrector, playback quality is of the highest excellence that is available in the business. Automatic playback adjustments and corrective features allow even marginal recordings or dubs to be played with maximum performance. And, like the AVR-1, the ACR-25B locks up in just 200 milliseconds (350 milliseconds in 625-line systems.)

The playback of short-segment sequences is smooth and flawless, even when there is a last minute change in schedule. A new cassette can be inserted or a program can be changed in just seconds. The operator can, at the last minute, skip a cassette that has started playing, simply by pressing the NEXT control button. The tape being played is cancelled and instantly replaced with the next cassette. Vertical interval switching between the two transports ensures a smooth transition.

The random-access capability and flexibility of the machine make it ideal for handling all short-segment materials with an ease which has to be seen to be believed. The daily spot reel can be eliminated, saving headwheel and manpower costs. Staff personnel who might otherwise be preoccupied in racing the clock to prepare short-segment material and play it back on several reel-to-reel VTRs are released for more rewarding, productive work.

The cassettes accept either the industry-standard 3-minute spools, or the unique Ampex 6-minute spools. Both supply and takeup spools are easily replaceable.

Rapid rewind, threading, and cue-up allow the ACR-25B to be programmed for any sequence of spots of any length from 10 to 60 seconds. Any number of 10-second spots can be played back-to-back if desired. Segments longer than 1-minute (up to 6-minutes) can be intermixed with short-duration spots by using the Rewind Lockout feature of the cassette.

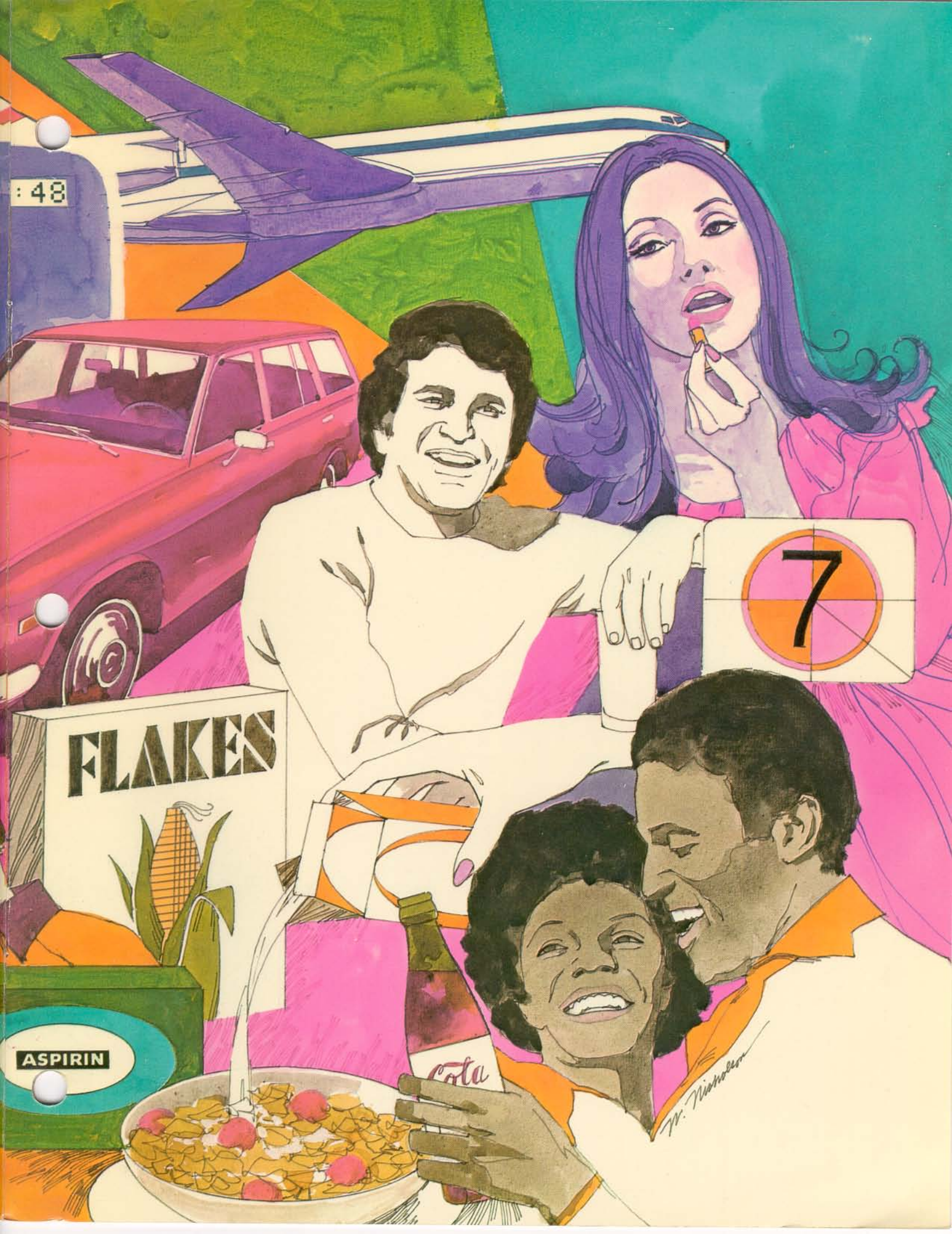
Inadvertent erasure of a tape is easily prevented by a Record Lockout device on the cassette.

