Printer Output Format on AFP-2800/XLS-2000

```
Event(max 18 char)  Zone  Point          Label(max 28 characters)      Date  Time
-------------------------------------------------------------------------------
```

V2/V3/V4 Common Event Format

```
:ALARM              Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:23;
:FAULT              Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:23;
:ISOL               Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:24;
:DE-ISOLATE         Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:24;
:ISOL ALARM         Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:22;
:ACKD ALARM         Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:23;
```

System Fault Format:

```
:MAINS FAIL         Z000 0.2.I5        MAINS FAIL                   11/12 15:08;
:CHARGER LOW        Z000 0.2.I7        CHARGER LOW                  11/12 15:08;
:BATTERY LOW        Z000 0.2.I6        BATTERY LOW                  11/12 15:08;
:RESET FAULT        Z000 0.2.I6        BATTERY LOW                  11/12 15:09;
:COMMS FAIL         Z000 1.0.--        UNNAMED POINT                11/12 15:09;
:COMMS PROC FL      Z000 4.0.--        UNNAMED POINT                11/12 15:10;
:NO REPLY           Z000 L1            UNNAMED POINT                11/12 16:39;
:COMMS PROC FL      Z000 3.0.--        UNNAMED POINT                11/12 16:40;
:RING BROKEN        Z000 1.0.--        UNNAMED POINT                11/12 16:46;
:NO REPLY           Z000 1.1.--        UNNAMED POINT                11/12 16:46;
```

V2/V3 Specific Event Formats

```
:RESET ALARM        Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:23;
:FAULT SELF CLEARED Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:24;
:ACTIVE SELF CLR    Z000 VP3           AZF 1 ON MODULE 1 (28 CHAR)  27/05 22:35;
:ALARM SELF CLEARED Z001 1.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  12/08 01:23;

:FAULT (F01)        Z001 L2D159        SOUTH WEST ENTERANCE DET     11/12 14:11;
:FAULT (F21)        Z000 L10M158       SOUTH WEST ENTERANCE RELAY   11/12 14:11;
```

V4 Specific Event Formats

```
:RESET              Z001 0.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  27/05 22:35;
:ALARM CLEARED      Z001 0.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  27/05 22:35;
:FAULT CLEARED      Z001 0.1.Z1        AZF 1 ON MODULE 1 (28 CHAR)  27/05 22:33;
:ACTIVE CLEARED     Z000 VP3           AZF 1 ON MODULE 1 (28 CHAR)  27/05 22:35;

:FAULT F01          Z001 L2D159        SOUTH WEST ENTERANCE DET     11/12 14:11;
:FAULT F21          Z000 L10M158       SOUTH WEST ENTERANCE RELAY   11/12 14:11;
```

V3/V4 Network Fault Format

```
:NODE DOWN          Z000 N8.           UNNAMED POINT                11/12 16:42;
:PORTA FLT          Z000 0.13.Z2       UNNAMED POINT                11/12 16:42;
:PORTB FLT          Z000 0.13.Z3       UNNAMED POINT                11/12 16:42;
:RST FLT(REM UP)    Z000 N8.           UNNAMED POINT                11/12 16:43;
:PORTA UP           Z000 0.13.Z2       UNNAMED POINT                11/12 16:43;
:PORTB UP           Z000 0.13.Z3       UNNAMED POINT                11/12 16:43;
```

Start positions in output string for each field:

Event - First character in each event is a ':' followed by max 18 characters for a description
Zone - Zone number is max 4 characters long and starts at position 21
Point - Point address is max 13 characters long and starts at position 26
Label - Label is max 28 char long and starts at position 40
Date - Date is max 5 characters long and starts at position 69
Time - Time is max 5 characters long and starts at position 75

There is a ';' at the end of each line (position 80) followed by a carriage return (ASCII chr 13) and a line feed (ASCII chr 10)

AFP-2800/XLS-2000 Printer/Pager/HLI Interface

Overview

AFP-2800/XLS-2000 can be interfaced to serial printers, pagers and nurse call systems using the printer port on the CPU (CONN1). A global option on the FIP will enable/disable printing. Any standard terminal program or the AFP-2800 PCI history upload tool can be used to monitor the output of this port.

