



**00-012D
2 May, 2007**

CONFIGURING A RELIABLE COMMUNICATIONS CAS

I. PURPOSE:

To help our customers configure the reliable communications CAS for operation with the API analyzers. This note was written to support the 8 port CAS (S-CAS/8), however if you buy the CAS that only has 4 ports (S-CAS/4) this will work as well. The difference is that you are only going to change the dip switches for 4 ports not 8.

II. TOOLS:

Phillips screwdriver
Standard flat tip screwdriver
Computer

III. PARTS:

CAS
DB25 to DB9 Comm cables for each analyzer.
One DB25 to DBXX cable for the master port of the CAS (if you are going to a computer you are probably going to need a DB25 to DB9. If you are going to a modem you are probably going to need a DB25 to DB25). NOTE: ensure that your cables are straight through cables & not some special cables that are for special applications. You want cables that go from pin 1 to pin 1 & pin 2 to pin 2, no NULL modems or any odd configurations.

IV. BACKGROUND:

1. Provided is the switch configuration for the ESC 8816 data logger.
2. Also provided is the switch prefix table for APICOM, if you are going to use APICOM with a CAS.
3. All the instruments that are communicating through the CAS have to be using the same baud rate. Select a baud rate that is common to all the analyzers and set the CAS and all the analyzers to that baud rate.
4. See diagram on page 3:
SW 1 on CAS is for master port.
SW 2 through SW 5 are for ports 0 through 3
J1 through J4 are for ports 4 through 7
SW 10 is for the baud rate of the data through the CAS.
5. Pages 4, 5, 6, and 7 of this service note are the configuration of the CAS switches if you are going to use the CAS with API instruments on all 8 ports of the CAS. These switch positions also require that you are going to connect directly to the CAS with a computer using the serial port of the computer.
6. When you are using API analyzers with a CAS you must set the RS 232 mode in the analyzers to the Multi-drop configuration. To do that push "SETUP_MORE_VARS_ENTER_NEXT to RS232 MODE_EDIT" and change the RS 232 mode to 35 (or 43 will work for Multi-drop RS 232 mode). Now push ENTER and EXIT back out to the sample menu.
7. Ensure that the switch on the front panel of the CAS is in the TEXT position.

