

PRECISION BLIPBOX

Ducati 899, 959, 1199, Superleggera
Perfect Clutch-Free shifting!

This manual is for Blip Box with firmware 1.14 onwards

Welcome to **Blip Box**, the world's first Plug 'n' Play throttle auto-blip system for Ducati 899 / 959 / 1199 / Superleggera

- Fitted in under an hour
- No ECU re-flash
- Can be used in all power modes and adjusts the BLIP response automatically.
- All existing bike systems, and sensors are retained
- Integrates with the bike CAN bus.
- No error codes on the dash when plugged in.
- Supplied with a BLIP-Map for your bike but also fully re-programmable to suit different rider, tracks, gear ratios, and foot rest hardware
- Replaces the standard 'up-shift switch' allowing the shift point to be set by load cell pressure
- Fully re-programmable using the simple to use WinBLIP software
- Standard and reverse shifting fully supported and changeable by the user without PC
- Machined aluminium housing with fully sealed electronics and high specification 'plug n play' wiring, no wiring modifications needed.
- Designed and made in UK by Bike Sport Developments Ltd and in Sweden by Cordona Precision Technology AB.

Blip Box

- Supplied pre-programmed for your bike and the BLIP is triggered by a load cell sensor on the shift rod
- The standard up-switch shifter is removed and replaced with the load cell, this same load cell is used to trigger the up-shift.
- System may be re-programmed or adjusted by the additional USB interface and the **WinBLIP** software. Sold as a separate part.

How it works – The Ducati Panigale uses a Ride By Wire system with sensors in the twist grip telling the ECU what the rider wants, and electric motors on the throttles carry this out. Between these 2 devices sits the ECU with maps and control strategies to make the bike safe and easier to ride in a wide range of conditions.

Blip-Box reads signals from the twist grip and the CAN bus and at the signal from the rider (load cell or clutch) it creates an appropriate BLIP on the throttle which releases the pressure on the gearbox allowing a perfect smooth back shift. Like a quick shifter, but in reverse.

Download the software, drivers and PDF manuals at
www.cordona.net/manuals

Important rider notes

Must be read and understood by all users

- Blip will be activated under these conditions:
 - RPM is higher than 4600
 - Rear wheel speed is higher than 30kmh
 - Throttle grip is closed (less than 2%, engine slowing down)
 - Clutch is OUT (disabled when rider pulls in the clutch)
 - The time since the last blip must have been exceeded (0.35seconds)
 - DQS is enabled on the dashboard in your chosen rider mode.
 - There are no Blip Box diagnostics active (flashing LED)
- The BLIP disengages the gearbox very much like a quick shifter in reverse, but your foot pressure makes the gear shift, so make a positive movement just like you would when using the clutch.
- For riders who use the slipper clutch excessively you may need to extend the primary BLIP duration to give more time to close the clutch and make the gearbox reversal. Use WinBLIP software or consult your dealer.
- Never force the lever, the BLIP should make it smooth and easy. If you suspect the gear is not fully engaged, pull in the clutch and check in a normal way.
- Never try to make a clutch-free downshift while accelerating (like dropping a gear to overtake). In this case the BLIP system will not work.
- After each downshift blip, release the lever pressure to re-arm it for the next gear Blip change.
- Always keep your foot off the shift lever between shifts or you will cause a measurement error in the shift load.

IMPORTANT – Turn OFF the ignition and wait at least 2 minutes before you disconnect anything or fit the Blip Box kit. This allows a full ‘power down’ of the bike.

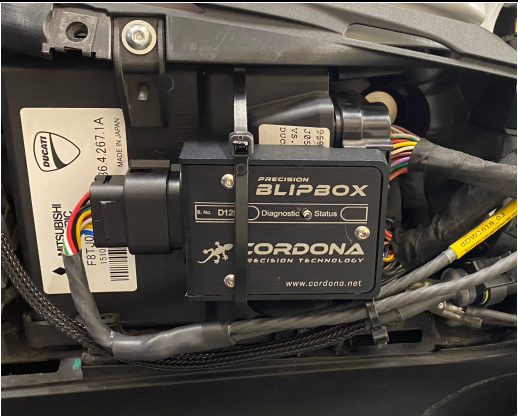
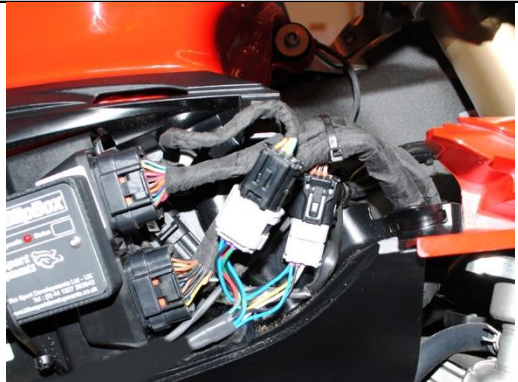
IMPORTANT – During the initial Ignition ON you will see the LED on the Blip Box blink for 30 seconds. This is perfectly normal as the Blip Box enters a self-calibration mode which lasts approx. 20 seconds (see below)




IMPORTANT – During the initial Ignition ON self-calibration the load cell Mv is automatically adjusted to 2.5v to correct for any sensor drift. For this reason it is very important that there is no load applied by your foot or by ‘sticking’ linkages at the power On stage. If you suspect that the load cell is out of calibration, turn OFF the ignition switch and wait 2 minutes for a complete shutdown, then turn back on to re-start the self-calibration.

Preparation

1. Turn off the ignition switch.
2. Wait for 2 minutes until you hear the main relay click and the bike fully powers OFF.
3. Remove the
 - a. Right side fairing panel
 - b. Left side fairing panel
 - c. Inside front right fairing trim panel
 - d. Inside front left fairing trim panel
 - e. Plastic surround of the ignition switch

Wiring loom installation

<p>This module sits on the front face of the ECU with the connector facing backwards and the LED facing out. It is supplied with foam rubber strips and a long cable tie to wrap around the ECU.</p> <p>Note that it helps to remove the ECU retaining clip to feed around the cable tie.</p> <p>NOTE the position of the module as seen in <u>this</u> image. This position provides clearance on the fairing so try to replicate as closely as possible</p> <p>There is no need to over tighten the cable tie</p>	
<p>The wiring now runs along the lower edge of the ECU tray and forwards</p>	
<p>Locate the throttle grip 8 way connector and disconnect it from the bike loom.</p>	
<p>Use a small screwdriver and un-latch the throttle grip (loom side) connector from its retaining post.</p>	
<p>Now fit the Grey throttle grip link connectors 'pin side' connector to that same post and now the throttle grip can be plugged back in to the new connector.</p>	
<p>This now leaves the original throttle grip loom connector and the other side of the adapter which can now be plugged together.</p>	
<p>If done correctly the grey connectors should sit between the standard throttle grip and bike loom as a bridge.</p>	

