

# TYPE F37 TRANSDUCER

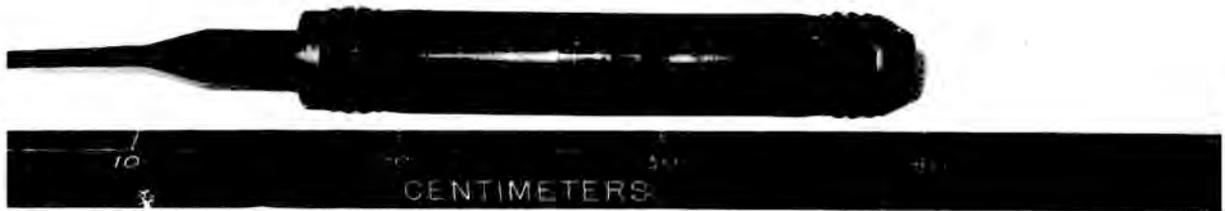


Fig. F37-1 - Type F37 transducer.

**FUNCTION:** A reversible and reciprocal transducer, omnidirectional in the horizontal (XY) plane and designed to hang by its cable.

**DESIGN:** A 16.5-cm line of eight PZT cylinders in an oil-filled rubber boot over a framework of steel rods.

**FREQUENCY RANGE:** As a hydrophone: 10 Hz to 37 kHz  
As a projector: 1 to 37 kHz

**FFVS:** -204 dB re 1 V/ $\mu$ Pa at <20 kHz (see Fig. F37-2)

**TVR:** See Fig. F37-3

**MAXIMUM DEPTH:** 275 m

**TEMPERATURE RANGE:** 0 to 35° C

**MAXIMUM DRIVING SIGNAL:** 100 V rms

**ELECTRICAL IMPEDANCE:** 60,000 pF

**DIRECTIVITY:** Omnidirectional in the horizontal (XY) plane

See Fig. F37-4 for patterns in the vertical (XZ) plane

**WEIGHT:** 4.0 kg (8.8 lbs)

**SHIPPING WEIGHT:** 11 kg (25 lbs)

**NORMAL CABLE LENGTH:** 30 m

**CABLE CODE:** Two conductors that can be used balanced or unbalanced with respect to ground

**INSTRUCTIONS FOR THE USER:** See Appendix D for preparation for use  
When used as a hydrophone, the input impedance of the first amplifier should be at least 3 M $\Omega$   
See Fig. F37-5 for the acoustic center  
If the hanger is used, clamp on to the cable gland  
An eye is available on the bottom for a weight to steady position when hung by the cable, but the weight should not exceed 12 kg (26.4 lbs)

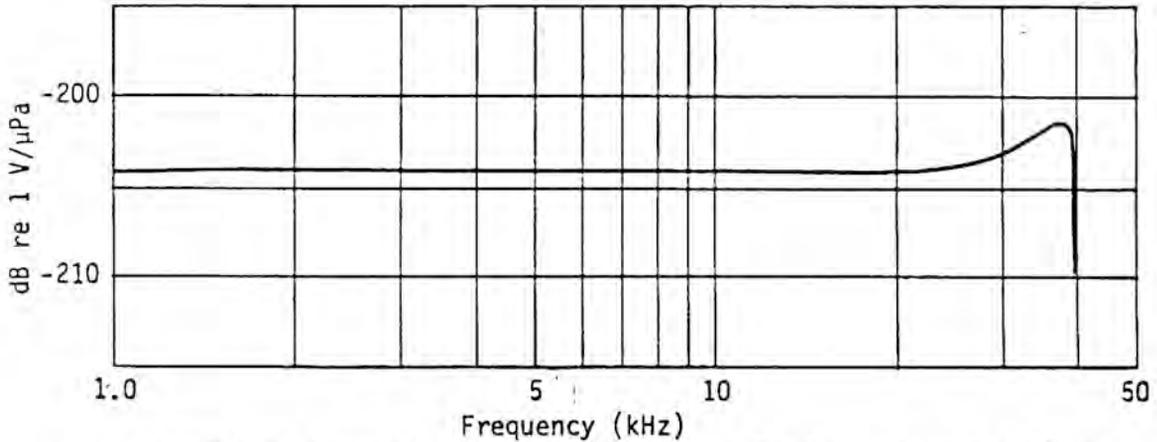


Fig. F37-2 - Typical FFVS for Type F37 transducer. FFVS is constant from 20 kHz to low-frequency limit of 10 Hz at end of 30-m cable.

