INTRODUCING THE

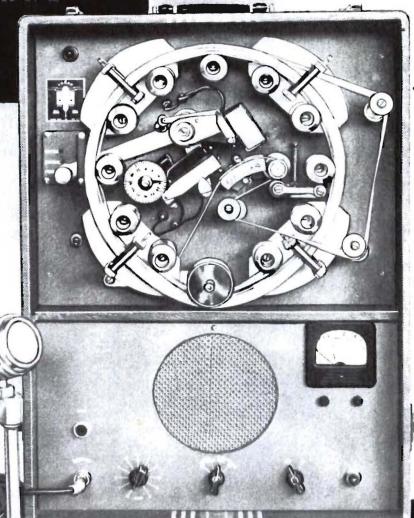
W. S. Research Corporation

1121 VERMONT AVENUE, N. W. WASHINGTON D.C.

CELLOPHANE

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T A P E RECORDER



A new sound recording instrument that records 8 hours of radio programs continuously without supervision . . . an ideal reference recorder for radio stations, advertising agencies and business offices.

FONDA
CORPORATION

29 West 57th Street, New York, N. Y.

THE FONDA TAPE RECORDER

Here is a completely new type of sound recording instrument that combines all the features you have wanted in a reference recorder.

It will record for as long as 8 hours continuously at amazing-ly low cost. A complete 15 minute radio program can be recorded for as little as 12½¢. The recordings, made on inexpensive cellophane tape, are permanent. They can be played hundreds of times. They are easy to file, easy to refer to whenever you like.

The Fonda recorder is simple to install. The complete recording mechanism and amplifier are mounted in a small lightweight carrying case. It can be quickly connected to the radio set in your office or to a program line from your studio. It can be used with a microphone for recording conferences.

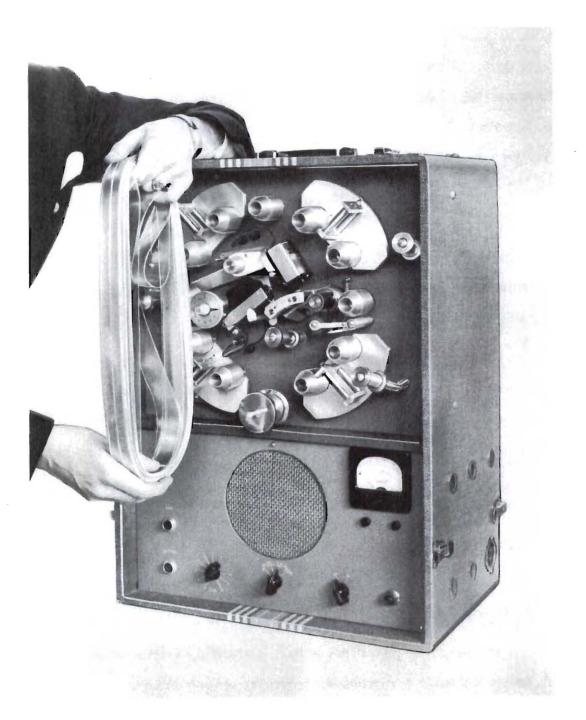
No technical knowledge or experience is needed to operate the Fonda recorder. Simply press a button when the program starts...press another when it ends. That's all there is to recording on this new machine. No supervision is required while recording any monitored program.

The Fonda tape magazine comes to you pre-formed, ready to slip into the machine, simpler than threading a home movie projector. Lower the recording head on the tape and it's ready to record continuously or intermittently for 8 hours.

To play the recording, simply place the reproducer on the tape. Each groove contains 8 minutes of recording making it simple to select

the desired program.

Both the recording and reproducing needles have permanent gem points. Needles do not require changing, shavings are eliminated.



The quality of reproduction obtained from the Fonda recorder depends upon the speed of the tape past the recording needle. For medium quality reference recording a speed of 40 feet a minute is used making the recording cost 50ϕ an hour. To obtain higher quality reproduction a tape speed of 60 feet a minute is used increasing the recording cost to 75ϕ an hour. The cost of recording is thus made proportionate to the quality of reproduction required.

Fonda tape recordings are surprisingly free of surface noise. They will remain quiet and give natural, distinct reproduction of voice or music for years. Fonda tape is non inflammable.

The Fonda recorder cuts 60 grooves on a 350 foot magazine of cellophane tape. A dial calibrated from 1 to 60 moves the pickup to the desired track for playback. The titles of individual programs can be marked directly on the tape. Each tape magazine comes to you in an individual carton with a printed chart for identifying the program material it contains.

