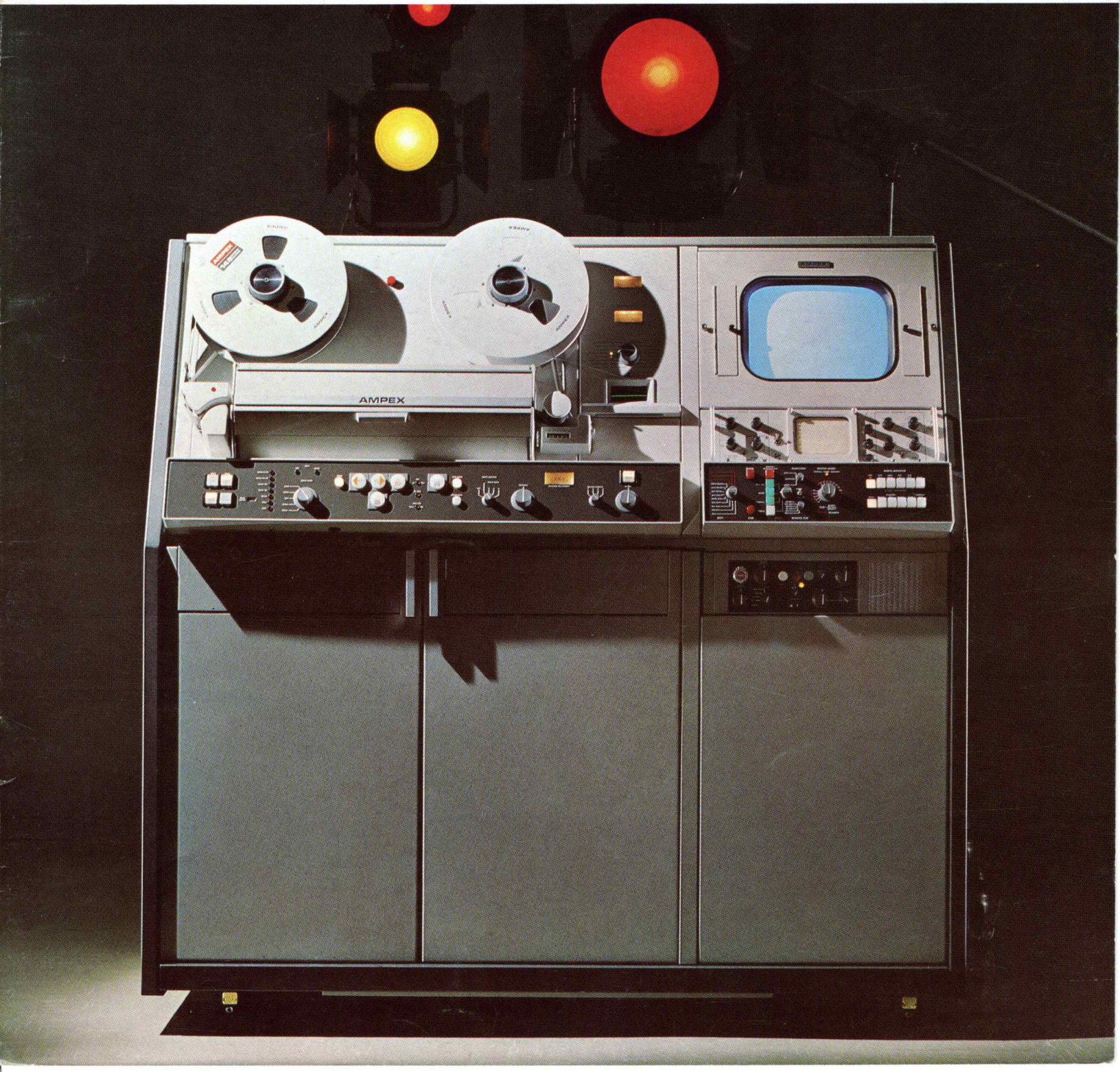
AMPEX

VR-2000B
color teleproduction videotape recorder



AMPEX

overwhelming choice of broadcasters, networks, teleproduction companies for over 11 years!

The reason is simple. The name "Ampex" has always been, and continues to be, synonymous with "excellence." No other company has been able to match Ampex's reputation for pioneering "the best" — then continuing to provide improvements and innovations to make "the best" even better!

