

ATR-124

LISTEN TO THE FUTURE



AMPEX

ATR-124:

THE FUTURE IS HERE

We think it's time **you listened to the future.** On our ATR-124...the most sophisticated 24-track audio recorder ever developed by Ampex for professional studio use.

The futuristic ATR-124 integrates advanced micro-processor electronics technology with existing audio circuitry into one remarkable multitrack system. You've never heard or seen anything like it before.

Setting new standards for tomorrow

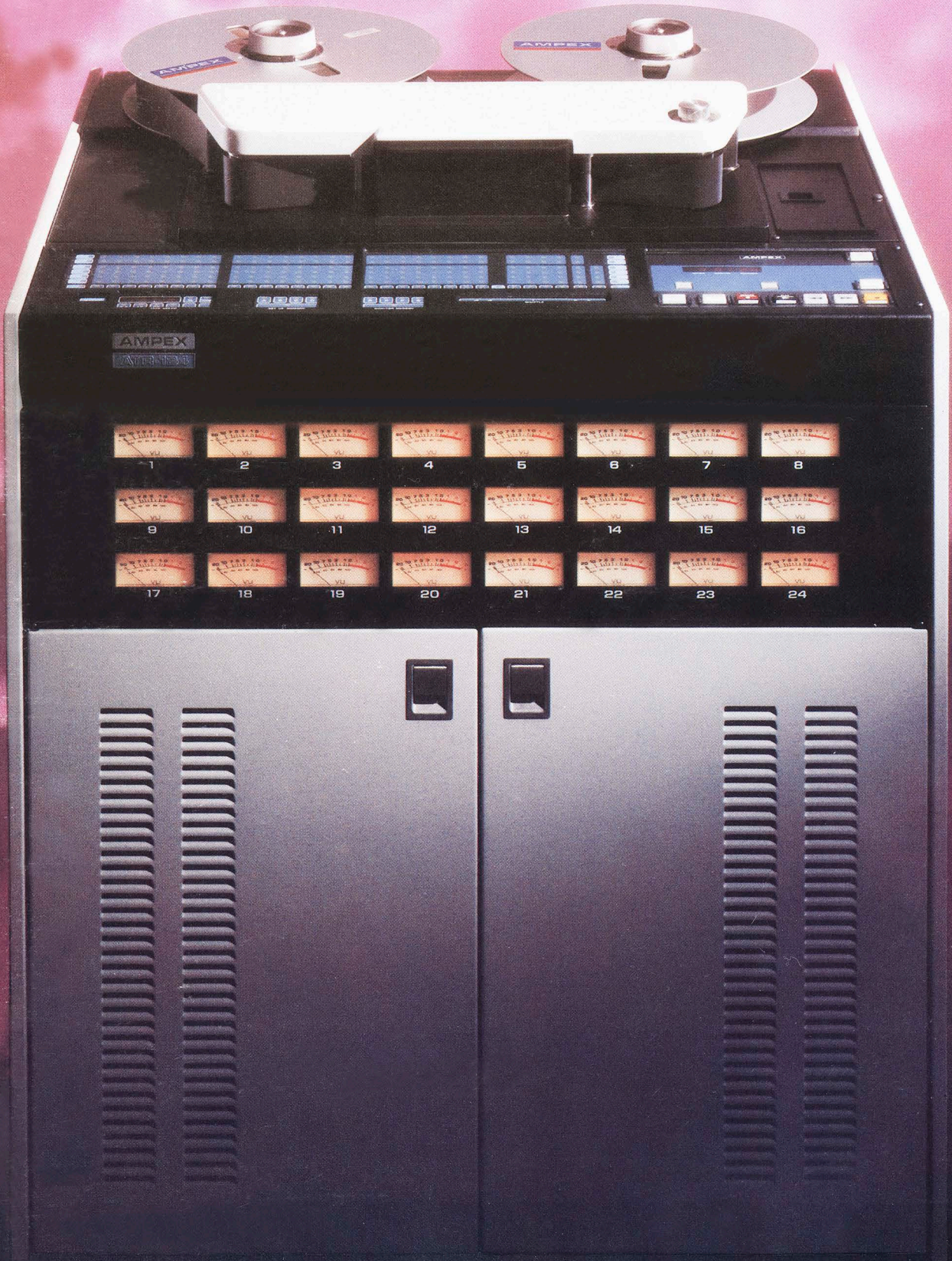
This state-of-the-art multitrack has been designed by Ampex to set new standards in signal performance, operational benefits and easy maintenance. It's equipped with a wide range of features to please and astonish you. This audio system of the future delivers:

- **Better sound results:** uses an improved signal system based upon the popular ATR-100 (offering the best sound fidelity in the industry on two and four tracks) ...and the phase equalization feature preserves the quality of your signal.
- **Unlimited creativity possibilities:** the new micro-processor-based control system permits the operator to try all kinds of different techniques with fingertip control...streamlined control panel offers such features as: fingertip pressure-sensitive switches...group assignment control...instant setup recall...programmable monitoring...fingertip control of both recording speed and tape's forward and reverse motion...a rehearse button that permits the operator to manually practice a routine before committing it to the final recording...and many options and accessories for flexibility including Multi-Point-Search-to-Cue with a capacity of

100 cue locations, and a rugged remote control unit.