Each of the 60 grooves plays 8 minutes. Knowing the approximate time of a program it requires only a minute or two to spot any portion of a recording whether or not the tape has been scored during recording.

Because of its relatively simple construction the Fonda tape recorder is now the lowest priced continuous recorder on the market. It is economical to operate because it requires attention only 3 times in 24 hours. It gives you exceptional reproduction of voice and music because it is designed to make efficient use of an ideal recording medium...cellophane.

DATA FOR YOUR ENGINEER

THE FONDA MODEL "AV" TAPE RECORDER consists of a motor drive system which passes an endless loop of cellophane tape over a ring of idler wheels. One loop of tape passes over a felt bed where the recording stylus embosses a groove of constant depth. A worm and gear system moves the recording head across the width of the tape making a continuous groove at a pitch of 60 grooves to the inch. The sound modulation is applied laterally in the groove. The reproducing head moves freely and is guided by the groove. The amplifier combined with the recorder has a gain of 110 db. and power output of 5 watts. The frequency response is uniform within 2 db. from 50 to 8,000 cycles. Inputs are provided for a high impedance microphone or a balanced wire line.

OVERALL FREQUENCY RESPONSE is determined by the tape speed. At 40 FPM the useful frequency response extends to 3,000 CPS, at 60 FPM the range is extended to 6,000 CPS. The low frequency response extends to 80 CPS.

BACKGROUND NOISE due to combined mechanical vibration and needle friction is 25 db below maximum signal level at 40 FPM and down 30 db at 60 FPM.

SPEED REGULATION is sufficiently accurate to prevent any noticeable "wows" when reproducing sustained tones.

CUTTING HEAD & PICKUP; cutting head, magnetic pickup crystal, having a complementary response range uniform within 5 db from 80 to 6,000 CPS. Cutting head impedance 500 OHMS.

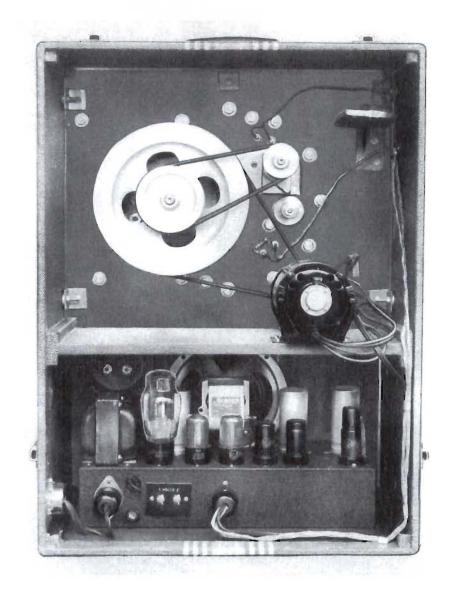
AUDIO POWER LEVELS; normal input to cutting head plus 20 db. Gain required to raise reproducer output to 0 level (.006 W.) 15 db.

IMPEDANCES: amplifier input 500 OHMS and high impedance, output 500-15-8 & 4 OHMS.

CONTROL PANEL contains receptacles for microphone and radio or wire line input, volume control, selector switch for recording and play-back, power switch, volume indicator meter and pinjacks for monitoring headphones.

LOUDSPEAKER: Dynamic, 8" size mounted in amplifier panel.

POWER REQUIREMENTS: Standard recorder operates from 110 volts 60 cycle A.C. and draws 150 watts.



REAR VIEW SHOWING THE EXCELLENT ACCESSIBILITY TO ALL PARTS OF THE FONDA CONTINUOUS RECORDER

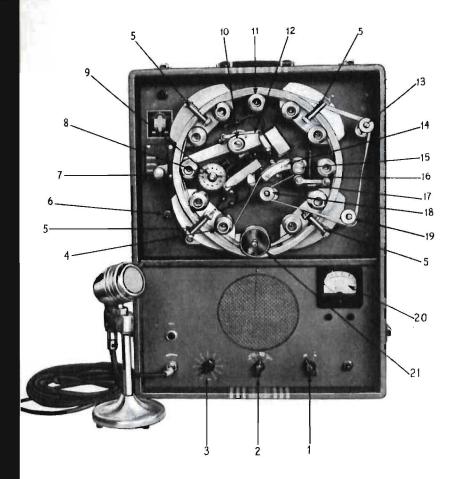
DIMENSIONS & WEIGHT: The recorder and amplifier are mounted in a carrying case which measures, closed, $17" \times 23" \times 13"$ and weighs 53 lbs.