In 1956, Ampex introduced videotape recording with the award-winning VR-1000. It revolutionized an infant television industry.

During the next two years, Ampex engineered the first practical color videotape system — introducing "burst-lock" color recording in 1958. A few years later, in 1961, Ampex revolutionized television a second time by introducing TWO innovations: a direct recovery color system that was immediately accepted as the INDUSTRY STANDARD, and, electronic editing that for the first time allowed standard production techniques to be applied to videotape recordings.

In 1963, Ampex revolutionized television a third time with HIGH-BAND COLOR. Introduction of our VR-2000 gave the industry a new standard — a standard that others are still trying to match.

And now, the ultimate refinement of the VR-2000 is available to the industry: the VR-2000B. It is THE color high-band videotape recorder of the future; nothing today is comparable. The VR-2000B offers: superb technical performance, incomparable ease of operation, a new level of system flexibility, and advanced teleproduction capability.

An "EMMY"† has been awarded to Ampex TWICE for outstanding technical achievement in the television arts. First, in 1956 for the VR-1000 — the world's FIRST videotape recorder. Again in 1967 for development of high-band color in the VR-2000.

†"EMMY" COPYRIGHT 1949, N.A.T.A.S.

VR-2000B

feature-for-feature... unmatched by any other VTR

(1) Proven video transport . . . ultimate refinement of a basic design in use in over 3000 Ampex videotape recorders throughout the world

(2) Mark Ten Video Head . . . with air bearings, nuvistor preamp and rotary transformer coupling for low noise . . . interchangeable with all other Ampex VTR's via plug-in preamp modules

(3) New non-scratch video erase head . . . does not contact tape oxide surface . . . eliminates possibility of tape-scratch

(4) New audio head . . . flip-down shield for easy cleaning

(5) New, removable video head cover . . . easy access to video head . . . held by only one captive thumbscrew (not shown)

(6) New reel hold-down knobs . . . precision-centering, positive-lock permits rapid tape loading/unloading . . . prevents distortion of plastic reels

(7) New plug-in head alignment sweep module . . . eliminates need for external sweep frequency generator (not shown)

(8) New audio-video monitor switch panel (optional version for Editec* system shown) offers complete picture and waveform monitoring capability . . . includes built-in video distribution amplifier to drive external picture monitors

(9) Full monitoring of all important VTR circuits with built-in, switchable A-Scope and metering

(10) Conrac professional-quality 14-inch picture monitor . . . with expanded pulse cross display . . . dual standard, 525/625

(11) Built-in Tektronix RM529 Waveform Monitor

(12) Functionally grouped operating controls and tally lights

(13) Signal system level adjustments . . . protected behind flip-down panel in cover door . . . easily reached when needed

(14) New audio/cue system: improved audio quality for multiple generation copies; built-in monitor speaker plus high-fidelity output for external speaker; audio spot erase for precise editing; built-in dynamic mike switchable to PROGRAM or CUE; 4 kHz cue tone oscillator switchable to either continuous tone or .5 second "beep"; built-in logic for optional Editor and Editec.

(15) Colortec* direct color recovery unit

(16) Amtec* time element compensator

(17) New system power supply . . . with circuit breakers and visual indicators on front panel

(18) Video signal system . . . with instant standards change for low/high band, monochrome/color

(19) Improved Intersync* servo . . . handles non-standard tapes

(20) Processing amplifier . . . new, convenient location

(21) Signal system and servo power supplies

OPTIONS:

(All optional equipment now "plugs-in" for easy field installation. See page 6 for descriptions of options.)

