



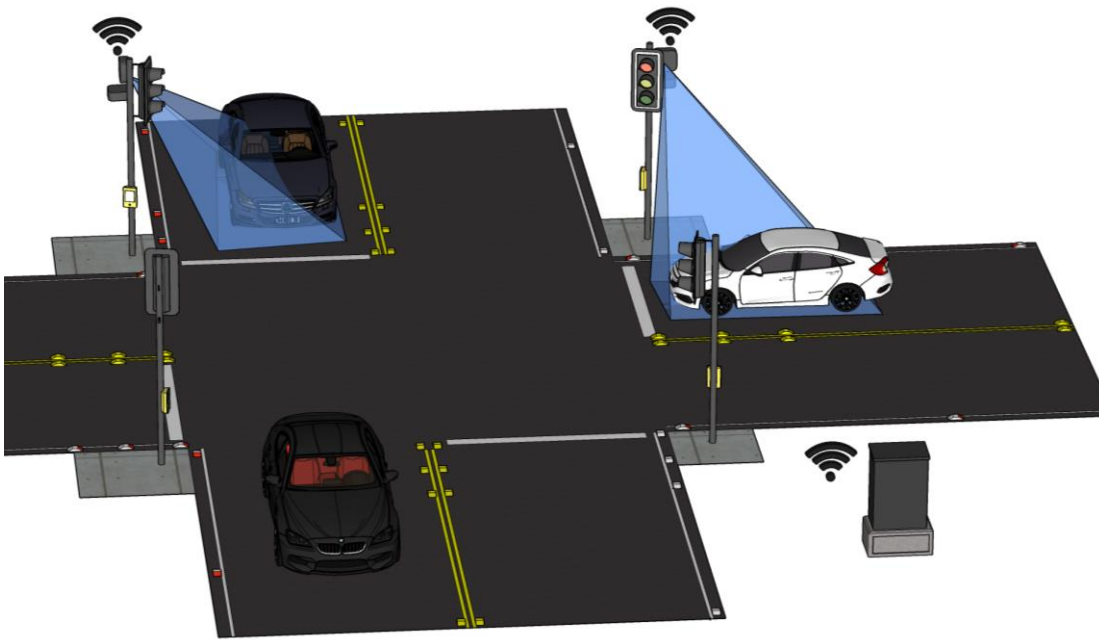
RLI
Remote Loop Interface

Product Manual

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The *Remote Loop Interface* is a 4 Channel loop simulator which interacts with existing infrastructure and has non-intrusive installment.



- Inductive Loop simulator
- 128-byte encryption
- Anticollision software (auto change channel)
- Installation using existing infrastructure
- No remapping of personality
- Easy installation
- 4 Channel
- Low Voltage
- User configurable
- Visual indications
- 100m to 2Km range with Antenna

1. Password

1.1 At power up or screen wake when touched, the screen will show:

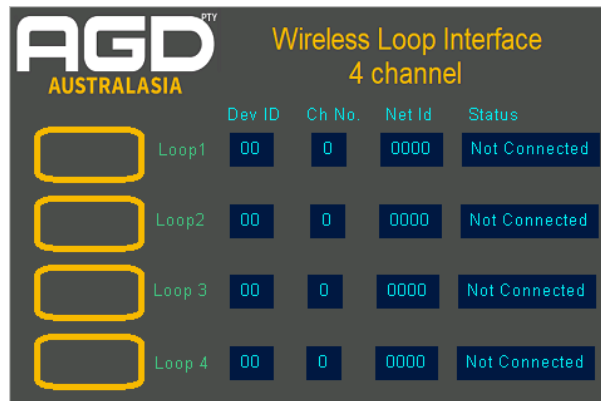
- 1.1.1 Textbox to enter PIN number.
- 1.1.2 Device ID or serial number.

Touch the textbox and a keypad will appear. Enter the PIN number. If correct the screen will change to the monitor screen, else repeat.

Note: each unit has an individual pin number for security purposes, this number is calculated from the device ID itself using an algorithm.