CONFIGURING A RELIABLE COMMUNICATIONS CAS

00-012 Rev C

Page 1 of 8

V. BACKGROUND:

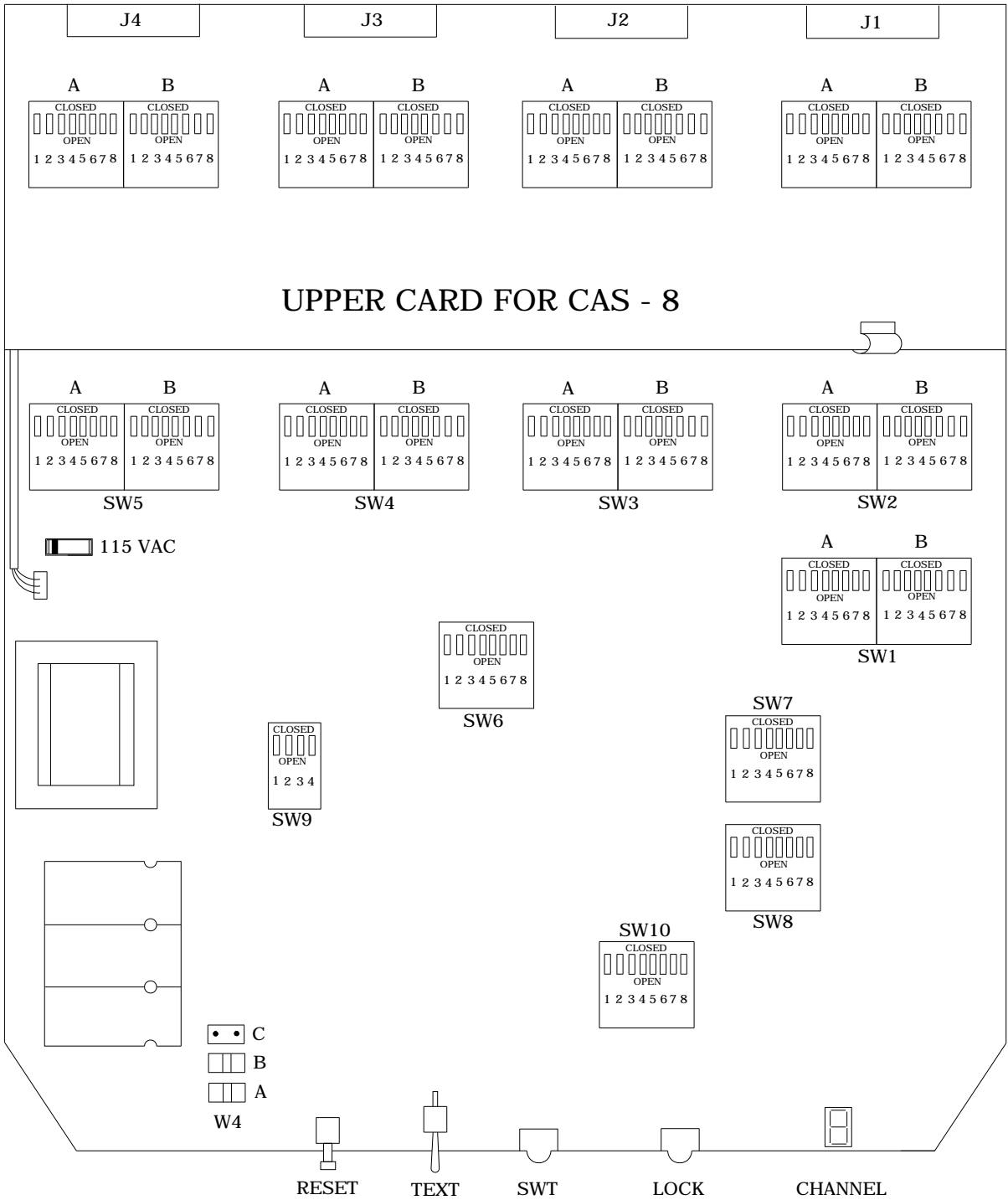
1. The intent of this service note is to guide users through the configuration of the CAS for use with API analyzers.
2. What we would recommend is that you do the configuration in steps.
3. The first step is to use pages 4 through 7 of this service note and configure the CAS for communications through the serial port of your computer (see diagram page 3) to the API analyzers.
4. Hook one API analyzer to port 0 of the CAS and ensure that you have communications through the CAS. Use HyperTerminal (or some other communication program), to communicate with the API analyzer (a simple API analyzer command is “?” And enter or “t list” and enter).
5. To switch channels on the CAS, turn on HyperTerminal and push “CTRL d” then push the correct number for the channel that you would like to switch to.

0 = channel 0	4 = channel 4
1 = channel 1	5 = channel 5
2 = channel 2	6 = channel 6
3 = channel 3	7 = channel 7
6. Switch to a couple of channels to ensure that the CAS is working properly.
7. Hook up more than one API analyzer to the input ports on the CAS and communicate with each instrument to ensure that the instruments work. If the instrument does not want to communicate through the CAS change the position of the DTE/DCE switch on the rear of the analyzer. If your analyzer does not have this switch then look on the PC card on the rear panel of the analyzer to see if there are DTE/DCE jumpers. If there are then change the position of the jumpers and try your communications again.
8. Once you have the CAS working and you are going to hook a modem up to the CAS connect the modem to the master port of the CAS and call the CAS with your computer using the regular phone system. You are going to have to connect the computer modem and the CAS modem to the phone system, you can not hook them directly together.
9. If your computer does not connect with the modem and you are not able to talk with the instruments then change the dip switches in the CAS (SW 1) per the configuration on page 8 of this service note.
10. If you still have problems check the configuration of the modem, per the Service Note 98-034.
11. Now if you are going to hook other instruments to the CAS install them and call them via the modem and see if they work. If they do not then check the manual for the CAS and see what configuration changes you are going to have to make to make the CAS work with the other devices.

