



AlphaTek Automation, Inc.

OMNIPOINT II, INSTALLATION AND OPERATION MANUAL





Basic User Instructions

To use the OMNIPOINT simply power the device on and plug into the serial port “A” of any Burny®, Wescan, or ESAB® device.

1. Make sure all settings are the same in the Burny® (or other CNC) as in the OMNIPOINT. (See Device Description For Details). As your OMNIPOINT powers up the display will show:
ALPHATEK OMNIPOINT II
INSERT USB MEMORY
2. This is the main screen. If the unit shows this message, there are no software or hardware errors detected.
3. Insert a USB memory device and the display shows:
ALPHATEK OMNIPOINT II
Please Wait...
4. During this time period, the OMNIPOINT is reading the memory device and you should see
5. the LED in the memory device (if equipped) blinking. The LED should stop and the display will show:
ALPHATEK OMNIPOINT II
READY XXXXXXXX
6. Where XXXXXXXX is the baud rate and character type that the OMNIPOINT is set to. To change these settings see the config file settings in this data sheet.
7. The OMNIPOINT II device is used to easily transfer part programs from a USB memory device or an Ethernet connected computer to a CNC control. It can also store from the CNC control to the USB memory device or Ethernet connected computer.

Device Setup File:

The OMNIPOINT II uses a setup file called config.txt on the USB memory device to configure all of the device settings. This file can be created in notepad on any windows based PC and stored to the memory device. Once the memory device is plugged into the OMNIPOINT, the settings in the OMNIPOINT are updated automatically. The file is no longer needed and the config.txt can be deleted from the USB device.

baudrate=X (Where X is the setting that you want.)

IF X = 1 THEN BAUDRATE = 110

IF X = 2 THEN BAUDRATE = 300

IF X = 3 THEN BAUDRATE = 600

IF X = 4 THEN BAUDRATE = 1200

IF X = 5 THEN BAUDRATE = 2400

IF X = 6 THEN BAUDRATE = 4800

IF X = 7 THEN BAUDRATE = 9600

IF X = 8 THEN BAUDRATE = 19.2k

IF X = 9 THEN BAUDRATE = 28.8k

IF X = A THEN BAUDRATE = 38.4k

IF X = B THEN BAUDRATE = 57.6k

IF X = C THEN BAUDRATE = 115.2k

chartype=X (Where X is the choice that you would like according to the following data)

IF chartype= 1 THEN NP7D , ASCII , No parity 7 data bits



IF chartype= 2 THEN NP8D , ASCII , No parity 8 data bits
IF chartype= 3 THEN EP7D , ASCII , Even parity 7 data bits
IF chartype= 4 THEN EP8D , ASCII , Even parity 8 data bits
IF chartype= 5 THEN OP7D , ASCII , Odd parity 7 data bits
IF chartype= 6 THEN OP8D , ASCII , Odd parity 7 data bits
IF chartype= 7 THEN OP7D , ASCII , Odd parity 7 data bits

storeext=XXX,XXX,XXX,XXX,XXX,XXX,XXX,XXX,XXX,XXX (Where XXX is the file extension that you want)

The OMNIPOINT II supports up to 10 file extensions for load files. The user may specify one or ten. The exact number is not important.

If no save extension is specified (e.g. STOREEXT=), files are stored without extension. Existing files are overwritten.

If one save extension is specified (e.g. STOREEXT=OMNIPOINT), files are stored with extension .OMNIPOINT. Existing files are overwritten.

If multiple save extensions are specified (e.g. SAVEEXT=001,002,003), files are stored with the first unused extension.

Existing files are never overwritten. If all extensions are used, OMNIPOINT shows error: "ALL EXTENSIONS USED ".

Valid extension letters are 0-9, A-Z, a-z any other characters will be considered as separators, e.g. "TXT CNC NCC MPG" ="TXT,CNC,NCC,MPG" = "TXT>CNC-NCC<MPG" = "TXT*CNC*NCC*MPG" will all work the same way and, therefore, set the four extensions TXT CNC NCC and MPG.

loadext=XXX,XXX,XXX,XXX,XXX,XXX,XXX,XXX,XXX,XXX (Where XXX is the file extension that you want)

When loading, OMNIPOINT will always try the program name in the order specified in the list. If not found, OMNIPOINT will finish by trying without any extension at all. For example: "LOADEXT=TXT CNC NCC MPG" will try to find 109.TXT, 109.CNC, 109.NCC, 109.MPG and finally 109.

1. LOADSEL=0 (default)
If a file with the specified file name (or program# on Burny®) does not exist, OMNIPOINT reports file not found.
2. LOADSEL=1
If a file with the name (or program#) specified does not exist, OMNIPOINT will start the file browsing function and the user can pick a file.
3. LOADSEL=2
OMNIPOINT will always start the file browsing function and the user can always pick any file any file on the USB memory stick regardless of program# used in Burny®.
4. This function works for all other supported controllers as well. It is NOT unique to Burny®.



LOOP BACK ACTIVE MODE FOR BURNY® OMNIPOINT II HARDWARE

There are two different modes for loop back, ACTIVE and PASSIVE. If LOOPBACK=1 in the config.txt file and a memory device is inserted, the OMNIPOINT is set to "ACTIVE MODE" and will start sending out a character string on pin 2 and will display any data received on pin 3 on the bottom line of the display.

The display will show:

LOOP BACK DETECTED:

LISTENING (2400 NP7D) <Or current settings>

LOOP BACK PASSIVE MODE:

Under normal system operation, a loop back can be performed using SERV MODE 78 on the Burny® 3 and 2.5 (NOT 5). The LOOPBACK parameter should be set to 0 for normal operation.

