

Course on BASCOM AVR - (5)

Theoretic/Practical course on BASCOM AVR Programming.

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Serial line Management.

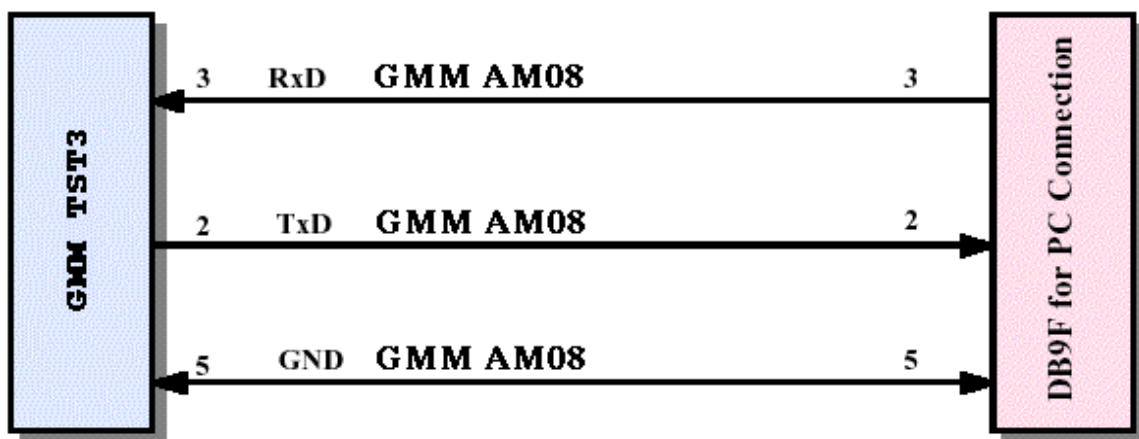
The **GMM AM08 Mini Module** has a serial line interface capable to communicate with external systems either at **TTL** or **RS 232** level, according with **DSW1 DIP Switch** configuration.

The **RS 232** serial communication is performed by connecting, through a standard cable, the **GMM TST3** to a **PC** that execute a proper Terminal Emulation program. For this purpose, as an example, it can be used the **Hyperterminal** program that is available in **Microsoft Windows** or alternatively it can be used the **BASCOM AVR** Terminal Emulation modality. The last choice is really comfortable in fact a single development tools covers all the phases of the work.

All the parameters of the communication, as **Baud Rate**, **Parity**, **Stop Bits**, etc. are defined by the program and obviously, they must be the same set on **PC** side. If the settings of the two systems are not the same, the communication can't proceed correctly.

The program has a feature immediately recognizable: the extreme power offered by an **high level Language**, as for example this **BASIC**, in communication management. In detail, in order to appreciate the simplicity of **PRINT** instruction, it is sufficient a comparison with the Assembly code required to perform the same operation.

The offered efficacy, and the simplicity of use, has no equal alternative.



RS 232 serial connection between GMM TST3 and PC

Example.009. RS 232 Serial Communication Management.

Added Definitions:

\$baud

Added Declarations:

Dim() As Byte

Added Instructions:

FOR ... TO ; NEXT ; WAITKEY ; PRINT.

Added Operators:

None

The program must interact with another system capable to support a serial **RS 232** communication with a fixed physical protocol at **19.200 Baud, 8 Bit x Characters, 1 Stop bit, No Parity.**

In order to simplify the use it can be used a **PC** provided of one **COMx** line, that execute a terminal emulation program as **HYPERTERMINAL** or the hononymous modality provided by **BASCOM AVR** (see **IDE Configuration**).

When **GMM AM08** executes the program it is sufficient to press **20** keys on **PC** keyboard (the **Terminal Emulation** transmits the pressed keys to **Mini Module**) and these will be immediately displayed on **PC** monitor (the **Terminal Emulation** program shows the characters received from **Mini Module**, on **Monitor**).