

finest recording specialists available anywhere....Men who devote their entire energies to magnetic recording and its associated arts. Because of this fact, very few organizations can match Magnecord's history of development of high fidelity magnetic recording and its wide distribution to governmental, industrial or commercial usage.

VI

DEVELOPMENT OF STANDARD MAGNECORD EQUIPMENT

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In 1946, Magnecord, Inc. designed and produced the first really high fidelity magnetic wire recorders for professional use. These were designated as SD-1 Magnecorders and sold to the Radio Broadcast industry for program recording and reproduction. Other commercial fields employed this SD-1 equipment for telemeter recording, study of sound phenomena and instrument control.

As the fidelity of magnetic tape improved through constant research, the Broadcast Industry created a demand for this medium instead of magnetic wire. It was found that editing, splicing and general handling of magnetic tape was far superior to wire.

Accordingly, Magnecord, Inc. designed and produced the Magnecorder PT6 series of magnetic tape recording equipment. This unit offered a frequency response of 15,000 cycles per second at only 15 inches per second tape speed. Prior to this 30 inches per second tape speed had been required to achieve the same high frequency response. By setting this precedent, Magnecord was instrumental in establishing the primary tape speed of 15 inches per second--the current primary standard of the National Association of Broadcasters.

The PT6 series Magnecorder was also the first equipment designed to offer the user "building block" flexibility. By engineering the recorder

AUDIO
ENGINEERING

mechanism and the various amplifiers as separate units, the operator could select the recorder mechanism and any amplifier required to perform a particular recording job. To a single recording channel other elements could be added in order to provide more elaborate systems, depending upon the requirements of the user. This unit construction also made available the lightest and most portable recorder for remote "on-location" recording assignments.

INCLUDING
VIDEO
ENGINEERING
SECTION

AUDIO ENGINEERING

SEPTEMBER
1950
35c

COVER

New, compact three-head assembly for Magnecord professional tape recorders. Erase head is at the left, recording head at center, and the playback head—which may be used for simultaneous monitoring of tape output while recording—is at the right. Record and playback heads are triple shielded to eliminate crosstalk and hum, and can be aligned or replaced individually. This new assembly is standard on both PT63 and PT7 equipments, or may be obtained as a conversion kit for PT6 recorders now in the field.

INCLUDING
**VIDEO
ENGINEERING**
SECTION

HE PREFERS

Magnecorder



Radio Engineers Use More Magnecorders Than All Other Professional Tape Recorders Combined

GREATEST FLEXIBILITY

For delayed studio or network broadcasts, you can mount a Magnecorder in a rack or console cabinet. For remotes, slip it into its really portable cases.

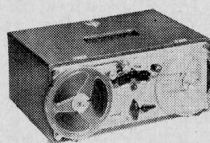
You can add to your Magnecorder equipment as you need it—combine and carry Magnecorders to suit every purpose.

HIGH FIDELITY, LOW COST

No other recorder offers you such high fidelity at such a low price. Users are enthusiastic about the amazing tone quality and low distortion of Magnecorderings. Magnecorder frequency response: 50-15 kc \pm 2 db. Harmonic distortion less than 2%. Meets N.A.B. standards.

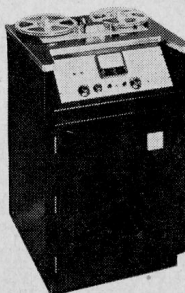
MORE FEATURES

Magnecorder leads the field! Your Magnecorder now can have 3 heads (separate erase, record, and playback) to permit monitoring from tape. Three speeds (15", 7 1/2" and 3 3/4" — up to an hour on a 7" reel) available on both PT6 and PT63 equipment. Dual track heads also available if desired.



PT6 SERIES —
most widely used professional tape recorder in the world.

PT63 SERIES —
3 heads to erase, record, and monitor from the tape.



PT7 SERIES —
A complete console for only \$950.00. Outstanding features and flexibility. Models for portable or rack mount also available.

Write for NEW CATALOG

MAGNECORDER, inc., Dept. A9
360 N. Michigan Ave., Chicago 1, Ill.
Send me latest catalog of Magnecorder equipment

Name.....

Company.....

Address.....

City.....Zone.....State.....

Magnecorder, INC.

360 N. MICHIGAN AVENUE • CHICAGO 1, ILLINOIS

Professional Tape Recorders for every purpose — every purse!

Congratulations to Harvey Radio Co. on its new sound demonstration room. Hear Magnecorders now on display!

LETTERS

Tracking vs. Tracing

Sir:

In the article on pickup tracking in the May issue, I used the word "tracking" to designate the mechanical contact or "fit" between the stylus and the groove. Some consideration was given to the selection of this term as "tracing," as suggested by Mr. E. F. Good (LETTERS, *Æ*, July 1950), is not preferred because of the close association of "tracing" with the term "tracing distortion." As we know, due to the excellent work of Lewis and Hunt as well as others, tracing distortion can occur even though good mechanical contact is maintained between the stylus and the record groove, and my choice of "tracking" was greatly influenced by such considerations. "Tracking error" instead of "tracking" is the term used to designate the angle between the vibration axis of the pickup and a plane containing the tangent to the unmodulated groove. This has been a tentative ASA (American Standards Association) definition for several years and, I believe, is well on its way towards becoming an accepted and generally used standard.