The ACR-25B tape format employs SOT and EOT holes for photocell sensing, and there is ample tape before and after the holes to permit threading on a reel-to-reel machine. The cue track will accommodate SMPTE time and control code information throughout the length of the tape. This allows an identification message to be recorded in the Pre-Roll segment, for example. It also allows multiple start and stop cues to be recorded on the cue track, so that more than one segment can be recorded on a single tape, if so desired.

When it is time to thread the tape, a highly efficient but gentle vacuum tape handling system draws the tape out of the cassette and threads it, while the female guide, audio head shield, and vacuum capstan move into place. Airfoil bearings are used wherever practical. Similarly, in rewind, the tape is moved away from the heads and guides for rapid movement. Tape wear is held to an absolute minimum, and tape movement is precise.

For an idea of how simple it is to program the ACR-25B, turn the page.





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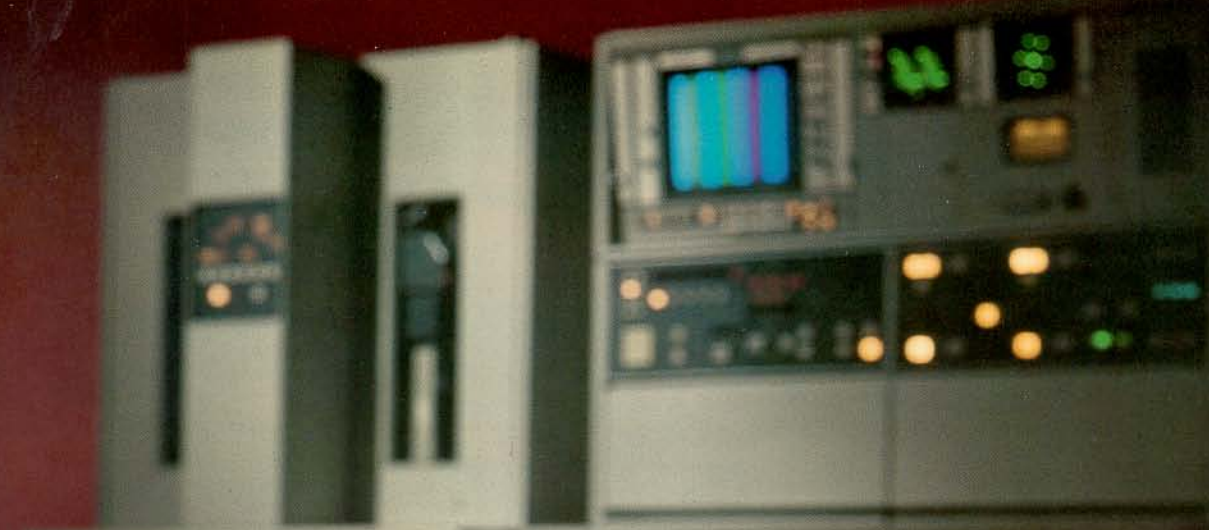
7

