TYPE F27 TRANSDUCER

Fig. F27-1 - Type F27 transducer

FUNCTION: A general purpose directional transducer for the high audio and low ultrasonic frequency range with stable performance to deep depths. Reversible but designed and used primarily as a projector.

DESIGN: A 21.4-cm-diam circular array of 55 lead metaniobate disks with tungsten backing plates, oil-filled, with a rubber window.

FREQUENCY RANGE: 1 to 40 kHz
TVR: See Fig.F27-2
MAXIMUM DEPTH: 3500 m
TEMPERATURE RANGE: -5 to 40°C
MAXIMUM DRIVING SIGNAL: 500 V rms
ELECTRICAL IMPEDANCE: See Fig.F27-3
DIRECTIVITY: See Fig. F27-4 for patterns in the horizontal (XY) plane. The patterns are approximately the same for the vertical (XZ) plane.
WEIGHT: 15 kg (33 lbs)
SHIPPING WEIGHT: 24.5 kg (54 lbs)
NORMAL CABLE LENGTH: 30 m

CABLE CODE: Two conductors that can be used with either balanced or unbalanced electrical potentials.

INSTRUCTIONS FOR THE USER: See Appendix D for preparation for use.
A rigging hanger is a permanent part of the transducer.
The acoustic center is the middle of the rubber window (see Fig. F25-5).

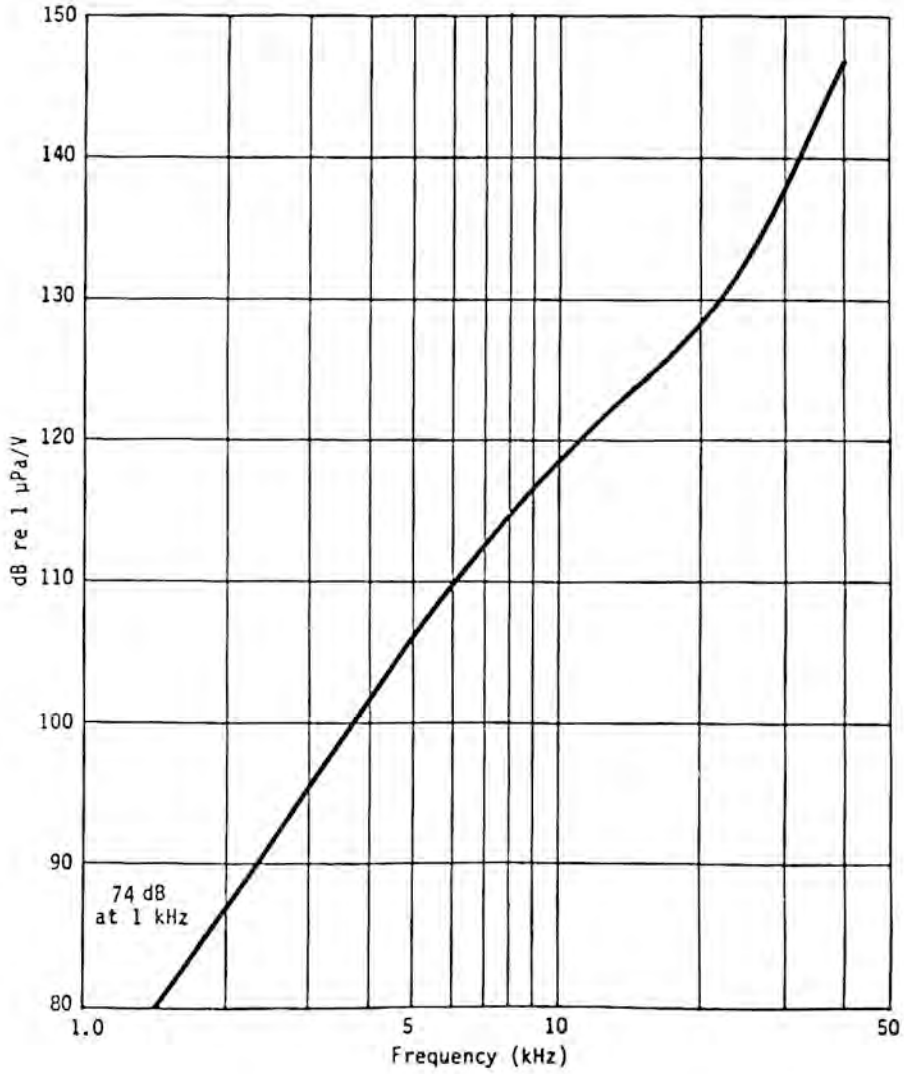

Fig. F27-2 - Typical TVR for Type F27 transducer.