- **Superior mechanical characteristics:** as a multitrack version of the popular ATR-100, the ATR-124 offers ultra-smooth and gentle tape handling without pinch rollers...extra stability even when the unit is moved about often...no tape "flapping" or damage at near-end and end-of-roll (machine has built-in ability to automatically decelerate and stop before end of tape)...digital logic programmed to control tape movement and tension at all times...rugged flux gate record and play head...8, 16 and 24 track head assembly configurations are available...and these versatile recorders can accept intermixing of 5 to 16 inch reels.
- **Easier service and maintenance:** the modular ATR-124 was designed with the service engineer in mind with everything easily accessible. The machine can be disassembled down to its major electronic subassemblies in minutes.
- **Fast to setup and learn:** it's easy to program and record with...with less setup time and less money wasted. You can start with basic features and increase level of sophistication as desired.
- **Exceptional reliability:** keeps downtime to a minimum...is always ready when it's needed...keeps on working continuously under even the most demanding schedules and conditions.

The new ATR-124 multitrack. It is the audio recording system of the 1980's and beyond. It's a present from the future...ready to deliver faster...easier...more accurate...and **better** audio quality than ever achieved with a multitrack.





A FUTURISTIC AUDIO
SYSTEM DESIGNED
TO SET YOUR
IMAGINATION FREE



Once you've controlled a recording session with the help of the ATR-124 keyboard, you'll want to do it again. Because you've **seen and heard the future**. And with each new session, your fertile imagination will come up with something new and exciting you can try. Things you can only do on a "bonus-laden" audio recorder of the future.

ATR-124 puts time on your hands

The microprocessor-based control system of the ATR-124 frees your imagination and lets you be more creative than you ever thought possible. The only limits on what you can do with the ATR-124 are in your own mind.

For once, you'll have more time on your hands. And you can use it to your advantage. With the ATR-124, you can pre-program what you want to do ahead of time, so you won't waste valuable studio time setting your session up. When studio time begins, you simply start the whole recording process by **touching a single recall button**.

It'll all come back to you

The ATR-124 lets you duplicate any recording technique you may have used earlier, without having to rethink what you did. Just touch a memory button and it'll all come back to you in an instant. Operating a multitrack was never so simple. The ATR-124 lets you rehearse what you've got in mind, too, without recording it, to make sure what you've got in mind is just right. Your tape can be manipulated faster and much more gently which means you'll get the sounds you want sooner. Do it the regular way, or try "something a little different."

In either case, it'll have the creative touches you desire with speed and accuracy because the ATR-124 puts control of the whole operation right at your fingertips.

Breaking the sound barriers

Probably the major breakthrough to the ATR-124's

new "levels of excellence" and purity of sound is due to its new space-age electronics. This recorder breaks many sound barriers to achieve its exceptional fidelity. A few of the sound electronic bonus features hidden under the ATR-124's top-plate include:

- **Flux Gate Recording Head:** This highly desired feature gives optimum playback and recording capabilities. The head combines recording and playback windings in a single unit. This gives you "sync" response that truly approximates normal reproduce response during simultaneous recording and playback operations.
- **Phased Equalized Recording:** A feature that ensures you of the finest in purity and clarity at all times. Complex musical waveforms are played back without the distortion created by normal equalization techniques.
- **SEL-SYNC™ Synchronous Recording:** A feature that lets you monitor a previously recorded channel while recording in synchronization.
- **PURC™ Record Insert Controller:** A feature that helps you eliminate problems of overlaps and gaps in your recordings when you have to insert new material in previously recorded programs.

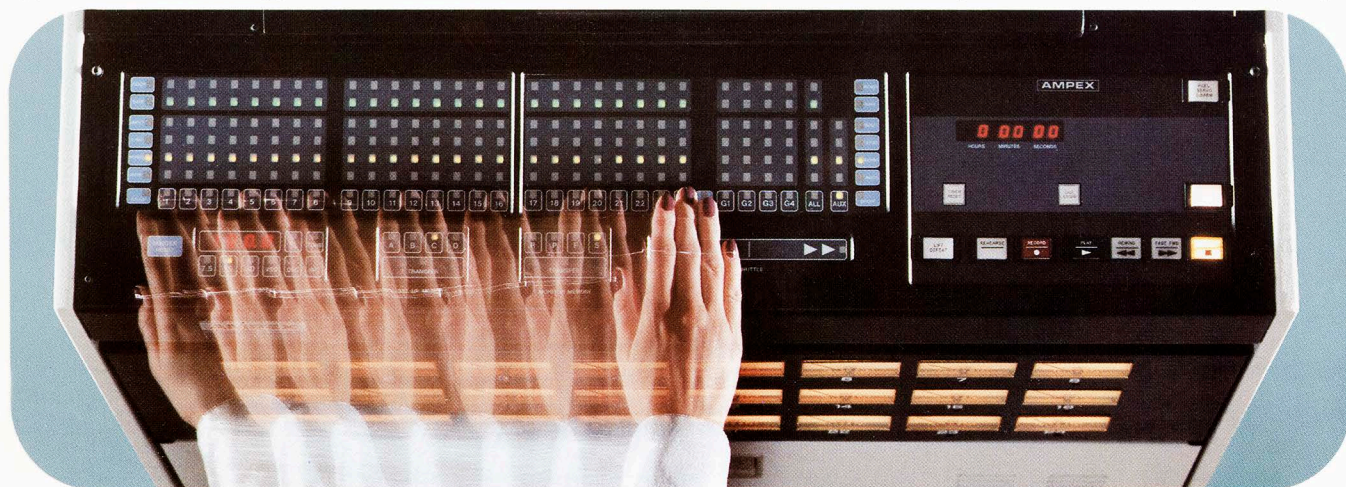
Other innovations include: balanced, transformerless input/output electronics...noise reduction interfacing...microprocessor control for greater flexibility...a unique record mode diagnostic design that alerts the engineer if a channel is not recording properly.