<p>Route the front loom UNDER the ignition switch but following the path shown in green.</p> <p>The Blue and Yellow banded connectors should be routed into the left side plastic cavity.</p> <p>The red band connector heads forward to mate with the unused 4 way white connector. This is used for GPS on some bikes so we provide a link wire allowing both GPS and Box to be connected here. Refer to the diagram on the next page for more info.</p> <p>Note – ensure the wires are not pinched when re-fitting the plastic shroud.</p>	
<p>It is IMPORTANT to route the left side cable (load cell BLUE and shift-out YELLOW) into the plastic compartment (left side) via the square hole at the top where the ignition switch cable also enters, and then along the top of this cavity above the regulator, this keeps it well away from the front ignition coil.</p> <p>Follow the green line shown on this image.</p>	
<p>Disconnect the small 2 way white connector from the standard quick shift switch and route this (loom side) connector up into the plastic tray below the regulator. Now plug this into the Blip Box loom at the yellow banded 2 way connector.</p>	
	
<p>Now the wiring installation is complete, check all cable routing and secure lightly with cable ties.</p>	

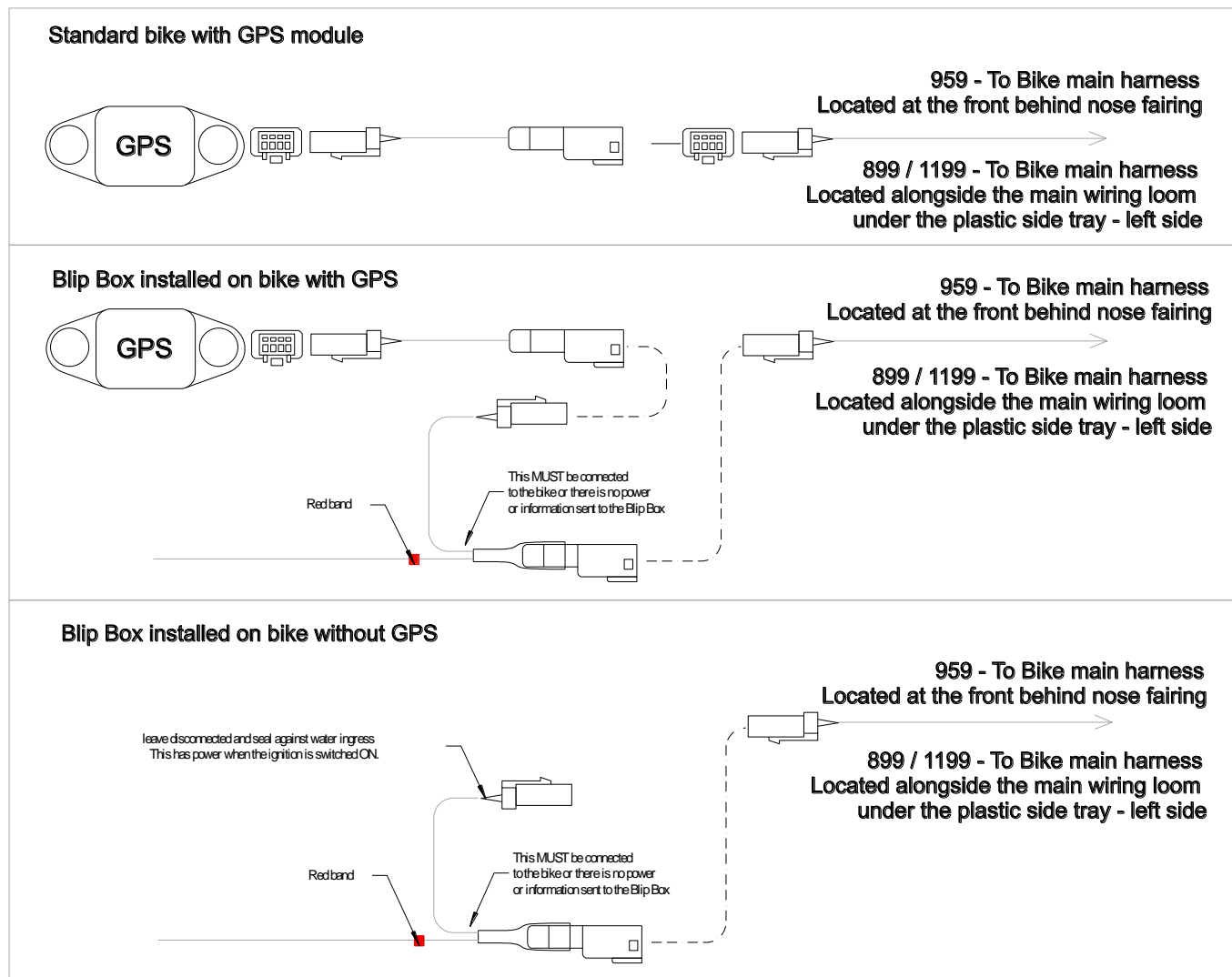
Wiring loom installation, Continued

The red banded white male/female connections provide power and CAN bus data for the Blip Box.

The diagram below gives various options for making this connection depending whether your bike is fitted with a GPS or not.

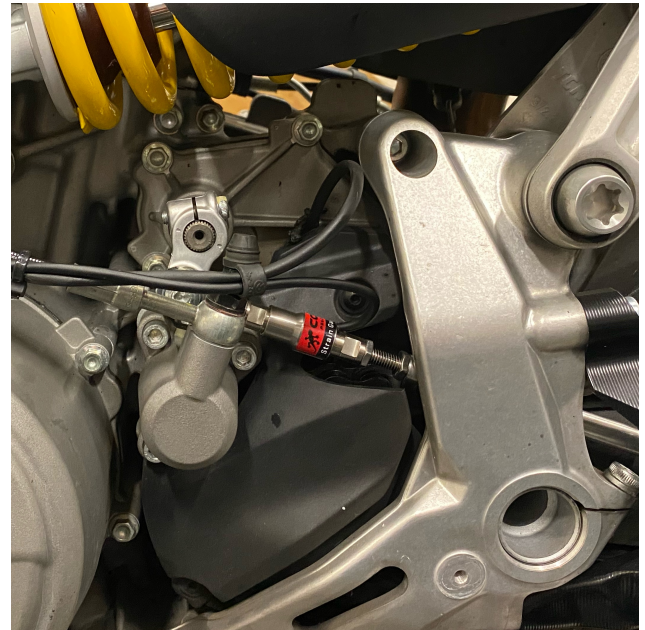
Notes to help you:

1. The 899 and 1199 have this connector near the left fork leg (inner fairing)
2. The 959 has this connector at the front near the headlight
3. If the bike is not fitted with a GPS you may find this connector has a dummy mating plug and some shrink sleeve to seal it.