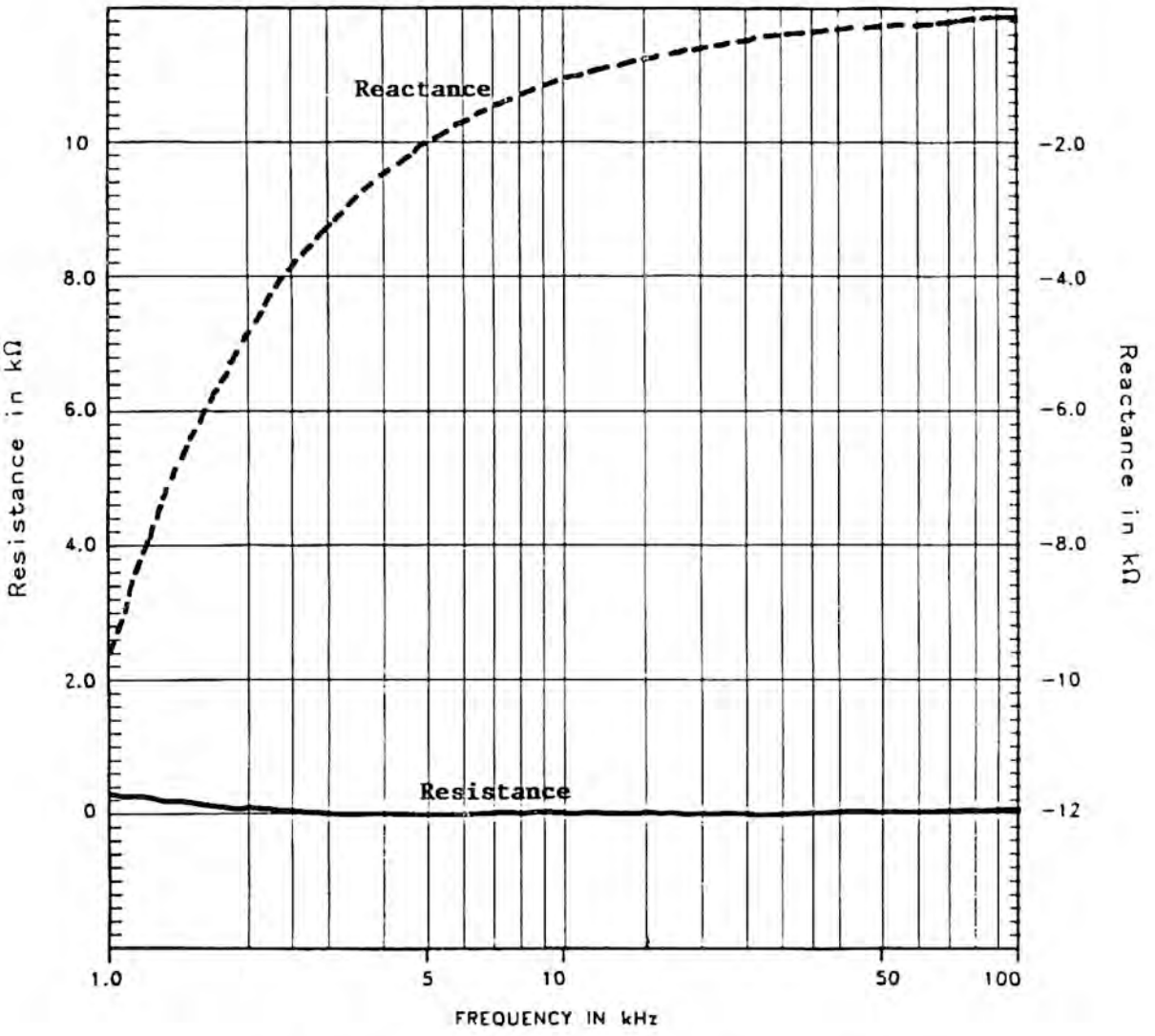

Fig. F27-3 - Typical series impedance for Type F27 transducer.

