

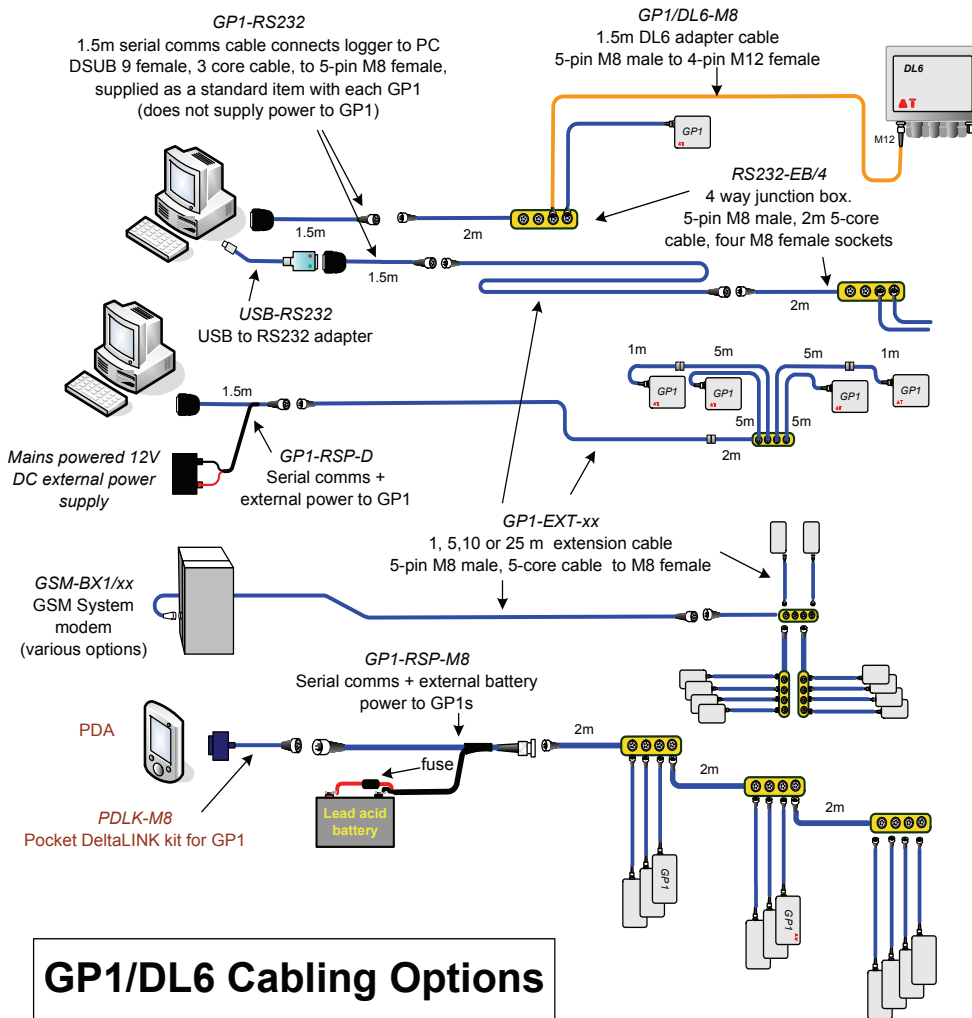
# GP1 Network

*Using multiple loggers on a GP1 Cabling Network*

## **Quick Start Guide** Version 1



**AT** Delta-T Devices Ltd



## Maximum Length

The maximum cumulative cable length - of all the loggers added together - depends on the signal source as follows:

Signal source	typical max cumulative cable length see note 1
RS232 note 2	20m
USB to RS232 note 3	220m
GSM modem	60m
PDA	30m

*Note 1:* Typical when using approved Delta-T parts.

*Note 2:* Individual PCs may perform better than this.

*Note 3:* USB to RS232 adapters appear to perform better than standard RS232 ports. Figures quoted here are based on an FTDI chip from [www.easysync.co.uk](http://www.easysync.co.uk).

## WARNINGS

- Only one external power supply should ever be connected to the network.
- Never connect more than one battery.
- Lead acid batteries must have a 3A fuse in series with the +ve wire.
- Do not charge any external battery (including one in the GSM modem box) via any of the M8 to M8 5-core extension cables.
- Do not power the GSM modem via any M8 to M8 5-core extension cables.