(22) Mark I Editec Program Unit

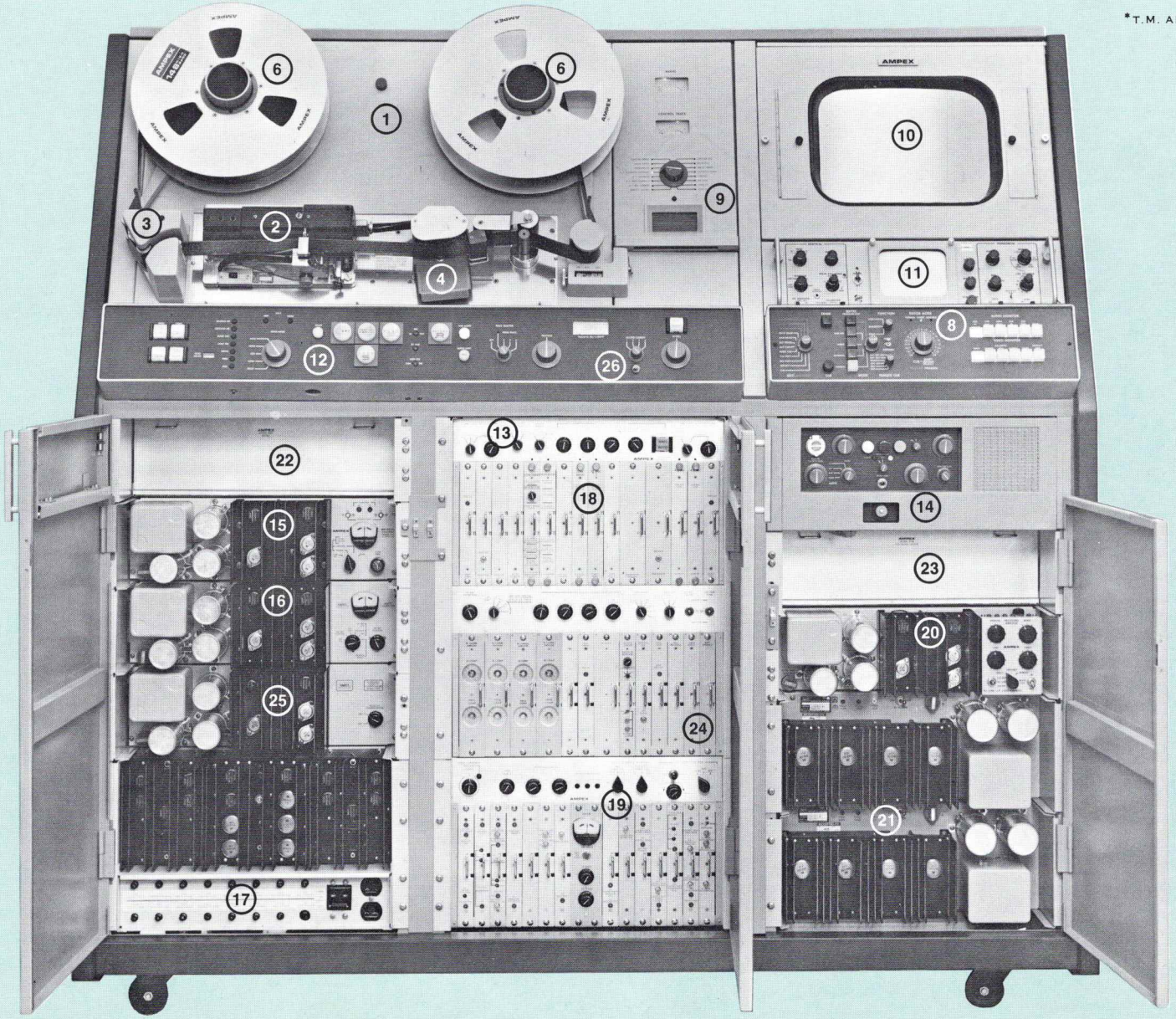
(23) Mark III Electronic Editor

(24) Auto-Chroma

(25) Velocity Compensator

(26) Video Head Optimizer . . . permits head optimization in 5 to 15 seconds. Heads can be optimized before every recording.