1. Press <RECYCLE>
2. Press <SERV> (Hidden key under the B in the Burny® logo on a Burny® 3)
3. Press<10 ENTER>
4. Press<78 ENTER>

At this time, the Burny® will ask what baud rate , char type, program type etc. Make sure this matches EXACTLY the settings in the OMNIPOINT or the test will fail. The OMNIPOINT displays the current settings in the bottom right of the screen , NP7D etc. Make sure this matches what you see on the Burny® Screen.

If the Burny® says NO CTS check the jumper inside the plug on serial port A on the Burny®. It should be pin 5 to 9 on a Burny® device. If this jumper is correct and the display still says "NO CTS" return your control to Alpha Tek Automation, Inc. for service.

If all goes well , the OMNIPOINT will show:

LOOPBACK DETECTED

ABCDEFGHIJKLMNQRST <-Data received

The bottom line of the display on the OMNIPOINT will scroll the data as the Burny® sends it out. If you see data on the OMNIPOINT and on the Burny®, then everything is wired correctly. The OMNIPOINT will show what it reads on the bottom line and the Burny® will show what it receives on its display.

Burny® 5 Setup

The Burny® 5 is perhaps the most challenging of the Burny® controls to setup. It has no loop back function and more than just a single serial parameter to setup. Here is a generic setup procedure:

1. Remove the back panel of the Burny® 5 and make sure that there are no short haul modems installed. See the section in this data sheet called ERRATA for details.
2. Determine your password. The password is the last 4 digits of the serial number backwards.
3. From the Main Menu: Press 6.) UTILITIES, then 1.) DISPLAY SYSTEM DATA, then 4.)SYSTEM BANNER. Record the last four digits of the serial number backwards. This is your password. Press RST in the bottom left side of the control.
4. Set Serial Parameters:
 - a. From the main menu: Press 6.) UTILITIES, then 4.) SETUP / CONFIGURATION, enter your password from the above step. Then, press 1.) SYSTEM SETUP DATA.
 - b. Scroll to parameter number 41.) SERIAL LOAD DEVICE and press <ENTER>. The cursor jumps to the numbers beside the parameter. Enter the number 4161. (COMM LINK, WORD ADDRESS, 4800, NP7D)
 - c. Scroll to parameter number 42.) SERIAL STORE DEVICE. Enter 4161.



- d. Scroll to parameter number 43.) BATCH LOAD DEVICE. Enter 4161.
- e. Scroll to parameter number 47.) COMM LINK and press <ENTER>. The cursor jumps to the numbers beside the parameter. Enter the number 033161 <ENTER> (Read / Write timeouts) enabled, Suppress 70 null characters from leader and trailer, use full software protocol, Standard word address, 4800 Baud, 7 Data Bits , No Parity.) Press <ENTER>
- f. Press the CE key
- g. Press 6.) SAVE CONFIGURATION DATA, Press the +/- key then <ENTER>
- h. The control is now set and should work with the OMNIPOINT.
- i. Hook the OMNIPOINT to SERIAL PORT A on the Burny[®] 5. Insert a USB memory device and try to store a program to the device first.

Burny[®] 3 Setup

1. Press <RECYCLE>
2. Press the service mode key located under the Burny[®] logo in the top right corner of the control.
3. Press 10 <ENTER>. Press 50 <ENTER>.
4. Enter the number 6116, (CLINK, Word Address, NP7D, 4800). Press <ENTER>.
5. Press <Service Mode>, 97 <ENTER> <SHIFT>. This stores the changes.
6. Press <Service Mode>, 98 <ENTER>. This resets the control.

IF THINGS DON'T WORK:

1. Check the supplied serial cable for continuity. Here is the Pin out:
2 _____ 2
3 _____ 3
7 _____ 7
5 _____ (jumpered to 9)
9 _____ (jumpered to 5)
2. Put the OMNIPOINT into ACTIVE LOOPBACK MODE by setting the LOOPBACK=1 in the config.txt file (See details below).
3. Disconnect the OMNIPOINT from the Burny[®] and jumper pins 2 to 3 on the OMNIPOINT cable. If you see LOOPBACK DETECTED and the data on the second line of the display, the OMNIPOINT is working.
4. If the OMNIPOINT tests okay and the cable test okay, then the Burny[®] is not sending correctly. The Burny[®] has a hardware failure.
5. If the OMNIPOINT does not pass the loopback test or the cable does not test okay, then please return the OMNIPOINT and the Burny[®] to Alpha Tek Automation, Inc. for service or call us for support.

BURNY[®] OMNIPOINT ERRATA OMNIPOINT II HARDWARE

Build 139 and older

1. If the disk is full, OMNIPOINT will say that everything is fine and NOT store files to disk. This has been fixed in build 140 and above.
2. Burny[®] and OMNIPOINT display: "END OF FILE ERROR" on some programs. In build 154 and older, this is caused by no blank line in the program after the M30<CR><LF>. A blank line can be added and the program will transfer. Build 155 fixes this bug.



Burny[®] Short Haul Modem.

1. Note the small black box mounted on the drive interface card. This is a short haul modem and should be removed before installing the OMNIPOINT.
2. Remove the entire PCB not just the box. Unplug it from the back panel board. Use Port A (RECP35) for the OMNIPOINT.

FILE ERROR CODES OMNIPOINT II HARDWARE

Error Number	Error Description
556	Framing error
557	Data communication handshake error
596	"ABORT" Command request termination code
597	Message command error
598	Message format error
599	Background process already busy error
600	Program format error
601	Program syntax error
602	Buffer size / allocation error
603	Data setup error
604	Copy / data size error
605	Copy / data checksum error
606	Data definition error
607	Function setup error