Load cell fitting

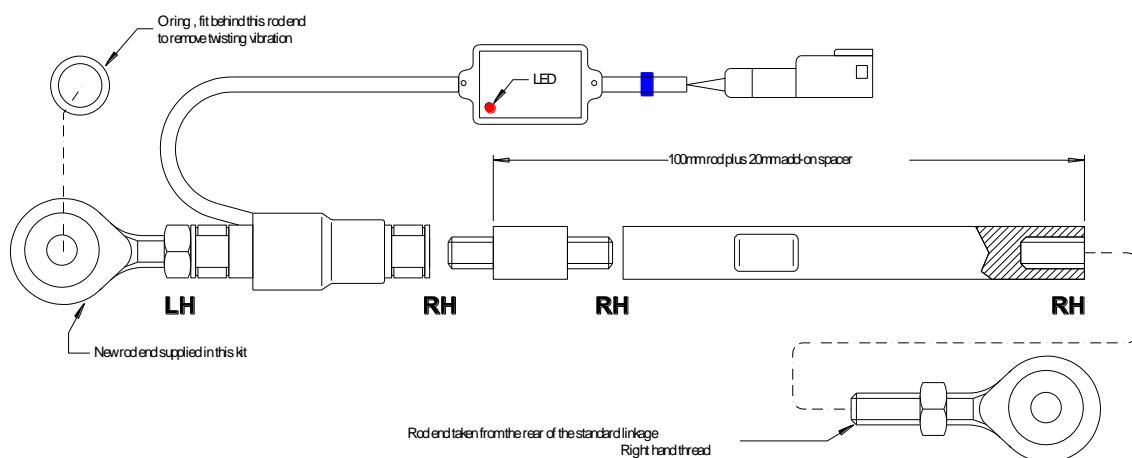
1. Remove the standard shifter switch.
2. Measure the total length of the standard shift rod (between centres), this will allow you to re-make the new shift rod assembly to the same length and give you the same shift lever height.
3. Remove the 6mm rod end from the back end of the standard shift rod and re-fit this to the new shift rod and load cell.
4. Adjust the new load cell shift rod to be the same length as the original via the rear rod end
5. We provide a new shift rod in 2 pieces for greater length flexibility, but adjust as needed.
6. Important notes:
 - a. When installed the cable exit of the load cell should be on the inside or outside of the bike (not above or below).
 - b. **NEVER** apply spanner force to both sides of the shift load cell when tightening lock nuts. This will cause twisting and damage to the load cell that is not covered by warranty.
7. Route the wire up into the plastic tray near the regulator and attach to the 3 way connector.
8. The load cell cable can be held lightly to the clutch hose but do ensure there is enough free play during gear change.
9. **IMPORTANT** : The small control box with LED must be located where the temperature does not exceed 85deg C



The load cell supplied in this kit is a very sensitive component designed to measure both compression and extension, it should NEVER be twisted or permanent damage can occur, so only apply spanner force using the flat section closest to the side you are working on.

Use Loctite 243 or similar thread retainer on all shift rod components

The O Ring we supply for the upper rod end is fitted between the lever arm of the engine and the rod end to reduce vibration of the shift rod and take up the free play.



Shift sensor setup

At 'power ON' the red LED on the sensor control box (see image below) will flash once to suit a 'Type-1' setup, or twice to suit a Type-2 setup.

The user can easily swap between these modes via a 'self-teaching' process

By default all Blip Box are supplied pre-programmed as 'Type-1' unless specified at the time of ordering.

Tuning of the load cell force can only be done within the Win Blip software using the dedicated USB cable.



Sensor control
box + LED



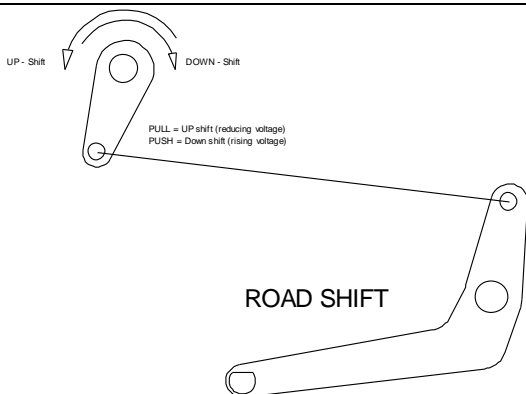
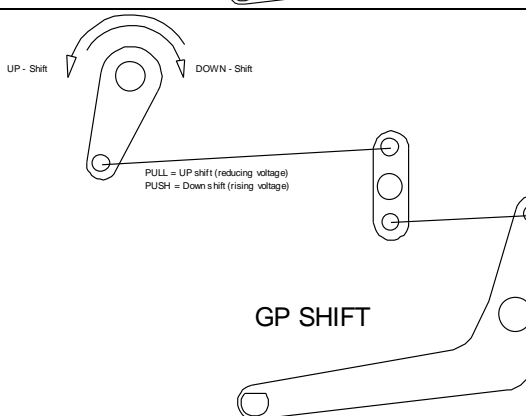
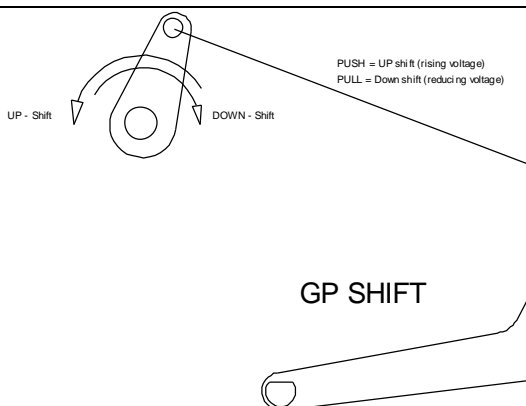
Type – 1
Engine Lever pointing DOWN



