TYPE F30 TRANSDUCER

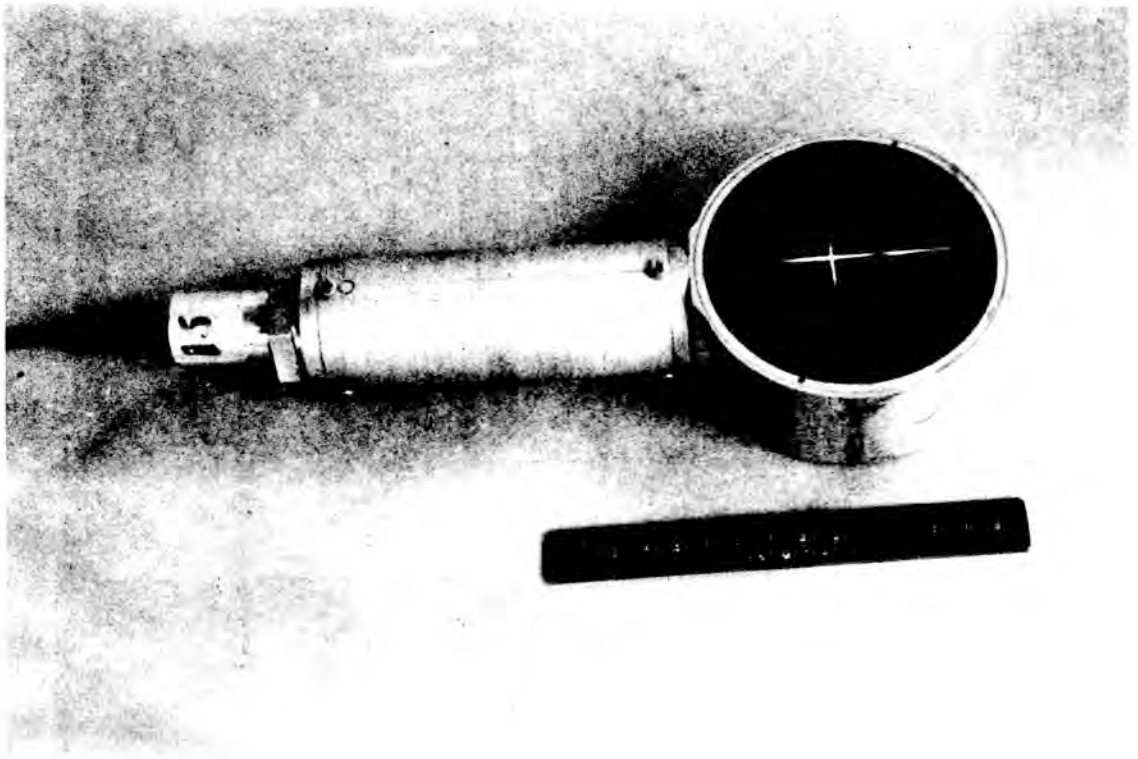


Fig. F30-1 - Type F30 transducer.

FUNCTION: A general purpose transducer for an exceptionally wide range from high audio frequencies to 150 kHz, with stable performance over extended ranges of hydrostatic pressure and temperature. Reversible but designed and used primarily as a projector.

DESIGN: A 5.0X3.8 cm array of 12 lithium sulfate crystals with tungsten backing plates, in an oil-filled steel housing, and with a transformer with a turns ratio of 30:1 to reduce the output impedance.

FREQUENCY RANGE: 10 to 150 kHz
TVR: See Fig. F30-2
MAXIMUM DEPTH: 2410 m
TEMPERATURE RANGE: 0 to 35°C
MAXIMUM DRIVE SIGNAL: 6.0 V or 0.5 W. Monitor driving current for distortion
ELECTRICAL IMPEDANCE: See Fig. F30-3
DIRECTIVITY: See Figs. F30-5 and F30-6 for patterns in the horizontal (XY) and vertical (XZ) planes.
WEIGHT: 3.2 kg (7 lbs)
SHIPPING WEIGHT: 11 kg (25 lbs)
NORMAL CABLE LENGTH: 30 m

CABLE CODE: Two conductors balanced output signal
Shield low signal output

INSTRUCTIONS FOR THE USER: See Appendix D for preparation for use
Clamp hangers on upper cylindrical transformer housing
For acoustic center, see Fig. F30-4 and use the center and front of the array

