TECHNOLOGY SOLUTIONS UK LTD

TROUBLESHOOTING:
1128 *BLUETOOTH*®
UHF RFID READER

www.tsl.uk.com
Design • Development • Manufacture

CONTENT

History

Version	Date	Modifications
1.00	03/09/2015	Document creation
1.01	04/09/2015	Added ASCII Remote Diagnostic Section
1.02	20/10/2015	Added test for battery-only flashing green LED

OVERVIEW

This document provides troubleshooting assistance to users of the 1128 Bluetooth UHF RFID Reader.

The "**FIRST STEPS**" section provides step-by-step instructions on how to disassemble the 1128 UHF reader into its component parts and then properly reassemble them.

The "**TROUBLESHOOTING**" section provides a structured workflow to follow when trying to diagnose a fault.

The "**REPORTING FAULTS**" section provides a list of fault names and the information that should be reported when contacting TSL Support.

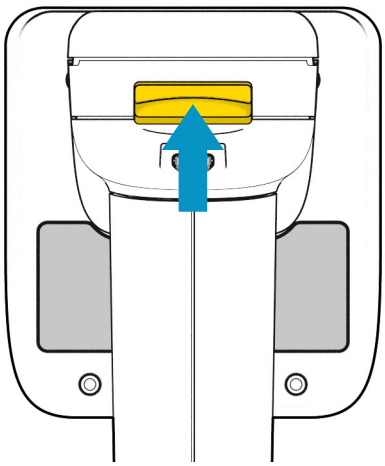
If you have access to a windows PC and a micro-USB cable, you can also run our "**ASCII REMOTE DIAGNOSTIC**" application which generates diagnostic information that can then be sent to TSL Support.