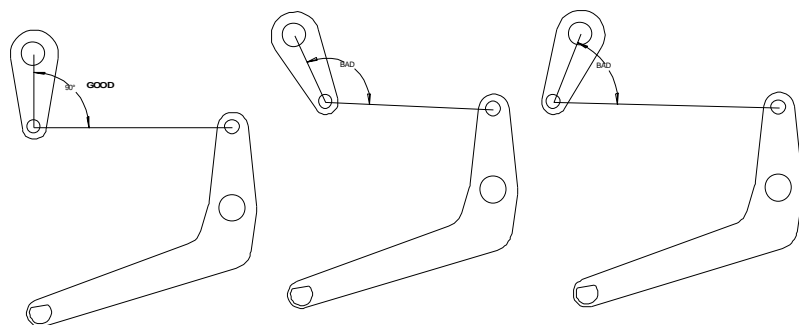
Type – 2
Engine Lever pointing UP

Type 1 – Voltage reduces with PUSH force – The sensor LED blinks once at power ON
Type 2 – Voltage reduces with PULL force – The sensor LED blinks twice at power ON

Ducati - Shift sensor setup / Setup options

<h3>Type - 1</h3> <p>This is used for both standard shift and Reverse GP shift providing the front lever on the engine stays in the Downward position.</p> <p>Program the shift sensor as Type – 1 (single LED flash on the shift sensor control box)</p>	 
<h3>Type - 2</h3> <p>This layout is used for GP shift and the engine lever is reversed upwards</p> <p>Program the shift sensor as Type – 2 (Double LED flash on the shift sensor control box)</p>	

When installing the shift sensor, always try to get 90deg when the lever is resting.



Ducati – Shift sensor setup / Changing the shifter from Type-1 to Type-2

Important note, the LED blink referred to in this document is the LED on the sensor box, not the Blip Box LED.

Changing from Type 1 – (Single LED blink) to Type 2 (double blink)

- a. Turn **OFF** the bike, wait at least 2 minutes for full shut down of the bike and the blip box
- b. Turn **ON** the ignition, you will see the LED blink once, then the LED will go off
- c. Wait 3-4 seconds then **Press and HOLD** on the gear lever as if you were going into 1st gear, this may be up or down depending on your rear sets, but it must be the 1st direction. The LED will start to blink rapidly and you have about 10 seconds to complete the next process.
- d. Release the foot pressure, and then count **6 more** rapid presses in the 1st gear direction, and **HOLD THE PRESSURE** on the 6th press.
- e. The LED will go out for a few seconds and you will now be shown 2 x blink of the LED to show you are now in Type 2 mode – Voltage reducing with PULL. You can now release the pressure, re-programming is complete

Changing from Type 2 (double blink), to Type 1 (Single blink)

- a. Turn OFF the bike, wait at least 2 minutes for full shut down of the bike and the blip box
- b. Turn ON the ignition, you will see the LED blink twice, then LED will go off.
- c. Wait 3-4 seconds then **Press and HOLD** on the gear lever as if you were going into 1st gear, this may be up or down depending on your rear sets, but it must be the 1st direction. The LED will start to blink rapidly and you have about 10 seconds to complete the next process.
- d. Release the foot pressure, and then count **6 more** rapid presses in the 1st gear direction, and **HOLD THE PRESSURE** on the 6th press.
- e. The LED will go out and you will now be shown 1 single blink of the LED to show you are now in Type 1 mode – Voltage reducing with PUSH. You can now release the pressure, re-programming is complete

Tip: If you did not get any 'LED blink' at power ON, you did not wait long enough for a full power shut down.

Load cell – Self Calibration

The version 1.14 onwards versions of Blip Box have 2 self-calibrating methods.

1. At power on (after a full shut down), or after transmitting a new Blip Map the load cell is automatically re-set on 2.5v (2500Mv).
2. While the bike is being used the average background sensor voltage is monitored and any drift away from the 2.5v is again re-set back to 2.5v. This compensates for sensor degradation over time and even extremes of temperature beyond the normal corrected range of the sensor.
3. In the event of a total sensor failure when the load cell stays for a prolonged time (over 1.2 seconds) below 1v or above 4v you will get a blink code flashing on the module and the Blip and Shift systems automatically disabled.

It is important to note from this that any rider who rests his/her foot on the shift lever will cause the sensor to become out of calibration, this will result in incorrect or missed shifts.

System 'power up' and normal LED activity

Normal Power on sequence if the bike has been switched OFF for at least 2 minutes. When you turn ON the ignition:

1. LED is solid ON for 2 seconds to indicate power up
2. LED blinks twice to indicate the start of self-calibration.
3. LED blinks 3 times for approximately 6-7 seconds (3 events of triple blink), module is self-calibrating and is perfectly normal
4. LED turns off and will now only activate when the load cell threshold is reached for UP or DOWN shift, or there is a problem.

Normal Power on sequence if the bike has been switched OFF for less than in a minute. When you turn ON the ignition.

1. In this case the Blip Box module never actually turned off so there are no LED indicators to indicate self-calibration
2. It will however blink a 9 x LED code for three cycles as it takes a little time for the CAN data to be received from the dashboard to indicate that DQS is active.

System – Power off. The Ducati 1199 has a 'controlled power down' of the ECU systems approximately 1-2 minutes after you turn off the ignition, when this happens:

1. You will hear the main bike relay click off as you turn OFF the ignition key
2. Blip Box will display a 9 x blink error code as CAN data is lost from the dashboard (DQS function OFF) – This lasts 20seconds, then LED is off.
3. At approximately 1 minute the secondary power latch relay will click off to trigger this LED activity:
 - a. 30 seconds of 9 x LED blink (DQS CAN data interrupted from the dash.
 - b. 20 seconds of 2 x LED as the signals are lost from the throttle twist grip
 - c. Occasional 3 x LED as the output signals from the Blip Box become invalid
4. Then all LEDs activity is OFF and the Blip Box goes to sleep after 30 seconds of no further CAN activity.

Summary of activation conditions for the 'Blip' function to work correctly.