FLAKES

ASPIRIN

Coca

M. Nielsen



CASSETTE NO 187 AMPEX
 PROGRAM HEART ASSOC.
 AGENCY MASTER HB
 COLOR DUPL LB
 B/W PROGRAM TIMING : 10

CASSETTE NO 41 AMPEX
 PROGRAM JONES PONTIAC
 AGENCY MASTER HB
 COLOR DUPL LB
 B/W PROGRAM TIMING : 10

CASSETTE NO 705 AMPEX
 PROGRAM CREST
 AGENCY MASTER HB
 COLOR DUPL LB
 B/W PROGRAM TIMING : 00

CASSETTE NO 231 AMPEX
 PROGRAM McDonalds
 AGENCY MASTER HB
 COLOR DUPL LB
 B/W PROGRAM TIMING : 58

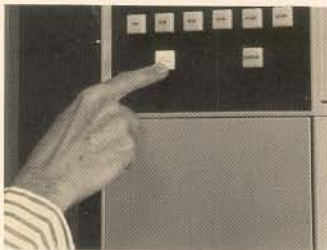
CASSETTE NO 102 AMPEX
 PROGRAM CREST
 AGENCY MASTER HB
 COLOR DUPL LB
 B/W PROGRAM TIMING : 00

simplify

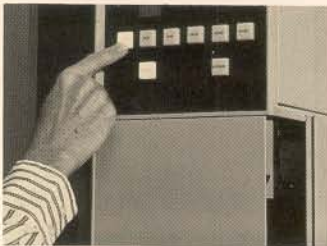
In a typical situation, one person can set up the ACR-25B to start a broadcast day in a few minutes.

to load

The machine accommodates up to 24 cassettes. Loading is simple as 1, 2, 3:



Turn the machine on, and press the LOAD CONTROL button. The lighted display panel with buttons numbered 1 to 24 will tell you which cassette bins are available for loading. Select a bin number, and . . .



Press the proper load button for the bin number you selected. The cassette carousel automatically brings the empty bin into place, and the door pops open within 1 second.



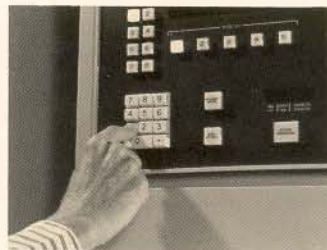
Insert the cassettes. At the start of the day, you'll probably load the cassettes in sequential order. As you insert cassettes during the day and evening, you can load in any order, thanks to the ACR's random-access programming.

remote operation

When assembling a custom remote control setup, the ACR-25B user has maximum flexibility to fit his installation, and he can remote all standard functions as he chooses. To simplify remoteing of some of the more complex functions, Ampex offers as options a Remote Status Display and a Remote Timer Readout.

to program

Programming the ACR-25B is convenient and simple. Operators quickly learn the routine, and consistently program the machine in just seconds.



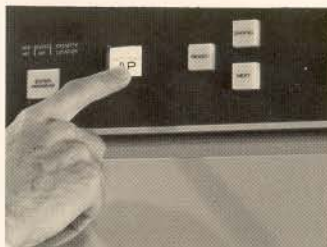
Following the program log, the operator first presses buttons to enter a bin number and a sequence number for each cassette.



At the end of each sequence number, he enters a STANDBY AFTER or END AFTER command.



Then he pushes the ENTER PROGRAM button to store the entire sequence in the machine's memory.



At broadcast time, a press of the AUTO PLAY button starts the whole automatic sequence.

produce

As a playback machine for spot commercials, the ACR-25B has no equal. But playback benefits are only half its glory. Its production and programming capabilities are equally attractive, especially in view of the man-effort that can be saved. The system offers a variety of practical advantages that cannot be duplicated by any other cartridge VTR or bank of reel-to-reel machines. Now it is both practical and economical to put *all* spots and short segments on cassette tapes. Whether you devote one machine to production and another to playback, or use a single machine for double duty, the ACR-25B more than pays its way.