FIRST STEPS

REMOVE TRIGGER HANDLE AND BATTERY

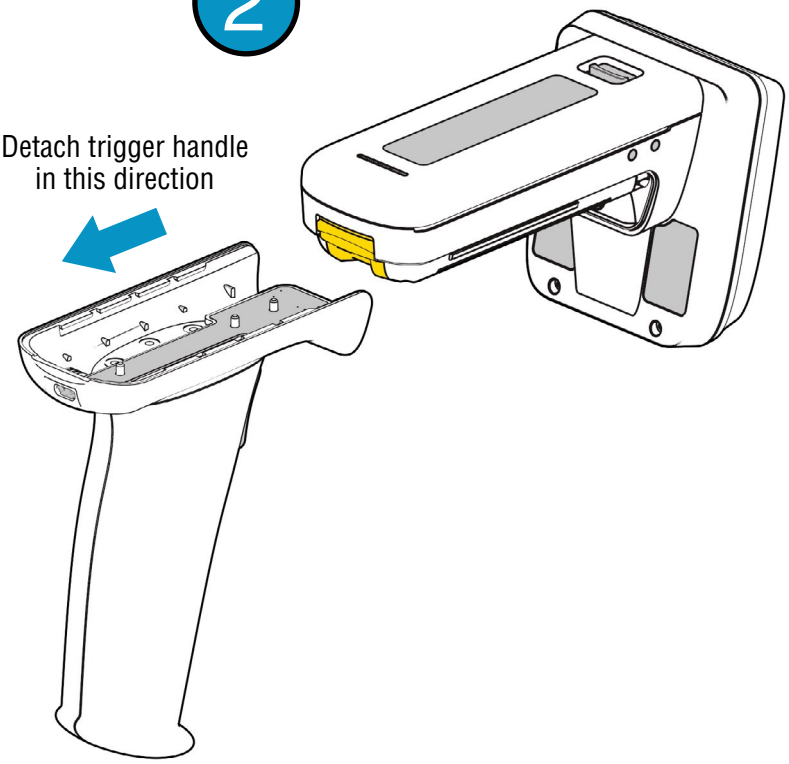
1

Slide trigger handle's release latch



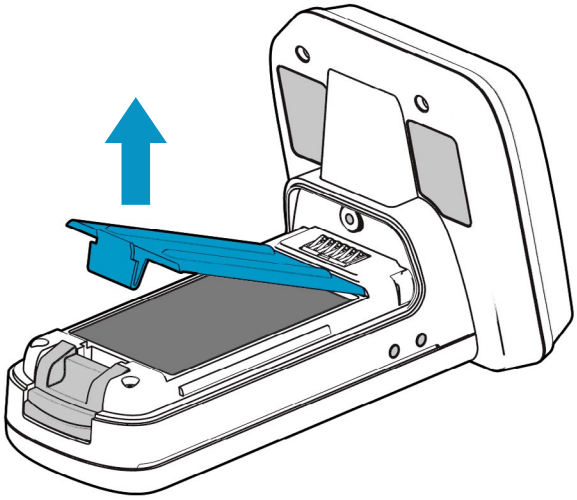
2

Detach trigger handle in this direction



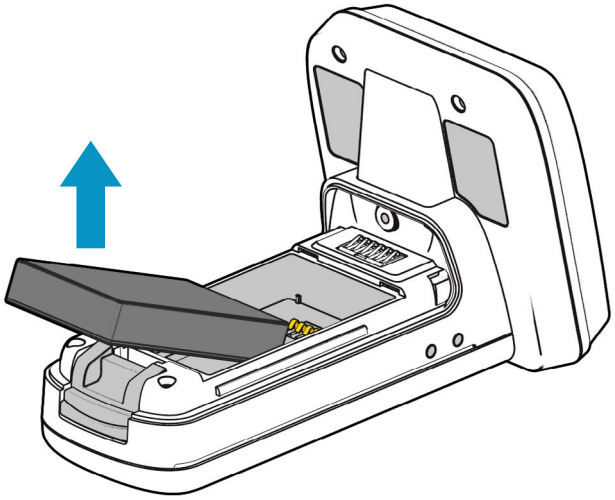
3

Remove battery cover



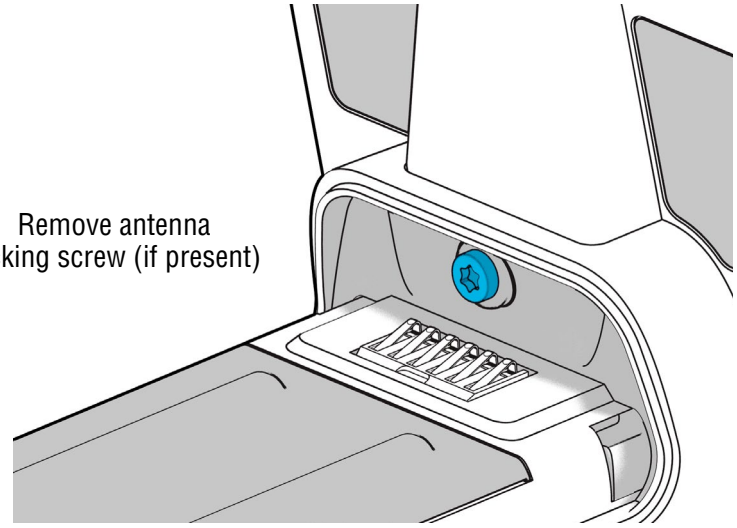
4

Remove battery



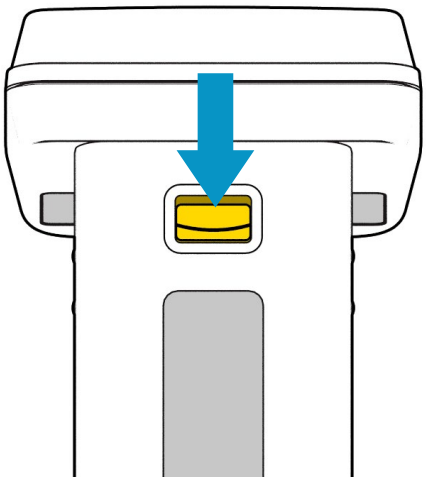
REMOVE ANTENNA

1



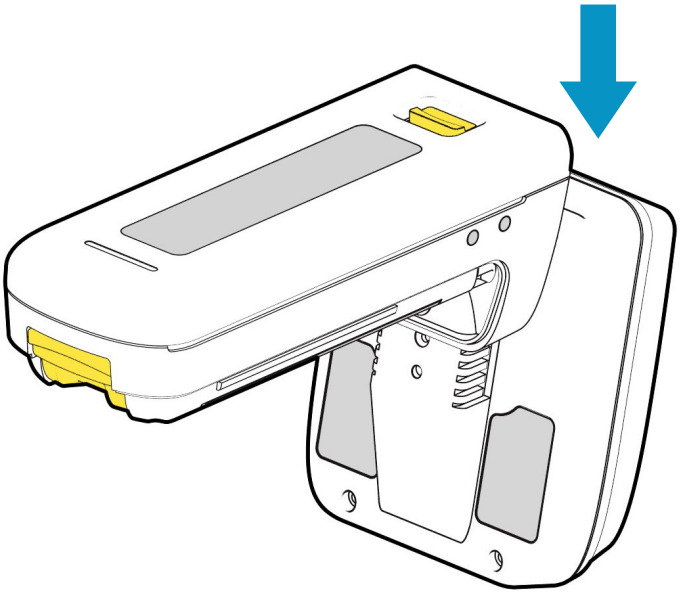
2

Slide Antenna's release latch



3

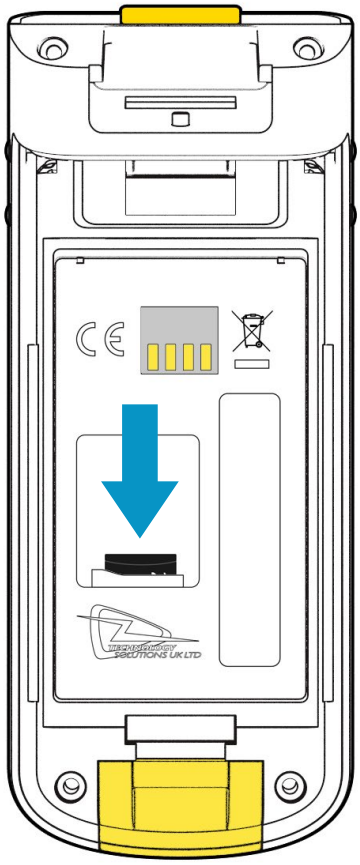
Detach antenna
in this direction



REMOVE MICRO SD CARD

