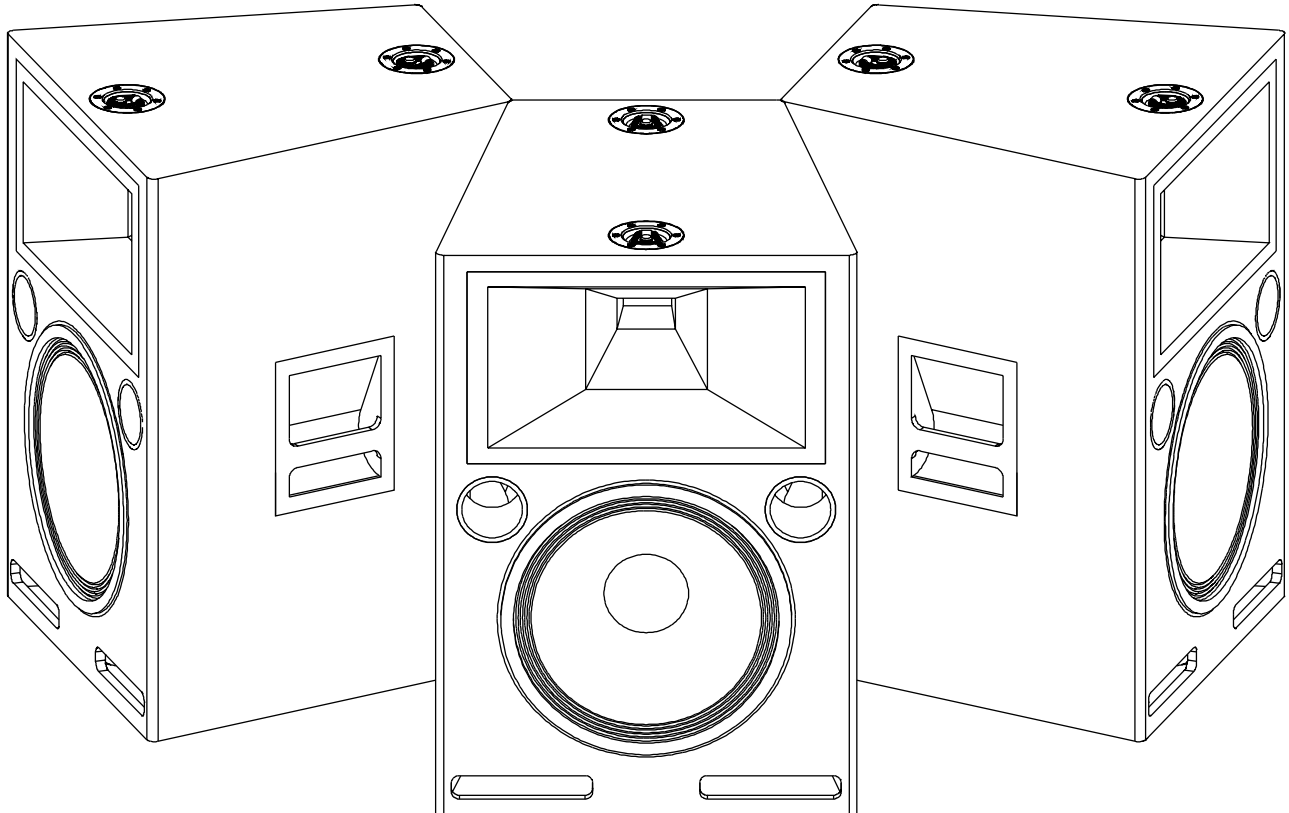


## (3) CQ-1's @ 70° Horizontal Splay



### Array Coverage and SPL

Coverage:  
 Vertical 40°  
 Horizontal 220°

Maximum SPL at 1 Meter:  
 Peak 138 dB

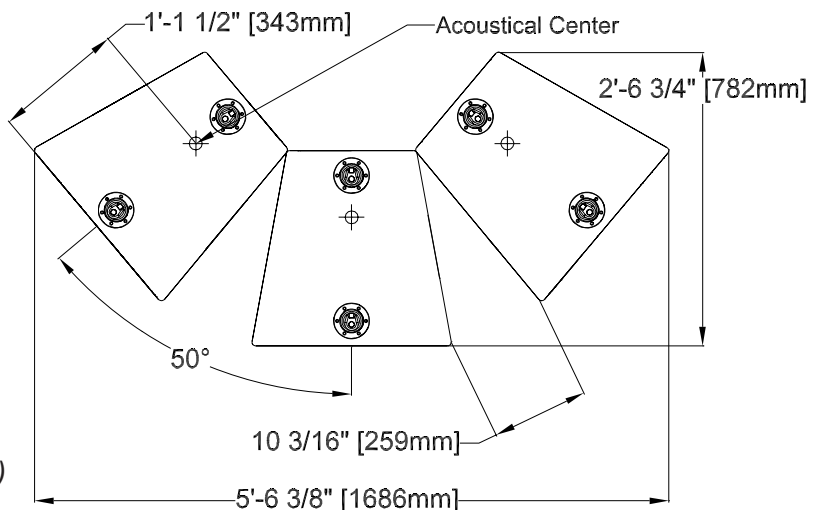
### Base Specifications

Frequency Range (Free Field) 40 Hz to 18 kHz

Weight (Before Rigging) 390 lbs. (175.8 kg)

### Measurement Notes:

Frequency range constitutes the usable bandwidth after on-axis normalization. Coverage angles measured as the -6dB (1/4 power) points from the normalized on-axis frequency response averaged over the band from 125 to 8k Hz. All measurements made at 4 meters in an anechoic chamber using the Multi-purpose Acoustic Prediction Program (M.A.P.P.)® at 1/36 octave bands and confirmed at 8 meters outside using pink noise and measured in 1/24 octave bands with SIM® System II.



Date: 11.19.97	Doc #: 01.990.101.63	Rev.A
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## **TruPower™ Limiting**

### **TruPower LIMITING TECHNOLOGY**

TruPower technology is a significant innovation as applied to Meyer Sound's self powered products. TruPower increases the output level and extends the life of the driver under heavy continuous usage by calculating the true power (in watts) delivered to the transducer. With the dedicated amplifier-speaker systems of the self powered line of products, it becomes practical to calculate the true complex impedance of the transducer on a real time basis by continuously monitoring the complex voltage and current of the power amplifier.

### **PERFORMANCE ADVANTAGES OF THE TruPower TECHNOLOGY**

Typically, high power systems show 3 to 6 dB of dynamic compression when run at extended high power levels. Have you ever noticed at the beginning of a concert how a traditional, non-powered system will have tremendous dynamic impact, and yet later on, seems to lack punch? This is not necessarily due to your ears compressing. As the speaker coils warm up their impedance rises. As this happens, the current flow is reduced. To achieve the same acoustic power, the voltage must increase proportionately. Conventional limiter topologies are voltage based. If the voltage threshold remains fixed the system compresses.

The TruPower technology is immune to increased impedance, allowing the driver to receive constant power. Because of this more effective power sensing, there is no dynamic compression even when operated at full power for long periods of time. The new Meyer Sound self powered speaker system with TruPower has almost twice the output as a standard Meyer Sound speaker system with SpeakerSense.

### **NO ASSUMPTIONS**

There is very little dispute on the role of a sound reinforcement limiter. It must provide total reliability and yet allow maximum dynamic range. Finding the exact balance point between these two goals is the key parameter of the limiter. To find this point, we must know the exact peak and long term power capabilities of the speaker and we must continually monitor it in order to verify that these limits are not overdriven. Assumption of amplifier or speaker parameters can lead to errors that cause excess compression or component destruction. The evolution of system limiters is one of gradually reducing the assumptions made in the calculation of system power. Meyer Sound's TruPower limiting has removed assumption by continuously monitoring the voltage and current to the speaker and thereby seeing the actual power dissipation.

### **SUMMARY**

Meyer Sound's TruPower offers an extended life over the standard systems when subjected to long term, continuous, high power situations. The TruPower limiter circuit resides on the controller board and can be simply exchanged on most of the Meyer self powered systems if you purchase a TruPower upgrade kit from the factory.



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