



SkyGuard High-Noise Environment Installation Guide

SkyGuard systems can be installed in very high noise environments. This helpful guide will assist you in keeping noise effects to a minimum, allowing the system to operate at optimum performance. This example configuration targeted an application where high noise was found equally on both sides and above the doorway.

General Reminders

Always follow the installation manual for proper setup and perform these actions for any system installation.

1. Measure the ac outlet neutral to ground. It must read between 0.1 to 0.5vac.
2. Sync the system to all other systems as best as possible.
3. Check to ensure there are no tags closer than 12 feet from the system during installation.

Step 1

Remove the turbo antenna covers, change the jumpers to [H1] for highest sensitivity, and replace the covers back on the antennas. Install the turbo antennas on the sides of the entrance, holding them in place with 3" painter's tape (Figure 1).



Figure 1. Installation Ready for Tuning

Step 2

Connect all cables, except the turbo antennas, to the System Control Unit and apply power. The Control Unit will respond with 4-16 long beeps followed by 2-3 short beeps, indicating normal boot-up. Take one turbo antenna and connect it to Channel 1, Position A. Using the handheld remote, select programming mode and monitor NSE-1. Write down the lowest and highest readings for that turbo antenna. Disconnect the turbo antenna and connect another one in the same location on the Control Unit, again writing down the readings. Repeat this for each of the turbo antennas.

