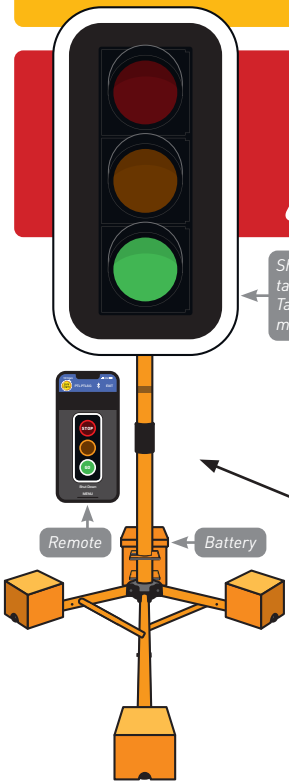
Operations and Maintenance Manual

PTL-TYPE-1 mode of operation (remote controlled only)

This Portable Traffic Lights is a lightweight traffic light. As such correct operation for Set-up and Take-down procedure is essential. Please ensure this manual is read and understood before attempting to operate the Data Signs' Portable Traffic Lights (PTL).

Set-up and Maintenance requirements of the PTL are covered by this Manual.



Showing optional Ballasts.
Ballasts are mandatory for QLD.

CAUTION:

The Data Sign Portable Traffic Lights should only be operated by qualified traffic managers.

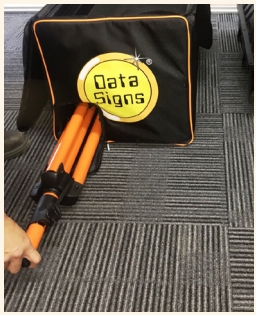
If you have hired out this PTL, contact the Hire Company for assistance.

The PTL-S1™ is used to control localized vehicular traffic flow as a safer substitute for STOP/SLOW (lollipop) signs.

It is powered by a LiPo maintenance free battery that needs to be recharged at the end of the day. It is not intended to be left unattended on site and can only be operated via the Remote Control which places a safe distance between the actual Traffic Light and the operator.

An overview of the layout of the PTL-S1™ equipment is provided here.

Installation - Setting Up for Operation



Step 1:
Take out the stand.

Step 2:
Loosen locking tab, lift the post to the pin-hole & place pin.

Step 3:
Pull out spring pin and slide the tripod legs down until the pin locks in place.

Step 4:
Release the spring pin and ensure the tripod is locked.

Step 5:
Fit Battery Box.

Step 6:
Twist and fit around the post.
Close and lock bracket if needed.

Step 7:
Remove light from carry bag and fit onto stand. Pull spring pin and lower onto post.

Release the pin into place.

Step 8:
Line up and Connect the power connector to the Socket, fit and screw socket in place to lock.

Installation - Target Board Setup (if supplied)

Step 1:
Remove the four parts from the side pocket.

Step 2:
Assemble this way.

Step 3:
Align and assemble top section to the 2 sides.

Line up tick marks.

Step 4:
Place the assembled sections over the lamps as shown

Step 5:
Now, assemble the bottom panel as shown.

Step 6:

SCAN FOR VIDEO PRESENTATION OF THIS PROCESS

PTL-S1™

This QuickStart Guide covers the PTL TYPE-1 Operation as per QLD *MRTS264, TSI-SP-049-050-062,* Australian Standards *AS-4191:2015* and Various State Authority requirements.

Ensure the units are setup as described in the first section of this booklet. This User Manual applies to Controllers operating on firmware 06.00.XX or later.

Contents

The PTL Remote

Once the power switch has been set to ON, the PTL Light will go through a start up sequence. When completed, the lights will show the self test and the buzzer will sound, it is then ready to pair to the remote.

Select the PTL and press to Pair to the Light.
If required press the Pair prompt(s).

Status screen

The top line shows date and time, if this count is active your device is paired.

The second line shows 1 unit connected.

The third line shows GATING MODE.

The fourth line shows the remaining time for the current light state.

Press START UP button, this will set the light start up sequence.

Once ready the light will rest on the RED light.

THE MAIN SCREEN

The battery level is shown above the light.

An Alarm will indicate if the battery reaches a 'too low' level and recharging is required.

To change the light from Red to Green, tap the Green lamp.

To change the light from Green to Red, tap the Red lamp.

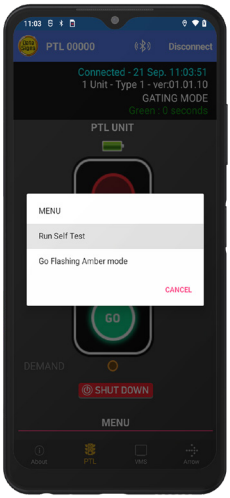
◀ STARTUP / SHUT DOWN

To Shut the light down or Start them up again, tap the START UP / SHUT DOWN button and confirm by allowing count to continue for 5 seconds.

