

PROPOSAL FOR DEVICE DETERMINATION
OF
STANDARD INTERFACE ADDRESSING

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There will be a new logic signal brought out of the standard interface; when this signal is true, the interface is trying to identify itself. (The line will be on the serial-port plug, even though the function logically should belong to the parallel plug, because the latter is full.) This signal must be used to control a three state driver which gates eight bits onto the least significant bits of the MON/CON data lines. These eight bits will be a seven bit integer (call it N) and, in the most significant bit position, odd parity. This seven bit integer must be unique within each station. At the option of the user, N may be simply wired onto the inputs of the three state driver; or it may be switch settable (you may then want a parity chip to generate the parity line); or it may be determined from wiring to a module plug (you then probably want to bring the parity line through the plug as well as sufficient lines to make up the plug-dependent part of N).

The standard interface would, at power up and every now and then on general principles, read N. If the parity is correct, the standard interface would then respond to two addresses in addition to its defined address block: at address $2*N$ the length of the main block could be both read (with a monitor request) and set (with a command). At address $2*N+1$, the starting address of the main block could be both read and set. At power up only, the starting address default value would be set to 7FF0 hexadecimal, and the length to 16.

Then if the parity is incorrect, the standard interface would respond only to addresses within its default main block, i.e., the address range 7FF0 to 7FFF hexadecimal.

The station computer would, at boot, and every now and then on general principles, read these words for all values of N that it expects devices on. If necessary, it would command the starting address and length of the main response block to that appropriate to the interface addressed. It would also occasionally try to read the interface block address at address 7FFF hexadecimal.

Note that the above is entirely compatible with non-standard interfaces using the M/C bus protocol as defined in Specification A55001N001, provided that addresses less than 256 and the block 7FF0-7FFF hexadecimal are reserved for use by standard interfaces.