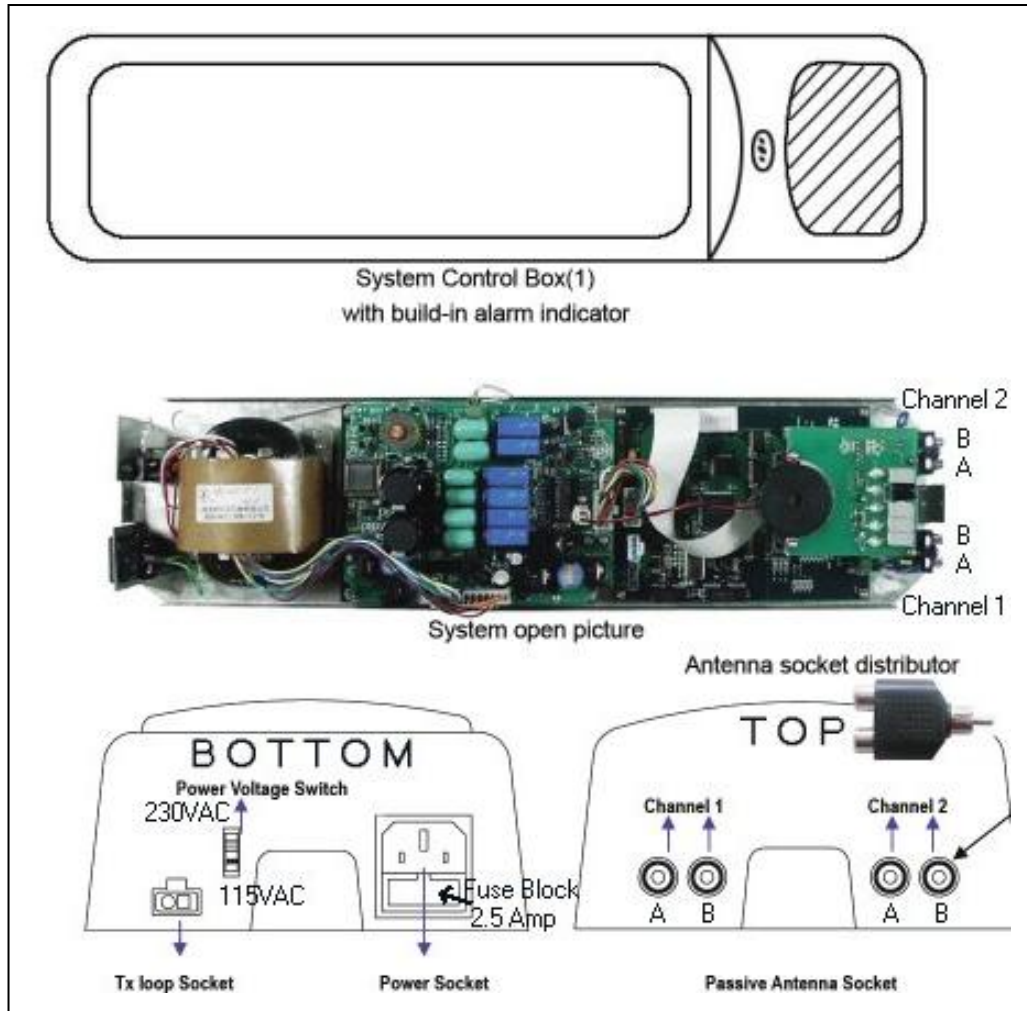


Figure 2. System Control Unit

Step 3

Using the readings taken in Step 2, you can now ascertain where the noise is generally coming from. Take the two turbo antennas with the highest readings and connect them to Channel 1, Ports A and B. Rotate one of the turbo antennas 180 degrees while monitoring NSE-1 until the lowest noise levels are read. Then rotate the other turbo antenna in the same fashion until its lowest reading is achieved. Repeat this process back and forth until you have achieved the lowest possible noise levels on Channel 1. If the noise levels are still above 100, remove the turbo antenna cover and move the sensitivity jumpers one position lower on both antennas equally. Repeat this process as necessary. Figures 3 and 4 depict an installation with high noise above the system. Note that the upper antennas share Channel 1 and the lower antennas share Channel 2.

If the antenna jumpers must be set below [M2] to obtain a noise level reading below 100, change the gain [GN] from 1 to 0. Then start over with the antenna jumpers back at [H1].

