

# AMPERITE VELOCITY (RIBBON) MICROPHONE

## UNUSUAL OPPORTUNITY TO IMPROVE YOUR OUTPUT

The new Amperite Velocity Microphone is the easiest way to improve any public address or studio installation. Your audience will notice the improvement — the clearer, more natural tone . . . When the sound man drops peas on the kettle drum, over the ordinary mike it sounds like rain. *Over the Velocity mike it sounds like peas dropping on the kettle drum. Brings you face to face with the performer.*

**ITS DIRECTIONAL QUALITY** is a highly desirable one because it helps to reduce acoustical feedback and reverberations; also helps to eliminate undesirable noises. If any noise originates from a nearby source it is possible to eliminate it or reduce it to a minimum by placing the microphone at 90° from said source.

**ELECTRICAL CHARACTERISTICS.** Frequency response, 42 to 10,000 C.P.S. (Maximum difference 1 db.) . . . **OUTPUT**—90 decibels . . . **OUTPUT IMPEDANCE** 50 and 200 ohm. Other values if requested.

**MECHANICAL CHARACTERISTICS.** Highest Cobalt steel magnets, insuring extremely long life . . . Ribbon of specially treated Aluminum alloy that can't be stretched or distorted out of shape. Not affected by temperature, pressure or humidity . . . Bronze and steel case provides complete shielding.

**MODEL RA-1** . . . Especially designed for public address. Gives minimum amount of acoustical feed back and best voice quality. Can also be used for music.

**MODEL RAE** . . . For studio use. Similar in construction to the regular model RA-1, has greater frequency range, and slightly higher output. Also includes laboratory grade transformer.

**STANDARD TRANSFORMER** . . . A laboratory made transformer with the very best grade of specially annealed Silicon Steel. Not to be confused with ordinary transformers. Can be used for public address or studio. Frequency 60 to 10,000 C.P.S. (1 db. difference).

**LABORATORY TRANSFORMER** . . . Highest grade transformer obtainable. Grid windings 150,000 ohms. Nickel alloy core, frequency range 25 to 15,000 cycles. (1 db. difference).

Our transformers are especially designed for our microphones. **DO NOT USE ANY OTHER.**

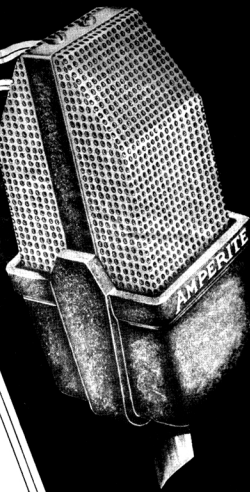
## AMPERITE CONDENSER MICROPHONE



A truly professional microphone. Made with micrometer accuracy and tested over the entire audible range. No hiss—no background noises. Reproduction is life-like. Excellent for public address, radio or recording. Specially annealed duraluminum diaphragm—stretched so that resonant point is far above audible range. Diaphragm comes mounted. Fully enclosed, protected against dust and climatic changes. Complete kit of parts with instructions for assembly and pre-amplifier. Shipping weight 4 lbs.

**KIT** . . . List price \$8.00  
**Factory ASSEMBLED and tested** . . . List, \$10.00  
**Special supersensitive studio type, factory assembled and tested** . . . List, \$15.00  
**Standard replacement diaphragm—mounted.** List, \$1.00  
**Supersensitive diaphragm.** List \$2.00

Dealer's Discount 40% (least of Rockies)



Complete instructions and amplifier diagram.  
 Shipping weight 4 lbs.

**RA-1, List Price** . . . . . \$25.00  
**RAE, " "** . . . . . \$35.00

Both of the above models are **ASSEMBLED**, factory tested, complete with housing and R. L. Transformer.