Limitless creativity at your fingertips

The new ATR-124. It's an audio engineer's dream of the future...at his fingertips today. You'll spend far less time setting up, correcting and redoing. Program a setup...then change it. Then, change it back again. And do it all with fingertip control.

The ATR-124. Sound recording will never be the same from now on.

upper left: Attractive, rugged remote control unit. below: Unique Control Panel with speed and accuracy at your fingertips.



THE SOUNDS OF THE FUTURE... AT YOUR FINGERTIPS

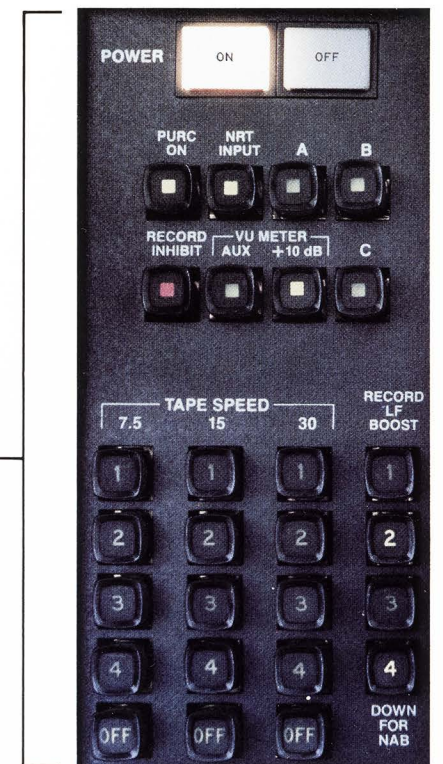
The real "business end" of any modern tape recording system is its control panel. And this is where you'll find yourself stepping into the electronics **world of the future**. The Ampex ATR-124's control panel is like nothing you've ever seen before. Its pressure-sensitive touch controls are linked to a microprocessor which offers unlimited flexibility.

- **Simplified pressure switches** that let you have fingertip control over either an individual recording channel, a group of channels, or over all channels at the same time.
- **Group assignment control** that lets you create channel groupings and quickly place these groups in the setup conditions required. A group control input selector and four group assignment buttons permit fast and accurate handling of as many channels as you need.

- **Instant "Setup" recall** that lets you store any given control panel setup for all channels in all modes. The ATR-124's SETUP MEMORY lets you keep for future use four individual setups of 24 channels each. (If you do a "take" one way, then you can quickly call up another setup for the next condition required.)
- **Programmable monitoring** that lets you program for each channel what the monitoring of that channel will do in each transport mode.
- **Fingertip speed control** with the variable speed oscillator that means you can have your standard 7.5, 15 and 30 in/sec, and everything in between at your beck and call with a resolution of .1% from -50 to +200% and -6 to +6 tones with 1/4-tone resolution.

- **Forward and reverse tape motion fingertip control** with the Variable Speed Shuttle that lets you simply slide your finger along the control panel to advance or reverse tape motion. Shuttle speeds can be regulated from slow to 300 in/sec.
- A **"Rehearse" control button** that lets you do quick, manual rehearsals before you commit yourself to the final recording.

EQ SELECTION PANEL that features push-button equalization standards. Four independently assignable equalization setups are provided. (Protected main power switch, PURC Controller, Noise Reduction Trigger, Record Inhibit, and VU meter controls also are located on this secondary control panel.)