CONFIGURING A RELIABLE COMMUNICATIONS CAS

00-012 Rev C

Page 2 of 8



CAS configuration table

CONFIGURING A RELIABLE COMMUNICATIONS CAS

00-012 Rev C

Page 3 of 8

API DIRECT CABLE:

<i>SW1</i>	<u>A</u>	1	O	<u>B</u>	1	C
Master		2	O		2	O
Port	3	0		3	0	
		4	O		4	C
		5	O		5	C
		6	C		6	C
		7	C		7	C
		8	O		8	C

<i>SW2</i>	<u>A</u>	1	O	<u>B</u>	1	O
Port 0		2	O		2	C
		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C

<i>SW3</i>	<u>A</u>	1	O	<u>B</u>	1	O
Port 1		2	O		2	C
		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C

<i>SW4</i>	<u>A</u>	1	O	<u>B</u>	1	O
Port 2		2	O		2	C
		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C

<i>SW5</i>	<u>A</u>	1	O	<u>B</u>	1	O
Port 3		2	O		2	C
		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C

<i>SW6</i>	<u>A</u>	1	O			
		2	C			

CONFIGURING A RELIABLE COMMUNICATIONS CAS

00-012 Rev C

Page 4 of 8

		3	C	
		4	O	
		5	O	
		6	O	
		7	O	
		8	C	
SW7	<u>A</u>	1	O	
		2	O	
		3	O	
		4	C	
		5	O	
		6	O	
		7	C	
		8	C	
SW8	<u>A</u>	1	C	
		2	C	
		3	O	
		4	C	
		5	C	
		6	C	
		7	C	
		8	C	
SW9	<u>A</u>	1	C	
		2	O	
		3	O	
		4	O	
SW10	<u>A</u>	1	O	300
Baud Rate		2	O	1,200
		3	O	2,400
		4	O	4,800
		5	C	9,600
		6	O	19.2
		7	O	38.4
		8	O	76.8

J1	<u>A</u>	1	O	<u>B</u>	1	O
Port 4		2	O		2	C
		3	O		3	C

CONFIGURING A RELIABLE COMMUNICATIONS CAS

00-012 Rev C

Page 5 of 8

		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C
<i>J2</i>	<u>A</u>	1	O	<u>B</u>	1	O
		2	O		2	C
Port 5		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C
<i>J3</i>	<u>A</u>	1	O	<u>B</u>	1	O
		2	O		2	C
Port 6		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C
<i>J4</i>	<u>A</u>	1	O	<u>B</u>	1	O
		2	O		2	C
Port 7		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C

ESC:

If you are going to connect an ESC data logger to the one of the slave ports you are going to have to configure that Comm port to the following positions. Locate the dip switches for the port that you are going to connect the ESC to and change those dip switches to what is on the table below.

<i>ESC</i>	<u>A</u>	1	O	<u>B</u>	1	O
		2	O		2	C
		3	O		3	C
		4	O		4	O
		5	O		5	C
		6	C		6	C
		7	C		7	C
		8	O		8	C

CONFIGURING A RELIABLE COMMUNICATIONS CAS

00-012 Rev C

Page 6 of 8

MODEM:

If you are going to connect a modem to the master port of the CAS (use the service note 98-034 to help you configure the modem) then configure SW 1 to what is on the table below.

<i>SW1</i>	<u>A</u>	1	O	<u>B</u>	1	O
		2	O		2	C
		3	O		3	C
		4	O		4	O
		5	C		5	C
		6	O		6	C
		7	O		7	C
		8	C		8	C

OTHER DEVICES:

If you are going to use any other devices on the CAS that are not listed on this table then you are going to want to check with the CAS configuration manual to see what the dip switches have to be set to. API would suggest that you configure the port as if you were plugging in an API analyzer and see if it works. If it does not then you are probably going to have to change switch A dip #'s 5, 6, 7, and 8 to the opposite position, for the port that you are putting the other device onto. If that does not work then you are going to have to check the manual for the CAS to see what is not set right.

API CAS-8 configuration for APICOM.

If you are going to communicate with APICOM through a CAS you are going to have to put into the APICOM what the switch prefix is for those analyzers. below is a table that you can use to help you identify what analyzers are on what channels. Make copies of this table so that you are going to know what analyzers you have on what channels at what sites.

Site Location: _____
Site Phone #: _____
Site Name: _____

<u>CAS Channel</u>	<u>Switch Prefix</u>	<u>Analyzer Type</u>	<u>Serial Number</u>
CH 0	\x04\x30	_____	_____
CH 1	\x04\x31	_____	_____
CH 2	\x04\x32	_____	_____
CH 3	\x04\x33	_____	_____
CH 4	\x04\x34	_____	_____
CH 5	\x04\x35	_____	_____
CH 6	\x04\x36	_____	_____
CH 7	\x04\x37	_____	_____