

Geartronics Paddleshift III - 37-way AS connector pinouts

A/S pin	Function	Comments	Standard colour
1	+12v Supply in	GCU 12v supply	Red
2	+12v sensor output	Connected internally to pin 1 - use for valves, pump relay & p/sensor supply	Red
3	UP valve	Low-side driver (switches to ground)	Purple
4	DOWN valve	Low-side driver (switches to ground)	Grey
5	BLIP valve	Low-side driver (switches to ground)	Pink
6	COMPRESSOR	Relay trigger. Low-side driver (switches to ground)	Blue
7	Aux output	May be used for AER (Life Racing) pump control	-
8	+5v sensor supply	Gear position sensor 5v supply	Red
9	+5v sensor supply	Spare 5v sensor supply	Red
10	Gear position sensor	Analogue 0-5v input	White
11	Auxilliary input	Reserved for future use	-
12	TPS	Analogue 0-5v high impedance differential input (use with pin 24)	Yellow
13	Clutch position	Digital or analogue (0-5v) input (optional)	-
14	Neutral button	Must be used in all applications (active when switched to ground)	Blue
15	Reverse button	Only required to select reverse on Ricardo 500Nm gearbox	-
16	Auto switch	Enables auto upshift & stacked downshift modes	Brown
17	Emergency switch	Enables 'limp home mode' (open-loop)	Orange
18	Up paddle	Active when switched to ground	Red
19	Down paddle	Active when switched to ground	White
20	TACHO (RPM) input	Please consult Geartronics regarding internal jumper configuration	White
21	Power ground	Battery/chassis ground	Black
22	Power ground	Switch & pressure sensor ground (not TPS or GPS)	Black
23	Gear position ground (differential input)	Internally connected to power ground unless internal link is cut	Black
24	Throttle position ground (differential input)	Normally connected to engine ECU sensor 0v (not power ground)	Black
25	Gear cut request	output to engine ECU gear cut input.	Green
26	System pressure	0-5v analogue input from air tank pressure sensor	Pink
27	CAN1 high	120 ohm terminator enabled by on-board jumper	White
28	CAN1 low		Black
29	CAN2 high	120 ohm terminator enabled by on-board jumper	White
30	CAN2 low		Black
31	Ground	Communication ground (connect CAN screen drain)	Black
32	Ground	Communication ground (for RS232 & USB)	Black
33	RS232 Rx	Connect to 9-way D-type pin 3	Green
34	RS232 Tx	Connect to 9-way D-type pin 2	Red
35	USB +D		Green
36	USB-D		White
37	USB +5v	5v from host PC disables RS232 comms when USB is connected	Red

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Loom requires AS614-35SN

Notes:

All outputs are low-side switches (switch to ground)

Paddle & switch inputs are active when switched to ground

TPS analogue input is high impedance differential input that uses an isolated 'ground' on pin 24.
Pin 24 should be connected to the engine ECU sensor 0v unless the TPS is being read from the CAN stream.

When using USB communication, all 4 pins must be used: 32, 35, 36 & 37.

It is strongly advised that RS232 communication is used when performing firmware updates.

Gear position sensor must connect only to GCU (pins 8, 10 & 23) - do not connect to any other device!

