

TYPE E27 TRANSDUCER

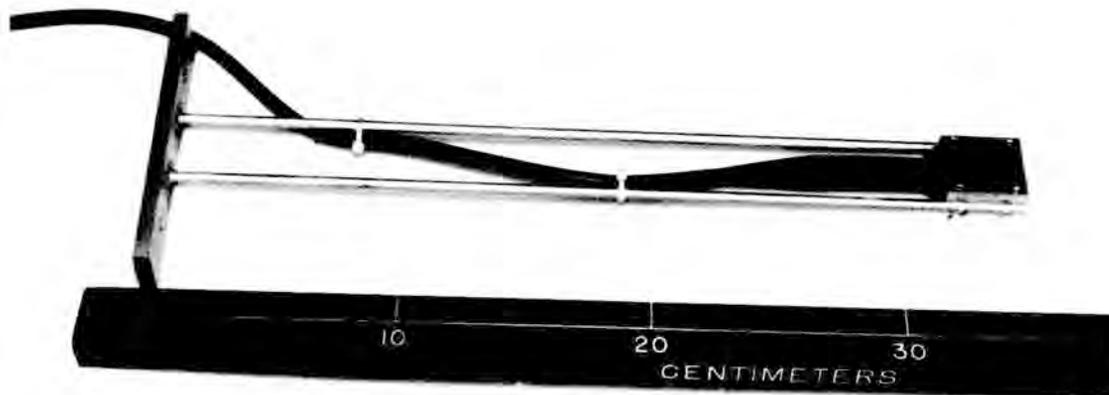


Fig. E27-1 - Type E27 transducer

FUNCTION: A reciprocal transducer and a standard hydrophone for ultrasonic frequencies

DESIGN: An array of seven PZT disks in a hexagon configuration and cemented directly to a butyl rubber acoustic window

FREQUENCY RANGE: 80 to 700 kHz

FFVS: See Fig. E27-2

TVR: See Fig. E27-3

MAXIMUM DEPTH: 17 m

TEMPERATURE RANGE: 0 to 35°C

MAXIMUM DRIVING SIGNAL: 200 V

ELECTRICAL IMPEDANCE: See Fig. E27-4

DIRECTIVITY: Same in the horizontal (XY) and vertical (XZ) planes (see Fig. E27-5)

WEIGHT: 1.8 kg (4 lbs)

SHIPPING WEIGHT: 4.5 kg (10 lbs)

NORMAL CABLE LENGTH: 30 m

CABLE CODE: coaxial center high signal
coaxial shield low signal

INSTRUCTIONS FOR THE USER:

See Appendix D for preparation steps

See Fig. E27-6 for acoustic center

Rigging hanger is a permanent part of the transducer
(see Fig. E27-6)