- System not to be in a diagnostic state
- Load cell to have exceeded threshold Mv (foot force)
- The inhibit time must have been exceeded since previous shift – Default is 0.3seconds
- Engine must be above minimum RPM – Default is 4600rpm
- Throttle grip must be lower than threshold (therefore closed) – Default is 2%
- Rear wheel speed must be above minimum – Default is 30kmh
- EBC must be switched ON in the dashboard settings
- Clutch must be OUT, Blip is disabled if the rider pulls in the clutch or the clutch wires are linked together.
- DQS must be active in your dash configuration

Summary of activation conditions : Up-Shift output

- System not to be in a diagnostic state
- Load cell Mv to have exceeded threshold
- The inhibit time must have been exceeded – for up-shift

System diagnostics, The red LED is also used as a 'blink code' to indicate potential problems with the system, wiring or sensors.

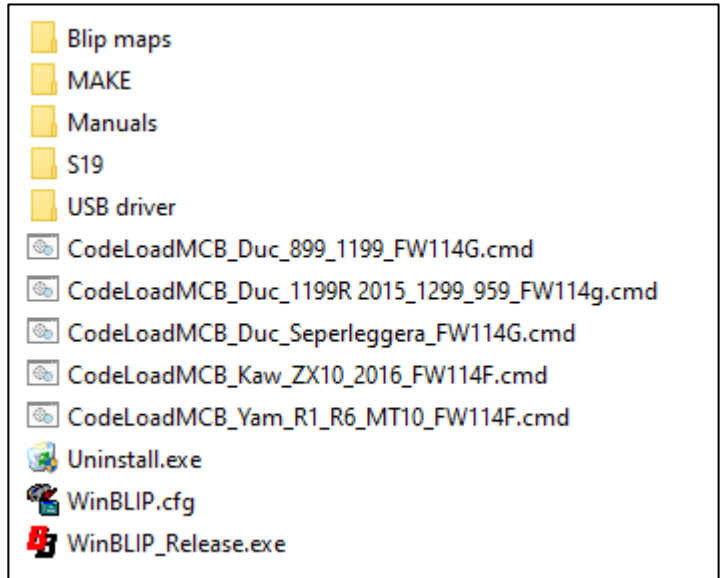
No LED at ignition switch ON	<ul style="list-style-type: none"> • Check CAN connection at rear of the bike • Inspect wiring • Disconnect other non-standard CAN devices and try again
LED on for 2 seconds at ignition switch ON, then light off	Normal operation
1 blink > short gap	Internal error – contact manufacturer
2 blinks > short gap	<p>Throttle grip input(s) out of normal range: Grip signal IN 1 range is 0.4 > 4.5v Grip signal IN 2 range is 0.4 > 2.3v</p> <ul style="list-style-type: none"> • Check grip connector • Check wiring • If wiring is all OK we suggest you plug the grip directly into the bike look and see if the same diagnostics are shown on the bike. Potentially a twist grip failure. <p>See power up notes on previous page.</p>
3 blinks > short gap	<p>Throttle grip output is out of range Grip signal OUT 1 range is 0.4 > 4.5v Grip signal OUT 2 range is 0.4 > 2.3v</p> <ul style="list-style-type: none"> • Check grip connector • Check wiring • If wiring is OK and there is no diagnostic for the Grip Inputs signals it suggest a damaged module • Note – This diagnostic is also used for the self-calibration at power ON and lasts approximately 20 seconds.
4 blinks > short gap	<p>Battery voltage out of range 8.5v to 16.5v</p>
5 blinks > short gap	<p>Load cell error - If less than 1.0v or greater than 4.0v for longer than 1.2 seconds</p> <ul style="list-style-type: none"> • Only active if load cell is selected in the BLIP map • In this diagnostic condition the Blip and Upshift is disabled until the sensor is back in range • First check there is a 5v supply to the sensor (pin 1) • Check the signal (pin 2) is at 2.5v unloaded. • Make sure you are not using a 'Lite' installation via the clutch and have loaded a Pro map for load cell. • If all wiring checks out OK, replace the sensor
7 blinks > short gap	<p>More than 5% difference between IN and OUT voltages for input 1</p> <ul style="list-style-type: none"> • Possible twist grip damage • Possible 5v sensor supply problem • Possible module damage
8 blinks > short gap	<p>More than 5% difference between IN and OUT voltages for input 2</p> <ul style="list-style-type: none"> • Possible twist grip damage • Possible 5v sensor supply problem • Possible module damage
9 blinks > short gap	<p>Blip has been disabled</p> <ul style="list-style-type: none"> ○ DQS is turned off in your dashboard configuration ○ Note that this code can be active during power off, see notes on page 9

Download the software, drivers and PDF manuals at
www.cordona.net/manuals

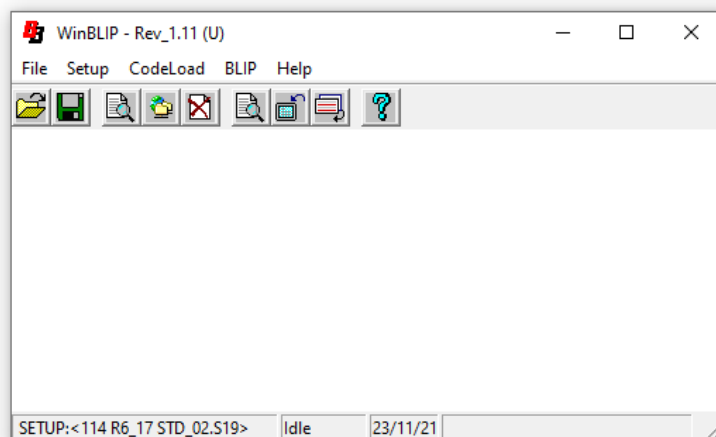
WinBLIP software – Installation

Download the Win Blip software at www.cordona.net/manuals

1. Double click your download selection and look at the lower left of your screen to see when the download is complete. You may have a warning then 'some downloads may harm your computer' just change this to Keep, not Discard.
2. Double click this **Win Blip 1.14_x** at the lower left to start the installation process.
3. You can choose to keep the default install folder or change to one you prefer.
4. When complete you will have a new folder on your PC containing the software, blip map library and the USB drivers for the PC cable BB-UCIF. There will also be Blip Box icon on your desktop.
5. From time to time there will be re-releases of the Blip map library, these can be downloaded separately from the web page given above.
6. Once installed you will find folders that look like this on your C drive. These contain
 - a. Blip map library
 - b. Firmware files
 - c. Application software – Win Blip
 - d. USB drivers