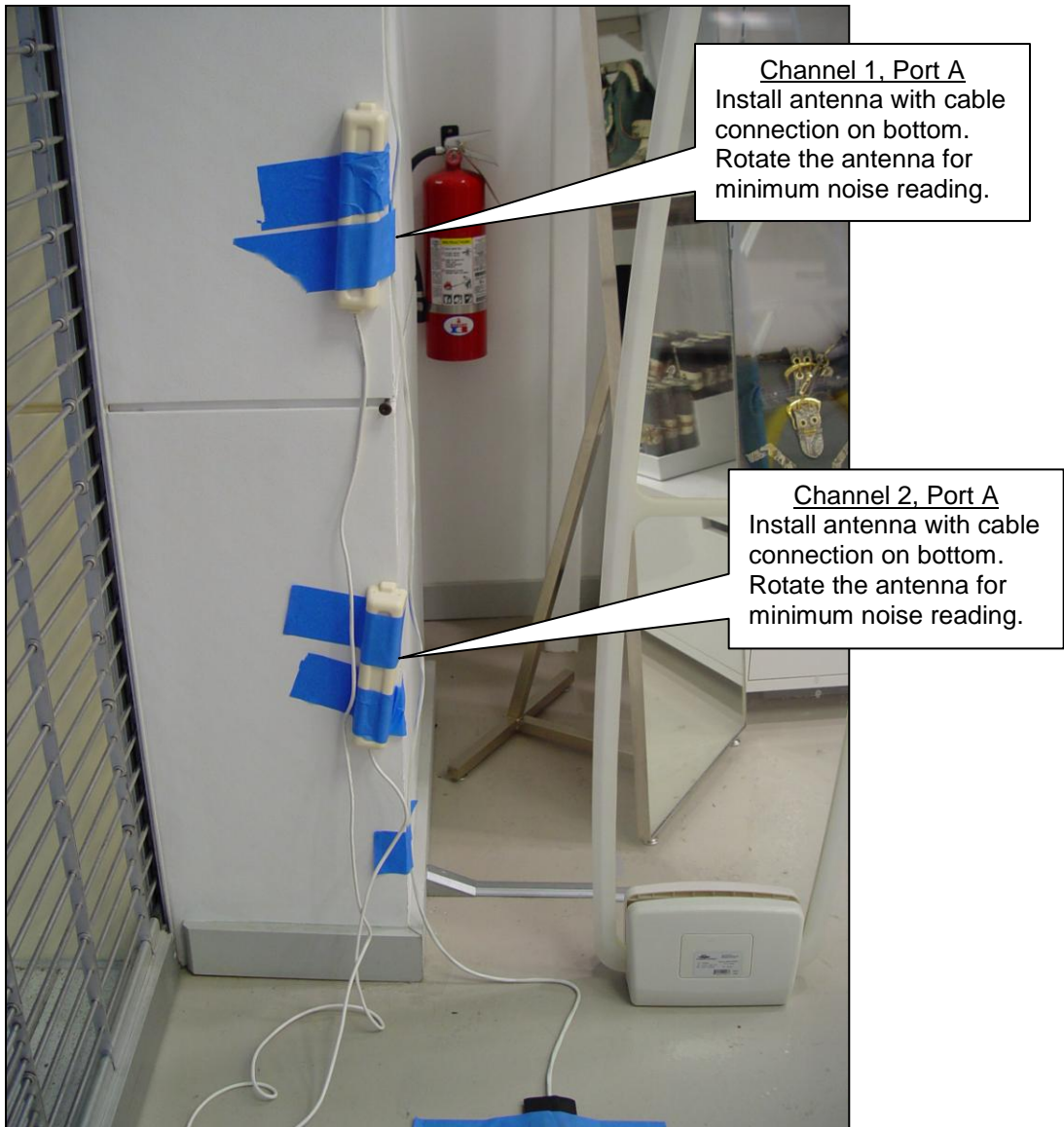


Figure 3. Turbo Antennas (Right Side)