The main control panel of the Ampex ATR-124 is shown with various callouts and labels. At the top left, a 24-channel, pressure-sensitive touch button setup is labeled with individual control of READY, SAFE, INPUT, SYNC, REPRODUCE, and MUTE monitoring conditions. To its right, an ALL button is labeled as quickly letting you assign a desired common setup condition to all channels. Further right, a REEL SERVO DISARM button is labeled as providing control over DC reel servos used when editing and splicing. Below the touch buttons is a MASTER RESET button, a TAPE SPEED CONTROL section with a digital display showing 100.0 and buttons for 7.5, 15, 30, VSO, DEC, and INC. Next to it is a SETUP MEMORY section with buttons A, B, C, D and a TRANSFER button. To the right is a MONITOR MEMORY section with buttons R, P, F, S and a TRANSFER button. In the center is a VARIABLE SPEED SHUTTLE CONTROL with a sliding bar and arrows, labeled as permitting fingertip adjustments to shuttle speeds. Below the shuttle is a CHANNEL GROUP ASSIGNMENT PANEL with buttons GC, G1, G2, G3, G4, ALL, and AUX, labeled as providing collective channel flexibility and convenience. To the right of the shuttle is a REHEARSE CONTROL function, labeled as letting the operator practice manually before committing the recorder to final taping. Further right is a LIFT DEFEAT button, labeled as causing the opposite of normal tape lifter action. At the top right, a BRIGHT, EASY-TO-READ LED TAPE TIMER DISPLAY shows 0000 in red, labeled as giving information in hours, minutes, and seconds. Below the timer are buttons for TIMER RESC and CUE STORE. At the bottom right, a SINGLE-POINT SEARCH/CUE button is labeled. The bottom section of the panel features a REHEARSE CONTROL button, a RECORD button, a PLAY button, a REWIND button, a FAST FWD button, and a STOP button. A STANDARD RECORDER FUNCTION CONTROLS section with double function illumination is also indicated.

Ampex audio recorders have earned a reputation for high quality and reliability. And the ATR-124 is no exception. It picks up where the popular ATR-100 left off. The ATR-124 offers you 24 channels of recording supremacy, instead of just one, two or four. The futuristic ATR-124 gives you the kind of operational excellence you've come to expect from Ampex.

Built to take whatever the future brings

To begin with, consider the new ATR-124 on the whole. It's a rugged performer. The entire transport is built around a precision-machined casting. The ATR-124 gives you unmatched stability—no matter where you take it, and no matter how often. Once this recorder is aligned, it stays aligned.

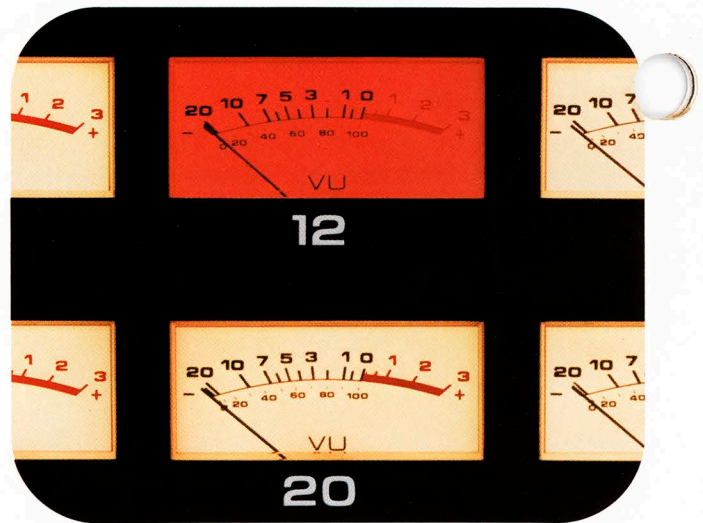
A smooth and gentle "tape handler"

All of the multitrack versions of the ATR-124 recorder feature ultra-smooth and extra-gentle tape handling characteristics. A closed-loop, DC-servoed transport maintains constant tape tension at each reel during normal operation at 7.5, 15 or 30 inches per second speeds as well as at all shuttle speeds. All this is done without the use of "pinch rollers" to avoid any unnecessary strain or pressure on the tape.

There'll be no tape "flap" in your future

With ATR-124's special tape transport, your master tapes are assured of extra-gentle handling because there are no mechanical brakes or pinch roller. Halting is accomplished electro-dynamically. The ATR-124 senses when your tape is nearing the end of its reel and stops itself automatically. There's never going to be any wild "flapping" of loose tape when it reaches the end, either. Controlled deceleration of the reel stops it without tape cinching or the tape detaching itself from the reel.

Single point search-to-cue with a tape looping feature is standard on the ATR-124.



