

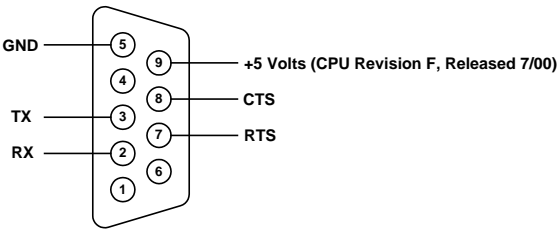
# Ports

## Serial Ports

The Analyzer has two serial ports that are identified as Serial Port 1 and Serial Port 2. These ports are used to communicate with other serial devices; such as a computer, printer, scanner or external display.

### Hardware Configuration

See the diagram below for the proper wiring configuration between the Analyzer and other RS-232 devices. We recommend purchasing completed cable assemblies from Dynalab to guarantee the correct connections.



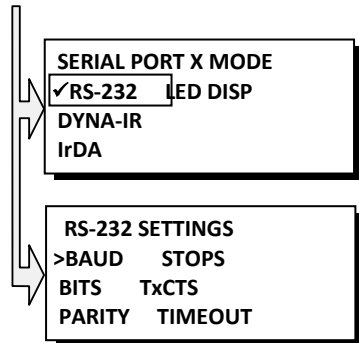
FROM	TO			
Analyzer	Computer Part#: 7100002		Printer 7430001	Printer 7100008
DB-9 Female	DB-9 Female	DB-25 Female	DB-9 Male	DB-25 Male
2 (RX)	3 (TX)	2 (TX)	2 (TX)	2 (TX)
3 (TX)	2 (RX)	3 (RX)	3 (RX)	3 (RX)
5 (GND)	5 (GND)	7 (GND)	5 (GND)	7 (GND)
7 (RTS)	8 (CTS)	5 (CTS)	7 (CTS)	5 (CTS)
8 (CTS)	7 (RTS)	4 (RTS)	8 (RTS)	4 (RTS)

## Software Configuration

There are three distinctly different modes that can be set for a Serial Port. The serial ports are configured in the Analyzer setup menu at **SETUP MENUS⇒PORTS⇒SERIAL**. Depending on the selected mode, the **SETTINGS** menu changes with different menu selections.

### RS-232

This is the default and most widely used mode. It is typically used for downloading a program from a computer, printing to a label printer or reading an input from a scanner. The default settings are the industry standard and rarely need changed. They are the settings required for all Dynalab devices.

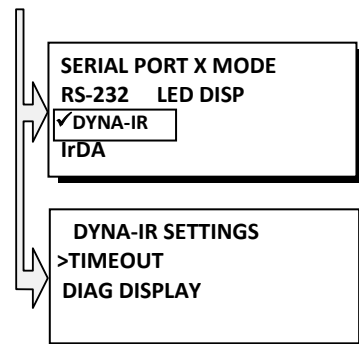


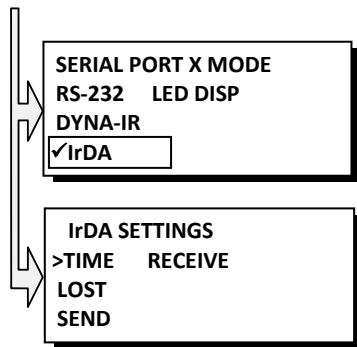
Setting	Default	Options
Baud	9600	2400, 4800, 9600, 38400 BPS
Word Length	8 Bits	7 Bits, 8 Bits
Parity	None	None, Odd, Even
Stop Bits	1 Bit	1 Bit, 2 Bits
TxCTS	No Hand (#1) Hardware (#2)	Hardware Handshake, No Handshake
Timeout	0000	0000 through 9999

### Dyna-IR

This module is used when a Dynalab IrDA Module (212-5000) is attached to a serial port. The **TIMEOUT** setting is the amount of time Analyzer waits to advance if data cannot be transmitted properly.

**DIAG DISPLAY** will either show or hide the number of retries required for a successful IR data transmission.

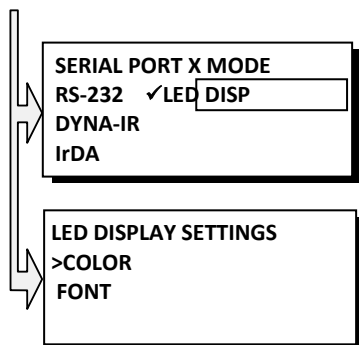




## IrDA

This module is used when a Dynalab IrDA Module (212-5000) is attached to a serial port. The TIME and LOST default settings are typical for most applications. The SEND and RECEIVE settings determine if the status of the IrDA transfer is displayed on the Analyzer.