The ACR-25B performs all the recording and dubbing functions of any tape transport, can be used as a video source like a camera, and a lot more besides. Since it contains two transports, you can dub from either transport to the other. (An optional editor allows you to edit on one transport.) It's even possible to play back a tape on one transport while recording another tape on the other transport, or to make two copies of a recording simultaneously. Many stations regularly use the ACR-25B for adding dealer tags to spots, recording editorials and promos, and many other chores.

When it comes to program assembly, the ACR-25B offers several possibilities. A complete show can be assembled from segments recorded on cassettes, at various times and places if necessary. The finished product can be assembled on a reel, or the program can be played back directly on the ACR-25B. This latter alternative offers

some bonus advantages. The playback is one generation closer to the original. Scenes can be replaced simply by changing cassettes, rather than re-editing a master tape. Cues can be replaced quickly, which allows the user to use any part or parts of any cassette tape without the need for electronic or mechanical splicing. These capabilities mean that dubbing masters "tailored" for different regions or markets are a very practical choice for any production studio.

Switching from a live feed to taped inserts is no problem, and offers many possibilities for news, sports, and entertainment shows. Since segments can run anywhere from 10 seconds to 6 minutes, it is even practical to imagine a complete program with station breaks being played back entirely from ACR-25B cassettes.

For duplicating moderate quantities of a spot or segment, an ACR-25B and a companion reel-to-reel VTR are ideal. Two identical master recordings are made on the ACR-25B, and are then programmed to play back-to-back continuously. The multiple copies are made on the reel-to-reel machine.

These are only a few of the ways ACR-25B utilization can be increased. Innovative station personnel are finding more ways every day.

THE CASSETTE

You can open it with a twist of the thumb, and load it or reload it in seconds with either 3-minute or 6-minute spools. It is precisely engineered of high-impact, molded plastic, and so rugged it is practically indestructible. An optional dust cover further protects the tape during storage. There are no bearings in the cassette. They are in the machine, where they belong!



automated oper

For the user whose plans include extensive station automation, the ACR-25B is the *only* sound choice in a cassette VTR. The reason: the ACR-25B can not only be rolled by the station computer on cue, it can now actually be programmed by the computer. The only manual function to be performed is loading the cassettes into the carousel. Two optional accessories are necessary: the Identification Data Accessory (IDA) and the Automation Data Accessory (ADA).

Here's how it works. At the beginning of each day, the operator loads the empty bins of the carousel in *random fashion*. He does not program the machine. As soon as he shuts the door and walks away, the ADA interrogates each tape by reading the identification recorded on the Pre-Roll segment of the *cue* track. There is no wear at all on the video head. (See IDA description.) Then the ADA creates a Table of Contents listing the status and contents of each bin. This is stored in the ADA and is also transmitted to the station computer, where it is used to compile a Play List. The Play List is also stored in the ADA, and provides the data that allows the ACR-25B to play back tapes on schedule, automatically.



prepare

eration

Once tapes are played the bins available for reloading are indicated by the load control lamps, which illuminate as soon as each tape is played, and flash when the operator activates the load control button. All day long and on into the night, the only operator action necessary is to reload cassettes randomly into the available bins from time to time. After each reloading the ADA automatically updates its Table of Contents, and likewise the computer updates the Play List.

Even if the computer goes down, the ACR-25B continues to operate, using the Play List stored in the ADA's memory. The Table of Contents and the Play List can be immediately printed out, allowing the operator to manually reprogram the ACR-25B and continue playback without interruption.



THE SPOOL

It is small, lightweight, easy to handle, ship, or mail, and you store it in its own, clearly marked box. It affords dramatic savings in the handling and storage of tape. A special adapter is available to enable you to use it on an AVR-1. The 3-minute spool meets the requirements of the proposed American National Standard sponsored by the SMPTE.

The ACR-25B equips your station to achieve the summit of excellence in short-segment broadcasting today, and to maintain it in the future. Here is a machine that was designed for the requirements of today and the potential of tomorrow.

A single ACR-25B can handle any short-segment playback schedule that any station could possibly require. It does so with an excellence which is obvious to the professional: playback quality is faultless, transitions are smooth and crisp. Every second of commercial time is fully utilized.

Along with efficient performance, the ACR-25B also affords certain immediate financial advantages. The investment soon frees staff and equipment for other work. Make-goods become a thing of the past. Tape storage—on spools—becomes more economical.