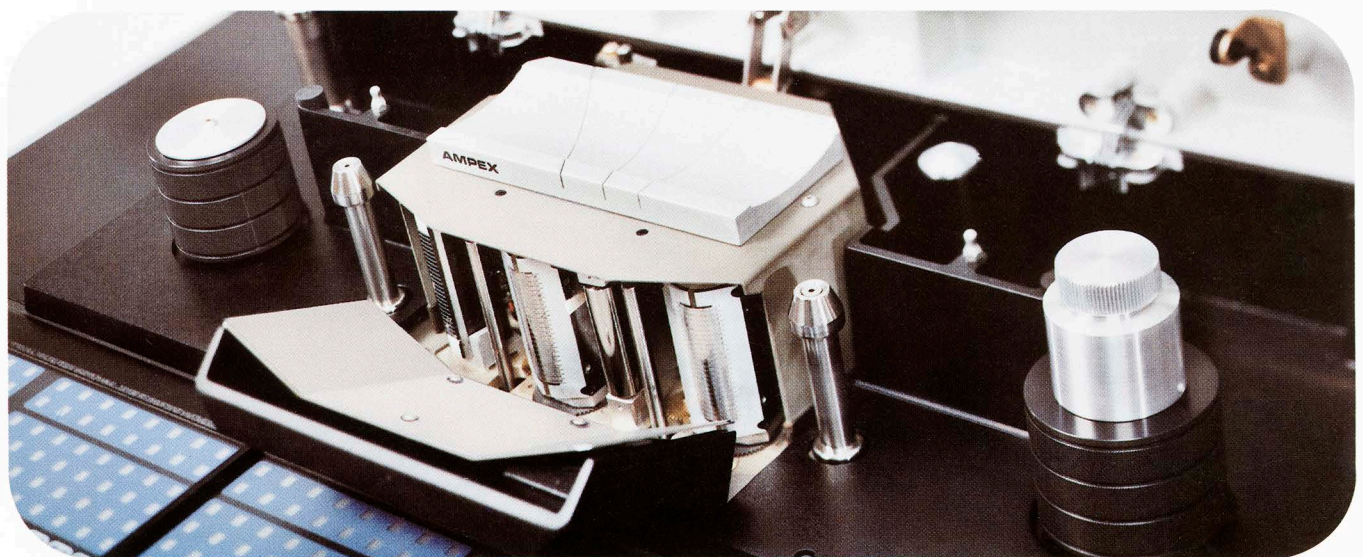
VU meters "flash" if channels aren't recording properly.

A tough head for all sessions

The new ATR-124 recorder has a self-contained, all-metal head assembly. It comes in 8, 16 and 24-track configurations. This rugged new metal head is designed for longer, more reliable operating life and unparalleled accuracy. The head assembly contains one scrape-flutter idler, and the record head stack has the patented flux gate construction so record and sync functions can be separately optimized.

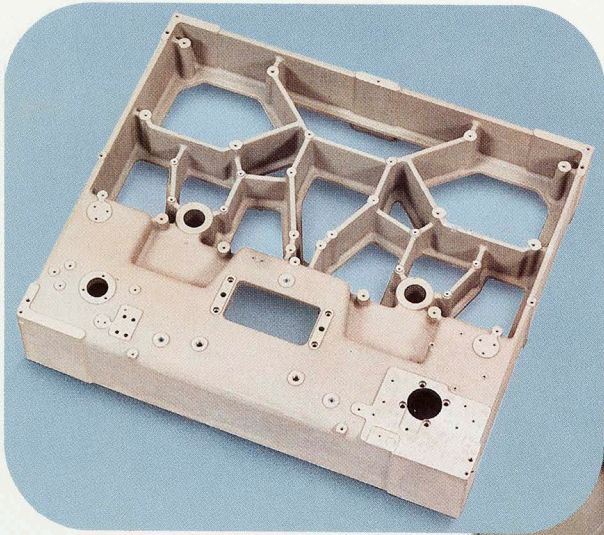
A versatile reel mixer

Five inch to 16 inch reels can be intermixed on the ATR-124 without the need to reset up. 16 inch capability makes it ideal for double system recording in a video-tape environment. The ATR-124's ability to handle massive amounts of tape offers you extra dynamic range and frequency response when running at 30 in/sec. You'll have "non-stop" recording time, without having to stop and change reels in the middle of a recording session, and you can eliminate the need for noise reduction equipment.

