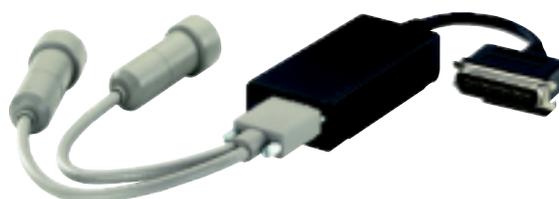# Twinax/Coax-Interfacebox

for

Apollo / A-Serie / Hermes

Users Guide

Introduction

The Bar Code Printer Interface is a powerful yet easy-to-operate twinax/ coax interface which enables connection of the Label Printer directly to an IBM AS/400 or System/3X twinax host system, or IBM 3270-type coax host system. The interface automatically adjusts to the host environment by sensing if a twinax or coax host adapter cable has been attached.

The Interface includes specialized firmware to enable it to diagnostic such as buffer dumps, to the printer, as well as using a generic CR/LF format to output to a line printer. This makes troubleshooting both the hardware connection and the code being sent to the printer an easy task to perform.

If you experience a problem during installation, please refer to the troubleshooting section at the back of this manual. If the problem persists, contact;

cab Produkttechnik GmbH
Wilhelm-Schickard- Str. 14
D-76131 Karlsruhe
Tel.: 0721 6626-0
Fax: 0721 6626-259
Email: support@cabgmbh.com
http://www.cabgmbh.com

Installation

Before connecting the interface to the printer, verify that the printer functions properly by performing a printer self-test.

Apollo/Hermes
This can be achieved by holding the ONL button at power-up, and keeping it pressed until the self test has printed. The printer should display "Test print", then it will reset and be ready for use.

A-Serie
1. Switch from „Online" mode to the Offline Menu by pressing the "MODE" key.

2. Press the Cursor key until the „Test" menu is displayed.
   Press the Enter key to confirm the selection.

3. Select the „Status print" option by pressing the Cursor key and confirm the selection by pressing the Enter key.

4. Start the printout by pressing the Enter key.

If the printer functions properly, proceed with the installation of the interface.

1. Configure the printer for the Centronics port through the printer's front panel.

2. Power off the printer.

3. Attach the interface to the printer's parallel port.

4. Attach the 9-pin twinax OR coax cable adapter to the interface's connector. ot attach the host cable(s) at this time.

5. If the interface is being connected to a Twinax system, the host address must be programmed into the interface. Remove power (unplug the power supply) and set the rotary switch to position 0-6 for the proper address, and restore power to set the address. Check your Config SSP to confirm that the port and address that you just set is configured for an IBM 5226 printer. This is the default twinax printer emulation for the interface.

6. Set the rotary switch to position „A" for normal operation.

7. Attach the host system cable(s) and send a test print job to the interface to verify proper installation.

Rotary Switch Function

Switch Number	Function at power up	Function after power up
0-6	**Twinax:** Selects twinax host address **Coax:** Selects the time Delay before an Intervention Required is sent to the host 0 = No IR sent 1 = 2 1/2 minutes 2 = 5 1/2 minutes 3 = 8 minutes 4 = 10 1/2 minutes 5 = 13 1/2 minutes 6 = 16 minutes	No function
8	Restore factory defaults and print self test	No function
9	**Coax** buffer size, and code page selection - See table 1 for settings	EBCDIC Hex Dump mode
A	Normal Operation	On-line
B	Host default language - See table 2 for settings	No function
C	No function	No function
D	No function	No function
E	Diagnostic test - Remove All host cables prior to selection	No function
F	ASCII printer (80 column) self test	No function

Secondary rotary switch functions

Certain rotary switch positions at power-up require a secondary selection to be made. When this happens, the LED will display a repeating three (3) flash pattern for approximately 30 seconds. During this time the rotary switch should be changed to select the desired setting. At the end of the 30 second time, the value selected by the rotary switch setting will be entered into non-volatile memory and the LED will display a rapid flash pattern. If no valid change was selected, the LED will indicate this by not flashing.

Table 1 - Secondary rotary switch selection for position 9

If there is a need to change your coax bufer size, or the ASCII Code Page, position the rotary switch to position 9, and apply power to the interface. The LED will begin a 3 flash pattern that will last for 30 seconds. Within this 30 seconds, set the rotary switch to position 0 to 6 as illustrated in the table below. After 30 seconds, the interface will save the value selected. Return the rotary switch to position A for normal operation.

Switch Setting	Value Selected
0	960 byte coax buffer
1	1920 byte coax buffer
2	2560 byte coax buffer
3	3440 byte coax buffer
4	3564 byte coax buffer
5	Code Page 437
6	Code Page 850
7-F	N/A

Table 2 -
Secondary rotary switch selection for position B

If there is a need to change your host default language, position the rotary switch to position B, and apply power to the interface. The LED will begin a 3 flash pattern that will last for 30 seconds. Within this 30 seconds, set the rotary switch to position 0 to F as illustrated in the table below. After 30 seconds, the interface will save the value selected. Return the rotary switch to position A for normal operation.