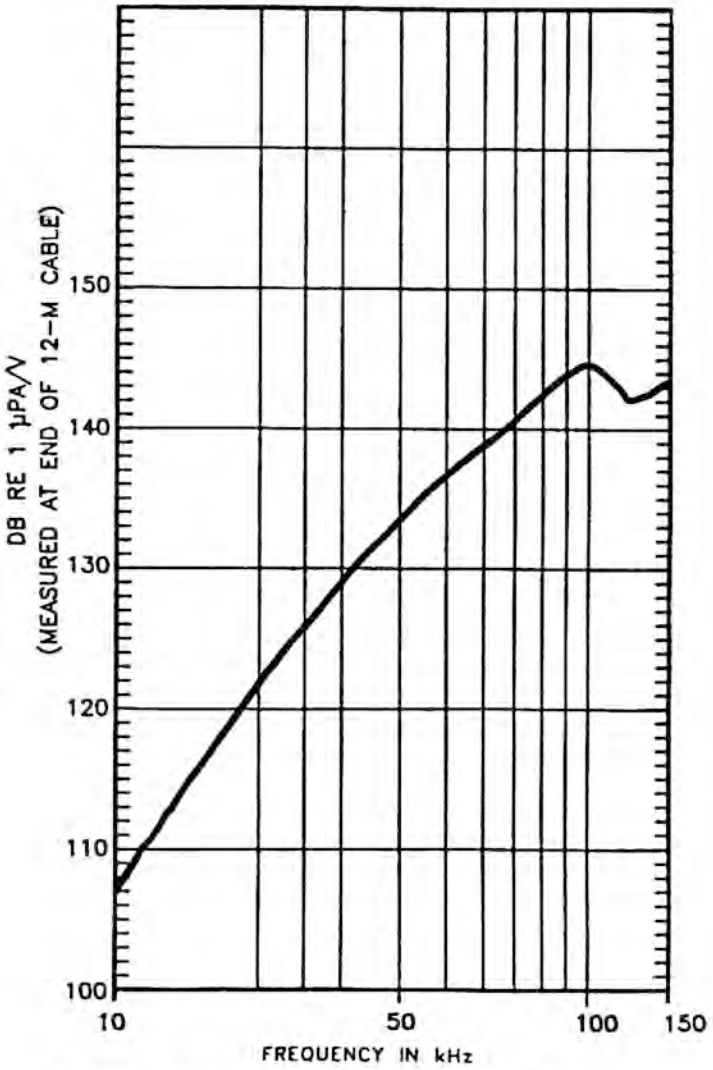


Fig. F30-2 - Typical TVR for Type F30 transducer.

