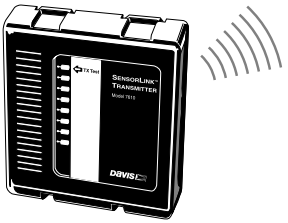

Wireless Repeater

Installation Manual

The Wireless Repeater receives data from a Wireless Weather Station sensor array and re-transmits it to the console. The repeater serves to extend the transmission range and improve reception between the sensor array's transmitter and the console's receiver.

One repeater can send data to any number of Monitor II or Wizard III consoles, as long as each console contains a receiver. It can also receive and re-transmit data from up to 8 sensor arrays, as long as each array has a transmitter set to a unique ID code.

The repeater's flexibility allows you to put together your weather system in a number of different ways. The most common setup is to plant the repeater in between a transmitter and a receiver to improve reception. Another possibility is to plant a series of repeaters to carry the transmitter's signal over a longer distance, or around obstacles.

Note: *The Wireless Repeater operates on a low power frequency that does not require you to obtain an FCC license.*

Installing the Wireless Repeater

How you go about installing the repeater depends on how many repeaters and transmitters you plan to install. The first section below will discuss the most common and simplest installation—that of one transmitter, one repeater and one receiver. The following section will discuss daisy-chaining the repeaters in succession to increase the range.

Single Transmitter, Single Repeater Installation

If you have just one sensor array (with transmitter) and just one repeater, simply follow the instructions below to install your system.

Choosing a Location

- **AC-Powered Repeaters**
  Install in a sheltered location, with access to an AC-power outlet. Position between the transmitter and the receiver so as to minimize the number of walls and other obstacles between both the transmitter and the repeater or the repeater and the receiver.

- **Solar-Powered Repeaters**
  Find an outdoor location between the transmitter and the receiver so as to minimize range and obstructions. Position the solar panel such that it will receive maximum exposure.

Setting up the Repeater

The repeater is pre-set by the factory to listen for a transmitter whose ID code is also set to the factory default. If you *have not reset* the transmitter's ID code from the factory default, then your repeater should pick up its signal automatically.

If you *have* changed the transmitter ID code to one of the 7 other optional dip switch settings, you need to set the repeater to listen for that ID code. To do so, first find your current transmitter setting in the following table:

ID Code	Dip Switch 1	Dip Switch 2	Dip Switch 3
#1 (default)	off	off	off
#2	off	off	ON
#3	off	ON	off
#4	off	ON	ON
#5	ON	off	off
#6	ON	off	ON
#7	ON	ON	off
#8	ON	ON	ON

Then, set your repeater to listen for that ID code by flipping the appropriate SENSORLINK TX dip switch. For example, if your transmitter's dip switches are set to OFF, ON, OFF, then you would flip dip switch #3 on your repeater to ON.

Powering the Repeater

To apply power to the repeater, do the following:

- **AC-Powered Repeaters**
  Plug the AC-power adapter into the jack marked POWER, and into an AC-power outlet.

- **Solar-Powered Repeaters**
  Plug the solar power cord into the the jack marked POWER.

Both LEDs should flash once when power is applied. If all is well, both LEDs should flash again, two times quickly, about 12 seconds later. After that second double-flash, the unit begins looking for a signal. If it finds one, the lower LED will flash as the data is received and then the upper one will flash as it transmits.

Test Mode

In test mode the lower green LED flashed each time the unit receives data. The upper green LED flashes when it re-transmits that data. Use this mode to verify that your transmitter is working. Turn off test mode to get the longest battery life. Test mode is enabled by toggling the fourth Repeater ID dip switch to the ON position and then, if necessary, removing and reapplying power.

Multiple Repeaters Installation

If you have more than one repeater in your network, follow the instructions as if for a single repeater installation but, before you apply power, set the repeater ID codes so that each will listen to the repeater before it in succession. The first repeater (i.e., the repeater closest to the transmitter) needs no adjustment. The second repeater, however, needs to be set to Repeater ID #2; and the third, to #3; and so on. In this way, the third repeater will only tune into signals from the second, and the second will only tune into signals from the first, and so on, thereby improving reception.

To set each repeater's ID code (except the first), use the table below to set the Repeater ID dip switches:

ID Code	Dip Switch 1	Dip Switch 2	Dip Switch 3
#1 (default)	off	off	off
#2	off	off	ON
#3	off	ON	off
#4	off	ON	ON
#5	ON	off	off
#6	ON	off	ON
#7	ON	ON	off
#8	ON	ON	ON

Once you have set the ID codes, simply continue with the "Powering the Repeater" instructions on page 2. There is no need to configure the repeaters to listen to a specific transmitter ID code, unless you want a repeater to listen to an entirely new transmitter aside from the one whose signal it's repeating.

Specifications

SensorLink Repeater

Transmit frequency: 916.5 MHz

ID codes: 8 user-selectable

License: Low power (less than 1 mW), no license required

Temperature range: -40 to 60 °C

Power Input: 5 to 12 VDC output @ 1mA

FCC Part 15 Class B Registration Warning

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.**
- **Consult the dealer or an experienced radio/TV technician for help.**

Shielded cables and I/O cords must be used for this equipment to comply with the relevant FCC regulations. Changes or modifications not expressly approved in writing by Davis Instruments may void the user's authority to operate this equipment.

Product Numbers: 7614 & 7615

Davis Instruments Part Number: 7395-105
Wireless Repeater Installation Manual
Rev. A Manual (4/29/99)
Controlled Online: Weather Manuals:Accessories:Wireless Repeater

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