H. E. Roys,
Sound Engineering Section,
RCA Victor Division,
Camden, N. J.

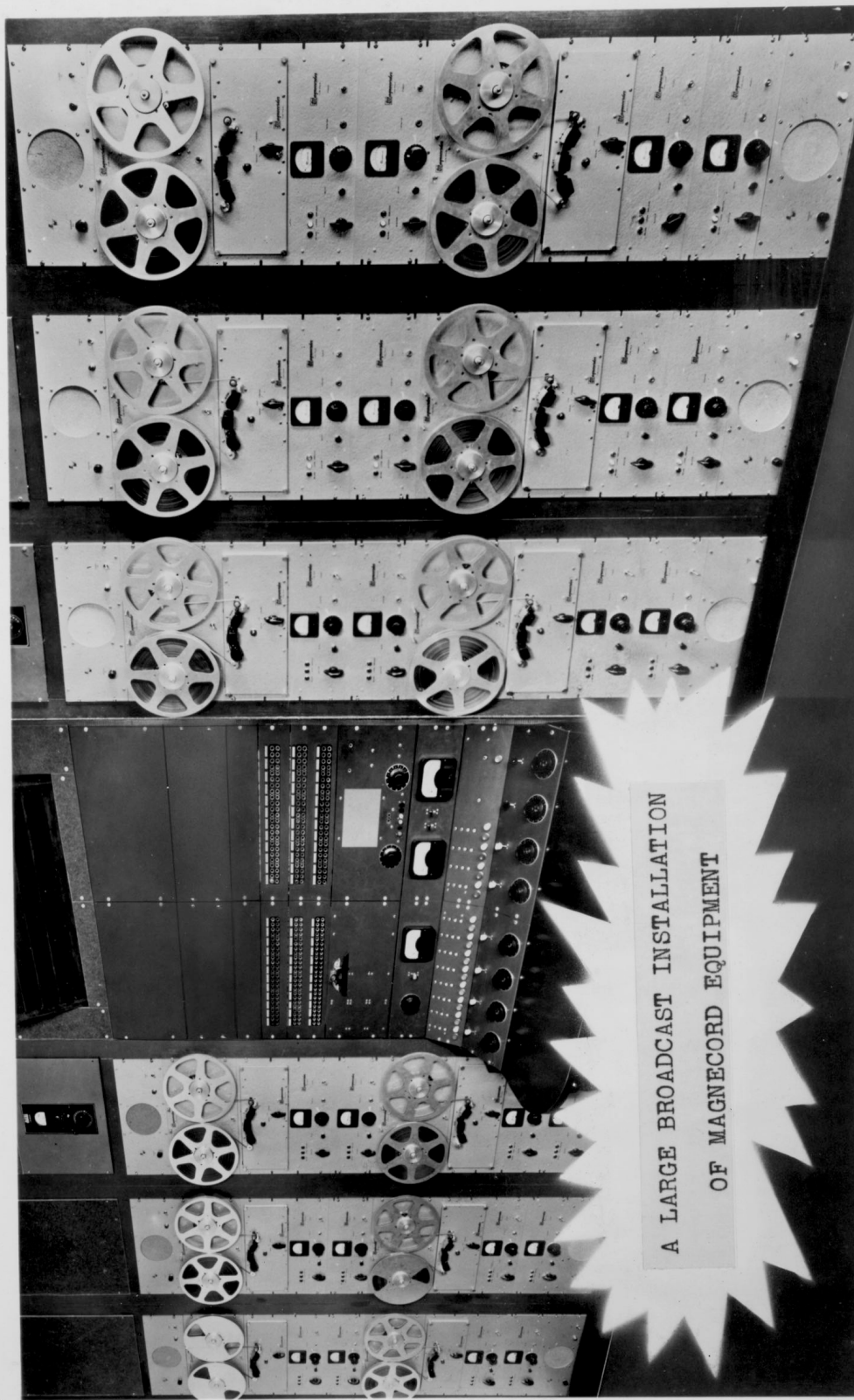
TV Lighting

Sir:

One of the most encouraging things about television is that once in a while we see an adult face on the TV screen which is lighted according to standards which are acceptable either in still photography or in motion pictures. If such a rarity can be achieved once, it can be duplicated and finally become the rule rather than the exception. It is unfortunate that the majority of TV portraits of adults are not lighted satisfactorily but are lighted in the manner commonly used for babies and young children.