The Light will go blank, or start up whichever the case might be.

Once the lights are BLANK, switch them off and recharge the battery for the next time. Also recharge the Remote.

Note: It is NOT recommended to power the remote OFF as this will result in longer pairing time to the light when switched on again. Keeping the Remote in standby will ensure a quick pairing to the light next time.



◀ SELF TEST

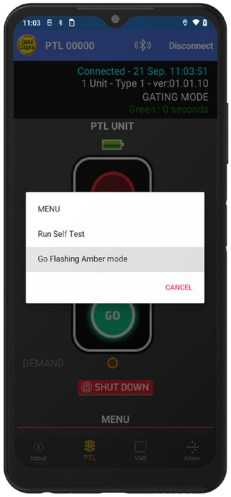
This does quick Green Amber Red Sequence to test the light.

This test can only be done while the lights are in SHUT DOWN state.

FLASHING YELLOW LIGHT ▶

You can set the Light to Flash Yellow only.

This might serve as a caution or warning lights.

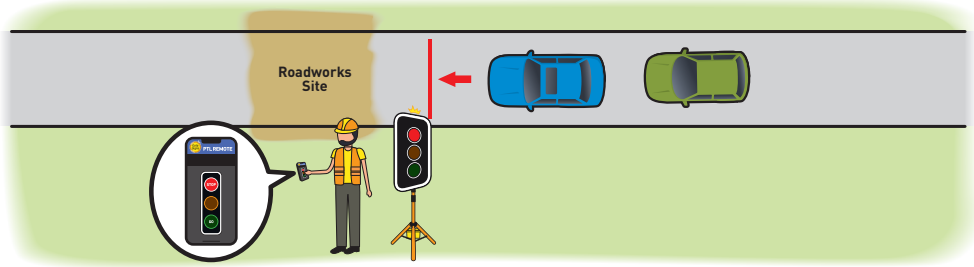


Gating Control Mode

Single PTL unit use only.

YouTube
Scan the QR code

Gating Control is used to control the flow of traffic as per below illustration.



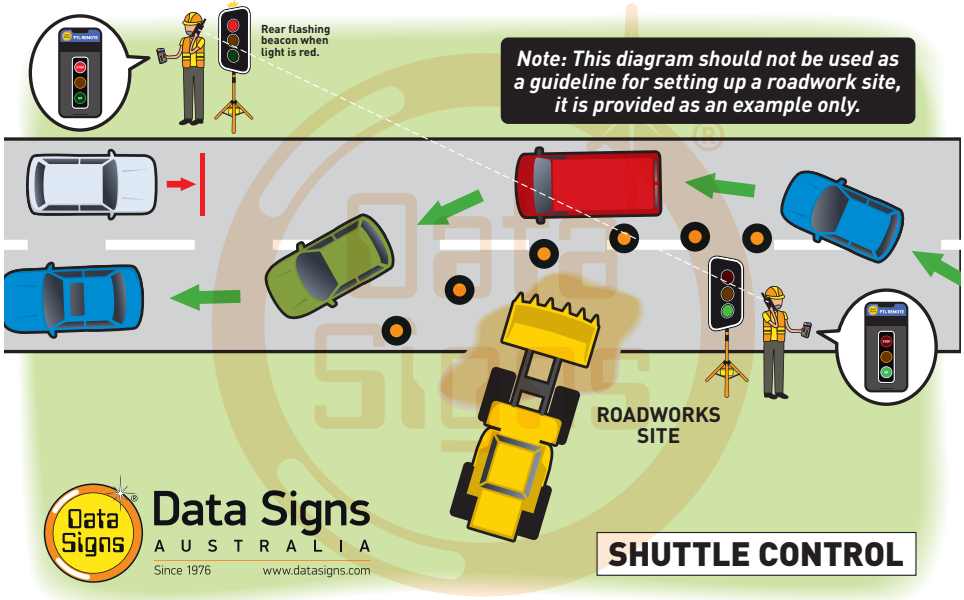
Gating control can also be used with 2 or more PTL units operating independently by traffic operators, using a Walky-Talky to communicate with each other as per below.

Shuttle Traffic Control Sample

Shuttle Control is a form of traffic control used where a portion of the roadway is closed so that only a single lane can be used alternatively by traffic from opposite directions.

Only one Traffic Light unit is allowed to show the Green signal at any time.
This control is coordinated between the 2 traffic controllers, normally with 2-way radios.

The diagram below illustrates the traffic control scenario where Shuttle control would typically be used.



Battery Charging

Use the battery charger provided to charge the Main LiPo battery and the smaller charger to charge the Remote Controller.

