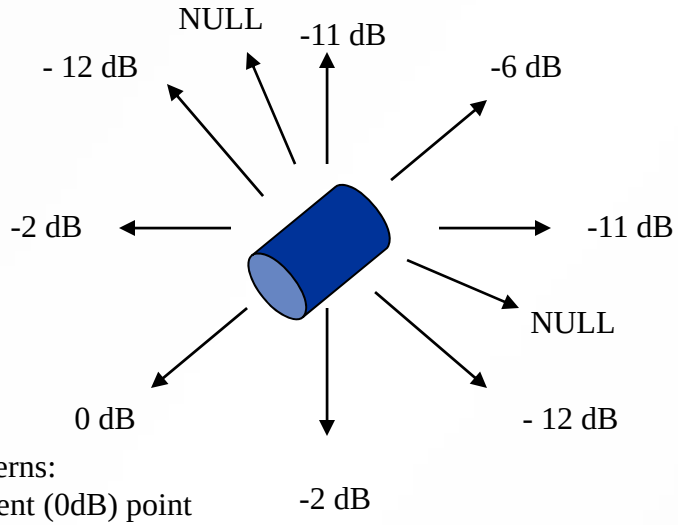
# Golf Ball Hanging Mic Cluster

- Benefits
  - Mono and Stereo pickup with a single hanging ball
- How it works
  - 3 (Crown PCC170 equivalent) cardioid capsules mounted in baffles
  - Baffles give 4 dB gain in sensitivity and convert the cardioid pattern to hypercardioid
  - 85dBASPL at mic = -20dBFS (digital) at codec
  - Microphones tilt downward 45 degrees from horizontal
  - Circular spacing is 120 degrees
  - Each element is treated independently within the codec

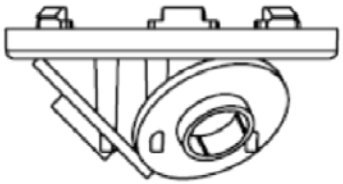
# Directivity of a Single Element




Per Hypercardioid patterns:
Null = ~109 degrees behind incident (0dB) point
So that's 26 degrees from vertical…
Approximately 1-foot out from a 2 foot drop cable

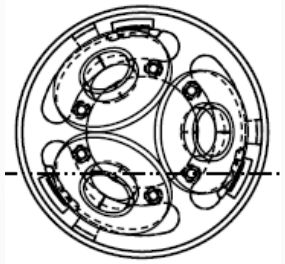
# Digital Ceiling Microphone Array

- specifications
  - 48KHz sampling rate. This is to supported 22Khz audio.
  - Synchronous sampling (all microphones sample audio at the same time. Critical for stereo audio processing)
  - Full duplex link running at 48.06MHz
- Benefits
  - Mono and Stereo pickup with a single ball
- How it works
  - Three cardioids mic elements mounted in baffles
  - This gives 4-dB gain in sensitivity and converts the cardioid pattern to hyper-cardioid



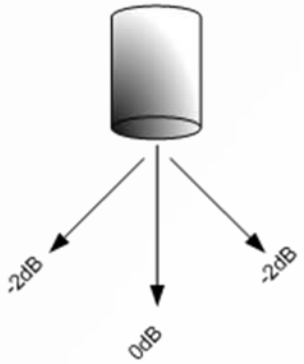
Side View

Bottom View

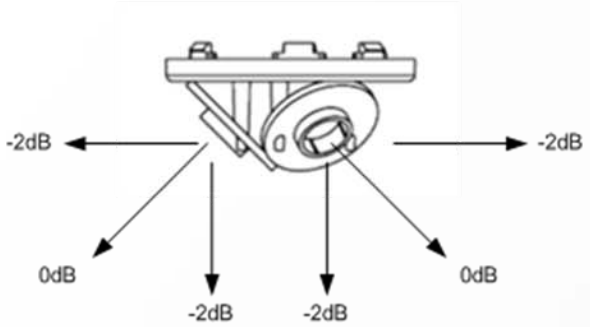


# Digital Ceiling Microphone Array Directivity

Directivity of One Mic Element




Directivity of Mic Elements Combined



# Digital Ceiling Microphone Array Setup

- Mic ball should be located 7’- 8’ (2.1 - 2.5 M) above the floor providing good pick up while maintaining head room clearance
- The center microphone is located at dead center of the table. The left and right microphones are located at the outer most left and right participants.
- Optional six-foot microphone cable is available through Polycom for ceiling that is higher than 10 feet (3M)
- The standard cable distances from the codec to the 1st node is 50’ (15.24 M) and 25’ (7.6 M) between microphones Longer distance can be achieve with custom made cables.
- Only the right Microphone input on the codec should be used. The left input will reverse the stereo imaging.