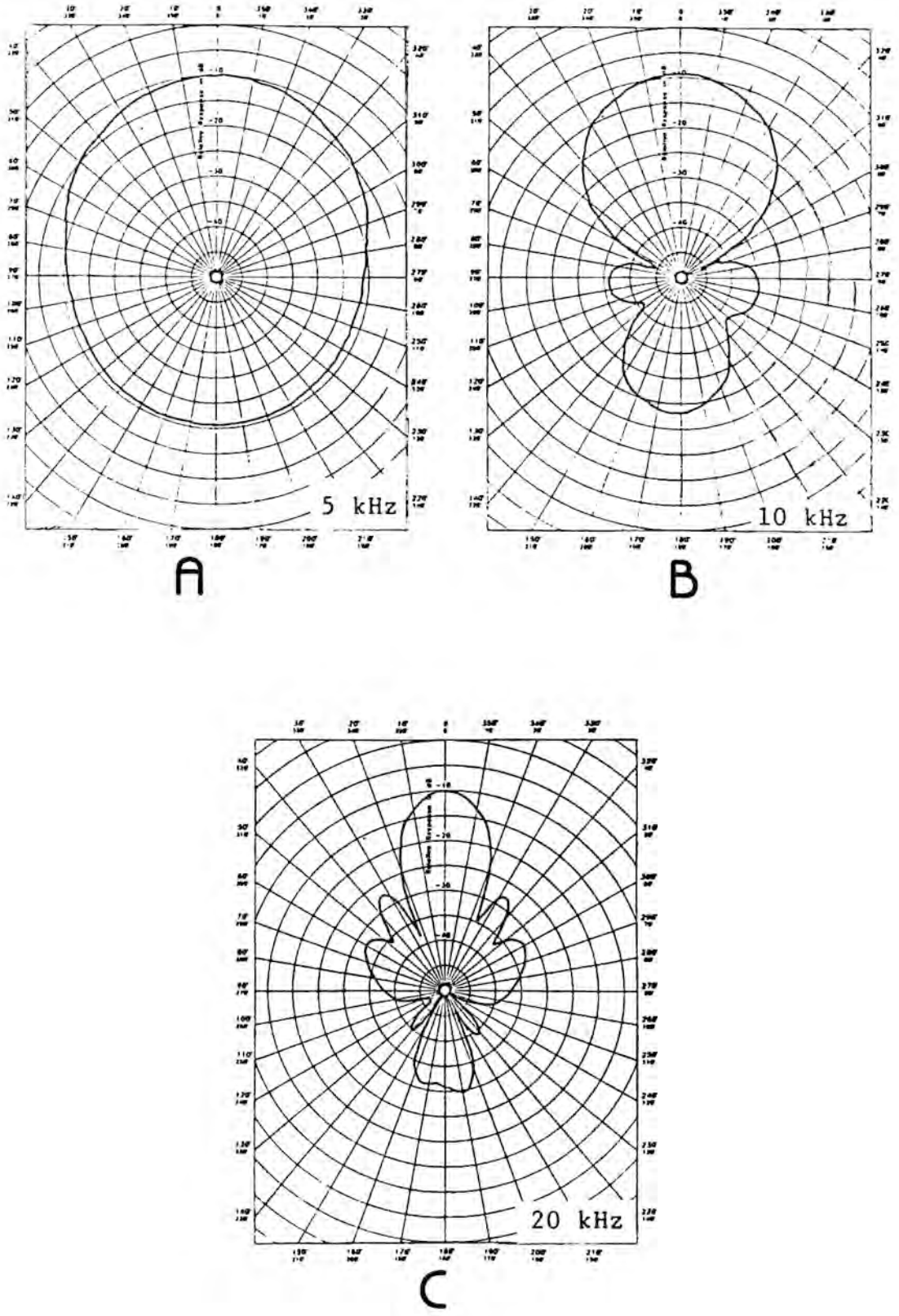

Fig. F27-4

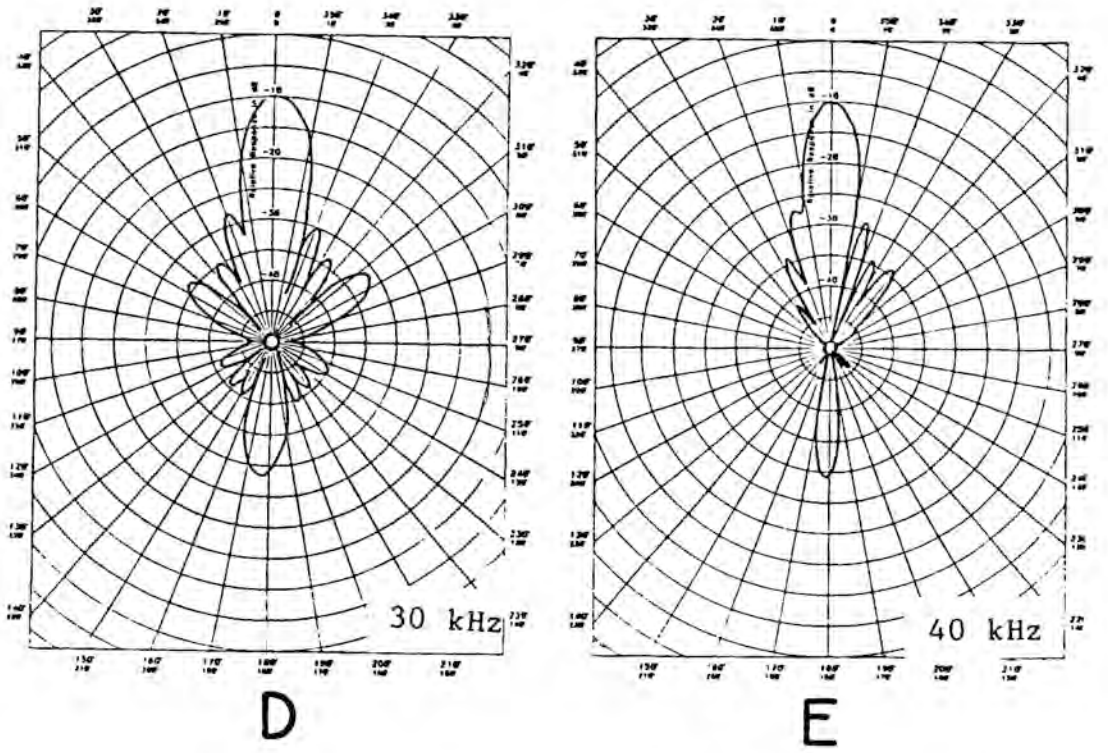

Fig. F27-4 - Typical directivity patterns in horizontal plane of Type F27 transducer.