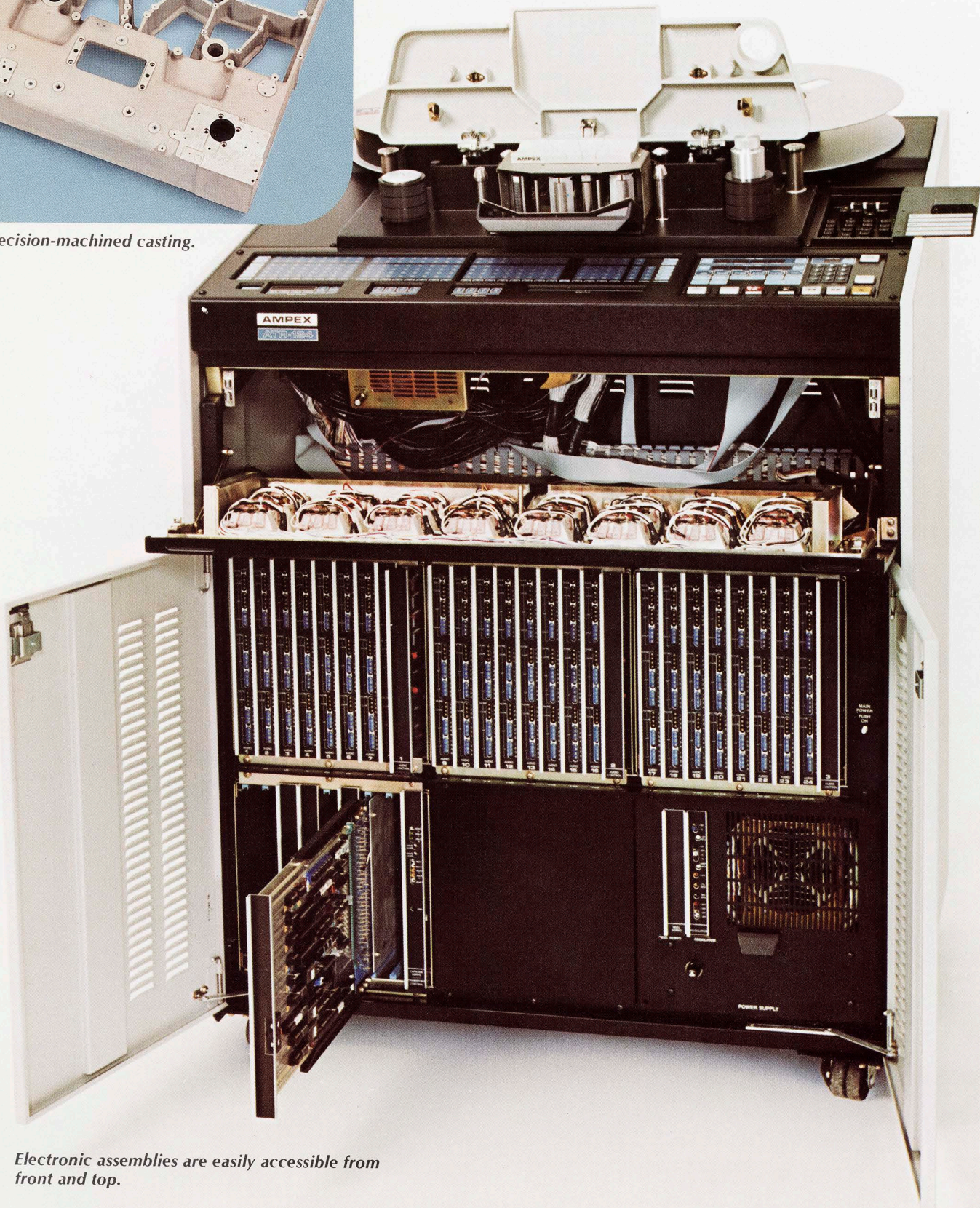


ATR-124 features reliable flux gate recording head.

ANOTHER SOUND PERFORMER...
DESIGNED FOR THE FUTURE



Rugged, precision-machined casting.



Electronic assemblies are easily accessible from front and top.

THE FUTURE WILL BE HIGHLY OPTIONAL

As with all other Ampex audio recorders, we have designed a line of optional accessories to go with your ATR-124 audio machine of "the future"...making it even more versatile and creative in the studio or out on location. Included in its important optional accessories are:

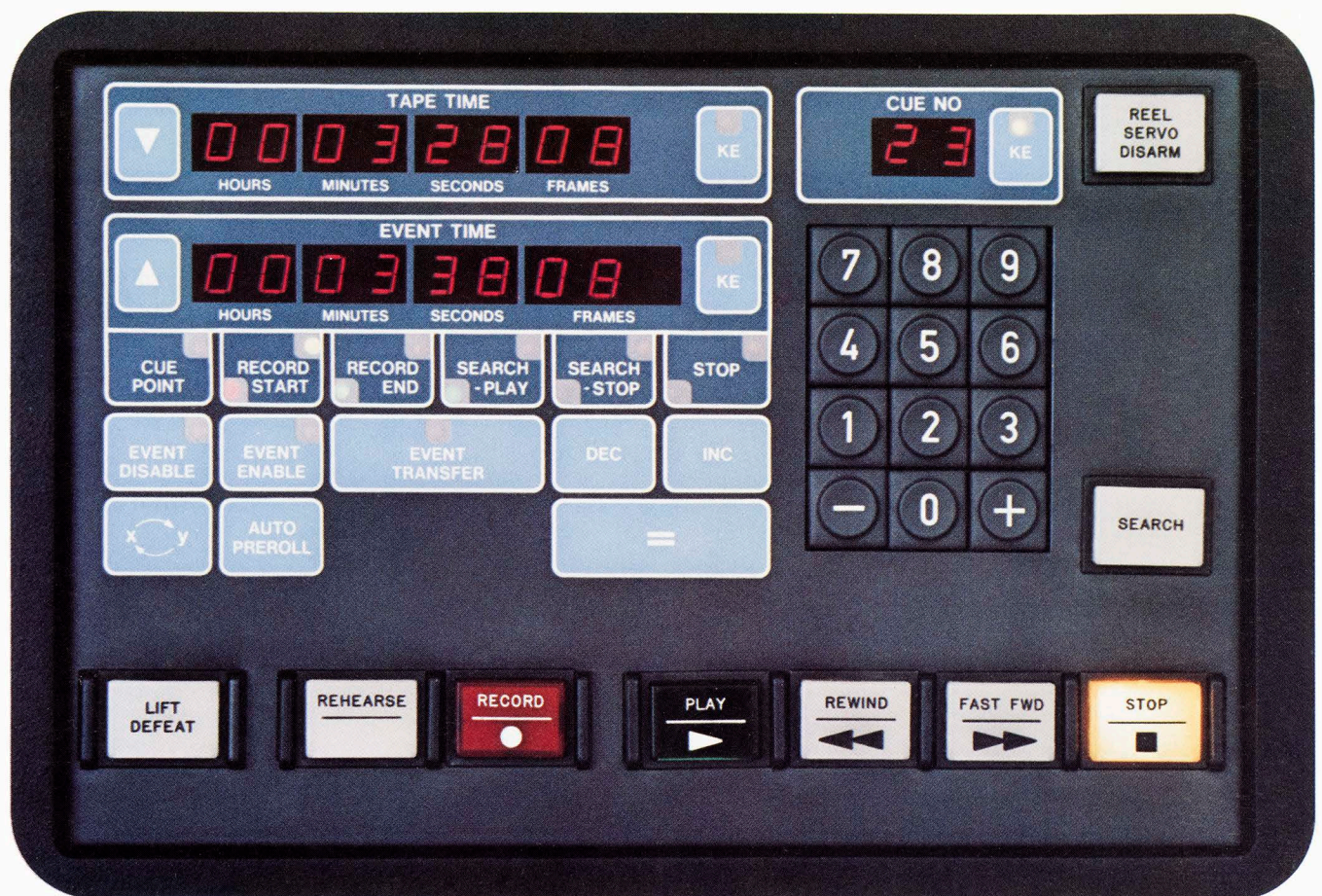
- **The Multi-Point-Search-to-Cue. (MPSTC).** Designed to complement the standard single point search-to-cue, the MPSTC provides a capacity of 100 cue locations. By adding MPSTC you can rehearse edits, and control 5 events from tape time, and even be compatible with SMPTE time code. Three LED displays for TAPE TIME, EVENT TIME and CUE NUMBER are featured. Up to 105 storage registers can be accessed through the ATR-124's keyboard.