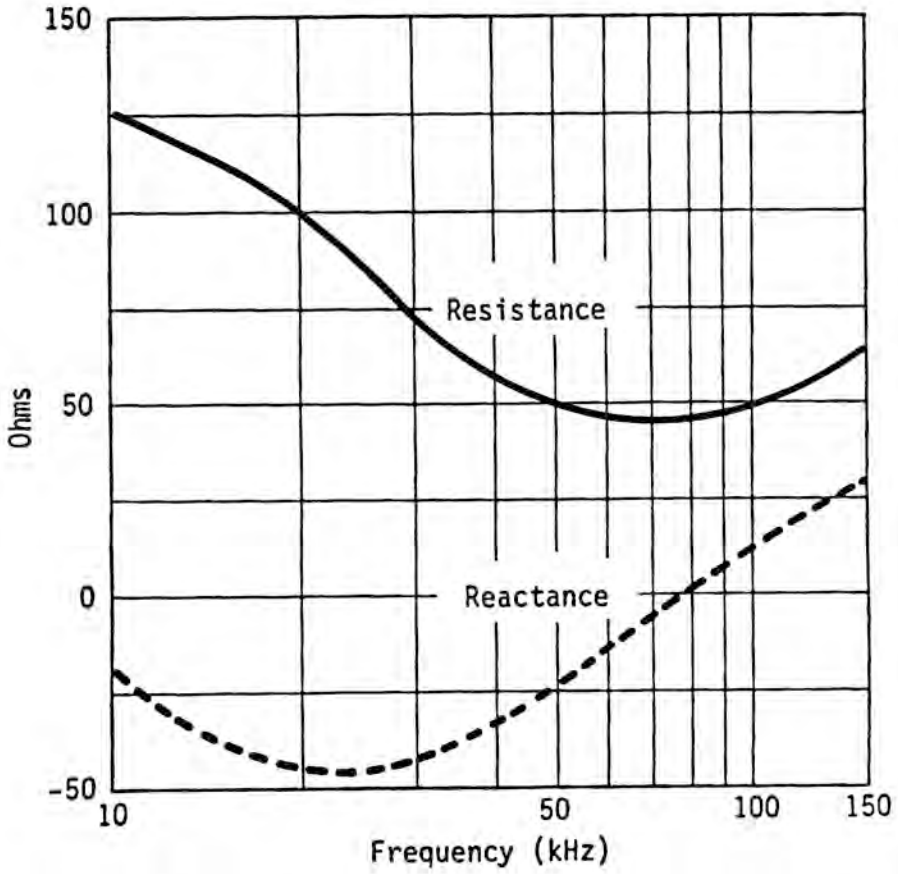


Fig. F30-3 - Typical equivalent series impedance for Type F30 transducer.

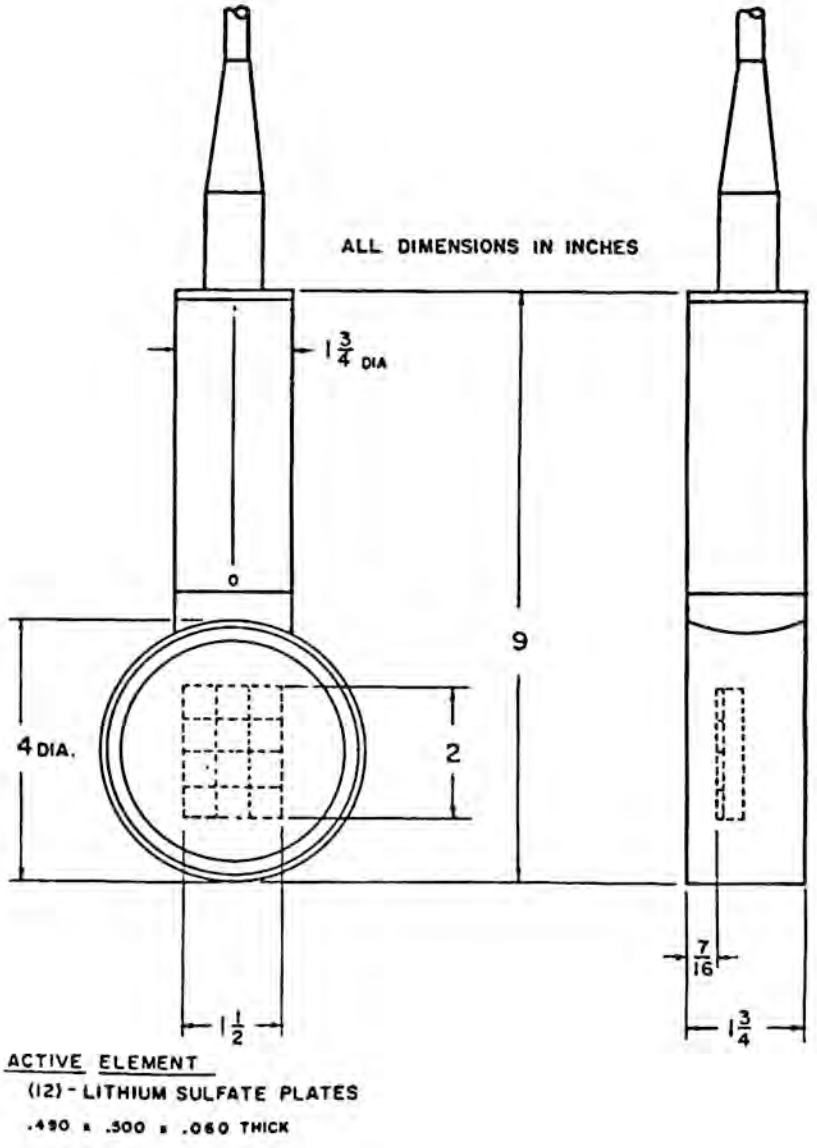


Fig. F30-4 - Dimensions (in cm) and orientation of Type F30 transducer.

