

Electrical Research Products Division
of
Western Electric Company
INCORPORATED

TECHNICAL INFORMATION BULLETIN

**SUBJECT: OPERATING AND MAINTENANCE INSTRUCTIONS ON
639-A, 639-B AND RA-1142 TRANSMITTERS**

mitter, is a rotary type with the shaft cut flush with the outside of the case. A slotted head can be rotated by means of a screwdriver.

The overall dimensions of the case are approximately $3\frac{1}{2}'' \times 4\frac{1}{2}'' \times 5\frac{1}{2}''$ long with a 2" shank increasing the overall length to $7\frac{1}{2}''$. The assembled transmitter weighs approximately $3\text{--}3\frac{3}{4}$ pounds. An aluminum gray lacquer is used as the finish with contrast provided by the bright metal polish of the joining beads for each section and the ring serving as a spring for the plug locking pin.

The inside of the case is lined with black chiffon. Each transmitter is provided with a suede cloth bag closed by a zipper fastener, which should be retained as a dust tight cover for the transmitter when not in use.

RA-1142 Type

The RA-1142 Transmitter is housed in a cylinder made of perforated metal approximately $\frac{1}{8}''$ in diameter with spun metal ends. It is fastened by machine screws to an internal frame which incorporates a housing at one end for a Cannon plug. The overall length to the end of the housing for the plug is approximately 7".

Fastened to the inside frame are four Lord mountings which suspend the working assembly of the transmitter. A small window of lucite permits visibility of the switch position on the inside assembly. The switch position can be changed by means of a screwdriver passed through a hole close to the window.

A 6" ball which is fastened to the frame by means of threaded studs and knurled nuts provide a flexible means of support. The case is painted a dull black color and lined on the inside with black chiffon.

The total weight of the transmitter, including ball, is approximately $4\frac{1}{2}$ pounds.

OPERATION

General

The 639 Type Transmitter may be mounted with the plug shank vertical on a 22-A or 24-A Transmitter Mounting, or suspended from an overhead position by an 11-A Transmitter Attachment with the face (side opposite switch) pointed toward the source of the desired sound.

The RA-1142 Transmitter is normally suspended by its ball from a studio boom in an overhead position with the pressure diaphragm (side opposite switch) facing downward, and so tipped that the plug end is slightly higher than the opposite end.

The desirable pattern to be used for a particular pickup situation can be determined by listening tests. Switch position "C" provides a full cardioid pattern and is the one most generally used for the normal situation while switch positions 1-2-3 on the 639B and RA-1142 Transmitters provide additional patterns of a modified cardioid form which are useful for unusual pickup conditions. The switch positions "A" and "D" are also available on the three types of transmitters when the semi-directional characteristics of a ribbon transmitter or the non-directional characteristics of a dynamic or pressure type transmitter are desired. The output level for the "B" and "R" positions is 6 db lower than for the "C" position.

Characteristics

Frequency Response - Essentially uniform throughout the frequency range from 40 to 10,000 cps. The response tends to drop somewhat beyond 3000 cps for the modified cardioid patterns secured on switch positions #1, 2 and 3, with the maximum drop occurring on position #3.