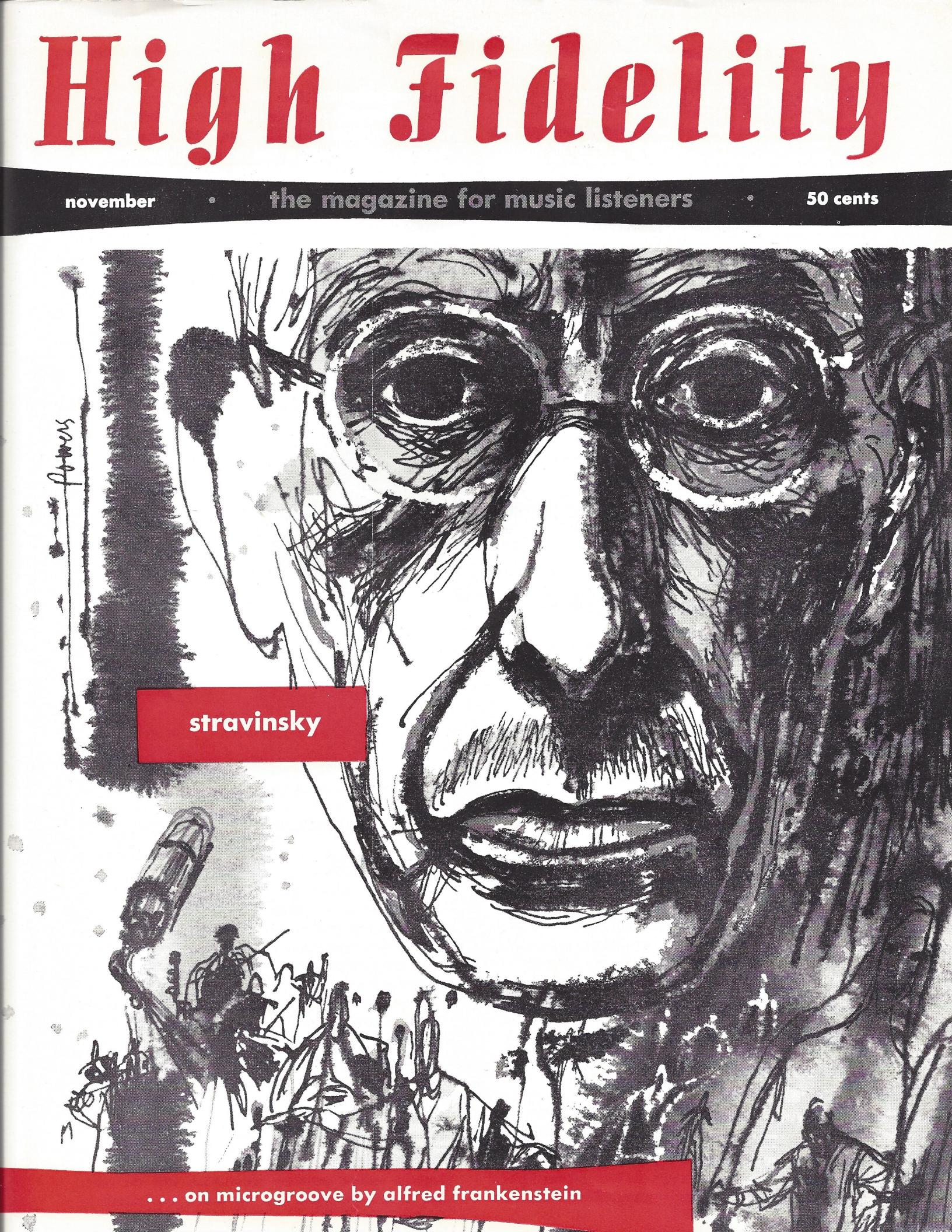


# High Fidelity

november

the magazine for music listeners

50 cents



stravinsky

... on microgroove by alfred frankenstein

# Berlant BR-1 Recorder

**SPECIFICATIONS** (furnished by manufacturer): a broadcast-standard record and playback tape mechanism with separate chassis for electronic equalization and control circuitry and functions. **Tape speeds:** 15 and  $7\frac{1}{2}$  ips. **Frequency response:**  $\pm 2$  db from 40 to 15,000 cps at 15 ips and  $\pm 2$  db from 50 to 12,500 cps at  $7\frac{1}{2}$  ips. **Signal to noise ratio:** 55 db. **Total harmonic distortion:** 2% at 0 VU. **Total flutter and wow:** less than 0.1% RMS at 15 ips, less than 0.2% at  $7\frac{1}{2}$  ips. **Rewind and fast forward speed:** 2500 ft. in less than 60 sec. **Heads:** provision for mounting up to five heads. **Meter indication:** bias current, record level, output level. **Inputs:** microphone (55 db) and high impedance, high level (0.1 v. sensitivity). **Output:** cathode follower. **Dimensions:** drive mechanism 14 by 19 by 6 in. deep; amplifier chassis  $5\frac{1}{4}$  by 19 by 6 in. deep. **Weight:** drive mechanism 35 lb.; amplifier 10 lb. **Price:** drive mechanism and amplifier \$545. **Address:** Berlant Associates, 4917 West Jefferson Blvd., Los Angeles 16, Calif.

Slick item, this.

Which is maybe where we ought to leave things, because the Berlant BR-1 has a lot of features which will take some writing to describe. We'll be as brief as possible. First, it operates at either  $7\frac{1}{2}$  or 15 ips. Second, it takes any size reel up to the big NARTB 10-inchers (they give you about 66 minutes of playing time at  $7\frac{1}{2}$  ips per track). Third, it is designed to meet professional specifications. Fourth, it is designed for simplicity of operations, including tape threading and editing. Fifth, through the addition of various accessories, it provides a high degree of flexibility, attained primarily by plug-in components. Sixth, considering these features, cost is definitely low.

