

**EV HP640
Constant
Directivity
Horn**

Specifications:

The following specifications are in accordance with or exceed the AES Recommended Practice for Specification of Loudspeaker Components Used in Professional Audio and Sound Reinforcement (AES2-1984; ANSI S4.26-1984).

Horizontal Beamwidth:

60° (+20°, -10°) (-6 dB 1.6 kHz to 20 kHz)

Vertical Beamwidth:

40° (+20°, -10°) (-6 dB, 1.25 kHz to 20 kHz)

Directivity Factor R_0 (Q):

17.8 (average 1.6 kHz to 20 kHz)

Directivity Index D_i :

12.5 dB (+2.0, -3.0 dB)

10 log R_0 , (average 1.6 kHz to 20 kHz)

Lowest Recommended Crossover Frequency:

500 Hz

Directivity

The axial directivity factor R_0 (formerly Q) of the HP640 horn was computed at each one-third-octave center frequency from the horizontal/vertical polars. The graph in Figure 2 illustrates this data over the range 500 Hz to 20 kHz. The axial frequency response of the HP640 with a particular driver is in close correspondence to that driver's power response above 1 kHz.

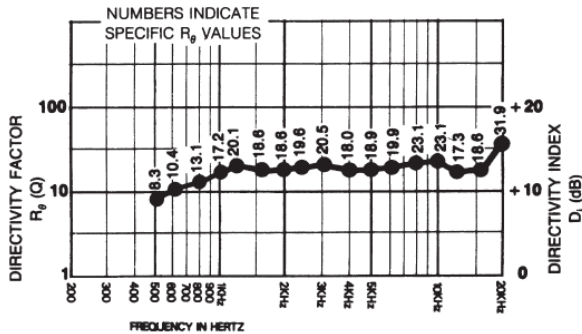


Figure 2: Directivity versus Frequency

Beamwidth

A plot of the HP640's 6-dB-down total included beamwidth angle is shown in Figure 3 for each one-third-octave center frequency. The horizontal beamwidth is maintained at 60° (+10°, -10°) over the range 500 Hz to 20 kHz. Vertical beamwidth control occurs only above 1.5 kHz because of the relatively short vertical dimension of the horn's mouth.

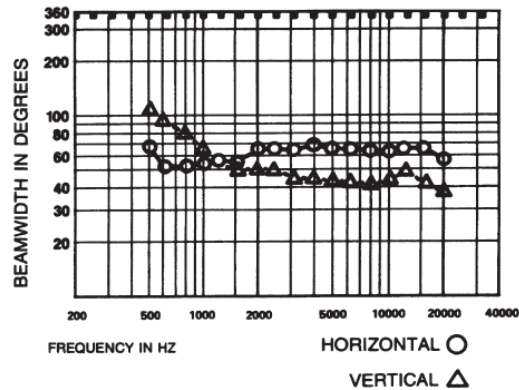


Figure 3: 6-dB-Down Beamwidth versus Frequency