Switch Setting	Twinax Value	Coax Value
0	Multinational	US/Canada (1)
1	US/Canada	US/Canada (2)
2	Austrian/Germany	Aus./German(3)
3	Belgium	Belgium (4)
4	Brazil	Brazil (5)
5	French Canadian	French Can (6)
6	Norway/Denmark	Norway/Den (7)
7	Finland/Sweden	Nor/Den Alt.(8)
8	France	Finland/Swe. (9)
9	Italy	Fin./Swe.Alt(10)
A	Japan (English)	French (11)
B	N/A	N/A
C	Portugal	Aus/Ger.Alt(13)
D	Spain	Multinational(14)
E	Spanish speaking	Italian (15)
F	United Kingdom	Japan-Eng. (16)

Special Operatings

All printer commands, and data can be sent from the host in the form of a text file. Special characters such as the ESC can also be sent in HEX by masking the value for the character between the &%.

Example; &%1B&% will pass the ESC to the printer. The &% combination will be removed from the beginning and end of the data stream, and the actual ASCII character represented by the HEX value will be sent to the printer.

Please refer to the Printer programming guide for information on the printers programming language.

The printer and interface allow the ability to access True Type fonts and graphics from a PCMCIA- or Compact Flash card in the printer. The fonts and graphics must be downloaded to the Memory card from a PC, but once they are stored on the card, they are available for printing when accessed by a host program.

Please refer to the programming guide for more information on using PCMCIA cards or Compact Flash Cards with the Printers

By factory default the IBM „logical-not" symbol is replace with the circumflex „^" and both vertical lines are printed as the pipe character „|".

Troubleshooting

ASCII Dump

The printer can be set up to print the data it is receiving from the interface in plain ASCII text. This can be useful for a programmer to debug problems with the application software, interface, or the printer.

Start the ASCII text dump as follows;

Apollo / Hermes
1. Turn the printer off.

2. Press the FF key on the printers front panel, then power on the printer. Keep the FF key pressed until the display reads "ASCII Dump Mode"

3. Send a print job to the printer. The code will be printed in ASCII text just as the   printer received it.

4. Press the ONL key to return the printer to normal operation.

A-Serie
1. Switch from „Online" mode to the Offline Menu by pressing the "MODE" key.

2. Press the Cursor keys until the „Test" menu is displayed. Press the Enter key to confirm the selection.

3. Select the option „ASCII Dump Mode" by pressing the Cursor keys and confirm the selection by pressing the Enter key.

4. Start the ASCII Dump mode by pressing the Enter key.

Note: Use 4" wide stock in the printer when performing an ASCII Dump.

Buffer Print

The interface can be set up to print the buffer in hexadecimal code. This can be useful for a programmer to debug problems with the application software, interface, or the printer.

The EBCDIC hex data is printed on a grid corresponding to the data's position in the buffer. If the hex data represents a printable character, that character is printed to the right of the grid.

Start the buffer hex dump from the interface's rotary switch as follows:

Note: Use 4" wide stock in the printer when performing a Buffer Print.

1. Verify that the printer is connected properly to the interface.

2. Power on the printer.

3. Before sending the print job, put the rotary switch in position 9.

4. Send the print job from the host. The job will print in a „Buffer Dump" format showing all host hex codes.

5. After printing is complete, return the rotary switch to position „A" for normal operation.

Flashing LED Table

This table describes what the different flashing of the LED is indicating:

1. Single flash pattern - The printer is not ready and the interface is waiting for the printer. Also after a rotary switch selection, the LED flashes to indicate that power should be cycled before proceeding.

2. Double flash pattern - There is not a proper host adapter cable installed.

3. Triple flash pattern - A rotary switch selection has been made that requires a secondary setting. There will be a 30 second delay to make the secondary selection.

4. Rapid flashing - The interface is saving a configuration to the Non-volatile memory. This could be a restore factory defaults, or a rotary switch selection.

5. The LED is on - Line sync has been established with the Host.

Problem, Cause, Solution

Problem or Message	Probable Cause	Possible Solution
„Printer not ready" message at host	Printer not on-line	Make sure printer is on-line, has labels, ribbon, etc.
Host line sync LED not on	Host is not configured for a printer at the address specified	Make sure the host is properly configured for the printer.
	Interface Configuration or address is incorrect	Make sure the interface is configured correctly, and for the proper address.
	Host is not operating	Check host system.
	Damaged or improper cabling	Check host cabling for damage or improper connection.
	Twinax cable improperly terminated	Make sure the prior device is not terminated (some PC emulator cards may terminate mid-line).
Host Line Sync LED comes on then goes off	Address conflict with another twinax device on the cable	Make sure no other devices on this cable have the same address.
	Damaged or improper host cables	Check host cabling for damage or improper connection.
Host LED on but no print output	Printer fault, such as paper out, paper jam, etc.	Make sure the printer has paper, is clear of jams, etc.
	Damaged or loose printer cable	Check printer cable for damage or improper connection.
Printer loses host communication (drops off line)	Improper or damaged cabling	Check host cabling for improper connections or damage.