I hope Mr. Rackey's article in the July issue is the beginning of better lighting for TV portraits. The key to the present difficulty seems to be Mr. Rackey's Rule III which states "The lighting should not be topky, i.e. directed from too high an overhead angle." If the TV studios will go easy on this rule for a while and begin to raise their key lights in order to produce at least a small nose shadow, we will begin to receive better TV portraits. Anyone who will take the trouble to watch long enough will eventually find a face on TV which is lighted in this manner and, I am sure, be convinced that TV can begin to approach good portrait photography.

Philip L. Bruce,
4753 Faculty Ave.,
Long Beach 8, Calif.





FIELD OPERATION OF MAGNECORD EQUIPMENT
BY THE ARMED FORCES

"Magne Recording"

FOR

- ★ **Broadcasting**
- ★ **Recording Studios**
- ★ **Motion Pictures**
- ★ **Churches**
- ★ **Business**

Brings you wide frequency response with low distortion . . . light weight with dependability . . . flexible arrangement and use . . . economical first cost and operation. Two tape speeds—one for AM quality of both speech and music; and a faster speed for a frequency response covering the complete range of human hearing, with freedom-from-distortion that makes for "presence."

PROFESSIONALS SAY "None Better!" Hundreds of Magnecord units are already in the field, giving heretofore unheard-of satisfaction. Here's what users write:

BROADCASTING STATIONS—" . . . unbelievably flexible for broadcast use, as recorder . . . remote amplifier."—H. E. Wehrman, Chief Engineer, KLZ Broadcasting Co., Denver.

RECORDING STUDIOS—" . . . really high fidelity . . . makes better discs . . . savings are far greater than purchase price."—Bernie Clapper, Universal Recording Corp., Chicago.

UNIVERSITIES—"Magnecord is by far the best equipment of this type that we have used or heard."—Wolfgang Kuhn, Ass't. Professor of Music, University of Illinois.

EQUIPMENT YOU'LL BE PROUD TO OWN AND USE

"Magnecording" is the very best in magnetic recording. Every circuit, every component, every function is the result of intimate knowledge of magnetic tape research and development. Manufacturing processes (including those of purchased items) are constantly checked by rigid inspection and tests.

EASY TO USE

Operation of Magnecord equipment is utterly simple. All connecting plugs are so constructed that each fits only the intended receptacle; thus errors in hook-up are eliminated. Threading the tape into the mechanism is straightforward; and a single switch controls all circuits in the "forward-rewind" process. Another switch on the amplifier panel selects the proper circuits for recording or listening.

LOW MAINTENANCE

Magnecord equipment is designed for and used by professionals everywhere. At certain radio broadcast stations, these units have been in operation 18 hours a day, 7 days a week, for close to half a year *without maintenance of any kind*. That's on-the-job proof that Magnecord is *built right to work right*.

CONTINUED ECONOMY

"Magnecording" is inherently economical in first cost and in both upkeep and operation. Because it is a unit system, you buy only the equipment you need. And when you are ready to expand, merely obtain additional equipment as required. Operating costs are extremely low because magnetic tape can be used over and over. During the recording cycle, the tape first passes through an erase head which *completely removes all previous program material from the tape*, thus giving you a new tape at no cost. In addition, tape can be started and stopped, corrected, edited, combined with other tapes—in short, "Magnecording" offers you flexibility and economy that can soon pay for your equipment.

HARMONIZING BEAUTY

The lustrous grey hammered finish, hard-baked on all Magnecord panels, blends pleasingly with any color combination. Attractive in itself, it lends an air of dignified, yet modern beauty to its surroundings. And the pleasure is enduring, because Magnecord grey is an effect you'll like just as well, after you've looked at it for many years.

Magnecording



PT6-P MULTI-PURPOSE AMPLIFIER

A light weight Record-Playback-Remote amplifier for use with the PT6-A tape recorder. Provides exceptionally clean, high fidelity audio. This handsome unit can also be used as a conventional remote amplifier or as a control console with flat response from 50 to better than 15,000 cps. Broadcasters, schools, and other professional users find the PT6-P amplifier ideal for both studio work and remote pickups.

Three microphone inputs are provided, each with its own mixer control. In addition there is a master gain control for the amplifier output. A bridging circuit permits using the PT6-P with a line level input. Equalization networks are selected automatically as the switch is set to RECORD or LISTEN.

This extremely versatile amplifier is tops for high quality reproduction. The signal to noise measurement is better than 45 db as measured off the tape, with a total harmonic content of less than 2%. Proper weighting and selected tape gives a 10 to 20 db better value. Loudspeaker and headphone jack monitoring facilities are included. Power supply is self-contained. The PT6-P has a black grain leatherette carrying case, for 33-pound portable use.

With a PT6-A tape mechanism and the PT6-P amplifier, all functions of magnetic tape recording and playback can be accomplished. Thus with a minimum of equipment, weight, and investment you can enjoy all the benefits of this thrilling new system of sound reproduction, with knowledge that new tape developments will not antiquate your installation.