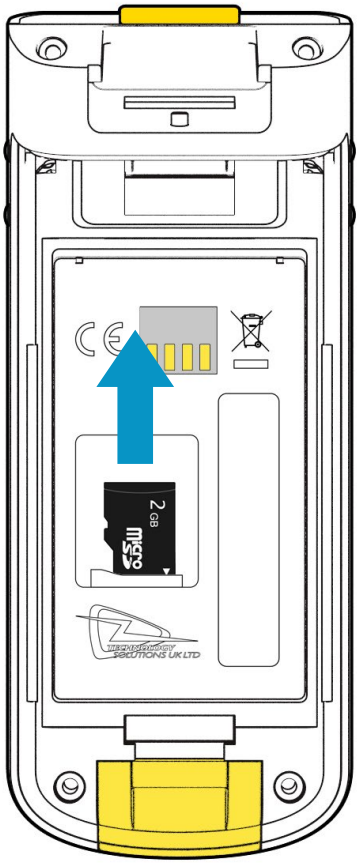
1

Push to release microSD card



2

microSD card can now be removed



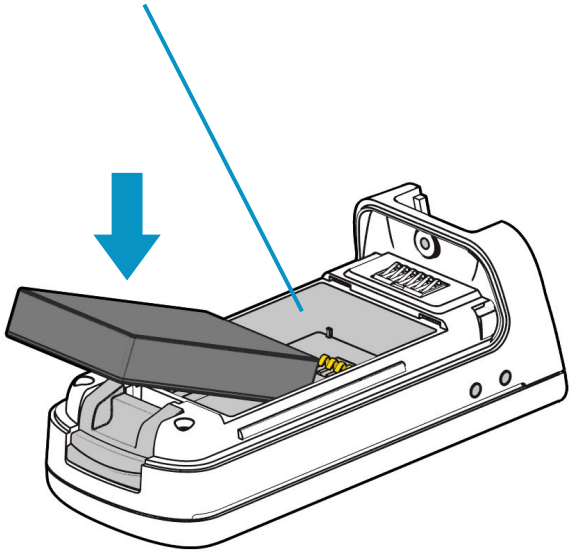
3

Do not replace the microSD card whilst troubleshooting

REPLACE BATTERY

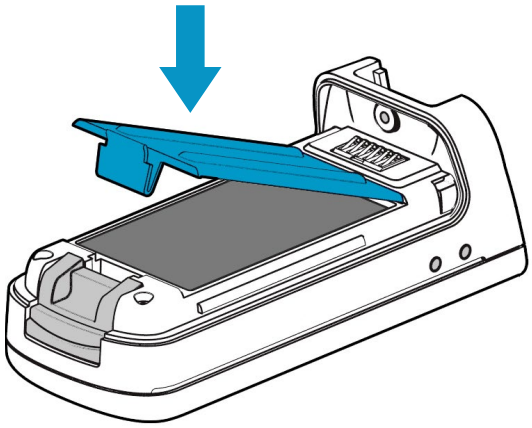
1

Ensure battery is correctly orientated so that the battery contacts meet



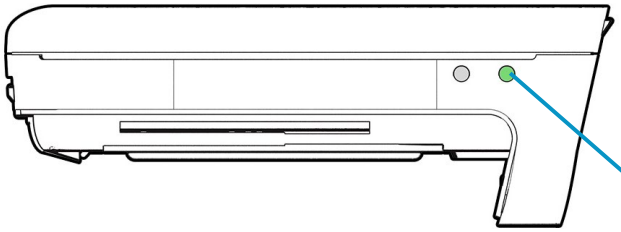
2

Replace battery cover - ensure battery cover is properly seated



CHECK FOR GREEN FLASHING LIGHT

1

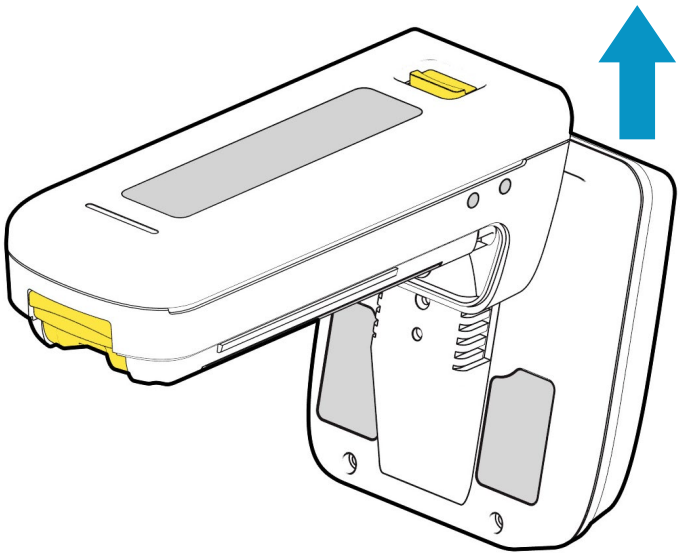


If the green light flashes whilst the antenna, handle and micro sd card are all removed, go to “REPORT FAULT – FIRMWARE”