Setting	Default	Options
Time	10	0 to 60
Lost	12s	3s,8s,12s,20s,30s,40s
Send	Show	Show Status, Do Not Show
Receive	Show	Show Status, Do Not Show



## LED Display

The LED Display mode is selected when the Dynalab 212-2007 external display is connected to the Analyzer. This device is a 15-character single line display and can only display messages from the Message Table. The settings allow the user to change the color of the text or the font height.

Setting	Default	Options
Color	Red	Red, Green, Amber, Orange, Yellow, Rainbow
Font	7 STD	5 STD, 7 STD, 7 FANCY, 10 STD, FULL

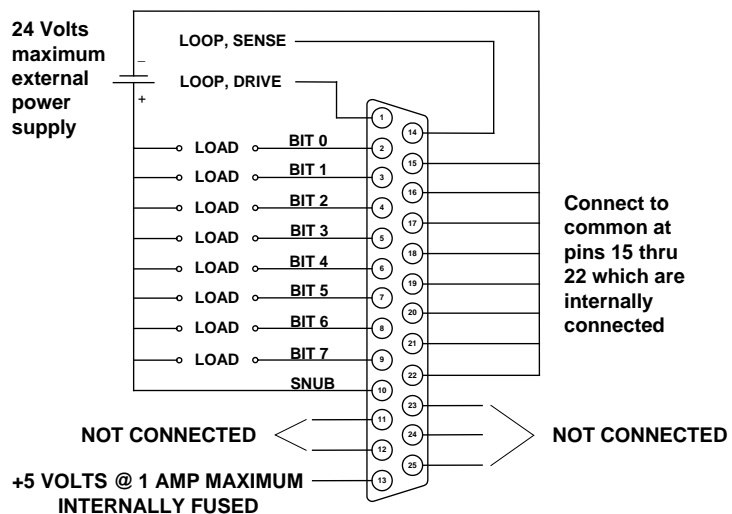
# Control Port

The parallel port effectively consists of 8 switches which can be closed to ground under sequence control. Sequence item commands exist which allow for the closures to occur singularly, collectively, or in a binary mode.

## Hardware Configuration

Care should be taken to insure that the maximum current per bit and total for the device does not exceed, .5 and 2 amps, respectively. Excessive current may damage the U114 component on the main processor board.

The external device being activated (load) must be located between the power supply's positive side and the Analyzer's parallel port. A snub circuit as shown absorbs the energy created when a relay or solenoid is de-energized.

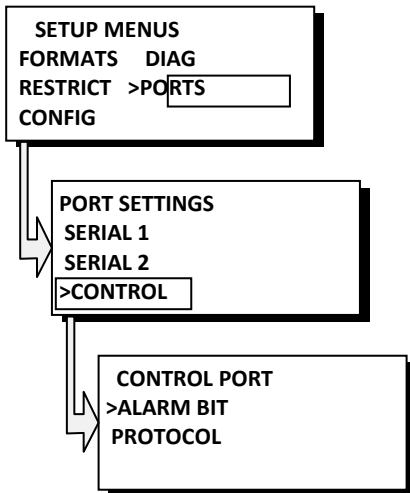


Maximum single bit port current: 0.5 amps  
Maximum total bit port current: 2.0 amps

## Software Configuration

### Alarm Bit Settings

The Alarm Bit setting determines what Control Port bit is activated if the Analyzer enters the Alarm Mode.



**BIT ACTIVATED DURING  
ALARM: 1**

### Control Port Protocol

The Control Port Protocol setting establishes the communication protocol for the different Dynalab accessories that are serially controlled by this port. The SPI setting is the default and controls the 212-2005, 212-2006 and 212-2011. The XBIT controls the obsolete PDC board, 7500020.

**SERIAL PROTOCOL**

✓SPI  
XBIT

## Test Points

This diagram represents the multiple 64-position connectors that interface to the Dynalab Analyzer.

The Test Point Boards are numbered 0 through 15 and each board has 128 test points. The numbers 0 - 127 are the test points identifiers per each Test Point Board. These test points are referred to in the PASS Software as Board-Point (i.e., 1-068)