Installation of the ACR-25B also increases opportunities for com-

mercial sales. The uniform quality of the broadcast signal makes advertisers look good consistently. The ease and convenience with which the ACR-25B plays back 10-second spots makes it practical to sell and program shorter commercials with restriction.

An increasing number of stations now employ dual ACR-25s, using one machine constantly for playing back of spots and other short segments, while a second machine is committed to production. The use of one machine for playback and the backup machine for production more than doubles the benefits.

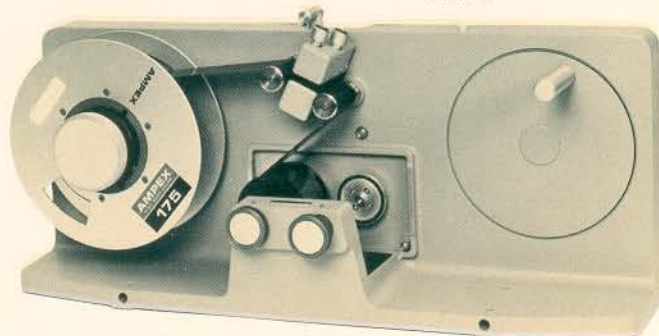
In any installation, employed singly or in pairs, automated or not, for playback or production, the ACR-25B creates a new world for the broadcaster or teleproduction studio. Procedures are simplified, there is more time to be used creatively, production is increased, and profit potentials expand horizons for future development. The ACR-25B is not only an incredibly versatile machine, it represents a whole new way of doing things.

IDA

The first line tells you which spot is cued up or on the air, the second, which is cued up to play next. Thus, the optional Identification Data Accessory for the ACR-25B tells you where you are at any given moment, and where you are going next, prevents mixups, ends guess work. The 14-character identification is recorded on the Pre-Roll segment of the cue track via optional keyboard or on a teletype machine. It can be printed out on an FCC log, and fed into a computer for programming or billing purposes. (It's also one of the keys to automated programming of the ACR-25B. See "Automated Operation.") Video head wear is nil, because the identification message is read by the cue track head.

THE SPOOLER

A manually operated cassette spooler is included for off-line winding of tape from reels onto spools. It also includes a precision punch for punching SOT/EOT holes.



specifications

Video Response:	DOMESTIC
MONOCHROME	525/60 High-Band
Bandwidth:	Flat to 4.5 MHz; -3 db at 5.0 MHz Tolerance ± 0.5 db
Signal-to-Noise Ratio:	46 db peak-to-peak video to rms noise on interchange basis (monochrome and color)
Transient Response: (Utilizing 2T sine ² Pulse)	Maximum K-factor 1%
Low Frequency Linearity	2% Blanking to White (max.)
COLOR	
Signal-to-Noise Ratio:	46 db peak-to-peak video to rms noise on interchange basis
Differential Gain:	3% max. Blanking to white
Differential Phase:	3° max. at 3.58 MHz off tape
Transient Response: (2T sine ² Pulse)	Maximum K-factor 1%
Moire:	-40 db min. (Color bars 75% amplitude, 3.58 MHz Subcarrier)

features

Play time up to 6 minutes per cassette at 15 ips.

Sequential or random access to 24 cassettes.

Back-to-back sequencing of tapes of any length up to 6 minutes.

200 milliseconds start time. (350 milliseconds in 625-line systems.)

Complete record/playback flexibility, automatic or manual.

Digital time base corrector.

Operates at either 7½ ips or 15 ips.

Cassettes can be loaded by operator with a standard (SMPTE/EBU) recording or blank tape.

Vacuum tape handling system—provides rapid, gentle tape handling, with minimum mechanical parts.

No head-to-tape contact during rewind.

Complete automatic operation—can be computer controlled with ADA.

Physical Dimensions:

	Control Console	Transport Console	Cassette
Height	78"	78"	3.75"
Width	48.5"	40.5"	6.25"
Depth	32.5"	32.5"	2.5"
Weight	1450 lbs.	1750 lbs.	