The tape transport mechanism may be operated in either vertical or horizontal position. In the vertical position, reels are held in place by special knobs (see illustration). Put them over the reels, push a button in the center, and the knobs clamp on by a spring catch mechanism. Push a tab along the edge of the knob and the catch releases. This is simple and quick, but presents a minor problem when small (7-in. or less) reels are used. The knobs have to be big enough to fit into the large hub holes on the NARTB reels; this means that they extend beyond the hubs of 7-in. reels, so it's a bit hard to see when the tape is approaching the hub of a smaller reel.

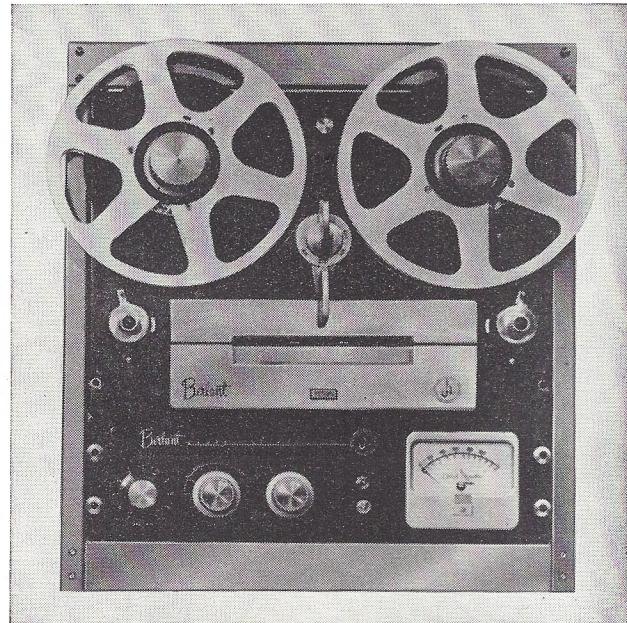
Tape threading is simplicity itself: just drop it into a straight-through slot and release the tape tension knobs at either end of the slot. Tape control is also simple: the small knob at the top edge switches speed. The next lever below controls fast forward and rewind, and here is a nifty one: the speed of wind (in either direction) is continuously variable from a whizzing 2500 ft. in 60 sec. right down to a crawl. Separate motors, by the way, are used on supply and take-up reels as well as, of course, capstan drive.

Directly below the tape spooling control lever, as Berlant calls it, is the tape drive control lever. It is interconnected, mechanically, with the record button and the cover which slides back and forth over the heads. Functions are: in the straight down position, STOP; tape and head cover open  $\frac{3}{4}$ -in. to permit threading; record button may be depressed to throw meter into monitor circuit so you can set levels without running tape through. Lever pushed to the right, RUN; cover closed; record button cannot be pushed down (to record, you push the button down first and then throw the lever to RUN position). The record button

snaps out when the lever is moved from RUN. Lever moved one notch to the left: CUE; cover closed, brakes applied gently, just enough to maintain tension while you spin reels manually to find the exact spot on the tape. Lever moved two notches to left: EDIT; cover open 1 in. so you can get a grease pencil onto the tape easily; brakes applied firmly so tape won't move.