Scale: center to top of grid in each pattern is 50 dB.

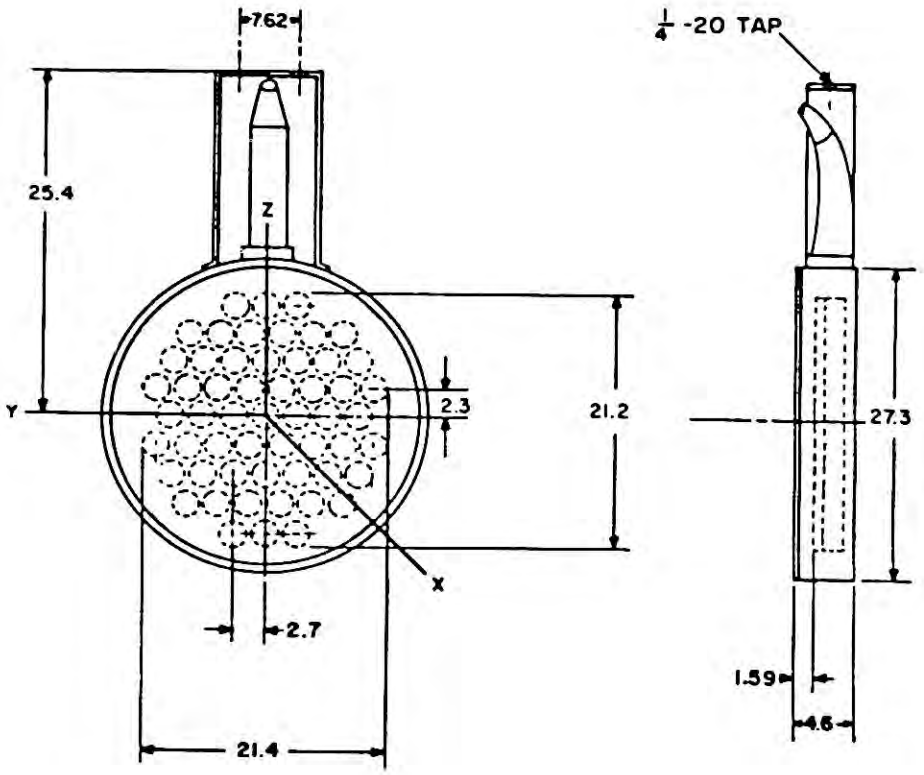

Fig. F27-5 - Dimensions (in cm) and orientation of Type F27 transducer.