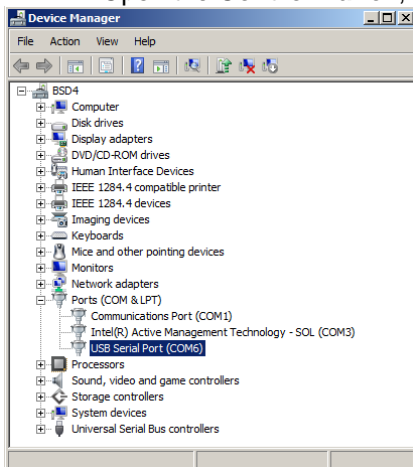
When you first run the Win Blip software it will look like this:



USB driver installation

1. PC operating systems from Windows 7 to Windows 10 are OK to use. If you have an older PC with XP then please Email us for specific drivers.
2. Do Not plug in the USB cable at this stage.
3. Download and install the latest software which includes USB drivers and install this at the default location.
 - a. The USB drivers can be found in the USB Drivers folder of Win Blip
 - b. Now look in that folder to find the file called **CDM21224_Setup.exe**
 - c. Double click the exe file to run the new driver installation.
 - d. Re-start your PC.
 - e. Now plug in the USB adapter and wait for up to a minute (sometimes 2) for the drivers to install correctly.

4. Open the **Control Panel** , then look for the **System** icon , then **Device Manager** to view this window:

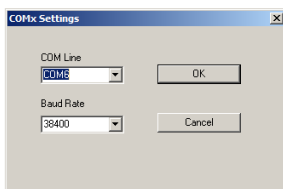


This icon shows that the USB adapter is installed and working.

Look at the COM number that has been allocated and make a note of this as it will be used in the WinBLIP software.

Note also that you may get a different COM number if using different USB ports on your PC, so try to use the same one each time.

5. Open WinBLIP and go to **Setup / COM settings** from the upper menu



It should look like this with the Baud Rate at 38400 and the COM line set to the one you noted in the Device manager.

If it does not, then use the pull down arrows to change things.

Then press **OK**

You should now have communication.

Notes:

In cases where there are still PC communication difficulties or Com Error, ensure you have used the default folder location for the software installation.

C:\Winblip\Blip Box....

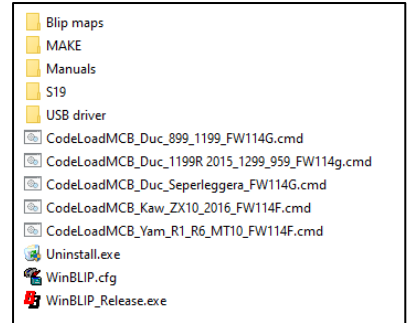
WinBLIP - Files

Blip box mapping files can be found in the Blip Maps folder as seen here.

Note that these maps are split up into two folders:

- RED shift sensor
- SILVER CORDONA shift sensor

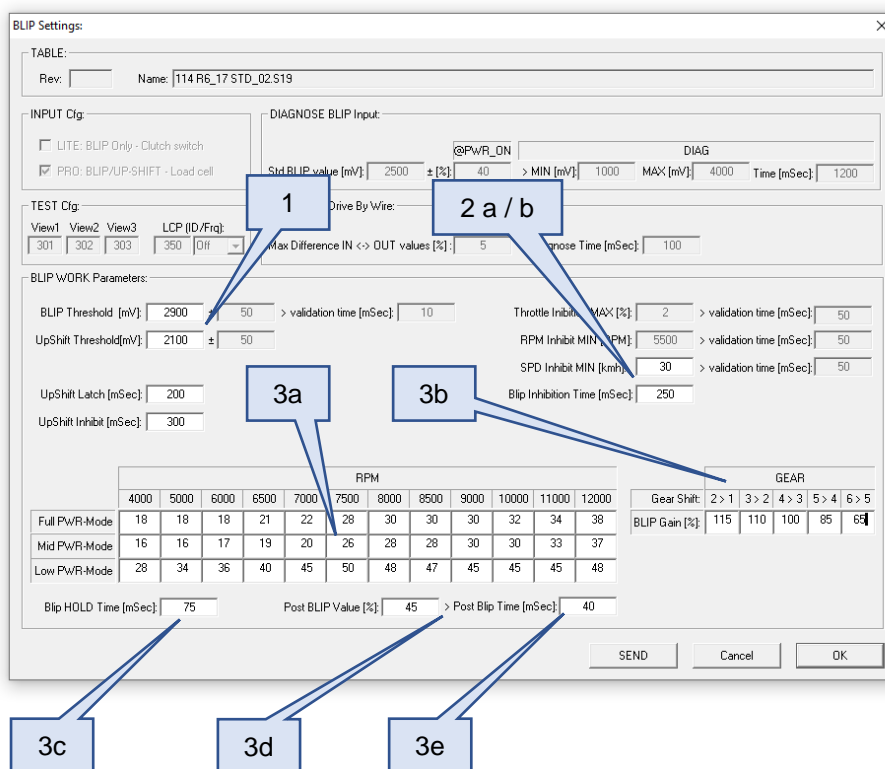
Choose a map from the correct folder to suit the product you have



WinBLIP - Tuning

The system is supplied with multiple base files that are split into folders specific to each bike and shift sensor type.

From the File / Open menu locate the **Blip maps** folder and select the appropriate base file. In this example I have loaded the 1199 Pro file