REPLACE ANTENNA AND GRIP HANDLE

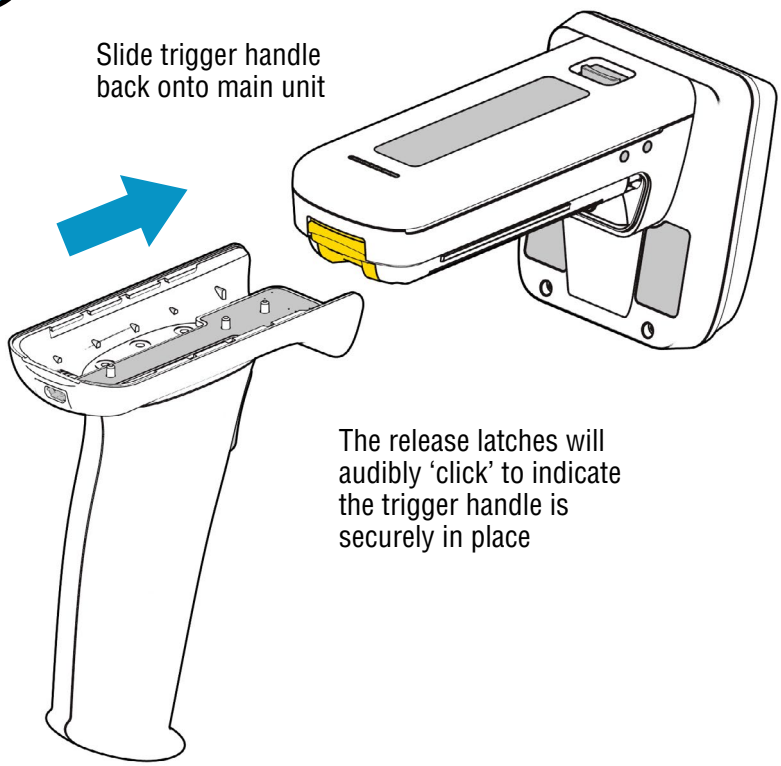
3

Replace antenna
in this direction



4

Slide trigger handle
back onto main unit



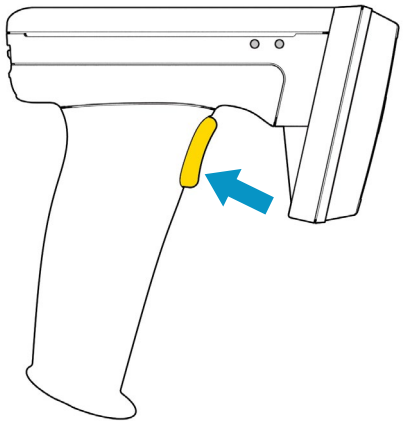
The release latches will audibly ‘click’ to indicate the trigger handle is securely in place

TROUBLESHOOTING

ATTEMPT TO POWER THE READER ON

ACTION

Pull the yellow trigger button to wake the unit



OBSERVE

There should be a buzz and vibrate. The green LED will flash once and the blue LED should start flashing

RESULT

- Was there any sound, vibration or LED activity?

