

# Reslo RV Ribbon Microphone . . .

. . . is backed by more than fourteen year's experience with these difficult instruments, and a production exceeding that of any other maker the world over.

The design features a unique low corrosion Duralumin ribbon which is formed by heat treatment and permanently retains its original characteristic no matter how subjected to excess pressures. General practice is to use aluminium foil for the purpose, which is highly erratic in production and unduly fragile in use. Such ribbons are formed by bending only, and are thus unable to withstand certain operational hazards commonly arising in practice. The use of a hard alloy permits thinner rolling to close limits, and a standard of 2½ microns is held reliably within a few per cent tolerance and delivers an element not inferior in life or stability to the immensely heavier structures of coil dynamic systems.

It is from this feature that the ribbon microphone can derive paramount advantage over all other types, for in this instance a total area of .15 sq. in., and such minute thickness provides a wholly negligible mass without mechanical resonance anywhere in the useful frequency range; thus no kind of correction network is necessary or desirable. It follows that a flat response is inherent to such design, and if it be that the magnet system can introduce unwanted effects, they are of small account and capable of elimination.

A ribbon dynamic design may exhibit any of a velocity, pressure, or uni-directional response and, to a limited extent, a combination of all three. In no case can variation from one to another be wholly avoided; thus it is a matter for a compromise that yields the most desirable performance of maximum utility. Polar sensitivity of a velocity design is bi-directional and sensibly dead to sounds impinging from sides and parallel to ribbon. At high frequencies the arc narrows, or can show a pressure response. A great objection for other than studio work, is that bass rises sharply with decreasing source distance and there is a curious mid-frequency peak which is troublesome for feedback.

The RESLO design overcomes these disabilities by a simple acoustic device which renders the polar response Cardioid at high frequencies, thus a broad arc of sensitivity; the front to back discrimination at 10 k.c/s is around 20 db, reducing to 2 db at 1 k.c. Response then becomes bi-directional, but the unwanted bass increase is hugely reduced and the cavity peak does not occur. It will be seen that, in difficult acoustic conditions, it is easily possible to eliminate reflections or feedback troubles without loss of high frequency response. It can be said with certainty that no other microphone can equal the sound level producible in such circumstances.

Contrary to general belief, the ribbon does not of a nature exhibit an efficiency lower than a coil dynamic, the reverse is in fact the case. The coil system has peaks which enhance the output, and the better it is the more it reduces to the ribbon level. Another reason lies in the simplicity of obtaining a high energy in a circular gap as opposed to the high leakage slit gap. With magnet development the problem has advanced towards solution, and there is every reason to believe that the small reduction in output now obtaining will eventually disappear.

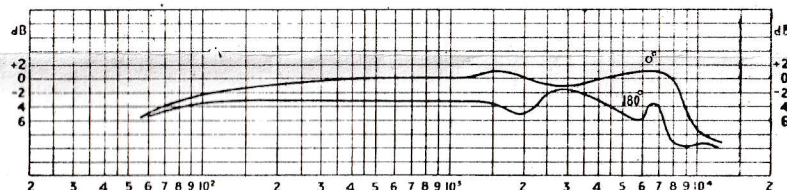
The output level is entirely adequate for any purpose, provided that amplifier design keeps pace with the quality of the transducer. The gain available should enable full loading from an input not higher than ten millivolts, and with low noise. The RESLO ribbon system by its very small size has a much lower induced hum when compared with the large ribbons, and does not call for any precautions other than keeping clear of A.C. fields such as may occur near the mains transformer. The likeliest source of trouble is the grid coupling transformer when wired into the amplifier, which in general is a poorly developed technique. The proper approach is to use a transformer in a circular MUMETAL shielding can which is mounted horizontally in a clip and electrically insulated therefrom with a strip of felt. The clip should have single hole fixing to the chassis and thus the can becomes rotatable simultaneously on two axes, with two 180 degree fixed positions on the third. By these means the hum field may be accurately scanned for a null point. A suitable clip is obtainable from the hardware store, its normal purpose being a fixing for automobile tools. It should be carefully noted that grounding of the can is effected solely by the screening leads from the transformer and that a balanced line primary is desirable. Trial of this method will convince that no other has a chance of exact balance.

The ribbon has a long life; but accidents do occur, and provision has been made for easy servicing without return to the factory. A replacement assembly is available, consisting of a ribbon correctly tensioned to a Bakelite frame; this is exchangeable by loosening four clamp nuts and requires but a little care to revert to original performance. This feature is exclusive to RESLO designs.

The microphone casing permits free air flow around the sensitive element and houses a matching transformer to any standard output impedance. It tilts over an arc of 90 degrees for universal placement. The ribbon is triple screened from blast.

Connection is by 3-pin shielded plug.

## FREE FIELD RESPONSE TYPE RV MICROPHONE



### Dimensions of head :

- Diameter 2" (50 mm.)
- Length 3½" (82 mm.)
- Weight 24 ozs (700 gr.) 18 ft. cable set 16 ozs. (400 gr.)
- Finish, Grey and Chrome.
- Thread for stand attachment :  
 ¼" x 26 threads (British standard) ; or  
 ⅜" x 27 threads (American standard)

### Output impedances :

- Code RVA 30/50 ohms. Colour dot on plug base—White
- Code RVB 200/250 ohms. Colour dot on plug base—Green
- Code RVC 500/600 ohms. Colour dot on plug base—Blue
- Code RVD 10,000 ohms. Colour dot on plug base—Yellow
- Code RVH Hi-Z (Direct to grid) Colour dot on plug base—Red

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