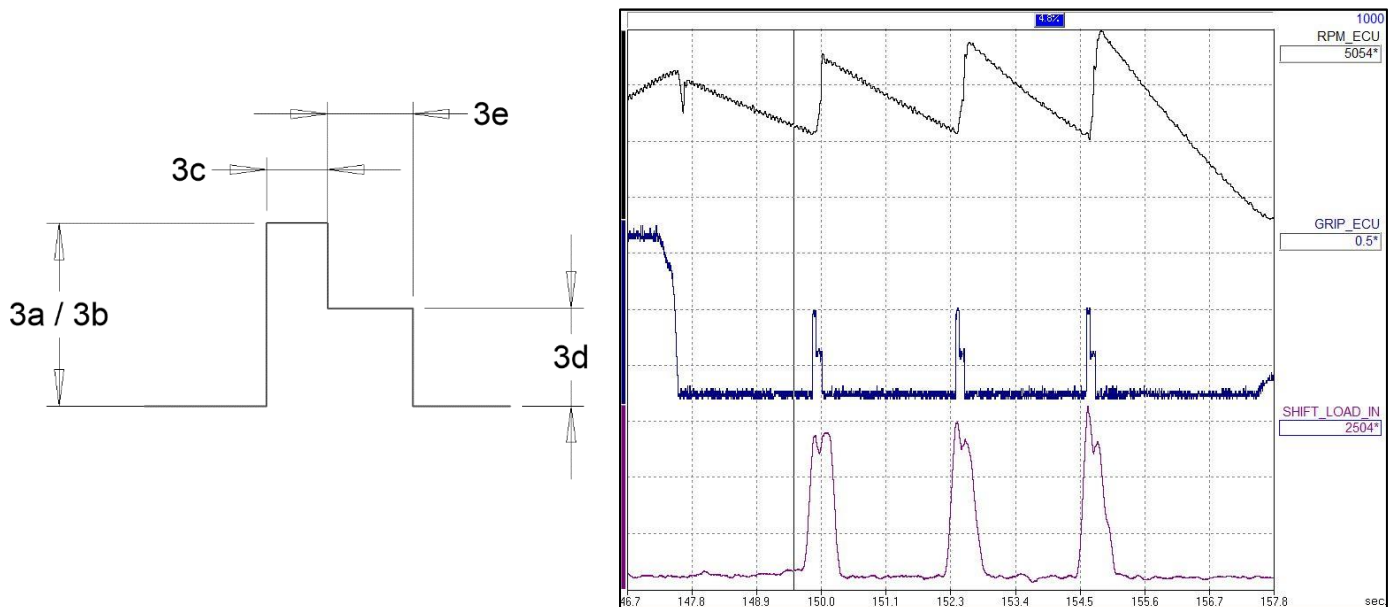


- These values control the activation threshold for the Load Cell
 - Blip threshold Mv – above this the blip is triggered. Note the 50Mv hysteresis so it would be 2900 ON and 2850 OFF (example only)
 - Up shift threshold Mv – below this the blip is triggered. Note the 50Mv hysteresis so it would be 2100 ON and 2050 OFF.
 - The signals must also be above the threshold for longer than the 10mSec validation time.
 - Zones that are 'grey' cannot be adjusted by the user.

WinBLIP Tuning - *continued*

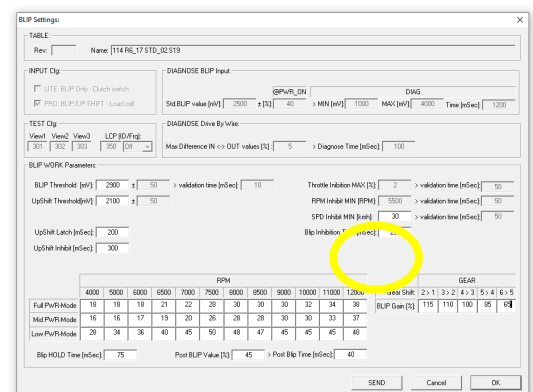
2. Blip inhibit settings.
 - a. This is the minimum timer permitted between blips. (Note 250 = 0.25 seconds)
 - b. Minimum speed to enable the 'blip', we suggest you do not use a lower value than this.
3. Blip settings. The BLIP values are in % of twist grip (not engine throttle) and as the relationship between the twist grip and the engine changes depending on which power mode and gear you are in, the settings are equally adjustable.
 - a. There are 3 rows of BLIP values with the first column covering all RPMs up to 4000, the next up to 5000 etc.
 - b. The 'Gear Shift BLIP gain' is a multiplier applied to the base BLIP values, This enables a higher blip value in lower gears. Example a Gain of 115 would multiple the BLIP value by 1.15 (15% extra)
 - c. BLIP Hold – This is the primary BLIP duration and will be of a height equal to the BLIP value from the table x the BLIP GEAR Gain. The primary blip is short and fast to rapidly raise the engine RPM and disengage the gearbox pressure from braking to accelerating.
 - d. There is then a 'post blip' with a height of **x** % of the primary blip
 - e. Continuing on for **x** mSec . This keeps the RPM sufficiently high after the blip to match the RPM of the next gear selected.

The image below shows the 2 stages of BLIP and the perfectly matched RPM values.