Align acoustic axis by maximum signal vs rotation at maximum
frequency

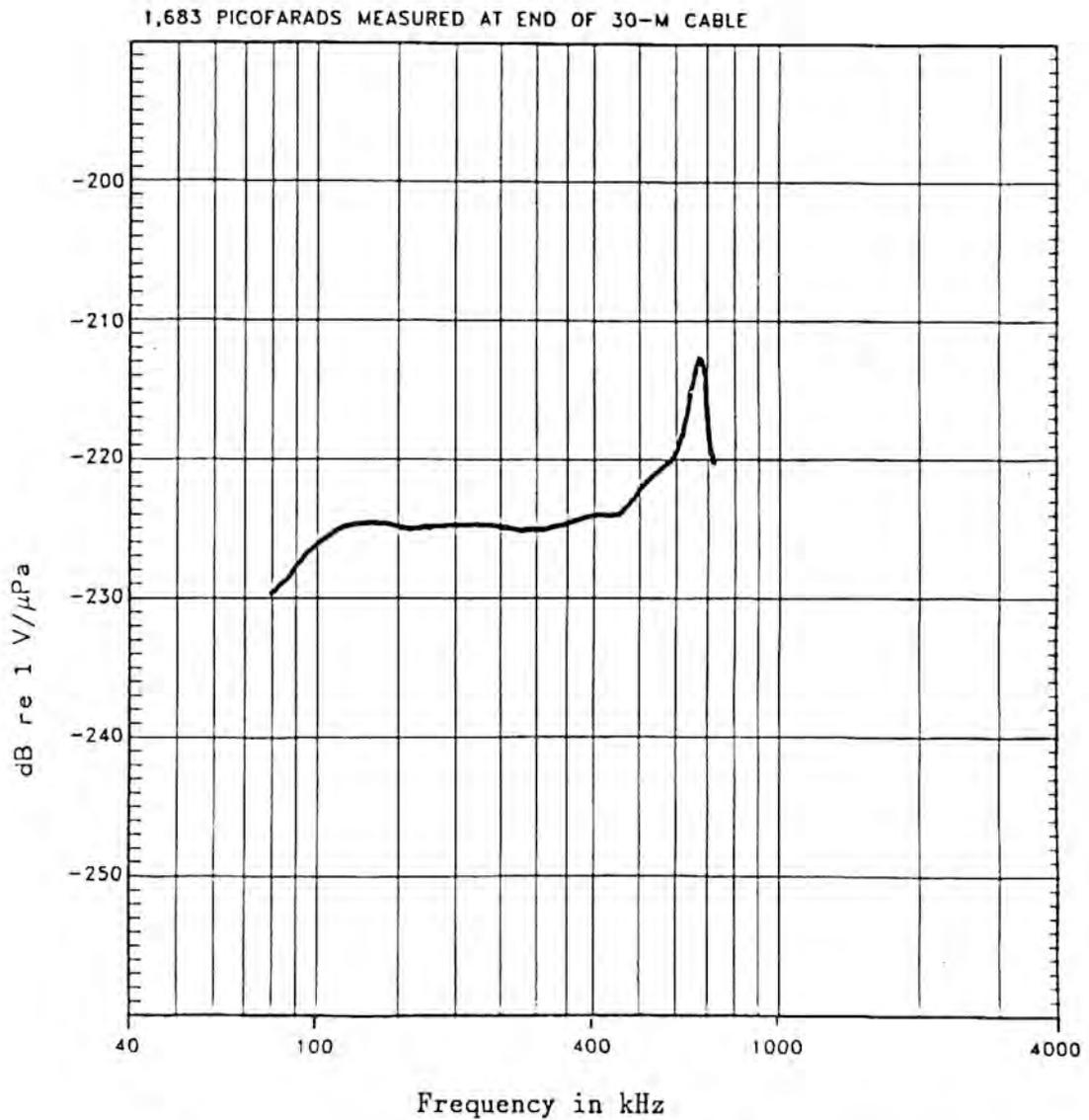


Fig. E27-2 - Typical FFVS for Type E27 transducer with 30-m cable.

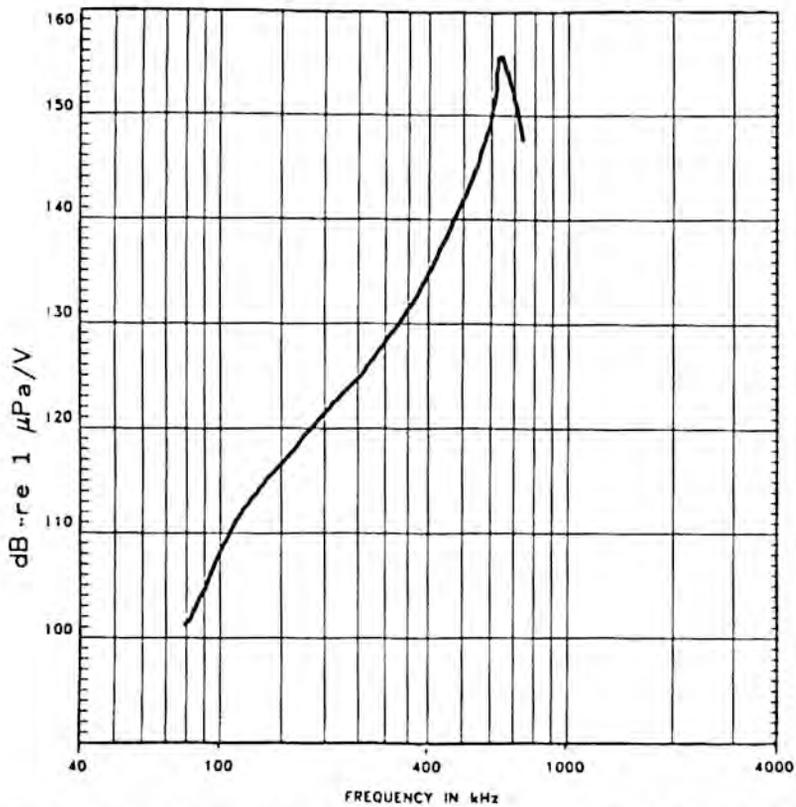


Fig. E27-3 - Typical TVR for Type E27 transducer with 30-m cable.