# GP1/DL6 Cabling Options

GP1 Cables and Connectors			Sales Code	Function and Description	gender	PC or Modem end	Logger end	gender	Length
1	Standard GP1 comms cable type GP1-RS232	GP1-RS232	Connects GP1 logger to PC. 1.5m cable carries RS232 to GP1 logger, D sub 9 female to 5-pole M8 female connectors	F				F	1.5m
2	GP1 RS232 and power cable	GP1-RSP-D	Enables PC serial comms with logger, without interrupting external power supply. Suitable for use with 11-24V DC power from mains adapter. Combined 1.5m RS232 and external power cable for GP1. 9-way D-connector to shared M8 5-pin (f) connector, plus power cable to 2-wire flying lead (Maximum current 3A).	F				F	1.5m
3	GP1 network extension or GSM modem connection cable (1, 5, 10 or 25m)	GP1-EXT-01 GP1-EXT-05 GP1-EXT-10 GP1-EXT-25	Serial comms and GP1 power extension cable Connects GP1 directly to GP1 GSM Modem System box, or to GP1 Network cables, or to PC via GP1-RS232, or to Pocket PC via PDLK1-M8 cable. 5 pin M8 male to M8 female connector. Hiflex Cable : 5 core x2.5 mm2, polyurethane, -5 to +90C. Max 3 A.	M				F	1m 5m 10m 25m
4	GP1 control line cable (100m)	GP1-CC-100	Enables GP1 to signal to an irrigation controller or to a Modem Box to initiate a text message. 100m reel, 2 core, max 3A, unshielded.	M					100m
5	GSM external battery cable 2m	GP1-EPC-02	Carries external battery power in GSM modem box. 2m 2 core mains cable, for connecting external lead acid battery to GSM Modem System 3. Terminated at modem end in 6.3mm male spade connectors and at battery end in 6.4 mm female spade connectors. Maximum current 6A						2m
6	GP1 RS232 and power cable (M)	GP1-RSP-M8	Enables PC serial comms with logger, without interrupting external power supply. Suitable for use with external 12V battery. Combined 1.5m RS232 and external power extension cable for GP1. 5-core comms cable terminating in M8 male and female connectors, with 1.5m 2-core mains cable terminating in 6.3mm spade connectors, with in line 3A fuse.	M				F	1.5m
7	External Power cable for GP1	GP1-EPC1	Carries external power to one GP1. 1.5m cable for 11V to 24V DC external power connection to a single GP1 Data Logger. Maximum current 3A. Cable is not fused. NB Serial communications only possible if this cable is disconnected.					F	1.5m
8	DL6 M12 cable to M8 connector	GP1/DL6-M8	Connects DL6 directly to GP1 GSM Modem System box, or to GP1 Network cables. Note: does not supply external power to DL6, which is not designed for external power. 1.5m RS232 cable terminating in a 5-pin M8 connector for GP1 network and a 4-pin M12 connector for a DL6 logger	M				F	1.5m
9	4-way GP1 network expansion block	GP1-EB/4	Permits RS232 serial communication with up to 10 GP1 or DL6 loggers in a range of network configurations via GSM Modem Box System, or to PC via GP1-RS232 cable, or to Pocket PC via PDLK1-M8 cable. 4-way expansion block with four round, 5 pin, 8mm female connectors and 2m long cable terminated in 5 pin 8mm male connector. Up to 10 GP1 or DL6 loggers may be connected. Maximum current 3 A.	M				F	2m
10	Modem to PC serial cable	GSM-RS-DB9	Permits setting up GSM modem for initial modem configuration and/or setting up text messaging from modem 2m DB9 Serial Data Cable (M-F).	F				M	2m
11	USB-RS232 adapter	USB-RS232	Increases the maximum length of extension cables that can be used on each GP1 cabling network. Provides USB connectivity to RS232 peripherals. Includes driver software on CD	M				M	1m

Ten GP1 or DL6 loggers may be connected to each network, i.e. to each PC serial COM port, or USB to RS232 adapter, or dial-up GSM Modem System.

*You may also use Pocket DeltaLINK for GP1 type PDLK-M8*

## DeltaLINK System Requirements

You need DeltaLINK version 2.2 and GP1 or DL6 firmware version 1.30 (or later).

- Contact <http://www.delta-t.co.uk/software-download.html> for the current version of DeltaLINK.
- The latest firmware version is provided with DeltaLINK: from the Windows Start menu select **Programs, DeltaLINK-PC, Firmware Upgrade**.

## Creating a Network Connection

1. Start DeltaLINK. Click **Cancel** when DeltaLINK tries to connect to a logger and dismiss any error message.
2. Connect your PC to the GP1 network, either directly via the standard GP1-RS232 cable, or via USB-RS232 adapter, or, if using a modem, plug a GP1 network cable directly into the GSM Modem Box via the M8 5-pole connector.  
(See also *Cabling Options* and *Cables and Connections Table*)
3. Select **File, New, Connection**  
(*if using Pocket DeltaLINK, select Tools, Connection*)
4. In the **Connections** dialog, click **Add...** to pop up the **Connection Properties** dialog.
5. In **Connect to logger using:** select the communication method.
6. Select the **Details** tab and enter connection details.
7. Select the **Connection** tab, enable **Networked**, and enter the serial number of the GP1 that you want to address.
8. Enter a descriptive **Connection name**, e.g. 'GP1-1.23 using COM1', or 'Plot 6 via modem'.
9. Click **OK**, and in the **Connections** dialog select the new connection and click **OK**.
10. DeltaLINK will then open the connection which you have created in a new window.
11. Repeat the procedure for each logger on the network.

## Selecting a Network Connection

When you re-start DeltaLINK, it tries to use the connection which you most recently used. If this is not the connection that you want to use:

1. Click **Cancel** and dismiss any error message
2. Select **File, Properties** (*or in Pocket DeltaLINK select Tools, Connection*) and select a connection from the **Connections** dialog.

## Connecting to 'Any logger'

You can also create a non-networked connection in DeltaLINK:

1. Proceed as in 'Creating a Network Connection' above.
2. In the **Connection** tab, **disable Networked**, and enter a descriptive **Connection name**, e.g. 'Any logger via COM1'.

You can then select this connection from the **Connections** dialog, to connect to any logger which is directly connected (i.e. not networked) to your PC, modem (*or PDA*).



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