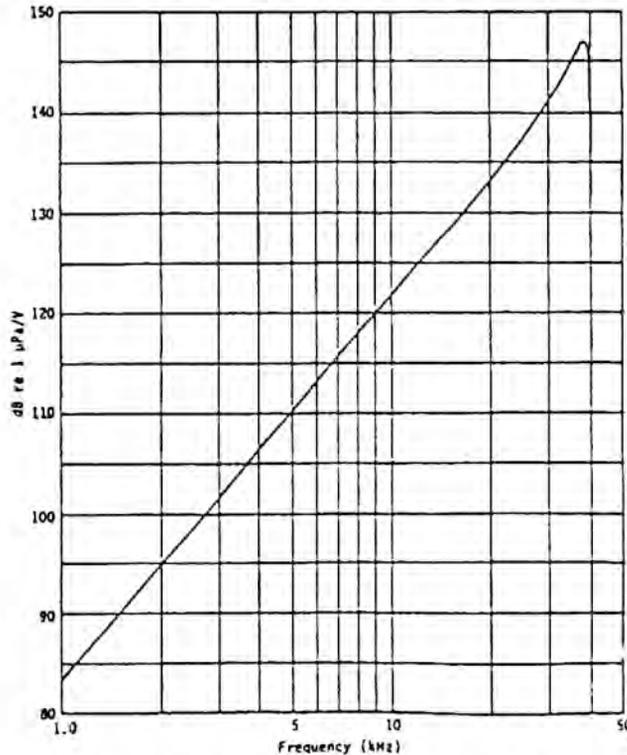


Fig. F37-3 - Typical TVR for Type F37 transducer at end of 30-m cable.