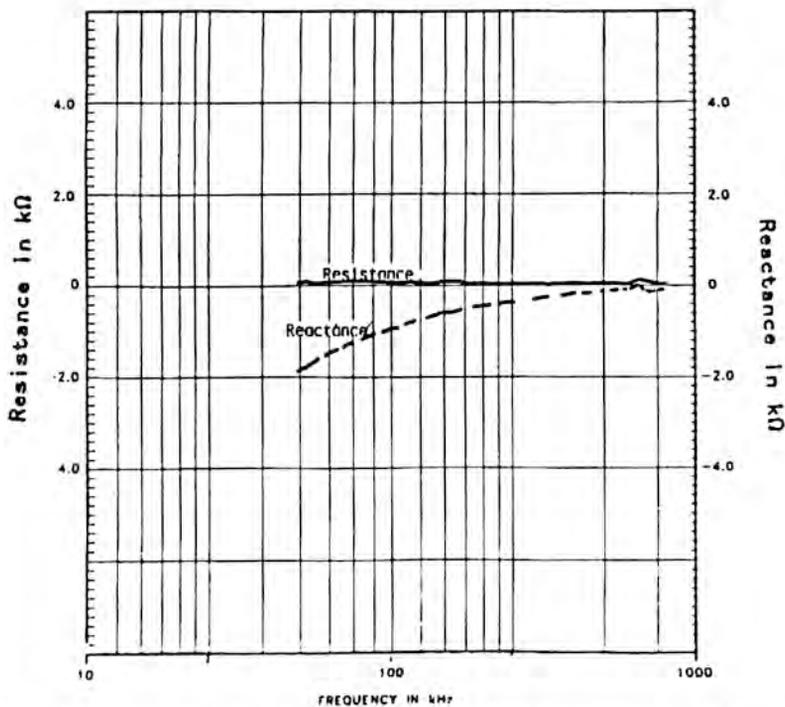


Fig. E27-4 - Typical series impedance for Type E27 transducer with 30-m cable.