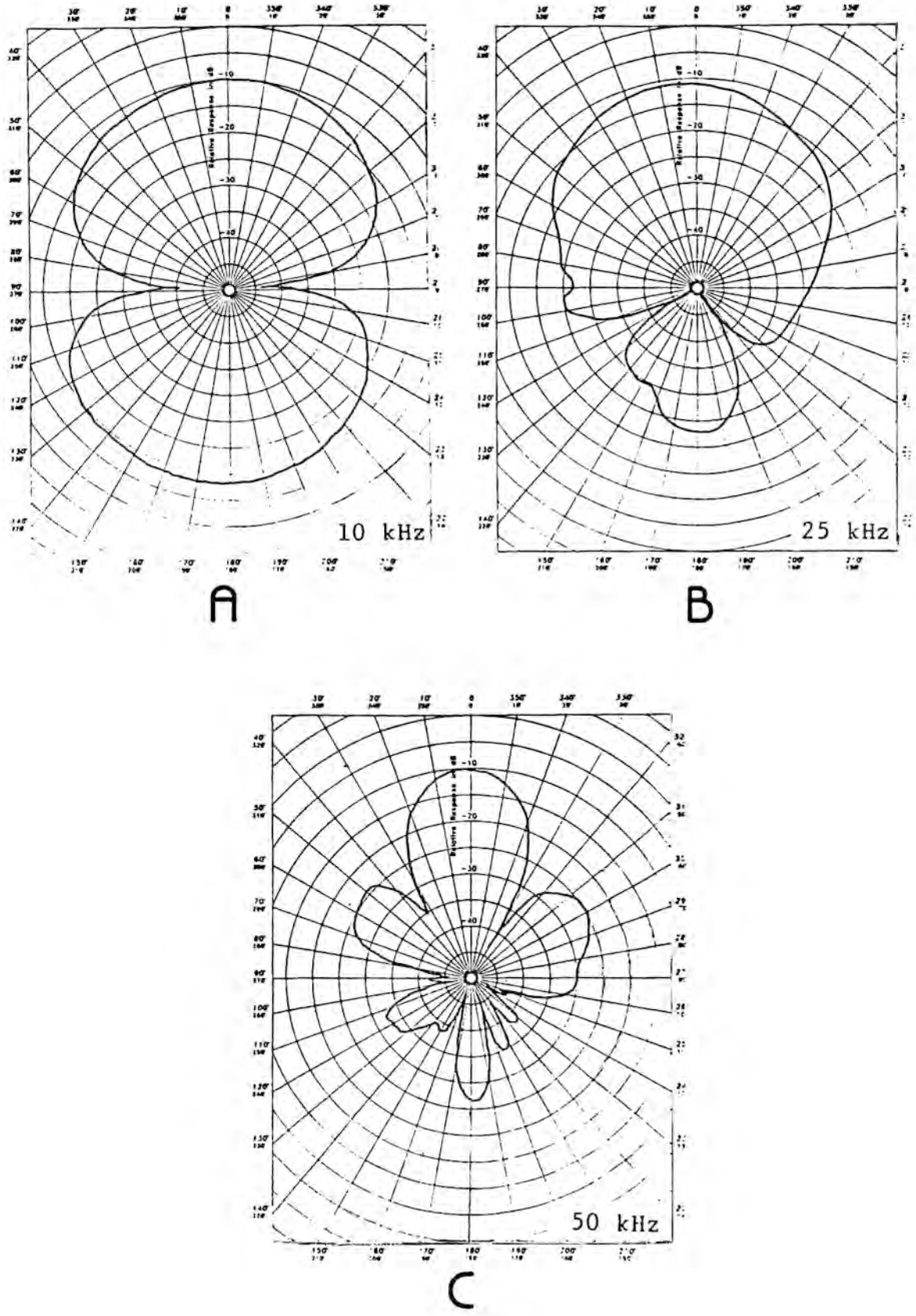


Fig. F30-5

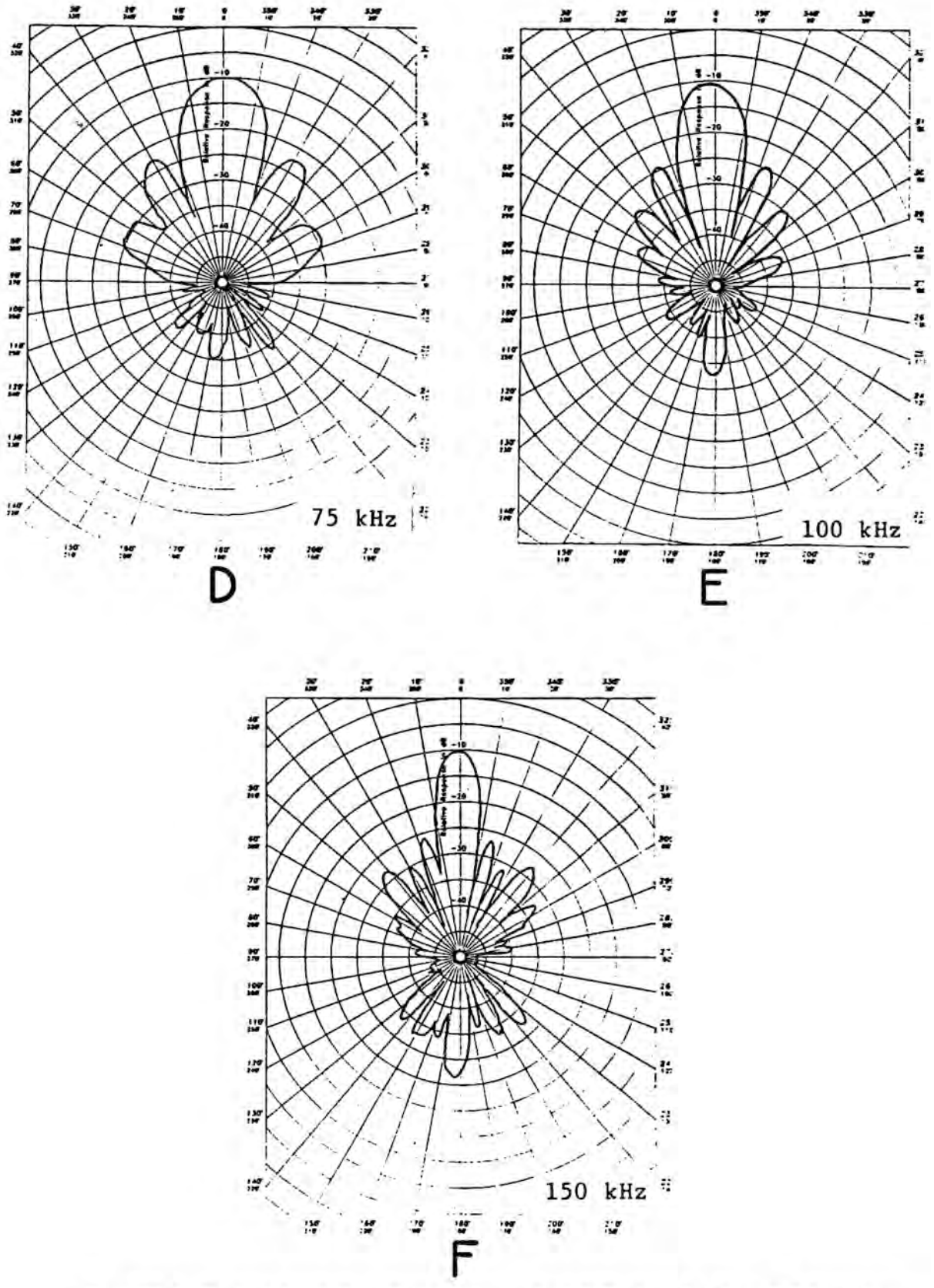