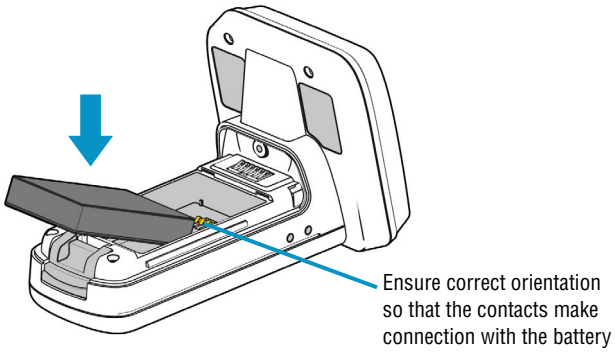
  YES -> Go to "**READER POWERED ON**"

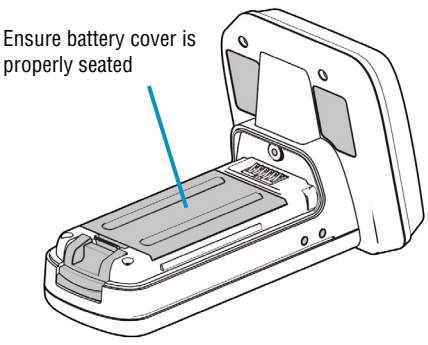
  NO -> Go to "**READER DID NOT POWER ON**"

READER DID NOT POWER ON

ACTION

Check that the battery is inserted correctly





OBSERVE

The battery is the right way up and the right way round to ensure the contacts make connection with the battery. The battery cover is seated correctly and clipped into place

RESULT

- Was the battery inserted correctly?

  YES -> Go to "**TRY ALTERNATE BATTERY (IF AVAILABLE)**"

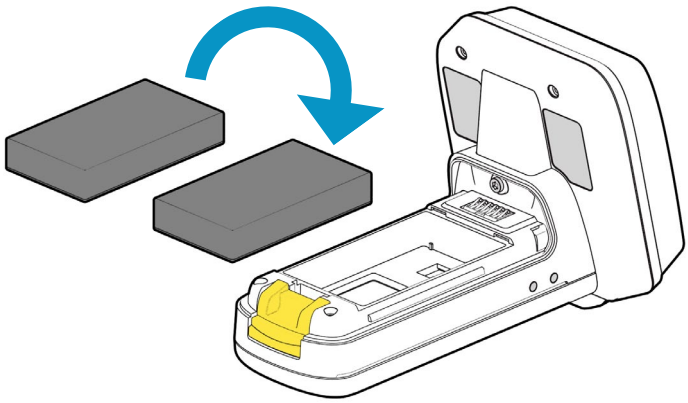
  NO -> Go to "**ATTEMPT TO POWER THE READER ON**"

TRY ALTERNATE BATTERY (IF AVAILABLE)

Note: If no alternate battery is available skip to section -> "**TRY ALTERNATE TRIGGER OR TORCH GRIP (IF AVAILABLE)**"

ACTION

Replace the battery in the unit with the alternate battery. Pull the yellow trigger button to wake the unit



OBSERVE

There should be a buzz and vibrate. The green LED will flash once and the blue LED should start flashing

RESULT

- Was there any sound, vibration or LED activity with the other battery?

  YES -> Go to "**TRY CHARGING**"

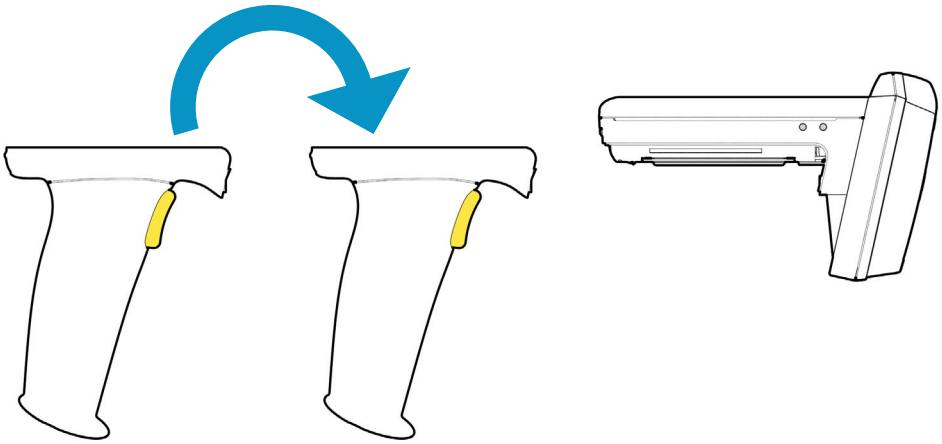
  NO -> Go to "**TRY ALTERNATE TRIGGER OR TORCH GRIP (IF AVAILABLE)**"