This is normally done when the equipment is returned to the workshop/yard at the end of the day.

Fault Conditions

If any fault conditions occur as discussed throughout this document, the Fault is displayed on the Remote and if critical the Lights will go to RED. When the fault is cleared, normal operation is resumed.

Troubleshooting Guide

This section contains some tips on handling some of the issues that may arise when using the Traffic Lights. If you cannot resolve the issue you are experiencing using the information below, please contact Data Signs on the Help Desk at datasigns.com.au/help.

Turning the Controller On

If the POWER light does not come on when the switch is turned ON**:**

- Check that the power connector is inserted properly.
- Check the fuse of the Controller that is inside the light housing (behind the Green lamp) and inside the battery box.
- Ensure the battery is charged using the charger provided.

Lights Not Working

Check the connections on the controller or the lights. If you need to ship the Controller or parts back to Data Signs for repair, contact the Help-Desk at datasigns.com.au/help

The SD Card

The PTL Controller is fitted with a SD card.
This is used for Software upgrades. If required, Data Signs will advise process to be used.

Maintenance / Handling

1. **Battery level.** Always ensure unit is fully charged for a full days work. Charge overnight, including the PTL-Remote.
2. **Keep Clean.** Always keep the light lenses clean.
3. **Cables.** Ensure cable are secured and not frayed or loose from the connectors.
4. **Test and Tag Battery Charger.** Use an authorised service provider to regularly test and tag the battery charger.

Lipo Battery Handling

Safe handling of lithium batteries

The following instructions relate to the manual handling of lithium batteries as used in the Data Signs products. Lithium Ion batteries are perfectly safe so long as they are handled using the following guidelines.

Charging

The lithium Ion batteries MUST only ever be charged using the charger supplied by Data Signs. This charger must not be modified or used for any other purpose.

Handling

In the event a battery needs to be replaced please contact Data Signs. The lithium ion batteries are generally very reliable and replacement is unusual. It is possible there are other operational issues.

For full safe handling description download document from
https://datasigns.com.au/ServiceSupport/HelpDesk

Glossary of Terms and Abbreviations

Aspects
The actual lights or housing that contains the Lights.

HRC
Hand-Held Radio Controller.
This term is interchangeable with PTL Remote.

Lights
Actual Traffic signal Lamps.
Red, Yellow and Green.

LiPo
Lithium Iron Phosphate.
A lightweight high energy density battery that powers the PTL.

PTL
Portable Traffic Light.

PTL Remote
This term in interchangeable with HRC. This is the Hand Held Remote that is used to control all the PTL Signal changes, control the Lights ON/OFF function as well as other functionality as described in this Manual.

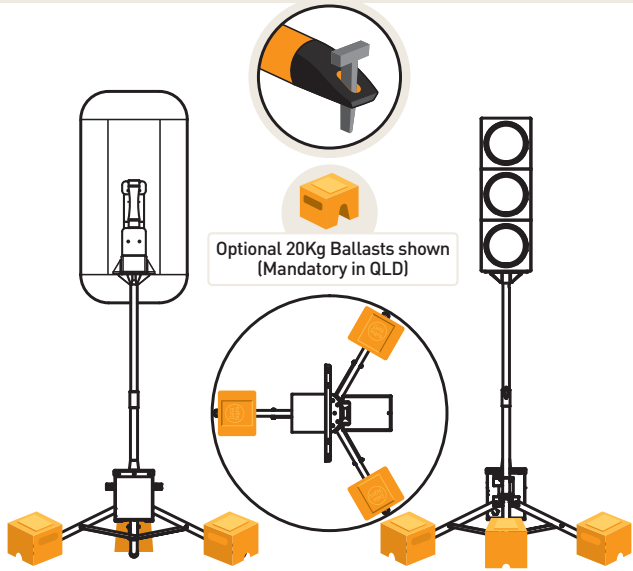
PTSU
Portable Traffic Signal Unit.
This term is interchangeable with PTL.

SD
Storage Device Memory Card. Used for setup, fault logs, firmware upgrade, Bluetooth PIN.

WIND LOADING

RATING FOR 20M/SECOND (72 Kph)

The PTL is fitted with Peg Feet.
Where suitable you can secure it with pegs instead of weights.



Note: Your PTL has a TILT sensor which will indicate on the PTL-Remote if the unit is tilted by more than 20 degrees ***(i.e. It has fallen over)***.

This manual complies with the Specification *MRTS264 Type-1 Portable Traffic Signals* and TSI-SP-062,049 and 50 where relevant *AS4191-2015 Portable Traffic Signals.*

Suggestions & Improvements
Data Signs develops its products with the end users in mind. As such, we are always open to suggestions for product improvement. Contact Data Signs, Head Office in Australia at: datasigns.com.au/help

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