2. Monitor Screen

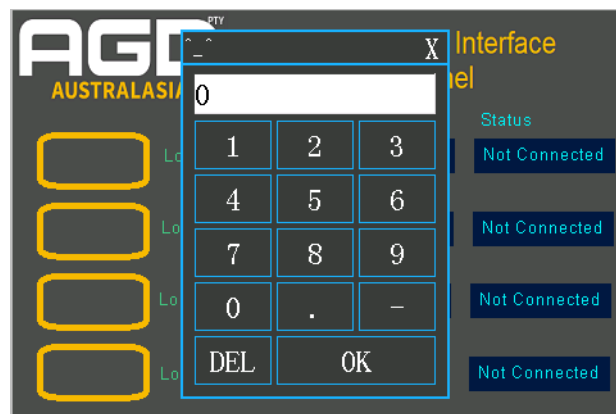


Monitor Home Screen

3. Change Device ID and channel numbers

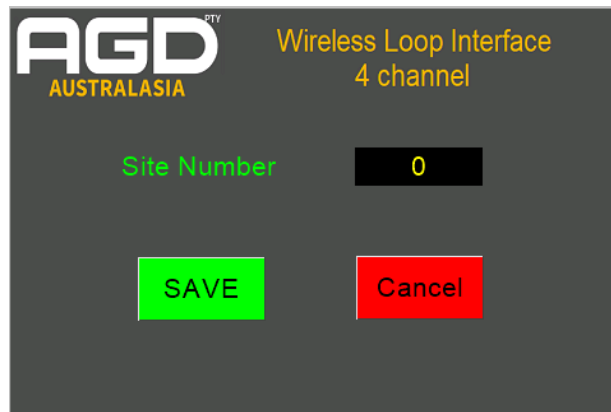
Touch Dev ID or Ch No. textbox to enter the remote device or channel number required, leave zero if not used.

A keypad will appear to enter the number, as per below.



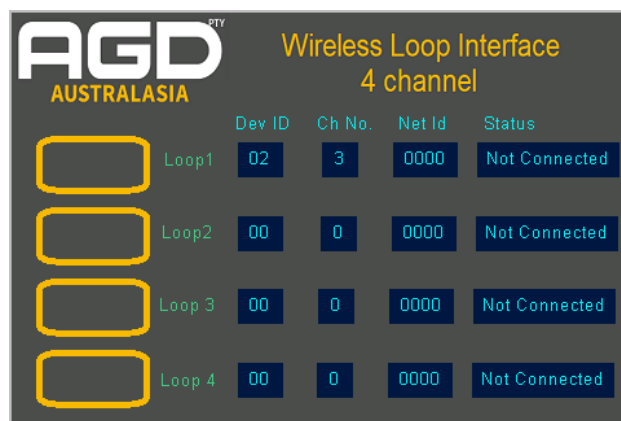
Note: each loop output can be allocated to a specific remote device and specific input on the remote device.

See Below.



4. Change Site number

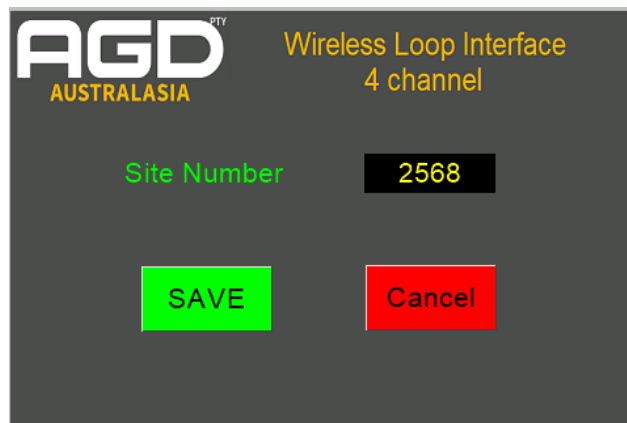
By touching the top Net ID textbox, a different screen will appear showing site ID input.



Touch Site number textbox and a keypad will appear, as shown below. Enter site number as below.



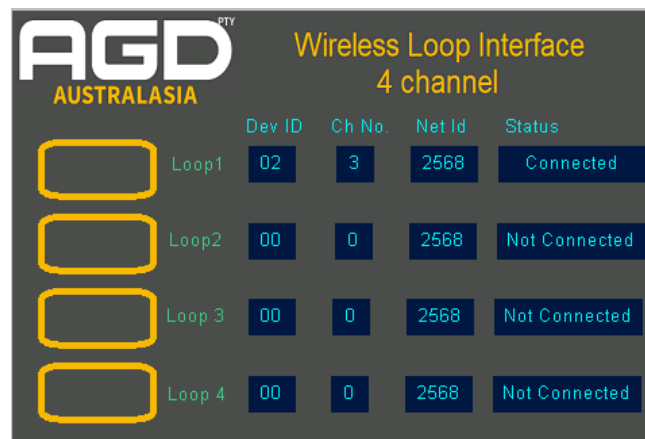
Now, select Save to write information to memory or cancel to return without saving.