Note that you cannot throw the spooling lever into fast forward or reverse except when the drive lever is in STOP position.

And note something else that's a fine feature: when drive lever is in STOP position, tape is held away from heads to avoid friction on fast wind and rewind, but still kept just close enough to set up low level sound in earphones (or speaker) to help locate pauses, etc. Tape is held in firm contact in RUN and CUE positions, but is pulled away again in EDIT position.



Berlant BR-1 professional recorder will hold five heads; takes NARTB reels; has easy loading, editing facilities; is portable.

Three cables lead from the tape mechanism chassis to the amplifier chassis. Let's take the back of this chassis first: There are sockets for the cables, including two AC outlets (one for tape mechanism AC line). You can get the amplifier chassis with either Cannon connectors or standard phone jacks; ours was of the latter type. The output jack is interconnected to an octal socket on the chassis. Without the transformer, the output jack terminates as a cathode follower suitable for direct connection to the input of a hi-fi control unit, for instance. If a transformer (available from Berlant) is plugged into the octal socket, the jack can be connected to a 600-ohm balanced line at zero dbm.

Two input jacks are provided. One is a high level input and may, for instance, be connected direct to the tape output connection from a high fidelity system. The other is a low-level input, as from a microphone. Normally, it operates from a high-impedance mike but this input phone jack is, like the output jack, interconnected to an octal socket. By plugging various accessory transformers into the input octal socket, the phone jack will match low impedance

microphones (50/250 ohms); another transformer provides equalization for reluctance cartridges; still another plug-in accessory is a "losser pad" so the mike input can be used as a second high level input.

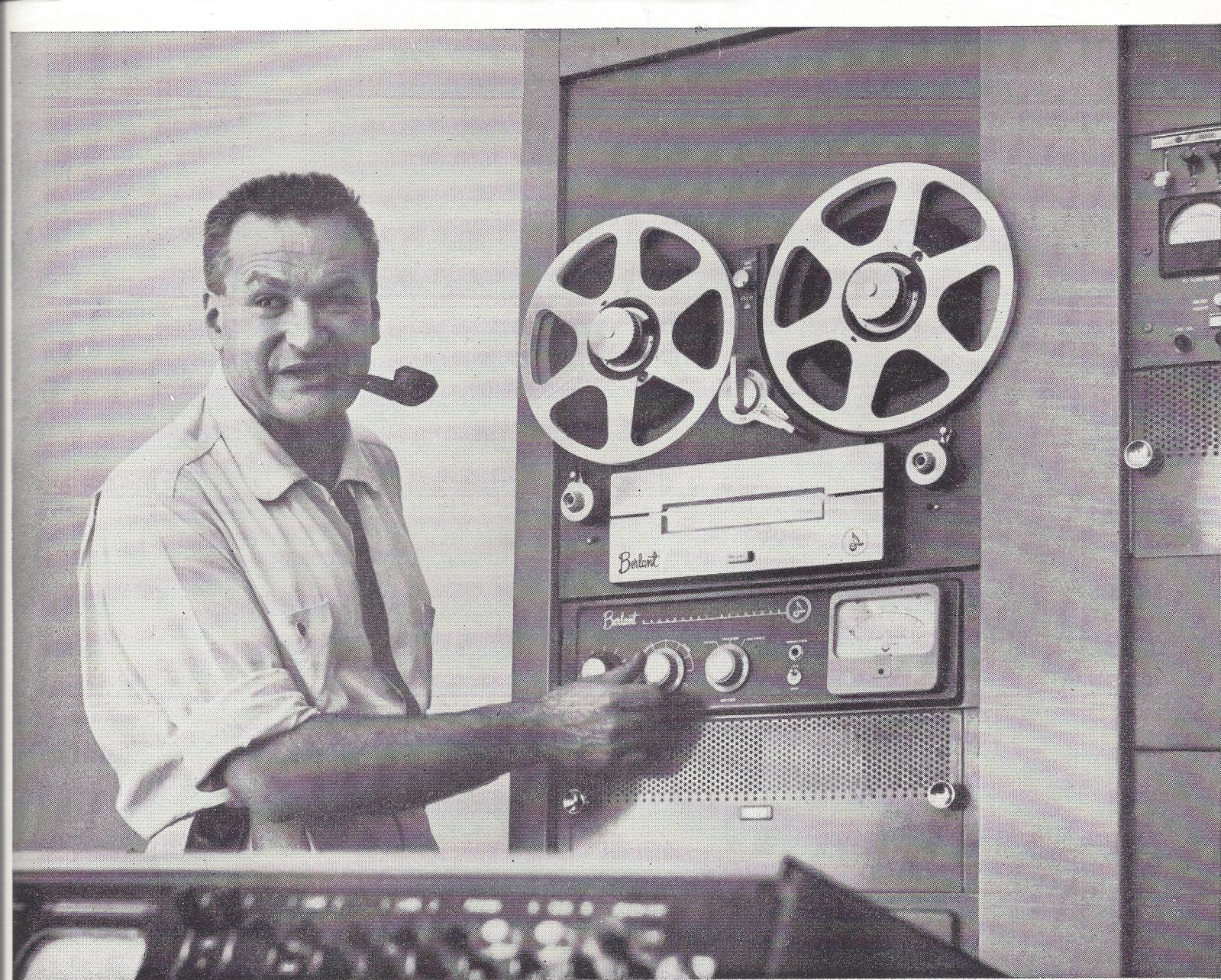
Also on the chassis are controls for bias level and bias meter setting.