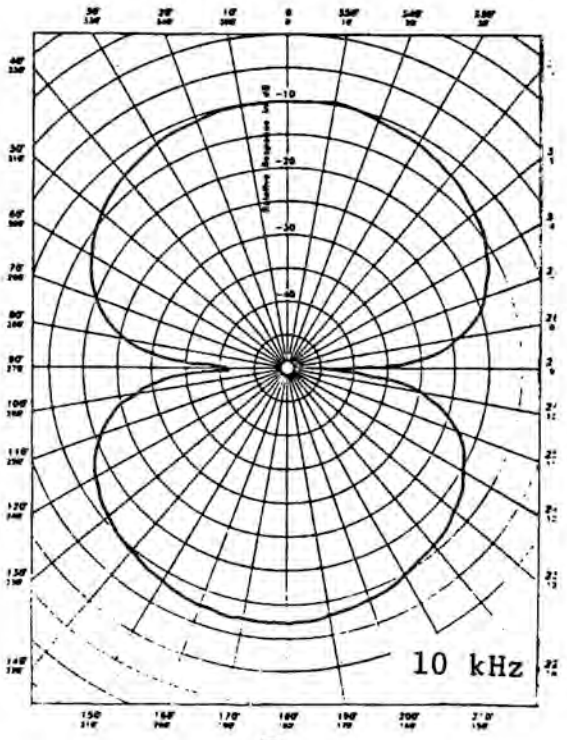
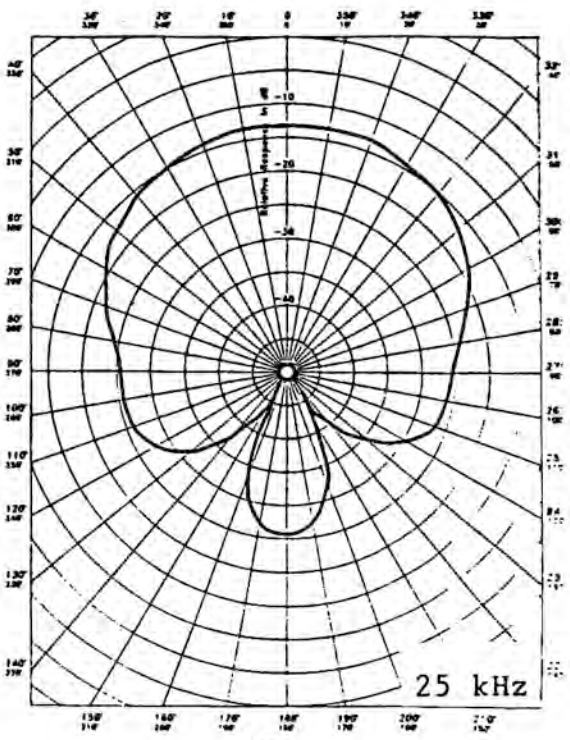


