FA Series
Setting up the Dakota Audio Focused Array (FA)

1. **Power supply:** The units require either a 16 to 18 VAC, or 24 VDC power supply. For most applications, you will use the included power transformer. For large installations, where the power is coming from a remote control room, you may want to supply your own 24 VDC power supply to help reduce the possibility of hum. FA-501 may have the power transformer mounted inside the array for shipping. You will see a small panel on the back with a label indicating where the power transformer is stored. Be sure to replace the panel after you remove the power transformer. On the FA-602, the transformer is in the box with the speaker array.

2. **Power:** WE STRONGLY RECOMMEND THAT YOU PHYSICALLY MOUNT THE POWER TRANSFORMER NEAR THE AUDIO SOURCE PLUGGED INTO THE SAME POWER OUTLET. This will help reduce ground loops (noise and hum) in the system. Basically, the two outside terminals on the plug-in transformer are power and connect to the two terminals on the back of the array labeled "power". The center terminal on the plug-in transformer is ground and should be connected to the terminal on the back of the array labeled "ground". For distances from the transformer to the array up to 50 feet, 18-gauge 3 conductor wire is adequate. From 50 to 100 feet, we suggest 16-gauge 3 conductor minimum. For longer distances, contact the factory for recommendations. To avoid hum problems (if you are using the supplied AC transformer) do not run the power cable close to the audio cable for extended distances.

3. **Audio Input:** There are two inputs, one a balanced transformer isolated input - this is the one on the terminal strip. If this does not mean anything to you, just ignore it. This is generally used for professional installations with the audio coming from a remote control room. The other input is a mini-phone jack. This is the same audio connection that is used on computers, MP3 players, or almost anything that has a headphone jack. This input is unbalanced and will combine stereo signals to our amplifier. (The term "unbalanced" may not mean anything to you, but it basically means this type of input is much more susceptible to noise and hum pickup). You can use either a line output or headset jack on the source to connect to this input. You can buy audio extension cords with a male mini-plug on each end at Radio Shack or almost any electronic or music store. The headset outputs of video screens or TVs tend to be noisy. We suggest using the audio output from the video source (the computer or video player) rather than using the headset output from the video screen. It is very doubtful that you can damage anything by trial and error. If you have problems, give us a call. We have developed a number of tricks to reduce or eliminate noise.

4. **Grill Cloth:** There is a grill cloth in the accessory box. We suggest that you don't attach the grill cloth until the array is mounted in place. The grill cloths can be washed and dried in a regular home washing machine. No special care required**.**

5. **Test Button:** When this button is pressed, the microcontroller tests every possible signal path through the circuit board. This can take a couple of minutes. If the button is pushed accidentally the array will appear to go dead for a couple of minutes and then resume normal operation.

6. **Mounting Height Button:** Press this button until the LED next to the desired mounting height is lit. (This is the mounting height above the floor for standing listeners). The average listener's ear is assumed to be at 5 feet above the floor so the focal point of the array is five feet less than the indicated height. Example, if the eight-foot LED is lighted, the focal point will be three feet from the front of the array. (8' - 5' = 3')

7. **Pattern Width Button:** The size of the listening pattern is set with this button. For the FA-501, the pattern sizes range from a tight area to a circle approximately ten feet in diameter. For the FA-602, the pattern is oval, adjustable from a size to cover a few people up to a group of approximately 10 people.