



DTAfast miniPDM User Guide



Amendment Record

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DTAfast miniPDM - Overview

Welcome to your new DTAfast miniPDM.

This user guide shows how to wire up the miniPDM.

The miniPDM has ten 17 Amp capable outputs, eight switch inputs and a CAN bus. The Pinout section describes which function is on which pin.

The miniPDM is designed to be used with either a CAN keypad or with physical switches. Both can be used if required.

The keypad is available from the DTAfast website.

Each output is assigned to a particular function and is triggered by the corresponding input or CAN keypad key.

If the miniPDM is used in conjunction with a DTAfast T Series ECU, the ECU will control the fan and fuel pump outputs via CAN. There is no need for the driver to turn them on or off under normal circumstances.

The override functions can still be used when needed.



Pinout

Pin No	Description	Function
1	OUT 1	Fan 1
2	OUT 2	Fan 2
3	OUT 3	Fuel Pump 1
4	OUT 4	Fuel Pump 2
5	OUT 5	ECU and Dash
6	OUT 6	Injectors
7	OUT 7	Coils
8	OUT 8	Lambda Sensors
9	OUT 9	Starter Solenoid
10	IN 7	Keypad Backlight Dim
11	IN 8	Not used
12	GND	Main Power Ground
13	N/C	Not connected
14	IGN IN	Master Switch
15	OUT 10	CAN Keypad
16	IN 1	Fan 1 Override
17	IN 2	Fan 2 Override
18	IN 3	Fuel Pump 1 Override
19	IN 4	Fuel Pump 2 Override
20	IN 5	ECU Ignition Switch
21	IN 6	Engine Start
22	CAN LO	CAN Low
23	CAN HI	CAN High



Output Descriptions

Each output is controlled by a switched input (see below) or via the CAN bus if that is connected.

If both the switch and the CAN bus keypad are connected the output is turned on if either of the inputs are on.

OUT 1 – Fan 1

This output controls fan 1.

Connect one side of the fan connector to this pin, and the other side to the chassis for ground or directly to the battery.

This output is turned on with Ignition Switch input.

OUT 2 – Fan 2

This output controls fan 2.

Connect one side of the fan connector to this pin, and the other side to the chassis for ground or directly to the battery.

This output is turned on with Ignition Switch input.

OUT 3 – Fuel Pump 1

This output controls fuel pump 1.

Connect one side of the fuel pump connector to this pin, and the other side to the chassis for ground or directly to the battery.

This output is turned on with Ignition Switch input.

OUT 4 – Fuel Pump 2

This output controls fuel pump 2.

Connect one side of the fuel pump connector to this pin, and the other side to the chassis for ground or directly to the battery.

This output is turned on with Ignition Switch input.

OUT 5 – ECU, Dash, etc.

This output controls the ECU, dashboard and any other low current electronic devices in the vehicle.

Connect one side of each device to this pin, and the other side to the chassis for ground or directly to the battery.

This output is turned on with Ignition Switch input.



OUT 6 – Injectors

This output powers the fuel injectors and any other solenoids such as idle valves, cam valves and so on.

Connect one side of each injector connector to this pin, and the other side to the ECU output for that injector.

For any other solenoids, connect one side to this output and one side to the ECU control pin.

This output is turned on with Ignition Switch input.

OUT 7 – Coils

This output powers the coils.

Coil wiring varies, so ensure the wiring is correct. This output connects to the power pin on all the coils.

This output is turned on with Ignition Switch input.

OUT 8 – Lambda Sensors

This output powers the lambda sensors.

Connect this pin to the heater pin on the lambda sensor.

This output turns on when the miniPDM powers on.

OUT 9 – Starter Solenoid

This output controls the starter solenoid.

Connect this output directly to the starter solenoid.

This output only turns on when the Engine Start button is pressed

OUT 10 – Keypad and ECU Permanent 12V

This output supplies the keypad and the ECU permanent 12V input.

Connect this output directly to the ECU permanent 12V and the keypad.

This output turns on when the miniPDM is powered on.



Input Descriptions

The switches are active high, so one side of the switch is connected to the input, and the other side of the switch is connected to the switched 12V supplying the miniPDM.

Input 1 – Fan 1 Override

This input is used to turn on fan 1.

Input 2 – Fan 2 Override

This input is used to turn on fan 2.

Input 3 – Fuel Pump 1 Override

This input is used to turn on the fuel pump 1.

Input 4 – Fuel Pump 2 Override

This input is used to turn on the fuel pump 2.

Input 5 – Ignition Switch

This input is the ignition switch for outputs 1 to 7.
These inputs are turned on and off with this input.

Input 6 – Engine Start

This input is used to power the starter solenoid and start the engine.

Input 7 – Keypad Dimming

Can be used to dim the keypad backlight and LEDs for nighttime driving.
Connect a switch from the vehicle to this input to dim the keypad.

Note: If a T Series ECU is used, then that will control the backlight brightness.
This input will be overridden.

Input 8

Not used



CAN Keypad

The miniPDM is designed to work with eight-button keypads.

The first four buttons are used for the miniPDM and buttons five to eight can be used as switched inputs into the DTAFast T Series ECUs.

Button 1

Ignition Switch – used to power up the required outputs for ECU.

Button 2

Engine Start – used to start the engine

Button 3

Fan Override – used to turn on both fan outputs

Button 4

Fuel Pump Override - used to turn on both fan outputs

Button 5

ECU Launch Control – used to turn on and off Launch Control in the ECU

Button 6

Pit Lane Speed Limiter – Used to turn on and off the Pit Lane Speed Limiter in the ECU

Button 7

Traction On/Off – used to turn the traction control on and off in the ECU

Button 8

Traction Wet/Dry – used to switch between wet and dry settings in the ECU.