**KIT RK-1, List price** . . . . . \$15.00  
 Transformer Extra

## REPLACEMENT RIBBONS

Standard (package of 2) List \$1.25  
 Supersensitive (package of 2) List \$1.75

## TRANSFORMERS

Due to small energy pickup properly matched and designed transformers are very necessary. R.L.—Ribbon to Line (50 and 200 ohms). R.G.—Ribbon to Grid (not recommended). L.G.—Line to Grid (50 and 200 ohms input). P.L.—Plate to Line (200 and 500 ohms output)

	Standard	Lab*
R.L. — P.L.	\$5.00	\$10.00
L.G. — R.G.	\$6.00	\$12.00

\*Lab. — laboratory grade

Flexible Coupling for stand . . . . . List\* \$2.00

# AMPERITE Corporation

561 BROADWAY

NEW YORK

# AMPERITE SUPERIOR RIBBON (VELOCITY) MICROPHONE

The Amperite Ribbon Microphone---is carefully assembled and thoroughly tested over the entire audible range. Although low in cost, it will give excellent performance. It brings the best in microphones within your reach. Installing an Amperite Ribbon or Condenser Microphone is the easiest and least expensive way to greatly improve any installation.

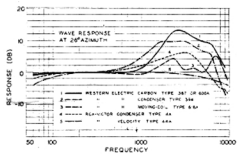


Figure 1—Frequency response characteristics for several standard commercial types of microphones (Ballantine).

sounds. A simple test to show that high frequencies are not lacking is to try to reproduce sounds that have a high frequency content, such as keys jingling, hand clapping, and foot steps, and compare it at the same time with a diaphragm type microphone. High frequency speakers such as "tweeters" should be used for this test. The difference will be obvious.

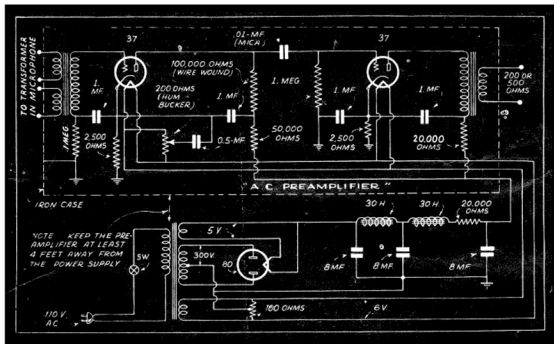
An increased response at the higher frequencies is in many cases advantageous, as in announcing. It is simple to alter the response of the Velocity Microphone so as to obtain an accentuated high frequency response similar to the condenser or moving coil microphone. The way of accomplishing this is shown in Fig.2

## PRE-AMPLIFIER

Two stages of pre-amplification bring the output level of the ribbon microphone to a value of -35 db. which is the same as the average carbon microphone.

Either the battery operated or A.C. operated pre-amplifier can be used. Either should be placed in a fully shielded steel or iron container. External battery leads should also be shielded.

It is of course, important that the transformer in the microphone match the input transformer of the pre-amplifier. A microphone with a 50 ohm output however, can be fed into a 200 ohm pre-amplifier without affecting the frequency response---the gain will be down approximately 2 db. A high impedance microphone should never be fed into a lower input transformer.



The performer should stand at least 12 inches from the microphone. If it is necessary to stand closer, talk away from the microphone as shown in Fig. 4

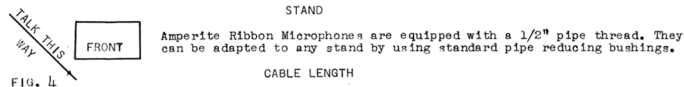


FIG. 4

Amperite Ribbon Microphones are equipped with a 1/2" pipe thread. They can be adapted to any stand by using standard pipe reducing bushings.

## CABLE LENGTH

The Velocity Microphone can be operated at a considerable distance from the pre-amplifier. This distance depends upon the selected output impedance. With a 50 ohm output, it is not advisable to use a line longer than 200 feet. For longer lines use 200 ohm output. With the lower output impedance, the noise induced in the line by external sources are at minimum.

A shielded cable should be used between the microphone and pre-amplifier.

