NUMBER: 23A   DATE: October 10, 2003   X APPLICATION   SERVICE

SUBJECT: B&B Electronics Universal RS-232 to RS-485 Converter

The Black Box Short Haul Modems used in the past for the CPU-95 and CPU-2000 programming have changed again. The IC620A-F has now been superseded with the IC1620A-F. As you may recall from Application and Service Note #23, previous versions of the ME721A-F were revised to an "R1" and "R2" version which did not work with the CPU Terminal Programs. Since there is now another change with the products sold by Black Box, and since this new version is untested, we are now recommending a lower cost alternative that "covers all the bases".

This new converter that works with "all Altronic devices" is now available from B&B Electronics. It is part number 4WSD9R, and lists for $69.95. This device is line powered, but can be externally powered if necessary by purchasing a 110VAC to 12VDC power supply (Model 485PS - our applications have yet to require any external power). It replaces the Black Box converters, as well as the ADAM-4520 converters shown in the Digital Product literature for products such as the DSM's or ETM's.

This unit can be purchased on-line at **www.bb-elec.com**, or by calling **815-433-5100** and select option #4

B&B Electronics Mfg. Co
707 Dayton Road
P.O. Box 1040
Ottawa, IL 61350

Model 4WSD9R

This unit has directions available on-line at the above e-mail address, and are also supplied with the unit. Connect the unit according to the "RS-485 2-Wire Half-Duplex" wiring diagram. Select the 4-position DIP switch according to "table 3" for half duplex operation. (RS-485, ECHO "ON", 2-wire, 2-wire) Some devices will require the "ECHO" to be turned on or off with the DIP switch depending on the product and the "ECHO" selections made in the Terminal Programs. The "ECHO" must be turned "ON" for use with the CPU Terminal Programs.

The unit has two DB-9 female connectors and will directly plug into the serial port on the back of a PC. The RS-485 connections will require a male DB-9 connector (available from RadioShack or from B&B) with the following connections:

DB-9	External Device
Pin 2	(-)
Pin 3	(+)
Pin 4/6	(shield)

The B&B part numbers for the accessories are as follows

485PS	12VDC@100mA Power Supply, Wall Transformer (not necessary so far)
DB9P	DB9 Male 9-pin Connector (necessary)
BP09AK0010	DB9 NovaHood Connector Cover Kit (necessary)