TRY ALTERNATE TRIGGER OR TORCH GRIP (IF AVAILABLE)

Note: If no alternate handle is available skip to section -> "**TRY CHARGING**"

ACTION

If available try an alternate torch grip or trigger handle. Pull the yellow trigger button to wake the unit



OBSERVE

There should be a buzz and vibrate. The green LED will flash once and the blue LED should start flashing

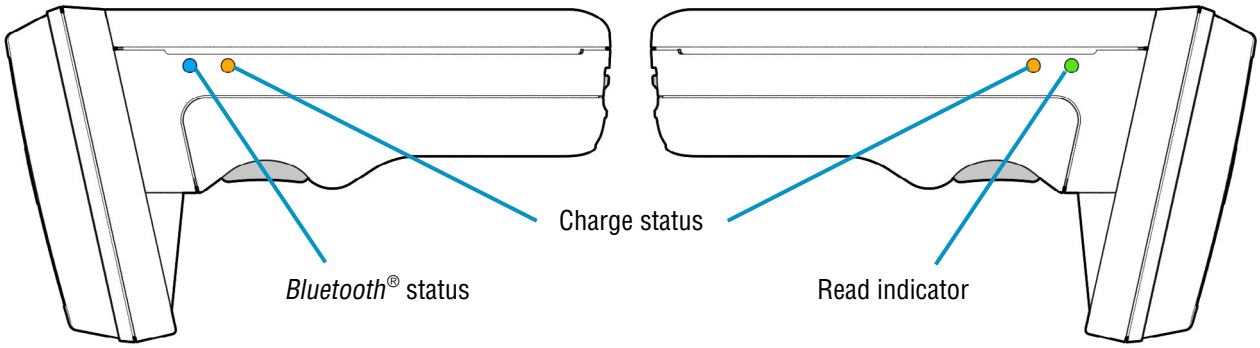
RESULT

- Was there any sound, vibration or LED activity?

  YES -> Go to "**REPORT FAULT – HANDLE**"

  NO -> Go to "**REPORT FAULT – NO POWER**"

READER POWERED ON



As the unit powers on there should be one short flash on the green LED and the blue LED should start flashing to indicate it is awaiting a connection

ACTION

Pull and hold the trigger for two seconds

OBSERVE

Look at the green and blue LEDs on each side of the reader

RESULT

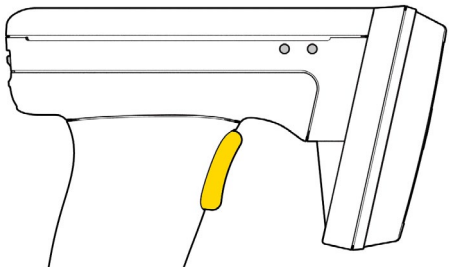
Blue LED	Green LED	Result	Action
○○○○○	○○○○○	Unit failed to power on	Go to "**READER DID NOT POWER ON**"
●○●○●	●○○○○	Blue LED flashing and Green LED off	Go to "**SCAN ONE OR MORE TRANSPONDERS**"
●○●○●	●○●○●	Blue LED flashing and Green LED flashing	Go to "**REPORT FAULT – ANTENNA**"
○○○○○	●○●○●	Blue LED off and Green LED flashing	Go to "**REPORT FAULT – FIRMWARE**"

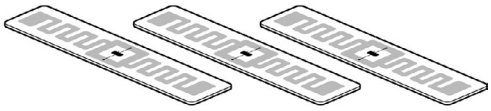
SCAN ONE OR MORE TRANSPONDERS

Note: If you are using an imager only antenna skip to section -> "**SCAN A BARCODE**"

ACTION

If you have some UHF RFID transponders to test with put them close to the reader and pull and hold the yellow trigger for three seconds





OBSERVE

- Does the green LED flash, is there a buzz and vibrate?

  YES -> Go to "**SCAN A BARCODE**"

  NO -> Go to "**REPORT FAULT – ANTENNA RFID**"

SCAN A BARCODE

Note: If you are using an RFID only antenna skip to section -> "**ASCII REMOTE DIAGNOSTIC**"

ACTION

Attempt to scan the barcode below by a pull, release, pull-and-hold action on the yellow trigger. Please note that when waking up the reader or powering on for the first time, it takes approximately seven seconds for the imager engine to activate.

OBSERVE

- Does the barcode engine activate? Is there a buzz and vibrate?