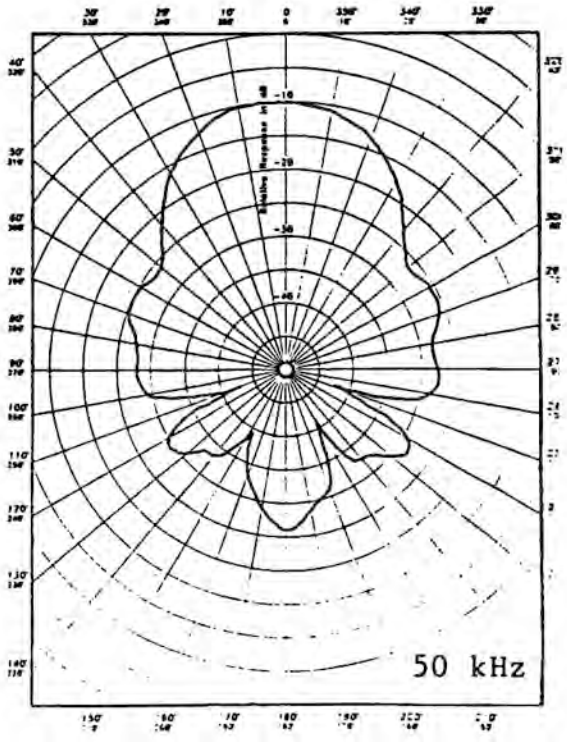
Fig. F30-5 - Typical directivity patterns in the vertical (XZ) plane for Type F30 transducer. Scale: center to top of grid of each pattern is 50 dB.



