NELSON

Wireless Controls

IRRIGATION TECHNOLOGY FOR THE FUTURE

twig

THE PURPOSE OF THE NELSON WIRELESS CONTROL SYSTEM

is to provide a method of automatically cycling through a series of irrigation control valves in a programmed sequence. While many wireless systems on the market target overall farm automation, data collection, and data management, the TWIG system is specifically designed for automation of irrigation control valves. The TWIG system is sophisticated, yet engineered for simplicity.

twigwirelesscontrols.com

TWIG ON VALVE

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IRRIGATION AUTOMATION

Save labor, energy, and water.
Improve crop yield and grade.

Additional Benefits

Costs less than hard-wired systems.

Eliminates in-ground wire splices which are a chronic source of problems.

Reduced lightning damage associated with hard wired systems.

Eliminates rodent damage associated with buried wires.

Easily expandable to accommodate future system growth by simply adding TWIGs to the network.

Solar power option brings automation to remote areas where no power source is available.

Makes automation of portable systems possible.

There is no limit to the number of TWIGs that can be turned on at once.

TD200 CONTROLLER

- Easy to learn. Easy to use.
- Controls up to 100 TWIGs and 200 valves, individually or in groups, to handle very large systems.
- Reliable, two-way data transfer every 20 seconds.
- Multiple start times with multiple irrigation programs, easy to set up and use.
- Irrigation events and water meter readings can be data logged.
- Optional power sources: 110 Volt AC, or 12 volt DC battery with solar charger.
- Reads actual battery and radio signal strength of each TWIG in the network.
- TD200 has a factory assigned “network I.D.” that is the network that the TWIGs will join.

TD200 CONTROLLER

PRECISION IRRIGATION CYCLE TIMES. APPLY EXACTLY THE AMOUNT OF WATER NEEDED.

twig

TWIG (VALVE CONTROL)

» Turns low voltage DC latching solenoids on and off at the command of the TD200 controller

» Proprietary “Nelson” high powered radio. Adjustable between 902 and 924 MHz.

» Three TWIGs available:

TWIG-1. Operates one solenoid.

TWIG-2. Operates two solenoids, independently.

TWIG-4. Operates up to 4 solenoids, independently.

» Power source: Two D-cell batteries, good for one irrigation season — shipped with TWIG.

» Utilizes a proprietary “deep sleep” cycle technique to minimize power consumption.

» Two antenna options:

Dua l internal antennas (standard). Provides diversity for better reception, and protection from damage. Use where line of site is optimal.

External antenna (optional). Use to improve signal reception when TWIG does not have good line-of-sight, and to extend range of communication.

» The TWIG is packaged in a rugged, field ready water resistant box. Ag tough!

» Joining a TWIG to a network is effortless and quick, either on setup of a new system, or the addition of a new TWIG to an existing network.

» TWIG is capable of running a manual solenoid test to check solenoid.

» Each TWIG has a factory assigned ID #.

TWIG REPEATER

When blind spots or poor communications occur in a network due to vegetation, topography or excessive distances, a repeater can be installed in the network to facilitate communications. The Repeater greatly extends the range of the network and can bridge obstacles that might otherwise block communications.

» Automatically directs the radio signal where the signal strength is greatest, i.e. either directs between the TD200 and the TWIG, or through the Repeater.

» A TWIG network may contain up to 9 repeaters.

» Optional Power Sources: 110Volt AC or 12 Volt DC battery with solar panel.

» TWIG Repeaters require an external antenna.

TWIG CONTACT

The TWIG Contact contains 4 latching contacts, incorporated into a TWIG radio receiver. The TD200 has the ability to communicate with the TWIG Contact to open and close the contacts in order to turn devices on and off.

Optional Power Sources: 110 Volt AC; 12 Volt DC battery; or 2 D-Cell batteries.

» Requires an external antenna.

» Contacts rated to one amp maximum current.

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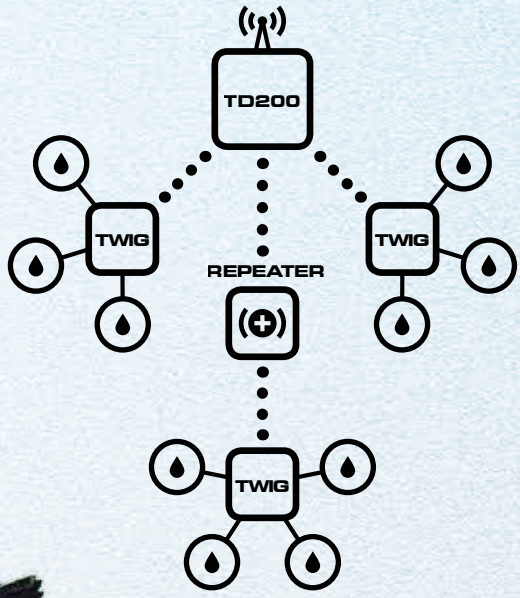
The Nelson Wireless TWIG Control System basically consists of a TD200 Controller capable of controlling up to 100 TWIGs in a programmed sequence. The TWIGs are located in the field on solenoid operated valves. The system operates like a conventional hard-wired automated irrigation system except the underground wires have been eliminated and replaced by two-way wireless radio signals between the TD200 and the TWIGs. The TD200 and the TWIGs that it controls are referred to as a "network". The TWIG system operates in the 900 MHz range and does not require a license.



Simply connect Nelson TWIGs to 800 Series Control Valves and couple with the TD200 Controller to automate new or existing drip, solid set or permanent set installations.

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