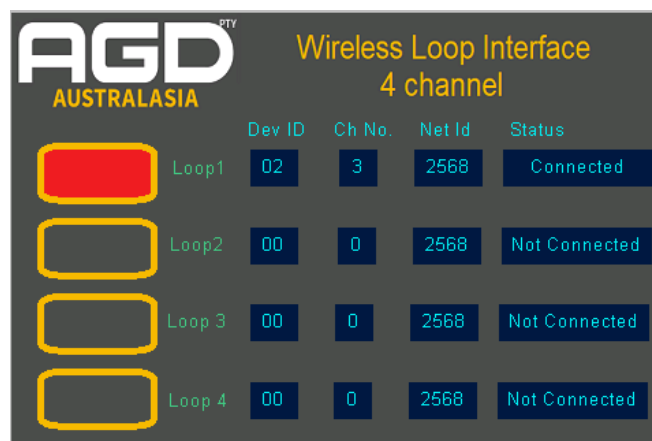
Note: Enter the Traffic signal site number or asset number into the detectors and the RLI-4 interface, this reconfigures the wireless module to different PAN ID to avoid close sites interfering with each other.

5. Loop monitoring and testing

Now that the system is setup, when remote device is powered the status box will show “Connected”.



If device No. 02, channel 3 detects a vehicle, then the loop image for this device will change to Red (detect mode) as shown below.

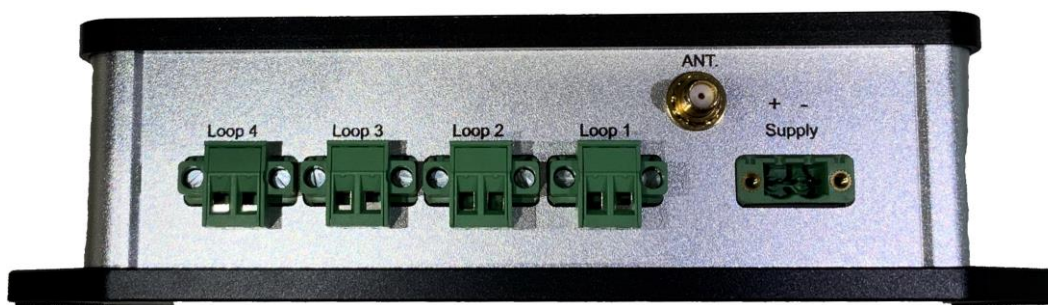


Note: The output connections to the controller can be tested by pressing the image of the loop, this will be same as receiving a trigger from remote device.

6. Connections indicators

- 6.1 Power: Each RLI-4 unit is supplied with a 12volt plug pack that can be simply plugged into the GPO.
- 6.2 Loops: 4 x 2-way connectors are provided on the rear of the RLI-4 Unit, each of these can be cabled with a twisted 1 pair cable and terminated into the required terminal on the traffic signal controller loop termination panel.

Note: return traffic controller detector inputs after connection to unit.



12volt Plug Pack

7. Antenna

A low-profile Antenna is also provided with 1m cable and SMA connector to connect to the RLI-4 unit, this controller cabinet will require a hole to mount the antenna.

8. Indicators

- 8.1 PWR: Power indicator should be on when power connected to unit.
- 8.2 Run: The run indicator should be flashing at a 1hz rate to indicate MCU operating.
- 8.3 Rx: Flashes when data received from remote device.
- 8.4 Tx: Not used in this version.



Loops: These operate to display output status to controller.

- Voltage 12 VDC (Max 24 VDC)
- Current 100 ma (Screen active)
- Number of outputs: 4
- Output type Variable inductance (172uh – 150 uh)
- Number of wireless devices: 4
- Number of channels per device: 4
 - Built in communication timer, loop fails to on status.
- LED indicators
 - Pwr
 - Run
 - Rx
 - Tx
 - Loop 1 status
 - Loop 2 status
 - Loop 3 status
 - Loop 4 status
- Wireless transmission distance 2km Line of site
- Wireless transmission Security 128-bit AES encryption
- Frequency 928 MHz ISM band, no license required.
- Anticollision software with retries (10) and code hopping to reduce the chance of packet loss.
- LCD
 - 3.2" touch screen
 - Password protection
 - Visual loop indication
 - Visual connection status
 - Individual loop test functions to controller
 - Device ID's config
 - Channel no. config
 - Site number Config
 - Auto sleep (LCD), need to enter password to re-activate