With multipoint, you can choose when to make use of a previously recorded event, or you can even transfer the time from one event register to another and employ unused cue point registers to store whole sequences of events.

An automatic PREROLL function provides the operator with "one-touch" entry of pre-roll and post-roll times associated with previously established

recording start and end points. Pre-roll and post roll durations are adjustable from one to 99 seconds. Additionally, displayed information also can easily be modified with the multipoint option by using the Decrement (DEC) and Increment (INC) keys. This gives the engineer rapid access to a series of cue numbers and simplified small time modifications without having to resort to calculations.

- **A Remote Control Unit.** All of your ATR-124 control functions, except those enclosed in the EQ SELECTION panel and REEL SERVO DISARM, can be fully removed. Your remote control unit is attractively designed, ruggedly built and can be rolled around from one location to another. It may also be customized into your console.
- **Auxiliary Output Monitoring Amplifiers.** These optional amplifiers give the sound engineer the ability to simultaneously monitor normal playback and sync playback for each channel. The Auxiliary outputs can also independently monitor normal playback as well as machine input.
- **Two-to-One Conversion Kit.** This is a one-inch, eight-track head and guide assembly that allows the use of one-inch tape on the ATR-124.



THE FUTURE WILL BE EASIER TO MAINTAIN

Many thousands of professional audio recorders from Ampex are making recording history every working day of the year. We designed them that way. We've been making true believers out of recording artists, musicians, broadcasters and businesses and institutions since the early 1950's. We build them versatile, reliable and easy to service and maintain.