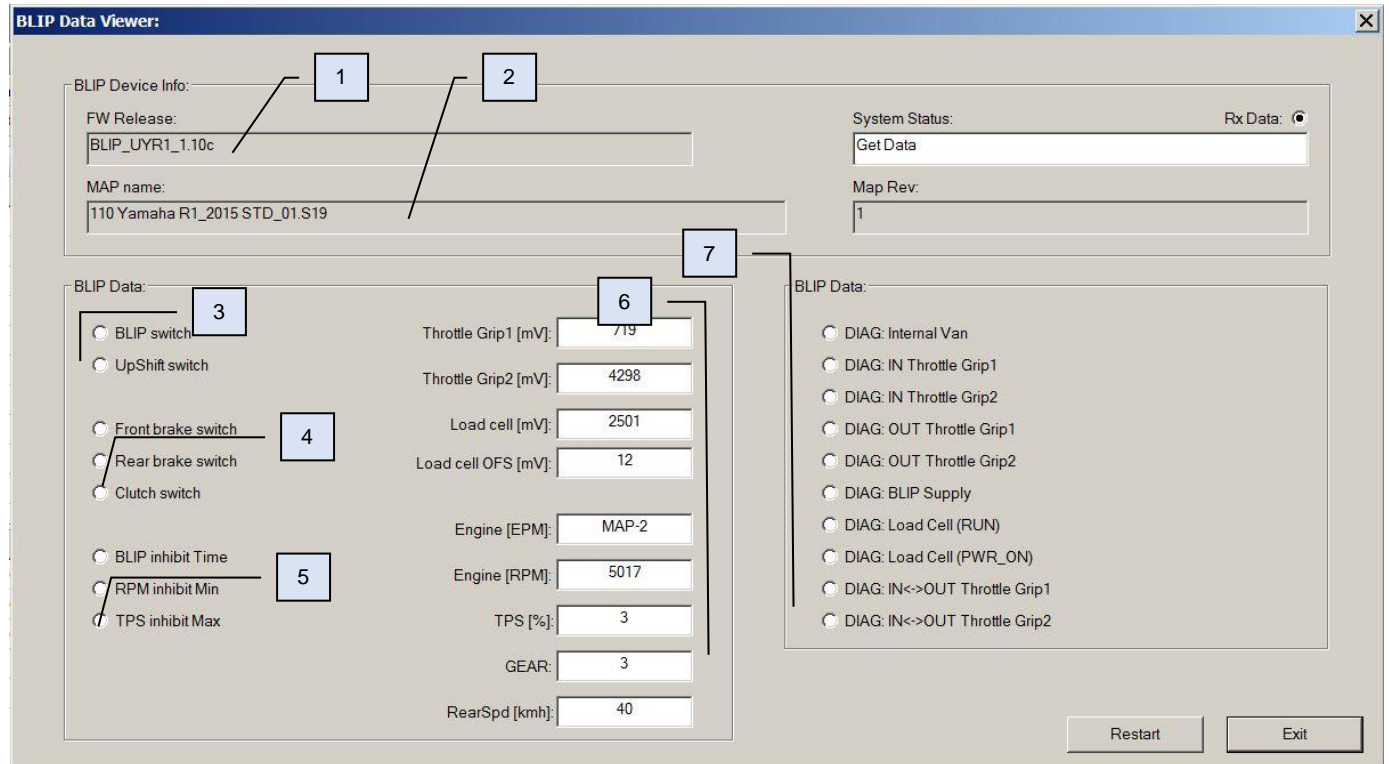
Send your changes to the module

1. Make sure the bike ignition is switched ON
2. Press the SEND button.
3. The BLIP Settings window will close and the main screen will show the status of the transmission and a bar graph at the lower edge.
4. You will get an OK message when finished.



WinBLIP - View Data

From the upper menu select **BLIP / View data** to get the following live data screen.



BLIP Data Viewer:

BLIP Device Info:

FW Release: BLIP_UYR1_1.10c

MAP name: 110 Yamaha R1_2015 STD_01.S19

System Status: Rx Data: ☒ Get Data

Map Rev: 1

BLIP Data:

☐ BLIP switch

☐ UpShift switch

☐ Front brake switch

☐ Rear brake switch

☐ Clutch switch

☐ BLIP inhibit Time

☐ RPM inhibit Min

☒ TPS inhibit Max

Throttle Grip1 [mV]: 719

Throttle Grip2 [mV]: 4298

Load cell [mV]: 2501

Load cell OFS [mV]: 12

Engine [EPM]: MAP-2

Engine [RPM]: 5017

TPS [%]: 3

GEAR: 3

RearSpd [kmh]: 40

BLIP Data:

☐ DIAG: Internal Van

☐ DIAG: IN Throttle Grip1

☐ DIAG: IN Throttle Grip2

☐ DIAG: OUT Throttle Grip1

☐ DIAG: OUT Throttle Grip2

☐ DIAG: BLIP Supply

☐ DIAG: Load Cell (RUN)

☐ DIAG: Load Cell (PWR_ON)

☐ DIAG: IN<->OUT Throttle Grip1

☐ DIAG: IN<->OUT Throttle Grip2

Restart Exit

1. Firmware version of the Blip Box module
2. File name currently loaded into the module
3. These icons will light up when the voltage thresholds are exceeded for UP and DOWN shift
4. These icons will light up if either the front or rear brake is applied, or the clutch (note that clutch icon will be active also if the bike is in neutral)
5. These icons will light up if the BLIP is currently inhibited by one or more reasons
6. Live data:
 - a. Throttle grip 1 – Input Mv
 - b. Throttle grip 2 – Input Mv
 - c. Load cell – Mv
 - d. Load cell offset (self calibration adjustment after power ON)
 - e. Engine power mode 1 > 4
 - f. Engine RPM
 - g. TPS (Throttle grip %)
 - h. GEAR (0 is neutral)
 - i. Rear wheel speed in kmh
7. These icons will light up if one of the diagnostic (flashing LED) is active.
8. Restart – system re-start, not normally needed by the user. Used in case of power sleep mode and bench testing.

WinBLIP - Firmware update / Changing the bike type

The software of Blip box can be considered as two levels.

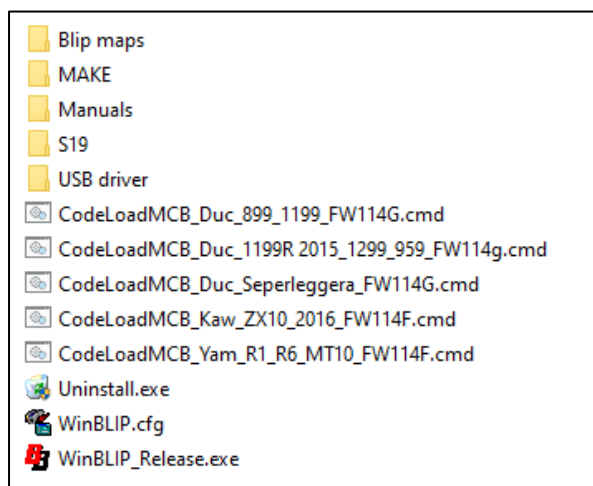
Level 1 is the firmware; this contains all of the software to make the box work and it also tells the Blip Box what type of bike it is connected to and how it should communicate with that bike. Loading the wrong firmware will of course stop the system working and may also create a diagnostic error on the bike.

Level 2 is the Blip mapping, this contains all of the tuning parameters

To change the firmware:

- Turn on the bike ignition
- From the upper menu select **CodeLoad / Run sequence** and browse for the files you see in the image below with a .cmd suffix
- Double click this file and the load procedure will begin and start to count up to approx, 3600. This completes the firmware update.
- **IMPORTANT** : Do not play with other things on your PC during the process, or interrupt the power supply.
- **IMPORTANT** : You have now loaded the firmware, remember to load an appropriate Blip map.

This image is an example and may be subject to change.



This system is intended for off-highway performance use only. It is not certified for use 'on the road'

Components	Part No.	959	SL/899/1199
Blip Box control module	820 BB	1	1
Foam strips – 35mm	n/a	2	2
Main wiring loom – Pro 899 / 1199 / SL	BDW1607_05		1
Main wiring loom – Pro 959	BDW1618_03	1	
CAN interface sub-loom	BDW1596	1	1
Cable tie – 300mm	n/a	1	1
M6 male rod end – LH thread	n/a	1	1
Shift load cell – Cordona 500Nm (female) threads	BD-PO-78-17B	1	1
M6 left hand full nut		1	1
M6 x 40 mm RH thread stud		1	1
M6 x 35mm RH thread stud		1	1
Shift rod extension – 100mm (RH thread)		1	1
Shift rod extension – 20mm (RH thread)		1	1
Rubber O ring for shift rod		1	1

PRECISION BLIPBOX

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Download the software, drivers and PDF manuals at

www.cordona.net/manuals