On the front of the chassis are three knobs. The left hand one controls recording level. Since it is connected to both high and low level inputs simultaneously, if both are used and "live" at the same time, their levels must be controlled externally (as with the Berlant multichannel mixer). The middle knob provides a novel arrangement: turned to the left, it regulates the level at the monitor phone jack on input; turned to the right, it controls level on playback. Thus, when recording, you would set the record level (according to the meter) by adjusting the left-hand knob. You could then monitor either on the incoming signal or from tape playback — and adjust the level to your earphones or speaker — by turning the center knob to the left or right, respectively. On playback, the center knob controls level to output and also level to meter. The meter can be switched by the right hand knob, to read bias, record, or playback level.

Between the right-hand knob and the meter is a phone jack, for connection to earphones for monitoring, and an AC on-off switch. The monitor jack is paralleled to the output jack on the back of the chassis.

Finally, five heads — or provision therefor. Normal complement is three: erase, record, and playback — either full or half-track. But there is room for two more. For instance, you might want to have both half and full-track erase and record heads available (using half track for playback of either half or full-track material). Or you could have binaural record and playback heads installed (Berlant has foreseen this possibility; vertically in-line heads are available). Another possibility — which applies to broadcast stations in particular — is that of a playback head ahead of the erase-record-playback series, so that one program could be played back while another was being recorded. Just dream about the possibilities of five heads!

So you see why we said, "slick item." If your budget permits an expenditure of over \$500 or so for a tape recorder, we'd certainly recommend careful examination of the Berlant BR-1. It's a very flexible and easy-to-operate unit with features and performance outdistancing its price. — C.F.



## "7:00 P.M. On the air..."

"Delayed broadcast going out from playback head in Position 1. Show being erased on head at Position 2. Recording incoming network signal on head in Position 3. Monitoring incoming signal on playback head in Position 4."

This is an actual case history. Operating engineer in this test was Bert Berlant, designer-manufacturer of the equipment used.

The Berlant Broadcast Recorder, BR-1, actually has provision for 5 heads, (3 heads are standard) and with a simple switching arrangement allows both single and dual track operation.

Research and development on this professional tape recorder took three

years. 382 engineers wrote the specs from a detailed questionnaire sent them before work was started. *Every important feature* they requested is incorporated. The one described in the test is an example.

Other exclusive features are: **UNISYNC DRIVE**: a completely new hysteresis synchronous direct drive with 99.8% timing accuracy and total temperature rise of 30 degrees. **UNIFIED CONTROL**: one simple convenient error-proof lever system. **A-B TEST FADER**: fades from incoming signal to playback without transients or clicks.

And these additional requested features: Fast forward and reverse at any speed. Instantaneous *Reelooks*.

Automatic cut-off. Tape tension arms. Adjustable bias...and three motors.

All of the above is what *you*, the engineer, wanted. The man in the "figure" department wanted dependability and low maintenance cost... at the right price! We listened to him, too.

### **\$545 IS THE PROFESSIONAL USERS NET FAIR TRADED PRICE.**

You'll want to test it yourself, we know. For a distributor close to you, for more complete technical brochure, write: Berlant Concertone

4917 West Jefferson Boulevard,  
Dept. N13 Los Angeles 16, California

THIS IS REPORT NO. 1 IN A SERIES OF FIELD TESTS.

*Manufacturers of Concertone...world's foremost high fidelity recorders and accessories.*