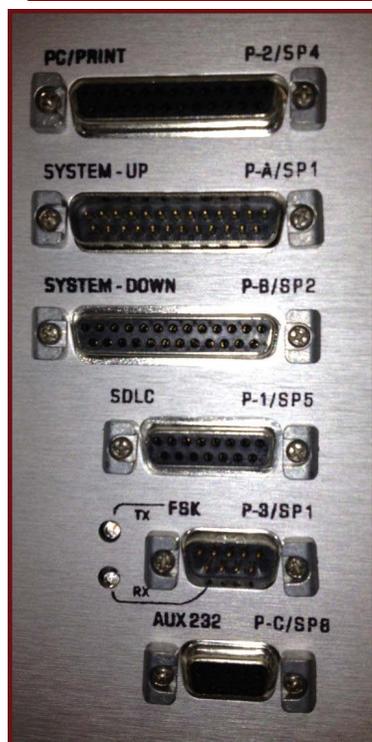


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# TecNote 1012 - Communicating with the Serial Ports using a Naztec ATC Controller

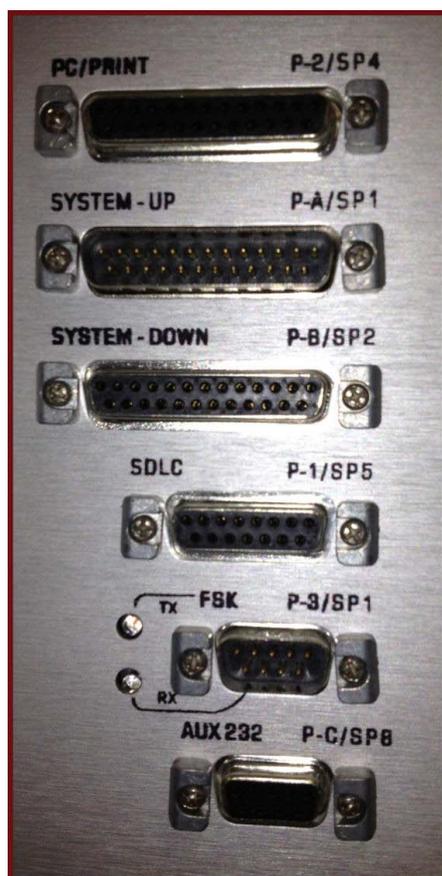
The purpose of this TecNote is to assist the user in communicating to the V76 software in a Naztec ATC Controller via the Serial Ports.



There are 6 Ports which are outlined by the blue circle above.

## The Ports

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The ATC Has 7 Ports that are used for communications. The ethernet port will not be discussed in this tecnote. The other six ports shown above are as follows:

**PC/ PRINT (P-2/SP4):** This port is used as a console port for communications to the Linux Operating system and should be avoided when connecting to oter devices.

**SYSTEM-UP (P-A/SP1):** This port is used to communicate to devices using version 76 via Serial Port 1 (SP1) using RS232. Its sister port is the FSK port.

**SYSTEM-DOWN (P-B/SP2):** This port is used to communicate to devices using version 76 via Serial Port 2 (SP2) using RS232.

**SDLC:** This port is used to communicate with TS2 Type 1 cabinet facilities including Channel Outputs, Detector Inputs and MMU's using RS485 via Serial Port 5 (SP5).

**FSK (P-3/SP1):** This port is used to communicate via FSK to devices using version 76 via Serial Port 1 (SP1) using RS232.

**AUX (P-C/SP4):** This port is used to communicate to devices using version 76 via Serial Port 8 (SP2) using RS232.

When connecting to auxiliary devices via RS232 the suggested ports should be the SYSTEM-UP, SYSTEM-DOWN, FSK and AUX232.

## Setting up the V76 Controller for serial communications

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After initializing your controller, You must set up the communications ports by binding the internal serial ports to the hardware ports.

1) Go To MM->1->7 and Turn off the Run Timer.

```
                Main Menu
1.Controller  4.Scheduler  7.Status
2.Coordinate  5.Detectors  8.Login,Utills
3.Preempts   6.Comm
```

```
                Controller
1.Phases      4.Flash      7.Enable Run
2.Unit,Ring   5.Overlaps   8.Channel,I/O
3.SDLC        6.Alarms
```

```
                Run-Enable Control

Run-Enable Status: OFF
Change to: OFF
```

2) Go to MM->6->6 Binding

```
                Communication Menu
1.General Parm  4.Reg Downld  7.Status
2.Port Parm    5.IP Setup
3.Reserved     6.Binding
```

```

Port Binding
Async  Hdwr      Sync  Hdwr
Chan   Port   Echo/Mode   Chan   Port
Async1: SP1  NONE   0          Sync1: SP5S
Async2: SP2  NONE   0          Sync2: SP3S
Async3: SP8  NONE   0
Async4: OFF  NONE   0
+

```

```

Port Binding
Func    Chan      -
TS2 CVM: ASYNC3
CMU/MMU: NONE
Opticom: NONE
LoopDet: NONE
GPS     : NONE
SysUp   : NONE  +

```

```

SysDown: NONE
Shell   : NONE
FI020   : SYNC1
TS2IO   : SYNC2

```

3) As per the defaults, asynchronous port 1 (ASYNC1) is mapped to SP1 (SYSTEM-UP or FSK)..

Asynchronous port 2 (ASYNC2) is mapped to SP2 (SYSTEM-DOWN) and asynchronous port 3 (ASYNC3) is mapped to SP8 (AUX).

4) If it is desired to communicate to an MMU/CMU via RS232 at 2400 Baud by wiring a DB-25 RS232 Male connector to the ATC then

a) We will physically connect the DB25 male connector to hardware port SYSTEM-DOWN (SP2).

b) Under Port Bindings change the CMU/MMU Chan field to ASYNC2)

```

Port Binding
Func    Chan      -
TS2 CVM: ASYNC3
CMU/MMU: ASYNC2 ←
Opticom: NONE
LoopDet: NONE
GPS     : NONE
SysUp   : NONE  +

```

5) Go to MM-6->2 and change the Baud rate of Serial Port 2 (SP2) to 2400 Baud and make sure that you use FCM6.

Hardware Port Parameters		
/SP#	Baud	FCM
1	9600	6
2	2400	6
3	1200	0
4	1200	0
5	1200	0
6	1200	0

7	1200	0
8	1200	0

6) Go To MM->1->7 and Turn ON the Run Timer.

Run-Enable Control	
Run-Enable Status:	ON
Change to:	ON

7) Power Cycle the unit to commit the hardware changes. These changes will be bound in the ATC.

## Summary

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By following the steps above, you can update your ATC Software to communicate to auxiliary devices using serial communications.

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