*T.M. AMPEX



VR-2000B

four zones for convenient, safe, error-free operation

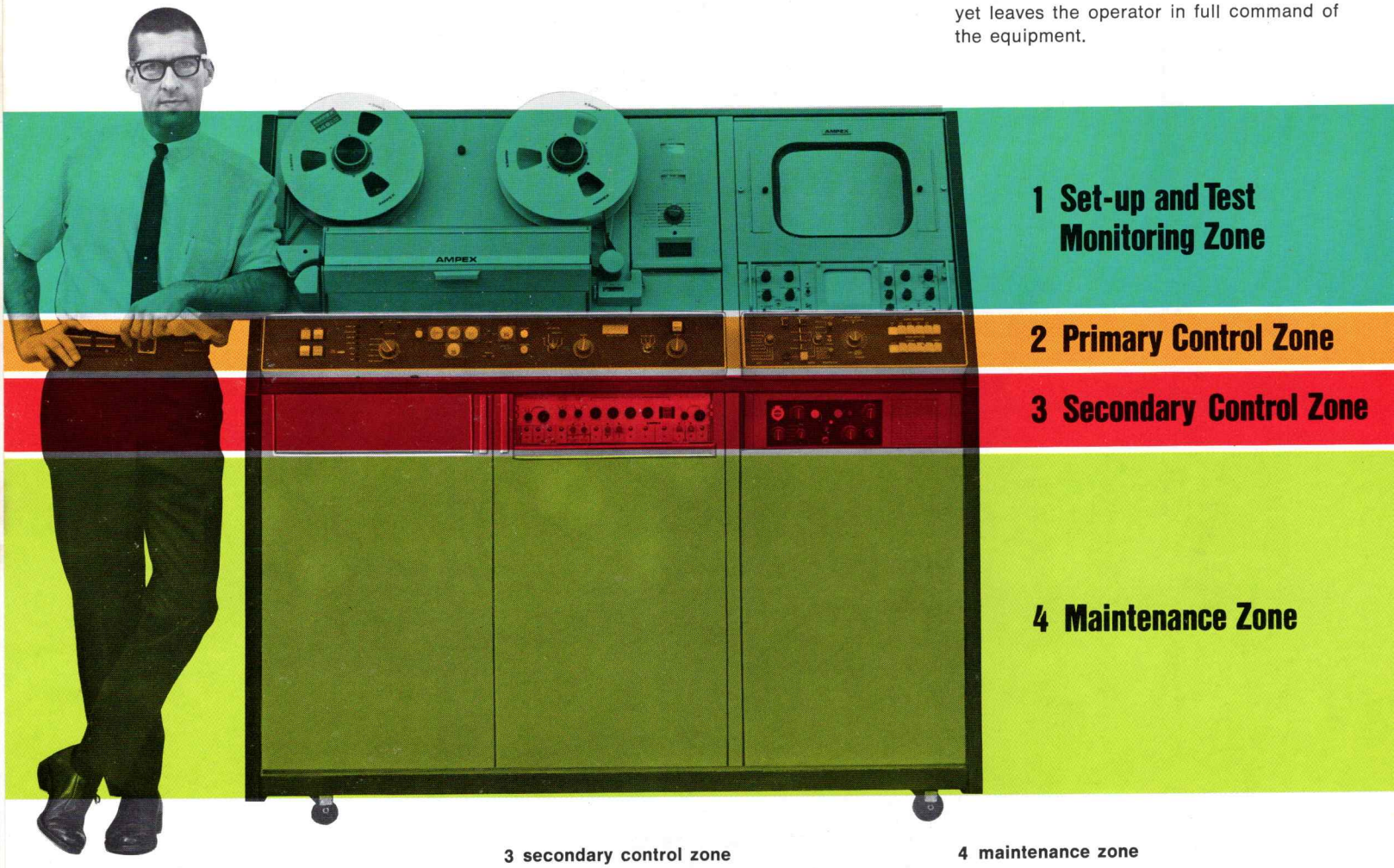
VR-2000B is the ultimate answer for highly professional teleproduction. It is *designed* for smooth, convenient, safe, and error-free operation. There are NO controls in illogical sequence . . . or in awkward corners or recesses . . . above or near moving parts. All controls and adjustments are accessible in a logical order of priority.

1 set-up and test monitoring zone

The uppermost zone of the VR-2000B's front panel contains all transport and test monitoring functions — functions that are most often required before, after or between "live" operational periods with the VTR. Once a tape has been loaded on the transport, and key VTR signal functions checked, the operator is free to leave this zone and concentrate on primary and secondary controls.

2 primary control zone

All frequently used operating controls are clustered in the highly accessible primary zone of the VR-2000B. Unless there is a deficiency in the tape, the operator never has to leave this zone. Primary controls are arranged in a logical sequence so minimal operator training is required. They incorporate meaningful tally lights that indicate either CAUTION (yellow), OK (green) or WARNING (red). Transport control logic incorporates a unique "memory" feature to safeguard against possible tape damage, yet leaves the operator in full command of the equipment.

