Communications Overview

There are a number of ways to communicate with a BOCA printer.

- FGL data making direct use of the interface (Ethernet / USB (Class3) / Parallel / Serial)
- WYSIWYG using the FGL printer driver (Ethernet / USB (Class7) / Parallel / Serial)
- Bi-directional (FGL) Communication with Printer Drivers (Pass through mode)

Interface

Communicating with a BOCA printer over the Network can be accomplished via the Ethernet interface. The network interface can be designed for full bi-directional communication and is the only means of working with a printer independent of a PC. Each Boca Ethernet Printer is assigned a unique MAC address based in part on the printer's serial number. All Boca printers with an Ethernet interface enabled are factory configured in DHCP/SUB/GATE enabled mode. If the printer is unable to get a dynamic IP address from the customer's network in the allotted time period (about one minute), it will default to the 10.0.0.192 address. You can select a different fixed IP address either via a Web Browser or the printer's control panel.

When the USB port is configured as a USB HID device the native HID driver (USB only, Class3) is automatically installed when the printer is connected to the PC. When operating in this mode, the HID driver passes all data directly to and from the printer without any interpretation.

NOTE:

- *All USB printers are factory preset to operate with printer drivers (Class7). To configure the printer to act as a USB HID device (Class3), you need to use the control panel or the Configuration and test program.*
- *You cannot use a printer driver when operating as a USB HID device.*

The oldest way to communicate with your BOCA printer is to open a port (parallel, serial) and to write directly to the port. This method will work with any PC and any software while supporting full bi-directional communication. However, we recommend avoiding both of these interfaces for new applications as parallel and serial ports are no longer provided on computers.

Sample files for Mac, Linux and Windows are available on request.

Printer driver

The alternative approach is to communicate with the printer using the FGL printer driver. The FGL printer driver interprets the (WYSIWYG) data from the application and sends it to the port (parallel, serial, USB (Class7) or Ethernet). BOCA provides printer drivers for all active Windows platforms (W2K, XP, Win7 and Win8), Linux and Macs. These drivers only work with standard BOCA printers built from 2000 forward. (Older software such as FGL II, IV, 20, 40, 21 and 41 will not operate with these drivers. FGL22/42 rev C and above and all FGL24/44, FGL26/46 are compatible.)

Sample files for Mac and Windows are available on request.

Bi-directional Communication with Printer Drivers (pass through mode)

While our FGL printer drivers do not support bi-directional communication, there are ways of bypassing the driver for querying and receiving status.

Sample files for Mac and Windows are available on request.

Printer status bytes

The printer sends out unsolicited status bytes. The user should monitor the port at all times to intercept these bytes. The status byte will only be send once per event.