The cable between the pre-amplifier and the main amplifier can be any length desired depending upon the output of the pre-amplifier.

## TRANSFORMERS

It is of extreme importance that the input transformers of the pre-amplifier be of the proper design. We recommend our standard grade transformers for public address---our laboratory grade transformer for studio work. The line to grid transformer should have a secondary impedance not exceeding 100,000 ohms. A higher value will deliver a higher gain at the cost of high frequencies. Only transformers especially designed to handle the minute voltages generated by the ribbon microphone should be used.

## GUARANTEE

All Amperite Microphones and parts are guaranteed against any manufacturing defects. We will be happy to test any microphones which you feel are defective.

For those not experienced in handling ribbon microphones, a little difficulty might be encountered in obtaining best results. Please feel free to consult our Engineering Department on any problems which you might encounter in using our microphones.

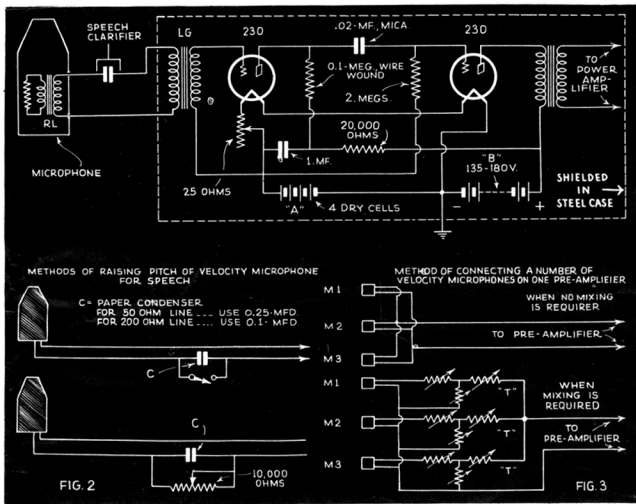
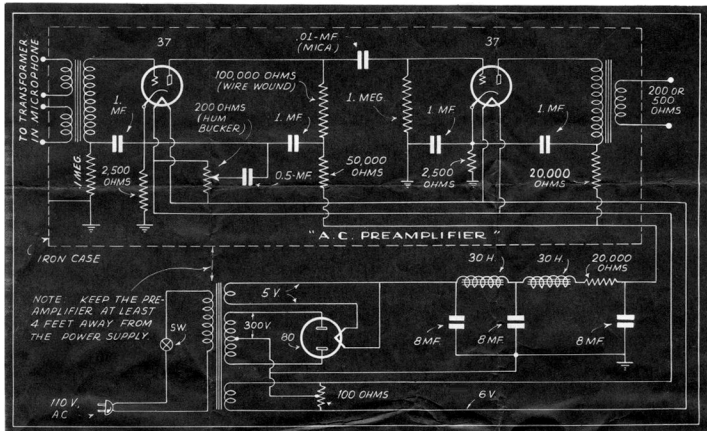


FIG. 2

FIG. 3

AC PRE-AMPLIFIER  
FOR  
VELOCITY MICROPHONE



IT IS POSSIBLE TO USE THE POWER SUPPLY OF THE MAIN AMPLIFIER FOR THE ABOVE PRE-AMPLIFIER. THE "B" VOLTAGE IS NOT CRITICAL AND CAN BE ANY VALUE BETWEEN 100 AND 300 VOLTS. A SEPARATE TRANSFORMER SHOULD BE USED FOR THE HEATERS. THIS TRANSFORMER MUST DELIVER 6 VOLTS AT 0.6 AMPERES.

ALL THE RESISTORS ARE OF THE CARBON TYPE -1 WATT- EXCEPT THE 100,000 OHM. THE LATTER SHOULD BE WIRE WOUND FOR NOISELESS OPERATION. THE CONDENSER MARKED .01 MUST BE A HIGH GRADE PAPER CONDENSER OR PREFERABLY ONE USING MICA DIELECTRIC.