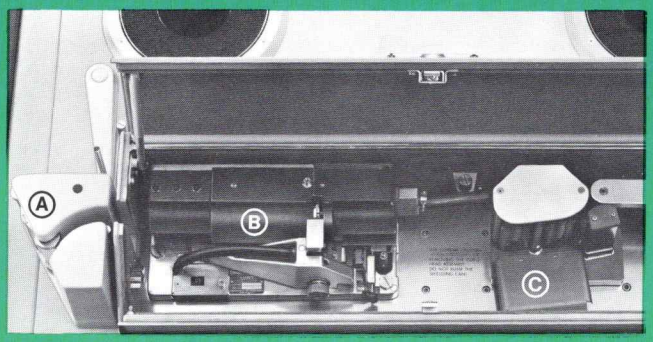


3 secondary control zone

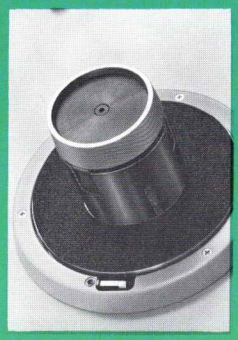
Immediately below the zone of most frequently used controls, a secondary zone contains controls needed only when adjustment is required to play an improperly recorded tape — or for cueing and dubbing. Video signal system controls in this zone are located behind a flip-down panel to discourage inadvertent knob "twiddling." Audio adjustment and cue controls are accessible from the front panel.

4 maintenance zone

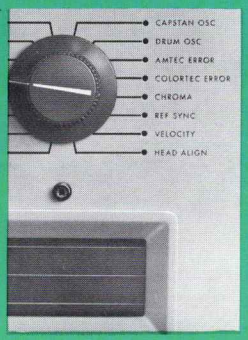
The bottom section of the VR-2000B, behind hinged doors, contains all adjustments needed for VTR alignment, periodic maintenance or emergencies. Normally, this zone is never entered by operating personnel. The only entry that might be needed would be to make corrections for non-standard tapes.



Easy-to-load tape path contains: (A) new non-scratch video erase head, (B) Mark Ten video head with rotary transformer coupling. . . interchangeable with other Ampex VTR's via plug-in modules, (C) new flip-down audio head shield for easy cleaning.

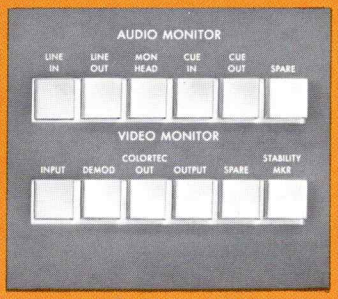


New reel hold-down knobs facilitate fast tape loading/unloading.

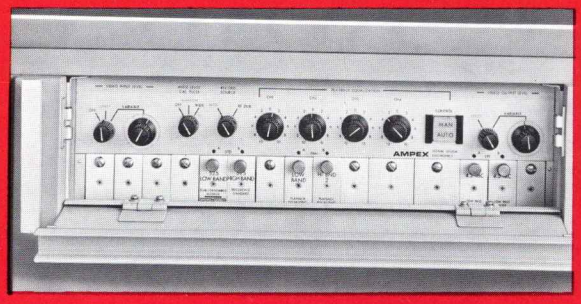


Important VTR circuits fully monitored with built-in A-Scope.

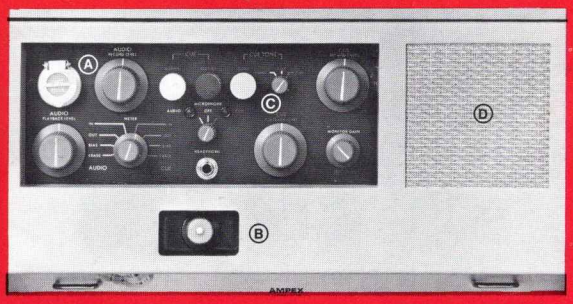
Logically arranged panel features: (A) full protection at-a-glance with meaningful CAUTION, OK and WARNING lights . . . plus other fail-safe features, (B) complete front panel servo mode control, (C) centralized, interlocked controls for convenient and error-free operation, (D) front panel control and meter indication of all four tracking modes.



