



Power-Valve controller system



Overview

The unit controls a Power Valve motor according to the RPM. The position is set by a factory programmed map or a user map. A new map can be loaded by software provided using the small white connector and a programming lead. See below for PV controller programming kit instructions

The unit can be used to upgrade an existing CDi to have Power Valve control or replace a damaged system on a RS125 or RS250.

Only one map is operational at any time.
If no user programmed map is loaded then the default factory loaded map is used

Un-connecting the small white connector allows the mechanical cables to be set.

Wiring

The unit is either supplied with a standard HRC 4 way and bullet connector set or a 5 way connector to bare wire ends to connect to the motor.

5 way connector Connection to a RS250 Power Valve unit:

<u>PV controller</u>	<u>PV motor</u>	<u>Action</u>
Pin 1 White/Red	White/Red	Motor up
Pin 2 White/Grey	White/Black	Motor down
Pin 3 Yellow	Light Green	PV feedback
Pin 4 Green/Blue	Green/Blue	Gnd
Pin 5 White	White	+5V PVF supply

Connection to Tachometer for power and the rpm signal,

<u>PV controller</u>	<u>Action</u>
Black	Power
Blue	Tachometer RPM
Green	Gnd

Mounting of unit

Mount the unit in the nose of the motorcycle

Mechanical Set-up

To set up the High RPM position

1. Remove the small white connector link
2. Power the electrical system up from a Battery supply
3. The motor will move to the High RPM position while no RPM or the link is still removed

As soon as RPM is detected or the link is replaced the unit will resume normal map position.

Leave the Small white connector link in place in normal operation

Indicator

The red indicator off = low voltage or high voltage

The red indicator on = power on no RPM signal

The red indicator flashing = RPM detected and running

Programming

The Programming kit for the PV unit consists of a PC Software CD and programming lead



WARNING

This programming software has the ability to program the PV controller unit with unsuitable maps. There are no upper or lower level limits or restriction on map values.

To connect, the unit must be powered from the programming lead to enable programming mode. The unit will not respond if the motorcycle power is on

PC Connection

Find the location of a free Communication port

- Find your comm port by [right click] my computer / properties / Hardware / Device manager
- Press the [+] on ports (COM & LPT)
- Make note of the comm port number that have and is free or use a USB adaptor

Start the software

- Select port on the menu bar / choose the port
- Power up the unit
- Plug the programming lead in to the unit
- Using the red and green battery clips connect a 12V battery (red +ve)

Check for connection

When connected the upload and download icons become active

- If no connection the select another port and then select the correct port
- If still no connection, close and restart the software

Map control

The fixed map in the unit cannot be read or written to.

If a zero map is loaded into the unit then the fixed map will be used by the unit (crossed out page icon)

Maps can be opened and saved in PV format (open and save icons)

BPS maps can be opened and the software will convert to PV values (bps icon)

The unit has option to have connected (if enabled) :

- one (PV) power-valve controller - RED
- two (PJ) power-jet controllers - PJ1=YELLOW & PJ2 =BLUE

Example a JHA map



PV Map edit only

To edit the whole map

With the red dotted line and arrow buttons:

- The map can be moved up and down
- The map can be reduced or increased in range

PV and PJ maps

To edit a selected area or single RPM point.

- Right-click to select a point, right click again along the map to select an RPM range
- Left click to de-select

Having selected an area on the map, the selected map area shows as cyan and can be edited:

The selected area can be:

- Pushed up or down
- Straightened

As shown below the map is pushed up



Or can be straightened



Clear Page

The delete page will reset the page to a zero value; if this is downloaded to the unit then the unit will operate its factory programmed map

Reference Map

Clicking the copy icon will take a copy of the current map, the map can then be altered or a new map loaded, the copied map will show as green behind the current map.

Clicking the paste button will overwrite the current map with the copied map

Uploading / downloading

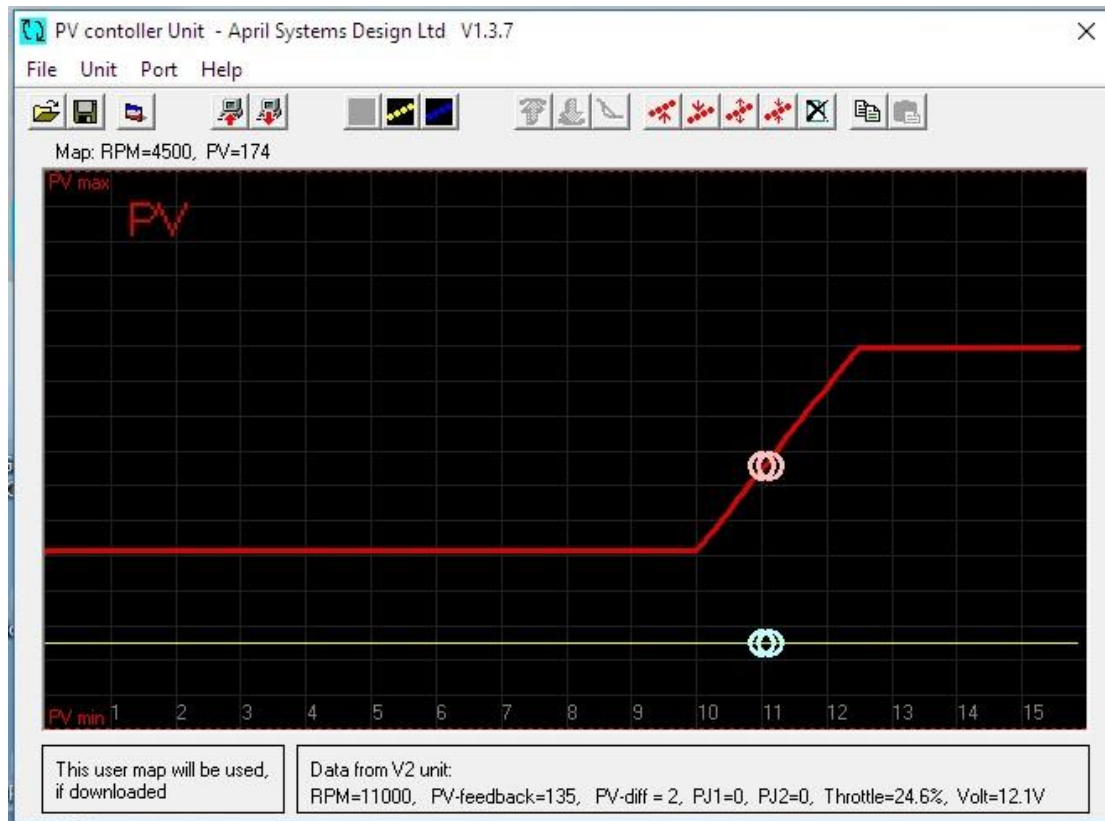
Upload and download buttons will send the data to the PV unit or read the data back

WARNING - no error checks are performed on the data, when downloading a map, clear the map on the software and load the data back to verify it is correct.

Running the unit when connected

With RPM and power the unit can be left connected to the PC and the software will show the RPM and values

The circles indicate the position on the map being used



Specifications:

Voltage range	9V to 18V
Input Current	100mA + Motor Drive current nominal
Drive current	10A maximum
Temperature range	-10degC to +130degC
Weight	Approx 150g

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