

### *Communication with external equipment - remote control*

Communication is possible via the digital and analogue in- and outputs, via the RS232-connectors, USB and ethernet. Several functions of the GC are checked continuously; if there are problems an error message is given. Status information can be sent to and from the instrument .

### *Digital input and output connectors*

The GC955 has seven digital output ports, and 4 digital inputs These are freely programmable and can be used for the linking up of external equipment (external integrator or calibrator) or to react to external signals, like a remote start or a pressure switch.

### *RS232-port*

The same messages can be send over the RS232-ports and a modem connection towards a control station. By online control further information about the problem can be obtained, errors in the setting of the program can be fixed, or other optional changes can also be made by modem communication. GC's with connected equipment for calibration can also be calibrated in this way.

Remote control of the instrument is best done with a Windows based remote control program. Synspec recommends the use of Symantec's PC-anywhere (version 8.0 or higher). The remote control can in this case take place over modem, or over a ethernet-LAN.

With a normal LAN connection, a shared disk can be obtained, to retrieve ASCII-data from the GC.

The USB ports are used to connect external (zip)drives, CD-reader and writers etc.

Overview of data transfer and of communication options: for each option the useful elements are explained, if an option does not fulfill a task it is labeled "no".

	Data transfer	Status information	Instrument control
Analogue outputs	Concentration values will be transmitted	No	no
Analogue inputs	Can be used to read in data from other instruments	no	no
Digital outputs	no	Yes, all set parameters in the digital communication protocol will be transmitted.	Limited: some actions, like runstart, or start calibration can be set.
RS-232-communication	Concentration values will be transmitted	Yes, all set parameters in the communication protocol will be transmitted.	Limited: some actions, like runstart, or start calibration can be set.
RS-232 modem and PC Anywhere	Yes, all data can be copied. Speed depends on modem and phone line	Yes, as the GC screen can be seen	Can be used to change settings and then activate them. Only possible if phone line is stable.
Ethernet connection	yes	no	Not directly Can be used to check on remote PC measurements and then to copy back improved programs.
USB connection	Can be used to copy data from the hard disk to zip drive, memory stick, CD-writable etc.	no	no