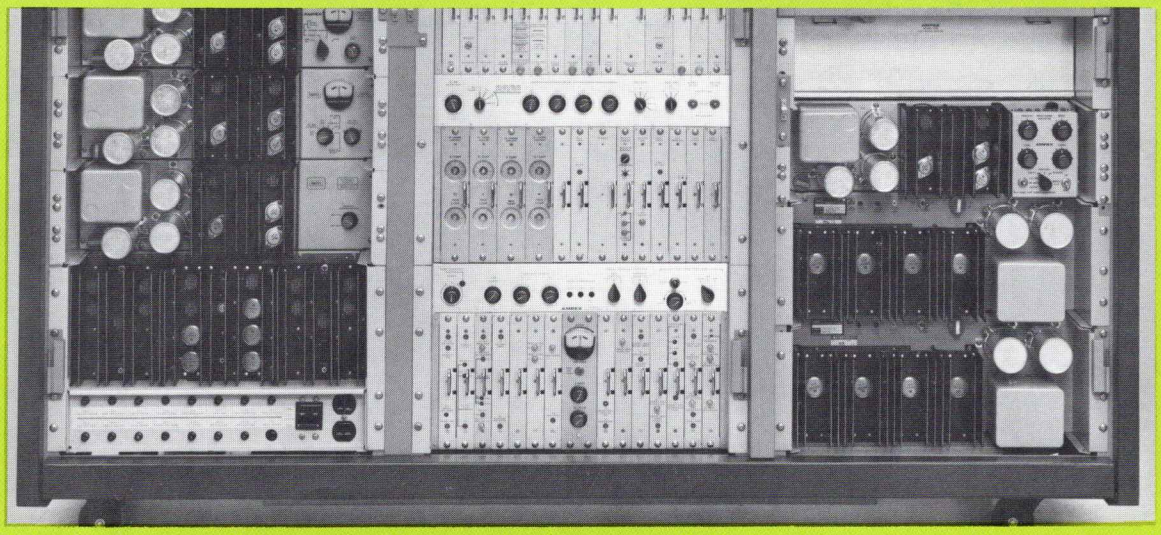
New monitor Switch Panel provides maximum flexibility in handling audio/video signals at all key points within the system.



Video signal system controls behind protective flip-down panel . . . permit compensation for improperly recorded tapes.



New, audio/cue system has: (A) "spot erase" feature, (B) built-in dynamic mike, (C) switchable cue tone oscillator, (D) built-in speaker plus high-fidelity output for external speaker.



Test points and set-up adjustments are easily reached in this zone . . . allowing convenient maintenance on all system components. Unitized, printed circuit construction permits use of small extender boards during maintenance, saves floor space.

VR-2000B...

perfect color from original tape to fourth generation dub

multi-generation dubbing . . .

The high-band color signal system used in the VR-2000B allows dubbing of original color tapes to four generations or more! At the fourth generation, color and resolution are only slightly degraded. In the actual, unretouched color monitor photos at the right, the dramatic similarity of an original color picture and its fourth generation dub are compared.

Color monitor picture from original tape.

Color monitor picture from fourth generation dub.

Above photos of the Lennon Sisters are reproduced courtesy of the Lawrence Welk Show and its producers.

auto-chroma

Since color presents a greater tape interchangeability problem than monochrome, Ampex has engineered an Auto-Chroma to provide fast, automatic control of color saturation from each of the four video heads on the VR-2000B. The optional Auto-Chroma is also useful for playing tapes made on other machines—providing tighter, faster control of chroma, reduced head banding and less operator attention.

Auto-Chroma "out-of-circuit" during replay of tape; case of chroma banding.

Auto-Chroma "in-circuit" during replay of tape.

automatic velocity compensator

Different recorders may have different video head mechanical tolerances—and thus produce errors resulting from differing head tip velocities. These picture errors, particularly color hue banding, are effectively nullified by the optional Ampex Automatic Velocity Compensator. Actual color monitor pictures at the right demonstrate the effective correction made by the Velocity Compensator.

Velocity Compensator "out-of-circuit" during replay of tape; velocity error.

Velocity Compensator "in-circuit"; removes color hue banding.

AMPEX

Ampex Corporation • 401 Broadway • Redwood City • California 94063 • U.S.A.
North Sydney, Australia • Rio de Janeiro, Brazil • Sao Paulo, Brazil • Rexdale, Ontario, Canada • Montreal, Quebec, Canada • Bogota, Colombia • Reading, England • Paris, France • Frankfurt/Main, Germany • Hong Kong, B.C.C. Tokyo, Japan • Mexico City, Mexico • Stockholm, Sweden • Lugano, Switzerland

LITHO IN U. S. A.—V191—6-68