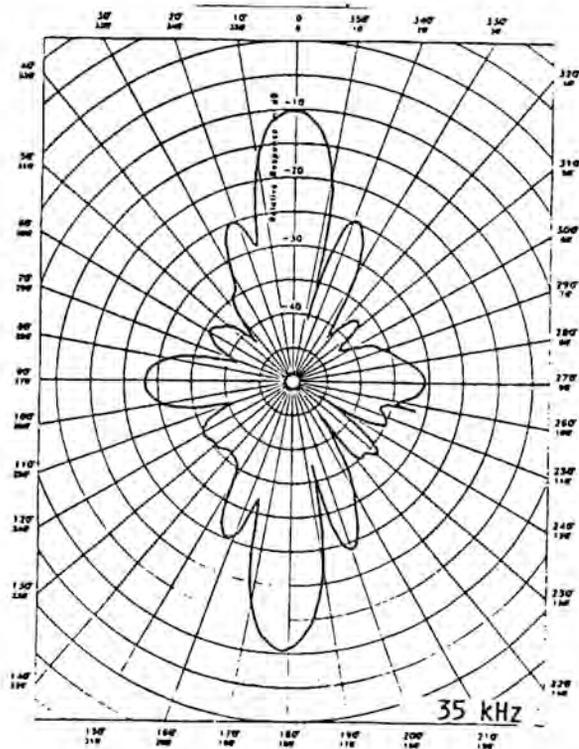
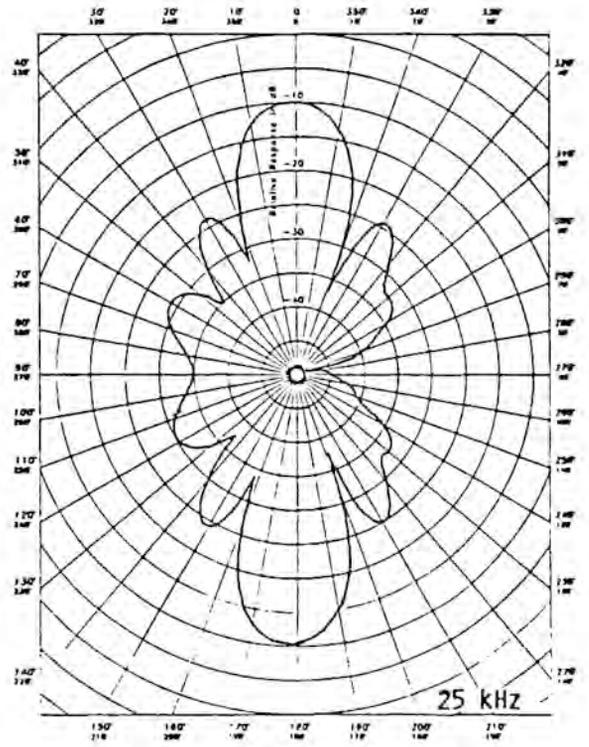
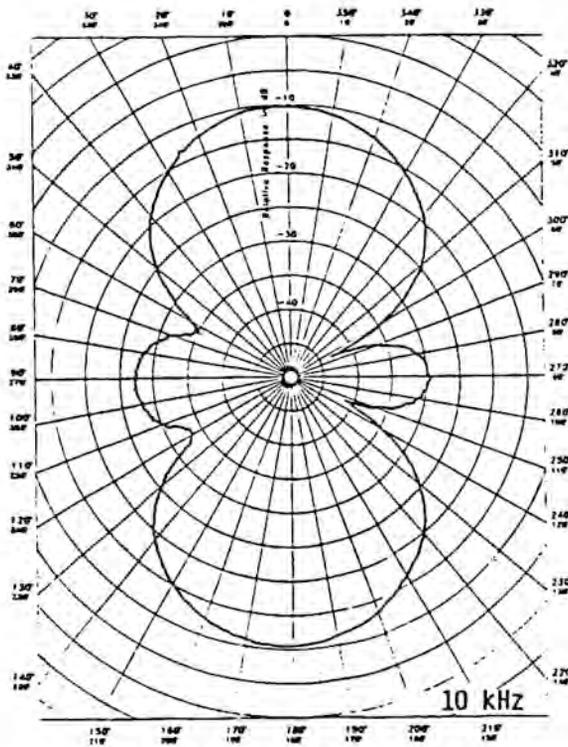
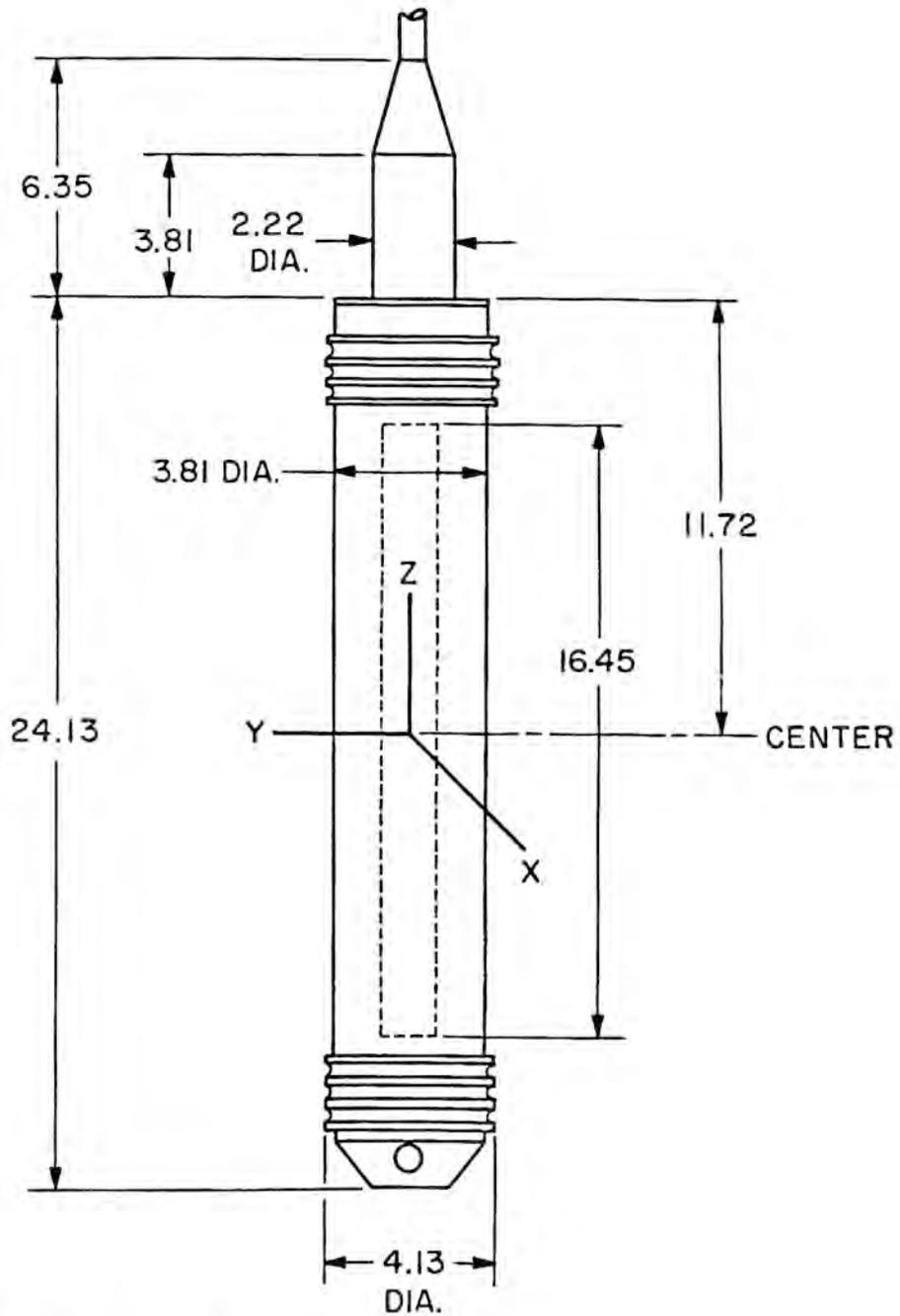


Fig. F37-4 - Typical directivity patterns in the vertical (XZ) plane for Type F37 transducer. Scale: center to top of grid for each pattern is 50 dB.



ACTIVE ELEMENT  
 (8)-PZT-4 CAPPED TUBES  
 1.27 X 1.27 X 0.076 WALL THICKNESS

Fig. F37-5 - Dimensions (in cm) and orientation for Type F37 transducer.