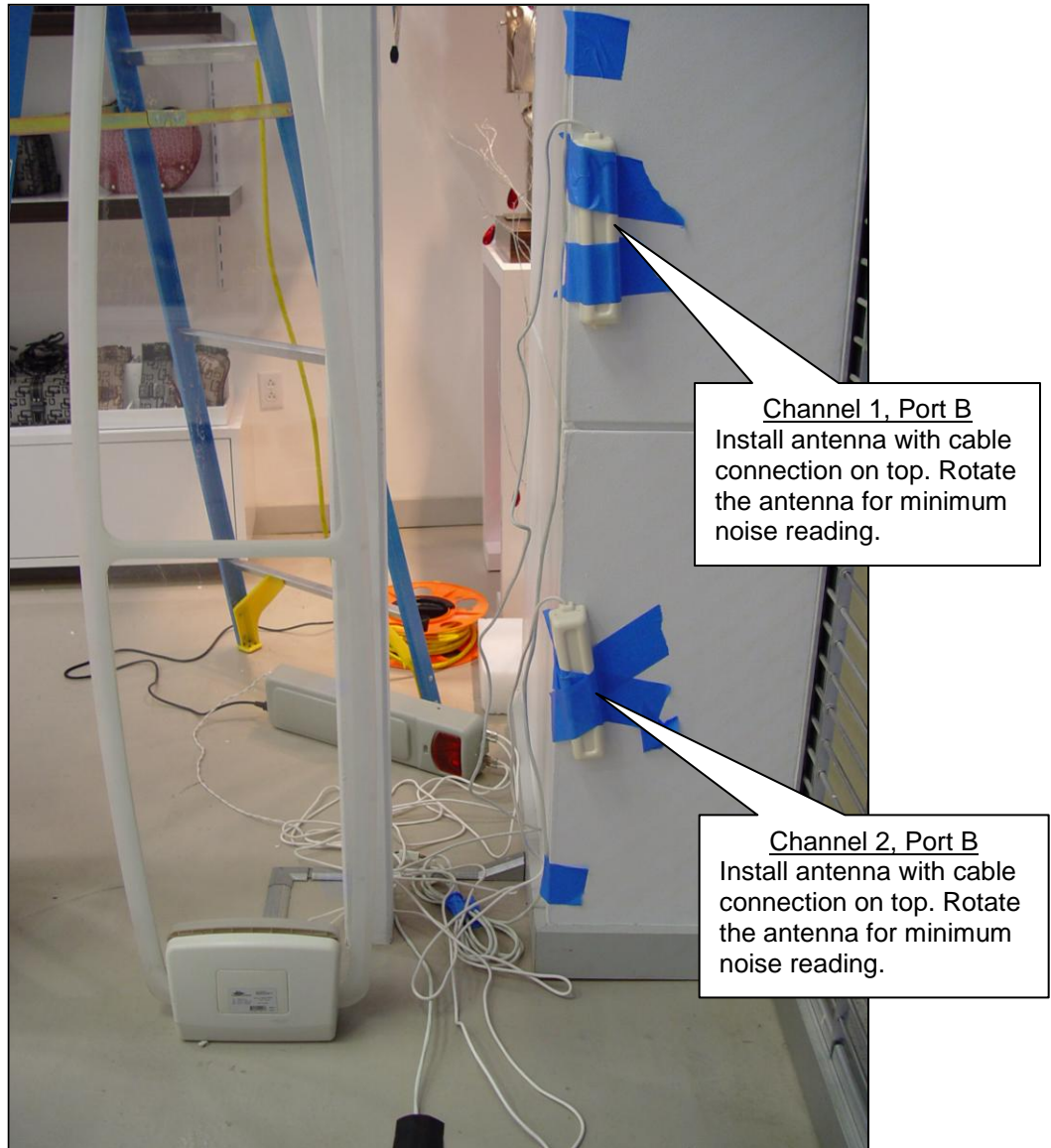


Figure 4. Turbo Antennas (Left Side)

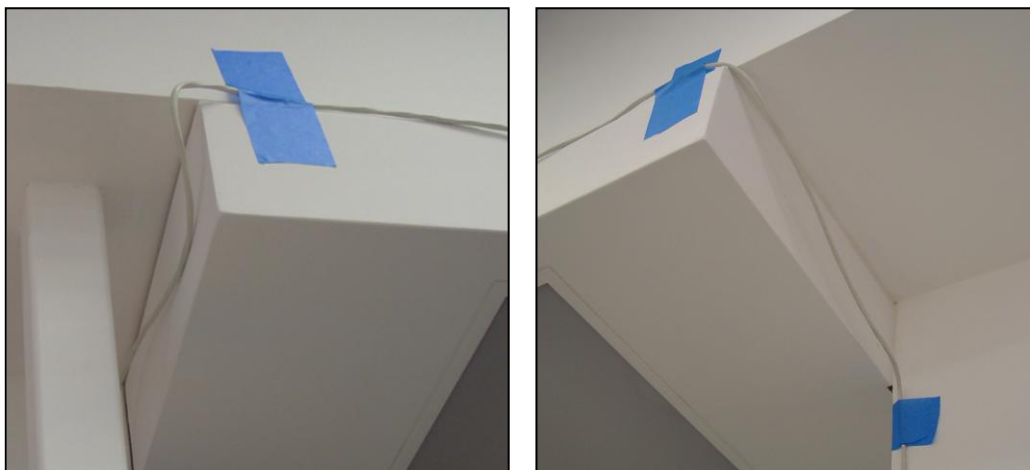


Figure 5. Loop Layout (Top Left & Right Views)

Step 4

When all four turbo antennas have been tuned for minimum noise readout, you can fine tune the system via programming [RE, GN, MIN]. This example installation initially displayed a noise reading of 900+ on each antenna with gain set to 1. Following this procedure, the noise was reduced to below 15 on both channels with gain still set to 1.

Summary

Keep in mind that every installation will have its own unique noise environment. Each EAS installation should be performed methodically with proper preparation and patience. Consistently applying these principles will provide optimum results.

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TECHNICAL SUPPORT		
North America South America Caribbean	Monday thru Friday 8am – 5pm USA Pacific Time	Tel: 949-545-6005 888-633-5095 (Toll Free) Fax: 818-255-0514 Email: service@wgsppi.com
Rest of World	Monday thru Friday 8am – 5pm Germany Time	Tel: +4 49 8654 7715-21 Fax: +4 49 8654 7715-21 Email: support-ROW@wgsppi.com