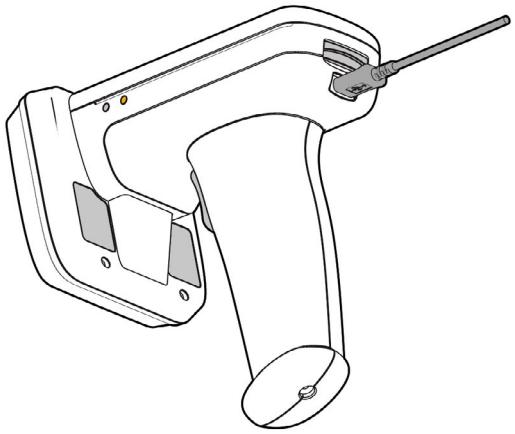
  YES -> Go to "**ASCII REMOTE DIAGNOSTIC**"

  NO -> Go to"**REPORT FAULT – ANTENNA BARCODE**"

TRY CHARGING

ACTION

Use the original supplied USB lead and charger to attempt to charge the reader.



OBSERVE

Look at the orange LEDs on either side of the unit.

RESULT

Orange LEDs	Result	Action
●●●●●	Orange LEDs on static	Go to"**ATTEMPT TO POWER THE READER ON**"
●○○○●	Orange LEDs flashing slowly	Go to"**ATTEMPT TO POWER THE READER ON**"
●○●○●	Orange LEDs flashing quickly	Go to"**REPORT FAULT – CHARGING**"
○○○○○	No Orange LEDs on	Go to"**REPORT FAULT – NOT CHARGING**"

REPORTING FAULTS

REPORT FAULT – HANDLE

Contact Technical Support as detailed below reporting “Fault – Handle”

REPORT FAULT – NO POWER

Contact Technical Support as detailed below reporting “Fault – No Power”. Please state whether an alternate battery and/or whether an alternate handle was tried.

REPORT FAULT – FIRMWARE

Contact Technical Support as detailed below reporting “Fault – Firmware”

REPORT FAULT – ANTENNA

Contact Technical Support as detailed below reporting “Fault – Antenna”

REPORT FAULT – LEDs

Contact Technical Support as detailed below reporting “Fault – LEDs”. Please describe what the LEDs are doing.

REPORT FAULT – ANTENNA RFID

Contact Technical Support as detailed below reporting “Fault – Antenna RFID”

REPORT FAULT – ANTENNA BARCODE

Contact Technical Support as detailed below reporting “Fault – Antenna Barcode”

REPORT FAULT – CHARGING

Contact Technical Support as detailed below reporting “Fault – Charging”

REPORT FAULT – NOT CHARGING

Contact Technical Support as detailed below reporting “Fault – Not Charging”

REPORT FAULT – NONE FOUND

Contact Technical Support as detailed below reporting “Fault – None Found”

CONTACT TSL TECHNICAL SUPPORT

Once you have identified that the unit is faulty please contact support@tsl.com with the following useful information.

- The steps that you have done from this guide to identify the fault and the fault that has been identified
- Has the unit always had the fault or has it started happening?
- What is the serial number of the unit?
- Did any other part of the system change (updated software, changed paired device) when the fault occurred?
- What are you using the UHF reader with?
  - Is it paired to a tablet? Phone? PC?
  - Is the connection Bluetooth or USB?
- Does the unit read transponders?
- (If an imager version)
  - Does the reader read any barcodes?
  - If you are failing to scan a particular barcode:
    - Please provide a sample image of the barcode
    - Please identify what type of barcode it is (i.e. the symbology)
      - 1D (e.g. Code 128ABC, EAN, UPC, ITF)
      - 2D (QR Code, PDF417, Data Matrix)

ASCII REMOTE DIAGNOSTIC

OVERVIEW

If you have completed all of the troubleshooting steps mentioned in this document and are still experiencing problems with your 1128 *Bluetooth*® UHF RFID Reader, you can assist TSL in diagnosing the issue by installing and running the 'ASCII Remote Diagnostic' application. This Windows application generates an email with diagnostic information attached, which can then be sent to our support team.

INSTALLATION

VIRTUAL COM PORT DRIVERS

To connect a TSL ASCII UHF RFID Reader to a desktop PC via a USB connection, the necessary Virtual COM Port (VCP) drivers must be installed. Depending on what version of Windows you are running, the VCP drivers may be installed automatically when you first connect the UHF reader - if not, you can manually install the USB drivers using the procedure below:

1. Visit www.ftdichip.com
2. Browse to Drivers, VCP Drivers
3. Download the relevant setup file for your operating system
4. Run the setup file and follow the on-screen instructions to unpack and install the driver package

ASCII REMOTE DIAGNOSTIC (WINDOWS)

PLEASE NOTE: The "**VIRTUAL COM PORT DRIVERS**" must be installed first in order for this application to function correctly.