A

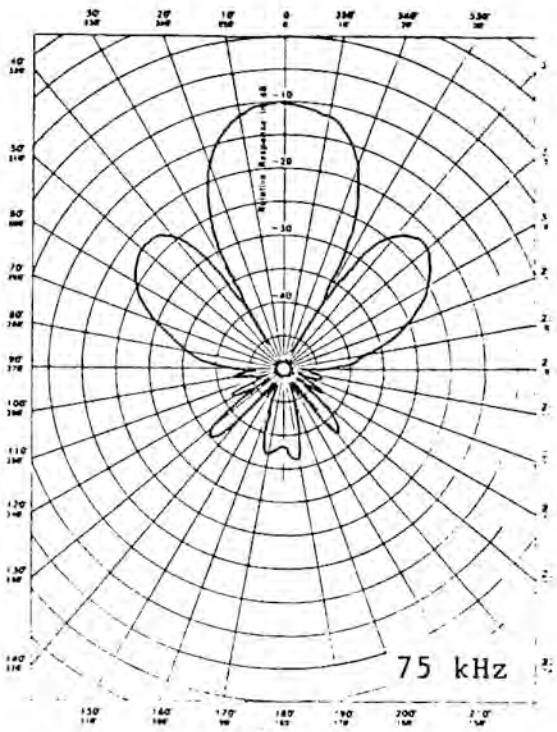


B

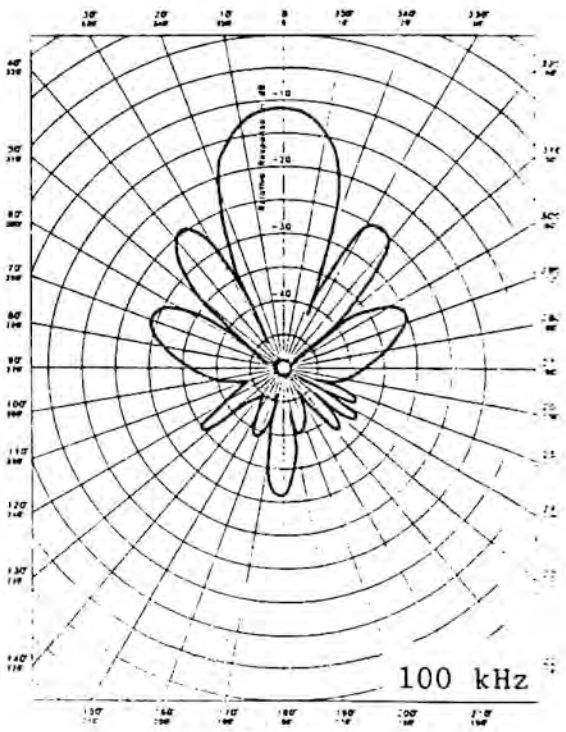


C

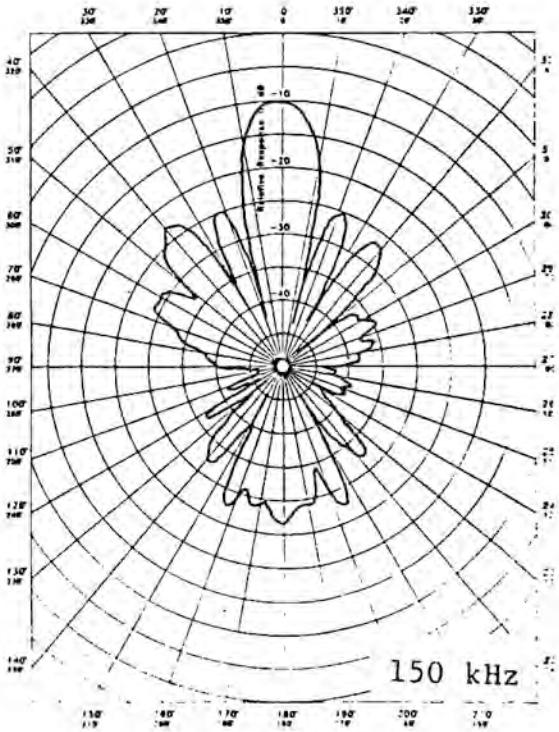
Fig. F30-6



D



E



F

Fig. F30-6 - Typical directivity patterns in the horizontal (XY) plane for Type F30 transducer. Scale: center to top of grid of each pattern is 50 dB.