Temperature and Humidity:

Temperature	0°C to 45°C
Relative Humidity	10% to 90% (non-condensing)

Power Requirements:

Prime Power Frequency	50/60 Hz
Input Voltage	208/230V single phase
	2-50 amp service
Standby Current	25 amps @ 220V
Max. operating Current	35 amps @ 220V

Video Signal Input (75 ohms impedance):

Composite Video: 0.7 to 1.8V p-p

Reference Input (75 ohms impedance):

Composite Color Signal: 0.7 to 1.8V p-p

Video Signal Output (75 ohms impedance):

Composite Video Signal	1.0V p-p
Non-Composite	Switches with the scanning standard between 0.7 and 0.714 volts

Audio Input Signal:

Impedance	15000 ohms balanced or unbalanced bridging input
Amplitude	-24 dbm to +16 dbm
Source	Line, microphone, oscillator

Audio Output Signal:

Output Impedance	Less than 30 ohms
Peak Output Level	+30 dbm
Nominal Output at 0 VU on level meter	+8 dbm

Playback

Equalization	
ANSI	2000/35 microsec.
CCIR	0/35 microsec.

Operation:

Tape Speed	
60 Hz	7½ ips or 15 ips
50 Hz	19.85 cm/s or 39.7 cm/s

Record/Playback Capacity:

Carousel	24 cassettes
Record/playback time (per cassette)	6 min. (plus leader & trailer)
Cycle time (1 min. or shorter)	10 sec.
Cycle time (6 min.)	20 sec. (10 sec. with rewind lockout)

Starting Time:

200 millisec. in 525
350 millisec. in 625

Stopping Time:

0.2 from record or playback mode

Audio Performance:

Frequency Response (400 Hz reference)	
15 ips	± 2 db 50 to 15,000 Hz
7.5 ips	± 2 db 50 to 10,000 Hz
Signal to Noise	Down 55 db from peak operating level

Flutter and Wow

15 ips	0.15% rms max.
7.5 ips	0.20% rms max.

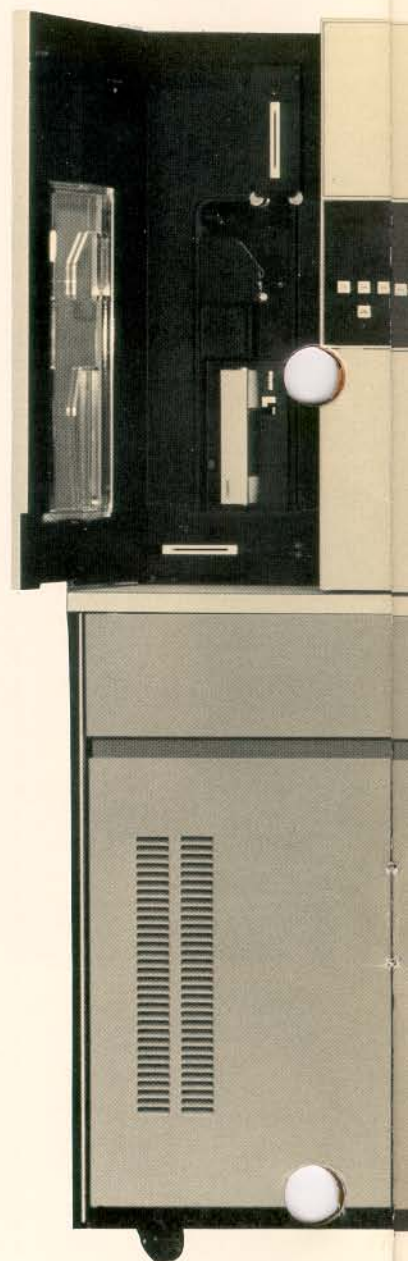
Distortion (measured at 1 KHz)

Operating Level	less than 1% rms
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Programming:

Number of Stored Events	40 (Total of all events from all sequences)
Maximum Number of Sequences	40 (One event each)
Display	8 groups of 5 events each
Start Point	Any one of the 40 events

* Specifications subject to change without notice.



INTERNATIONAL

625/50 High-Band

Flat to 5.5 MHz; -3 db at 6.0 MHz;
Tolerance ± 0.5 db

43 db peak-to-peak video to rms noise
on interchange basis (monochrome and color)

Maximum K-factor 1%

2% Blanking to White (max.)