PRICES

Complete Fonda Mo	odel "AV"	Recorder with	microphone	
and stand				\$ 600.00

Fonda tape magazine containing 350 feet of pre-formed cellophane tape giving 8 hours of recording time.... 4.00

Quotations are FOB New York, N.Y. and are subject to change without notice.



RECORDING INSTRUCTIONS - MODEL "AV"

For your convenience the numerals designating the various controls, etc. are arranged in clockwise fashion on the illustration. To make a recording, proceed as follows:

Unfasten the four clips (5)

See that handle (7) is at "Neutral" position.

Place film on top rollers and fasten two top clips (5). * Then place film on lower rollers and fasten two lower clips (5). Lift central bottom roller (21), then lower it on film. Install film with inside of loop to left of roller (4), with film passing under this roller.

* A clip has replaced the top roller (#11) on some models. When this is the case, film is supplied in a small pasteboard sleeve. This sleeve fits into clip.

Place film over recording track (14), around roller (15), to left of roller (18), under roller (19) and over roller (13).

Release spring on pressure roller (16) by placing thumb on lever (17) and pressing down. Push lever (17) down past locking point and allow it to come up.

See that control marked "Gain" (3) on lower front panel is at "O". Turn adjacent knob (2) to "Mic".

Insert plug of microphone cord into socket on panel marked "MICROPHONE". Turn switch knob (1) to "ON". Wait 30 seconds for tubes to heat.

Pull cutter head (12) to outermost position.

Snap on toggle switch (6). Recorder is now operating. See that film is in contact with roller (4), passing over recording track (14), around roller (15), under roller (18) directly to roller (19). Any slack will disappear after machine has run a few moments.

Allow film to run until red line on film passes recording track (14). This is the starting point of the recording. When red line appears in this position, turn off machine by means of toggle switch (6).

Test required level gain (20) by adjusting gain control (3) while person about to record speaks a few words or, in the case of music, plays a few bars into the microphone. Pointer on DB meter (20) should remain within the green portion.

Pull handle (7) outward and raise gently to "CUTTER" position. Snap on toggle switch (6). Machine is now actually recording. Check level gain (20).

NOTE: The cutting head (12) may be removed from film at any given time and instantaneous reproduction may be had by following the PLAYBACK instruction. RECORDING TIME: One complete revolution of the film takes place in eight minutes. Sixty tracks across the film permit 480 minutes of eight hours recording.

PLAYBACK INSTRUCTIONS - MODEL "AV"

When recording is completed, snap off toggle switch (6).

Pull out handle (7) and move to "NEUTRAL".

Snap on toggle switch (6) and allow film to run until red line appears opposite pick-up needle. This will be the starting point.

Snap off toggle switch (6). Turn index dial (8) to left until it stoos.

Pull out handle (7) and move to "PICKUP".

If playback of complete recording is desired, turn $\underline{\mathsf{knob}}$ (9) until pointer is at "0". This places pick-up needle on first sound track. Pointer, however, may be turned to select any other sound track desired.

Turn central knob (2) on lower panel to "PLAYBACK".

Snap on toggle switch (6).

Turn index $\underline{\text{dial}}$ (8) to the right as far as it will go. This will drop the pick-up needle into the sound track selected by operation number six.

Machine is now reproducing. Channels can be changed while machine is running by using control knob (9).

GENERAL INFORMATION

The central control knob (2) on lower panel has four positions, as follows:

MIC RADIO PLAYBACK SPEAKER EXT.

The MIC (Microphone) and RADIO (Tuner) positions are for recording purposes only. The MIC position connects directly with the Microphone. The RADIO connects with external broadcast Tuner, for recording programs directly *off the air*.

The SPEAKER EXT. position is used when an external speaker is desired. The leads of the external speaker should be connected to the terminals in back of amplifier chassis marked "Voice #1 and #2." To the left of these terminals is a plug marked "X". There are four holes in this plug reading clockwise 4, 8, 15 and 500 ohms. Impedance can be changed by moving this plug to either of the four positions.

The iiO volt, 60 cycle AC power plug is on the left side of the case.

CAUTION

When machine is not operating, the lever (17) should be pressed down until it locks. This will prevent flat spots on rollers.

AUTOMATIC STOP: This Fonda machine is equipped with a red light that will flash on 8 minutes before the end of 8 hours recording. The machine will automatically stop when a full 8 hours of recording is completed.

CLEANING INFORMATION: A kit consisting of felt pads, a bottle of carbon tetrachloride and a bottle of denatured alcohol is supplied with each machine.

The recording track (14) should be cleaned with felt pad saturated with carbon tetrachloride whenever necessary.

The drive roller (15) should be cleaned frequently with a felt pad saturated with alcohol.



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