



## GaugeLink Instructions.

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Thank you for buying GaugeLink. We appreciate your custom and trust the GaugeLink will be of significant use to you in your work.

GaugeLink is simple to install. You will need the following items:

1. A Mitutoyo digital gauge.
2. A Mitutoyo Digimatic™ connecting cable. The instructions that came with your gauge will list suitable cables. Not all Mitutoyo cables are believed to work with all models of gauge. Please consult your Mitutoyo representative.
3. An unused RS232 serial port (COM port on PCs) on your computer. The GaugeLink is powered by the interface, so a full RS232 is required. RS423 ports will not work.
4. If your computer's serial port has a 9-way connector, you will need a 9 way to 25 way adaptor.
5. Optionally an RS232 cable to allow use of the GaugeLink further from the computer.

### Making connections

1. Connect the Mitutoyo cable to your gauge according to Mitutoyo's instructions.
2. Plug the GaugeLink into the serial port on your computer. Consult the computer's instruction manual to locate the serial port. On PCs the serial ports are also known as COM ports, and are usually labelled COM1: and COM2: (if labelled at all). The convention is for COM ports to have male connectors with either 9 or 25 pins. Conversely, the printer port is a 25 way female connector, and *should not be used*.
3. Plug the free end of the Mitutoyo cable into the GaugeLink.

### Foot switch option

If you have the optional GaugeLink footswitch, simply connect its adaptor between the GaugeLink and the computer.

### Software

The Resources CD supplied with your GaugeLink contains several software options. Please run the CD, and select the GaugeLink option. If the CD fails to auto-run, browse to GaugeLink.htm on the CD and double-click it. If you are using the GaugeLink on a PC you can start with the GaugeLink Wedge ("GLWedge") software. GaugeLink Wedge is a Windows program and is installed in the usual manner. There are versions both for Windows 3.1 and for later 32-bit Windows. Please run GaugeLink Wedge first to check out your GaugeLink installation, even if you intend later to use third party software or write your own.

If you are writing your own software, the CD contains an ActiveX control that performs communications with the GaugeLink. Alternatively, if you want to "roll your own", here are the details of the data formats:

Character profile: 1200 baud, 8 data, no parity, 1 stop bit.

Control Lines: Power is taken from RTS and DTR. Both must be held high to power GaugeLink. Turning both off then on again after a few hundred mS resets GaugeLink. It is a good idea for any application program to do this periodically if the GaugeLink is not responding to polls. GaugeLink takes negative voltage from TxD.

Data Message: A data reading is of the form +23.45<CR><LF>  
i.e. the data is right justified in a field of 8 characters with leading spaces and a trailing CR/LF pair. The sign is always present.

Polling GaugeLink will initiate a gauge reading when sent a space character. This means you can for example use a terminal simulator program and get a reading each time you hit the space bar.

## Version ID

On receipt of any character other than space, GaugeLink outputs the following message

V1.6%<CR><LF>

where % is a random character and <CR> and <LF> are carriage return and line feed characters respectively. V1.6 is the firmware revision in GaugeLink, and may change.

## Compatibility

The data format out of GaugeLink is common in the industry, so third party software packages should recognise GaugeLink data. Some, if not all, third party software should be capable of generating a space character poll.

The GLWedge software will not work with serial data sources other than GaugeLink.

## In case of difficulty

If your computer is anything but a PC compatible machine, then its serial port may use different pinouts. GaugeLink uses the following pins:

2	TxD	Data computer ==> GaugeLink. Also negative supply voltage for GaugeLink.
3	RxD	Data GaugeLink ==> computer
4	RTS	positive voltage supply to GaugeLink
20	DTR	positive voltage supply to GaugeLink
7	Common	

If your computer defines pin 2 as an input pin and 3 as an output pin, it is most likely configured as a "DCE". In this case it will not provide power to GaugeLink on 4 and 20. You may then need to make up a crossover cable that swaps 2 and 3, swaps 6 and 20 and swaps 8 and 4.

If you can't manage to sort it out, send us the pinout information of your machine and we will be happy to suggest to you which pin connections to make.

## 9 Pin ports

GaugeLink can be used on 9 pin PC/AT compatible COM ports. Just use a standard 9(F) to 25(M) adaptor or conversion cable.

## Notebook computers

GaugeLink is powered off the COM port. In some notebook computers the COM port provides very marginal voltages. GaugeLink has been tested on a number of notebooks, but we cannot guarantee results on all makes. If you are having problems initially using it on a notebook, please try it first on a desktop machine as a sanity check.

## Further Assistance

If you experience difficulties installing GaugeLink send us a written message (email to [glhelp@splatco.com](mailto:glhelp@splatco.com) is preferred) describing exactly what is or is not happening. Please include the following information, or we will be unable to help:

- Gauge model number.
- Cable Model Number.
- Computer type.
- Port number.
- Serial port connector type including pin count and gender.
- Have you tested the GaugeLink with our GLWedge program
- All items you are using in the hookup (e.g. cables, adaptors, switch boxes).
- Where you purchased GaugeLink.

You must also tell us what steps you have taken to verify that your serial port is working. Have you tried a different port? Have you eliminated all inessential items like extension cables? Are you getting anything on the screen?