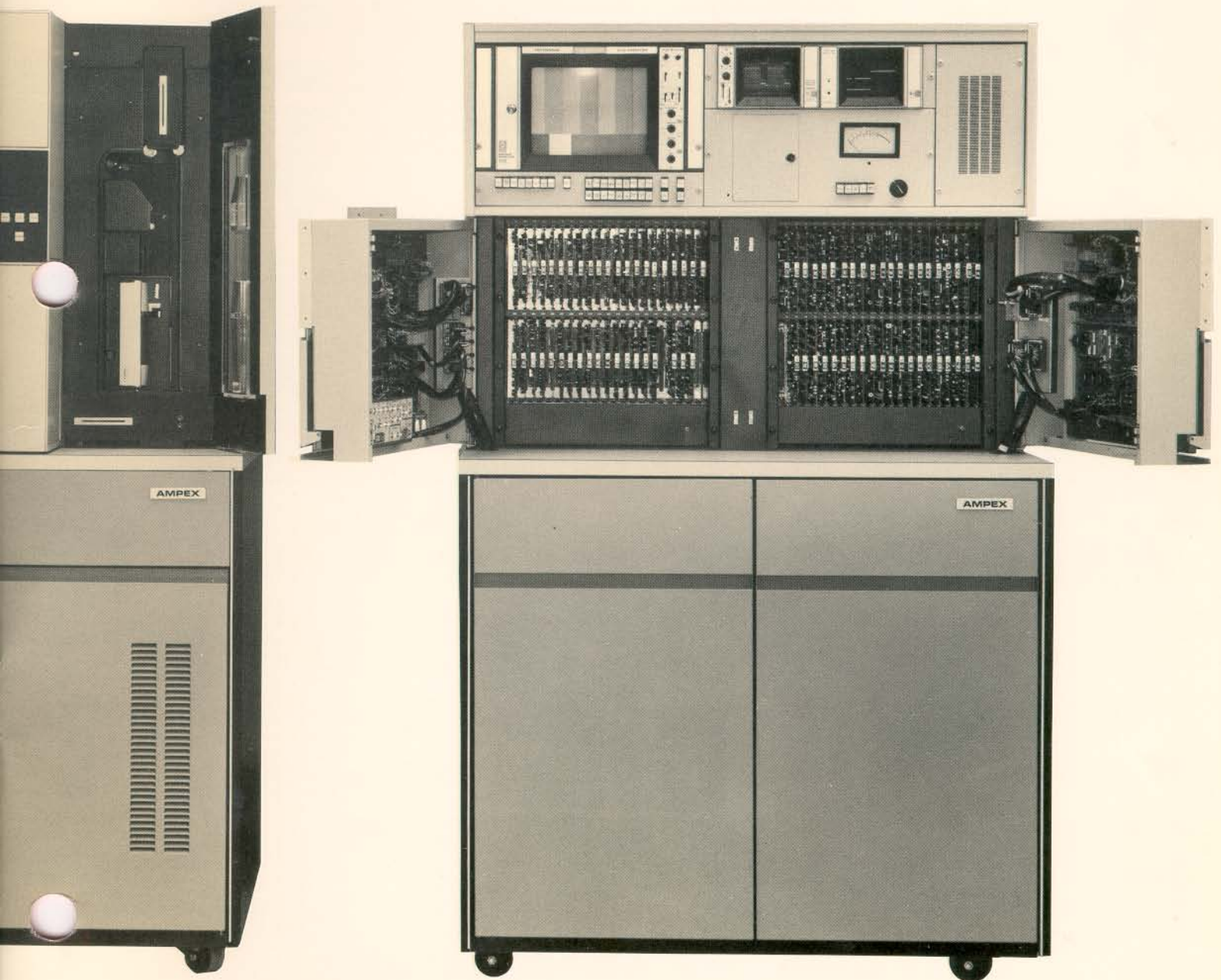
43 db peak-to-peak video to rms noise
on interchange basis

4% max. Blanking to white

4° max. at 4.43 MHz off tape

Maximum K-factor 1%

-36 db min.
(Color bars 75% amplitude, 4.43 MHz Subcarrier)





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