GH Everyware Application Note

Array Solutions™ SixPak

Using a GHE device to control the SixPak offers the following advantages:

- Adds ability to share the relay among operating positions and eliminates clumsy control boxes.

- Adds ability to control the SixPak remotely over the internet.

- Uses GHE Client software to allow custom computer screen controls and/or automatic antenna selection.

- Can eliminate expensive control cable if GHE Remote is located at the SixPak. In many cases, the control cable savings alone would pay for the GH Everyware device(s) required.

- Can eliminate the through-the-wall cable problems.

- If you use the GHE Wireless Remote, you will eliminate the possibility that lightning strikes will propagate up the control cable into the shack.

Here are some of the possible ways to connect to your SixPak Antenna Switch:

- Use a single GH Remote (with 16 relay module) out at the SixPak to eliminate control cable. Wire as shown. Obtain power via the available Bias T Remote, OR external 12V if you are not using the Bias T Remote. You must have a GH Base to communicate with the Remote. See the GH Everyware manual for the various Remote power supply options.

- Use a GH Remote (with 16 Relay Module) at the shack end of a cable run. This is an ideal "back room" or just outside the shack solution to eliminate the problem of running cables through walls. You must have a GH Base to communicate with the remote.

- Use a GH Base (with 16 relay module) inside within USB reach of a shack computer. Wire as shown to the control cable, an external 12V supply must be utilized as the base is USB powered and does not have 12V available to run the Remote Relay. Note that in this case we are actually not using any wireless signal, but you still retain most of the benefits of a GH solution.

  NOTE: You may parallel the connections with the SixPak control boxe if desired. You MUST remember to turn off the control box when using GH Everyware, and to disconnect GHE or use OFF position when using the control box
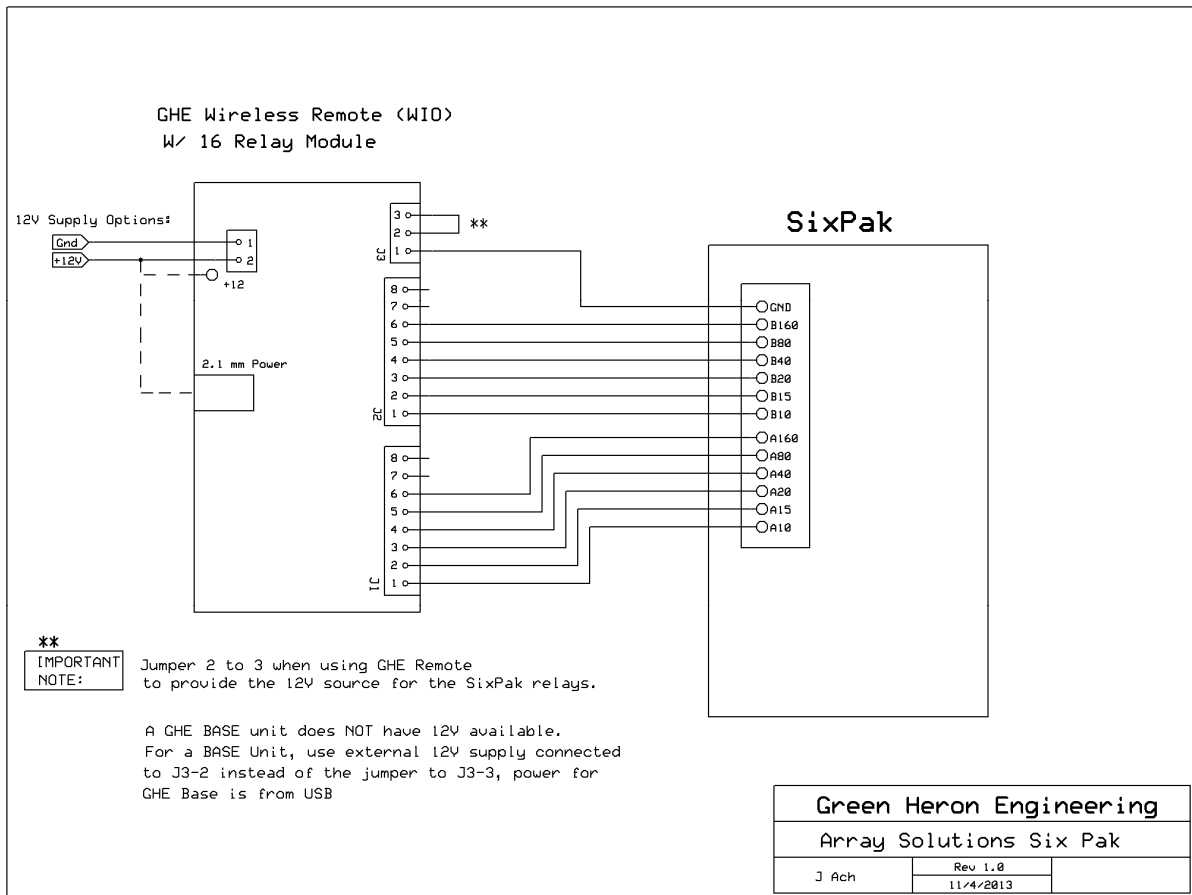
  NOTE: This note describes a system that can select one of six positions for each side of the SixPak. It is possible to select multiple antenna positions from each side, but this requires 2 separate GH Remote units, each with its own 8 relay module. Contact us for more info.