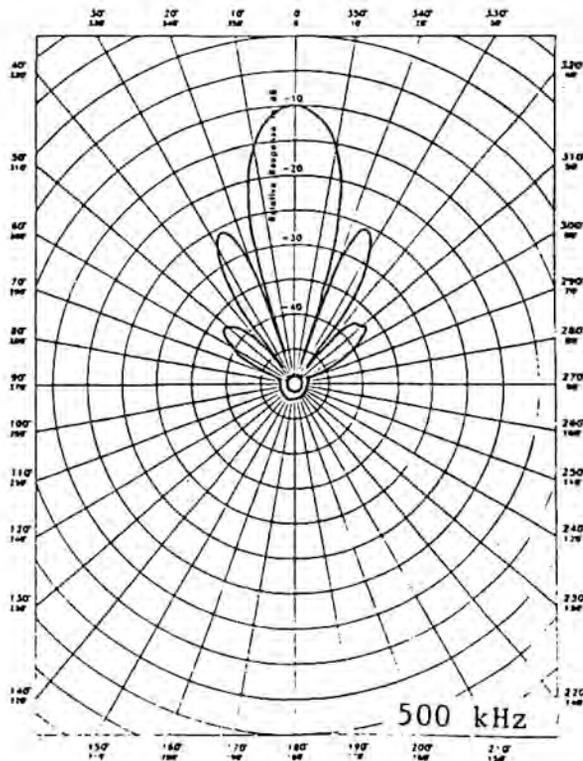
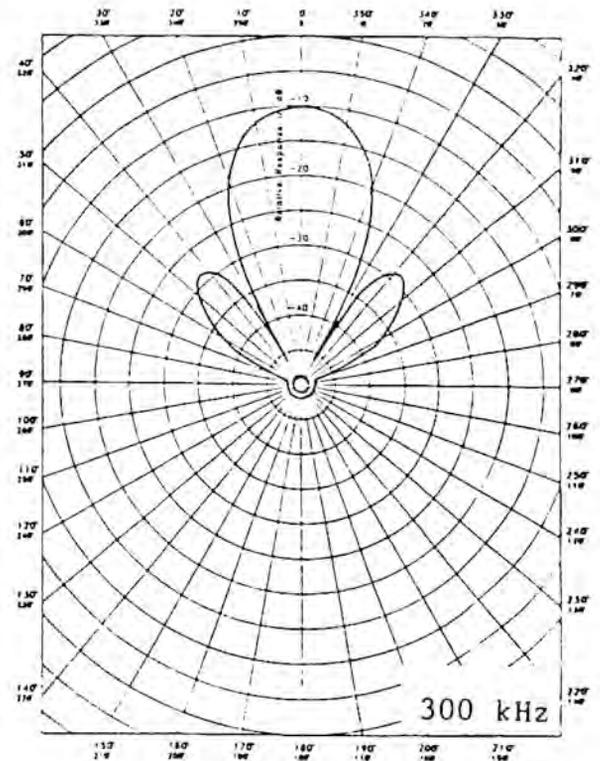
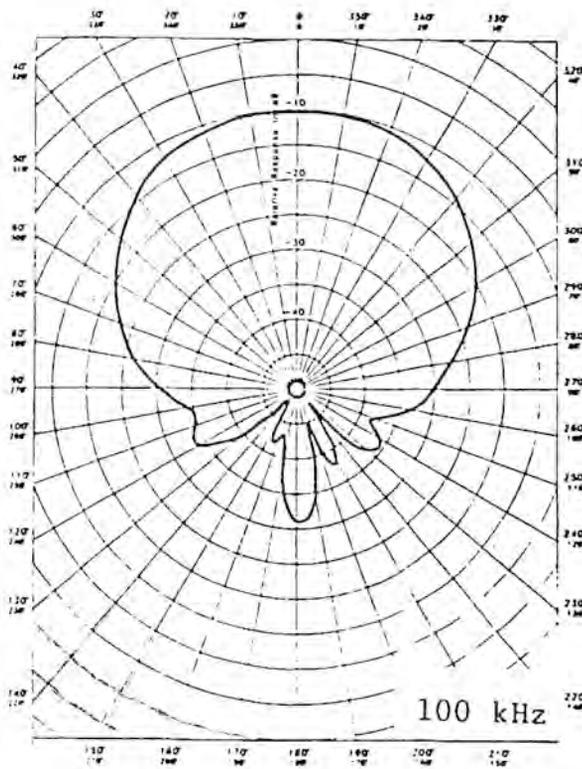
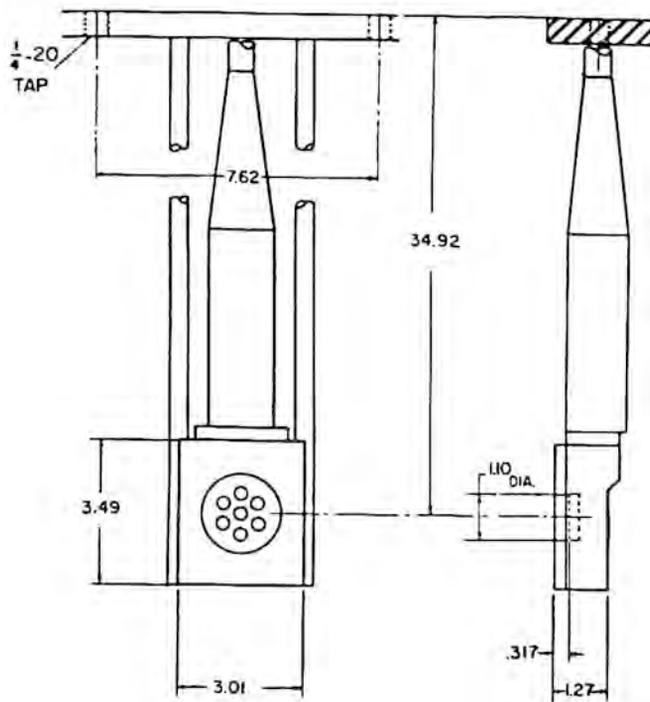


Fig. E27-5 - Directivity of Type E27 transducer, in planes that include the X axis.



ACTIVE ELEMENT
 (7)- P Z T 4 DISKS
 .317 X .152 THICK

Fig. E27-6 - Dimensions (in cm) and orientation of Type E27 transducer.