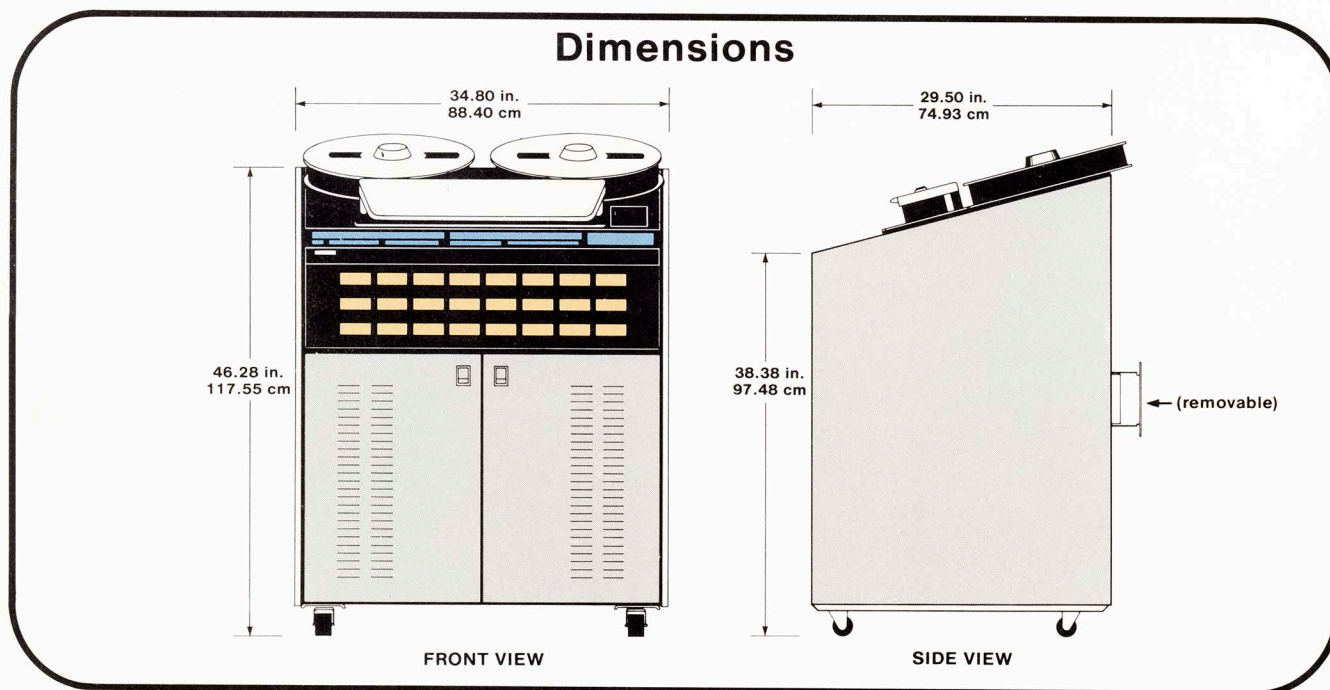
Designed with service in mind

The new audio star of the 1980's...our ATR-124 continues the Ampex tradition. We designed it with the modern service engineer in mind. Its top plate trim and side panels come off quickly, and all ATR-124

electronic assemblies and components are readily accessible for examination or removal and replacement. For example, the movable VU meter panel is hinged and folds down for easy maintenance.

An all-in-one system for the future

We've designed the new ATR-124 in a modular configuration, with room to spare inside for all options or accessories. Three complete bays of eight channels sit above the control electronics and the front-accessible/removable universal power supply. All electronic assemblies are accessible from top and front, making the ATR-124 easy to service and maintain.



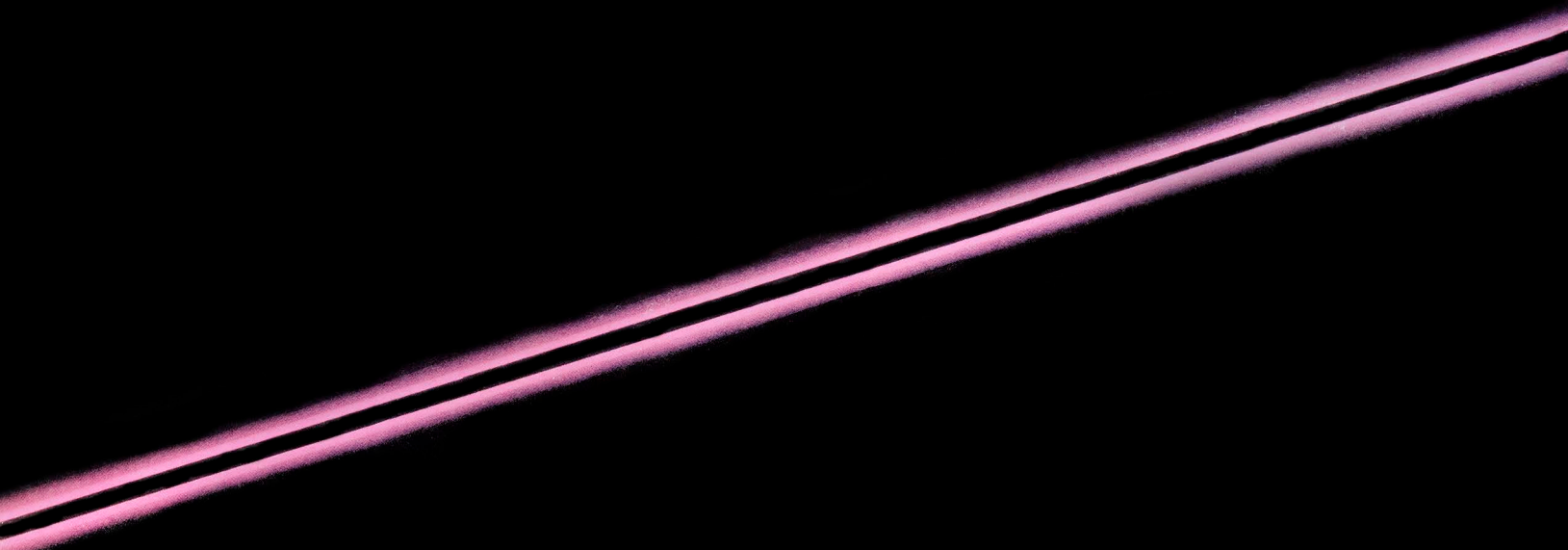
For technical specifications, see your Ampex Sales Representative.

Ampex reserves the right to make product and specification changes at any time without notice.

To learn more about the ATR-124—the sound of the future—contact your nearest Ampex Sales Representative.

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