AFP-2800 Printer Port (Conn1) Settings	
Mode	RS-232
Baud Rate	9600
Data Bits	8
Stop Bits	1
Parity	Odd
Handshaking	Hardware CTS/RTS

FIP to Printer Cable

AFP-2800 Printer Port (DB9 Male) Labelled CONN1	Printer Connector (DB25)	Printer connector (DB9)
Pin 2 (RX)	-	-
Pin 3 (TX)	Pin 3 (RX)	Pin 2 (RX)
Pin 5 (REF)	Pin 7 (REF)	Pin 5 (REF)
Pin **7 (RTS)**	-	-
Pin **8 (CTS)**	Pin **4 (RTS)**	Pin **7 (RTS)**

Notes:

- Pin 8 (CTS) on the CPU side has to be high (+5v) for AFP-2800 to print. If the printer/pager does not support Hardware handshaking (RTS signal), link pin 7 and 8 (on the CPU side) to allow printing without handshaking.
- A global option on the FIP will enable/disable printer output.

AFP-2800/XLS-2000 Modem Interface

Overview

The AFP-2800/XLS-2000 PC Interface can be used to control the FIP using a modem and AFP-2800 PCI software. A global option on the FIP will enable/disable modem operation.

PC Modem

Any non software modem should work correctly with the PCI. It is recommended to use a high quality external modem to allow modifying of modem parameters to solve any possible compatibility issues.

FIP Modem

The recommended modem for the FIP is a NetComm IG6000 (industrial modem) that is modified to work with 24VDC. This modem was chosen due to its construction and reliability. NIFS part number is 10972.

Modem to FIP Cable

The modem is connected to the CPU debug port and uses a **special** serial cable with pin connections outlined below:

AFP-2800 Debug Port DB9(male) Labelled CONN2	Modem Connector DB9 (male)	Modem Connector DB25 (male)
Pin 2 RX	Pin 2	Pin 3
Pin 3 TX	Pin 3	Pin 2
Pin 5 GRND	Pin 5	Pin 7
Pin 7 RTS	Pin 4	Pin 20
	Pin 7 linked to 8	Pin 4 linked to 5

Notes:

- All other pins should be left disconnected.
- The cable is uni-directional. When making the cable, make sure that each end is marked correctly as either CPU or Modem.
- This cable can not be used to change the AT settings of the modem. A standard modem cable (modem to PC) should be used for the next step.

FIP Modem Settings

The FIP modem needs to be programmed with the following AT commands using a terminal program such as HyperTerminal and the standard modem to PC cable provided:

Use "AT S0=2 R115 &K3 &S0 %E2" command to set the required modem options

ATS0=2 - answer after 2 rings
ATR115 - lock terminal speed to 115000
AT&K3 - RTS/CTS flow control
AT&S0 - DSR signal always asserted
AT%E2 - Automatic speed stepping

To establish connection with the modem after the above commands have been entered, set HyperTerminal port settings to 115 baud rate & RTS/CTS handshaking.

After re-connecting to the modem using the above settings, save the configuration to hardware profile 0 using the **AT&W0** command.

Check modem configuration using **AT&V** command. Ensure that all the options are the same as the configuration printout below:

B0 E1 L1 M1 T Q0 **R115** V1 W2 X5 &B4 &C1 &D2 &G0 &H0 **&K3** &L0 &M0 &N1 &P1 &R0 **&S0**
&T4 &X0 &Y0 \A3 \B3 \J0 \K5 \N3 \T0 \V0 \X0 #A2 #B0 #C0 #D0 #E0 #F0 #I0 #J1
#M0 #N0 #O0 #Q0 #U0 #V0 %B0 %C3 %D0 **%E2** %F1 %G0 %H0 %K0 %L11 %M0 %N0 %P0 %R0
%S0 %T0 %U0 %V0 %W0 *K0 *V0 *R0 *T0 *Y0 -Q1 :E1 -SDR0,1 #CID0 #MUS0
S000:002 S002:043 S003:013 S004:010 S005:008 S006:004 S007:050 S008:004
S009:006 S010:018 S011:095 S012:050 S018:000 S025:005 S026:000 S030:000
S033:003 S042:002 S043:015 S045:098 S047:030 S066:010 S067:042 S069:060
S076:080 S077:010 S105:030 S110:004 S126:061
&Z0 = &Z1 =
&Z2 = &Z3 =
&Z4 = &Z5 =
&Z6 = &Z7 =
&Z8 = &Z9 =
Last dialled = T2
+MS: 12,1,300,56000,1,0
Access Security: OFF Security Database, Security Mode & Call-Log Erase: FREE
Stored Phone Numbers: DISPLAYED OutDial: ENABLED
Caller ID: DISABLED DES: 64bit
Internal Storage (#MEM): Enabled when DTR off: 4 Voice Messages
#ALM1=0, #ALM2=0, PIN number =1234