GHE Wireless Remote (WIO)
W/ 16 Relay Module

SixPak

12V Supply Options:

Gnd
+12V

+12

2.1 mm Power

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IMPORTANT NOTE:

Jumper 2 to 3 when using GHE Remote
to provide the 12V source for the SixPak relays.

A GHE BASE unit does NOT have 12V available.
For a BASE Unit, use external 12V supply connected
to J3-2 instead of the jumper to J3-3, power for
GHE Base is from USB

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To allow separate control of the SixPak A and B sides, you will create two separate WIO Profiles, one for the 'A' side, and one for the 'B'. Each profile utilizes 4 of the 8 "bits" from which the 16 relay module decodes into the 16 separate outputs for the SixPak. The "4th" bit on each side is a "side enable" so that we can have an OFF position for each side where no antennas are selected.

Create WIO Profiles using GHE Server Device Manger to provide the on-screen display that you desire. Here's an example of Button Display profiles. Change the name of each position to match your Antennas as you want to connect them to the SixPak. (A SixPak is an ideal unit to use as an 'Band Switch' to allow automatic antenna selection from your logging program.)

Note the difference between a bit that is OFF and a bit that is n/c is important. "OFF" turns the bit off, "n/c" does NOT change the current state of a bit.

In GHE Server, you will connect both profiles to the SAME WIO COM port and address. They are two separate logical devices, but share one GH hardware device.

Example WIO Profile for use with SixPak

A Side

Name	1	2	3	4	5	6	7	8
A10	Off	Off	Off	On	n/c	n/c	n/c	n/c
A15	On	Off	Off	On	n/c	n/c	n/c	n/c
A20	Off	On	Off	On	n/c	n/c	n/c	n/c
A40	On	On	Off	On	n/c	n/c	n/c	n/c
A80	Off	Off	On	On	n/c	n/c	n/c	n/c
A160	On	Off	On	On	n/c	n/c	n/c	n/c
A OFF	Off	Off	Off	Off	n/c	n/c	n/c	n/c

B Side

Name	1	2	3	4	5	6	7	8
B10	n/c	n/c	n/c	n/c	Off	Off	Off	On
B15	n/c	n/c	n/c	n/c	On	Off	Off	On
B20	n/c	n/c	n/c	n/c	Off	On	Off	On
B40	n/c	n/c	n/c	n/c	On	On	Off	On
B80	n/c	n/c	n/c	n/c	Off	Off	On	On
B160	n/c	n/c	n/c	n/c	On	Off	On	On
B OFF	n/c	n/c	n/c	n/c	Off	Off	Off	Off