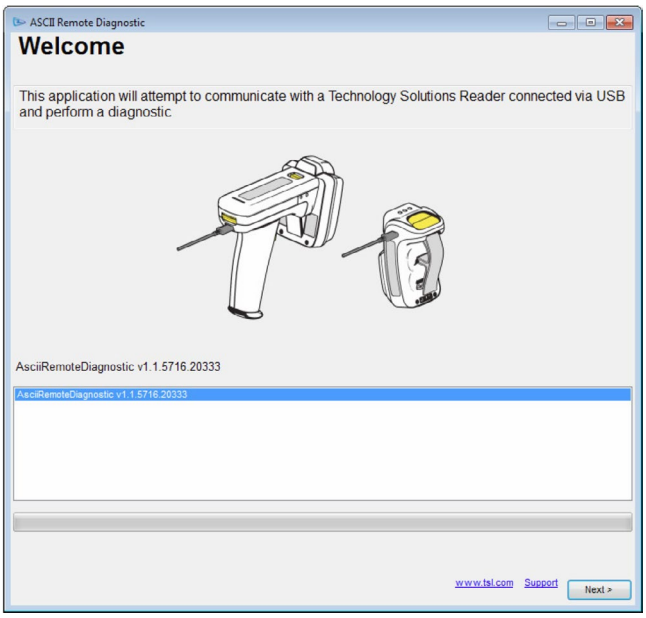
1. Visit www.tsl.com/1128-downloads
2. Scroll down to the 'Diagnostics' category and select the 'ASCII Remote Diagnostic (Windows)' zip file
3. Extract the zip file
4. Run 'setup.exe'
5. Follow the on-screen instructions to install ASCII Remote Diagnostics

RUNNING ASCII REMOTE DIAGNOSTIC

1

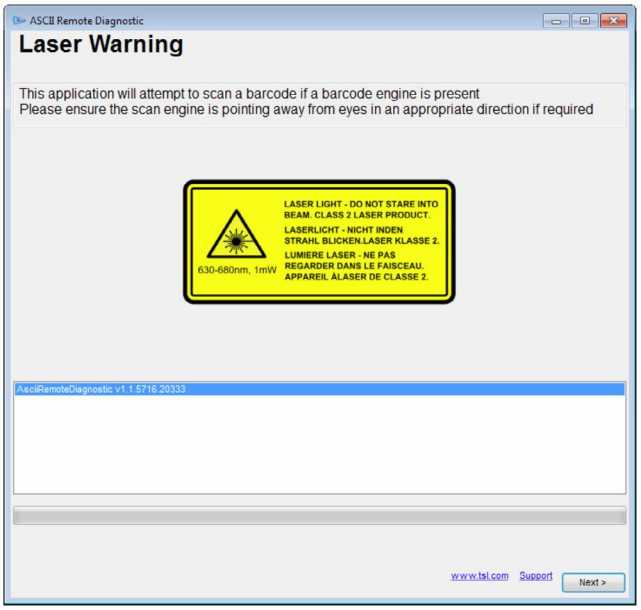
Run the 'ASCII Remote Diagnostic' shortcut from the desktop (or go to Start-->All Programs-->Technology Solutions UK Ltd-->ASCII Remote Diagnostic)

2



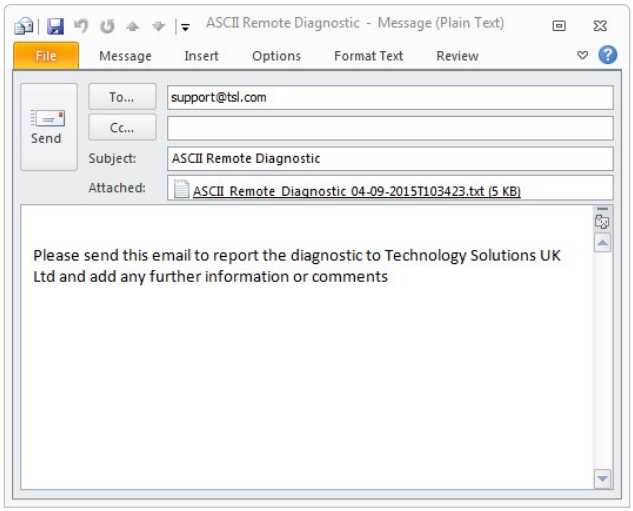
Follow the on-screen instructions to connect the UHF Reader to the PC.

3



Note that the diagnostic scan will automatically fire the imager laser, so make sure the reader is pointing in a safe direction before proceeding.

4



When the diagnostic scan has completed, an email will be generated. Please add any additional information (see "**CONTACT TSL TECHNICAL SUPPORT**") and then send the diagnostic email to support@tsl.com