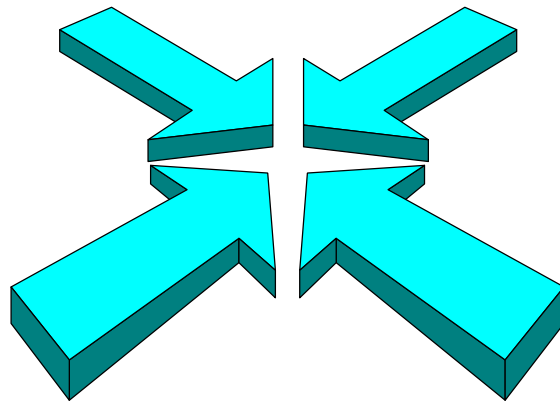


# **EXOR and SEL**



**Integrating touch screen technology**

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**Refer to the EXOR Operating Manual for following topics:**

<b>Quick Start Tutorial (Programs)</b>	<b>2-6 to 2-8</b>
<b>Numeric Fields</b>	<b>3-1 to 3-2</b>
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## **DRIVER BENEFITS:**

- Uses either SELNET or Serial Port (can't do var. write w/ Serial)
- Data read, write, and move (integer & real numbers)
- Flag/Output monitoring, toggle and control
- Variable/Input monitoring
- Jog axes forward and backward
- Turn servos on and off
- Homing single or multiple axes
- Program start / stop
- Can reset the controller w/ Serial comm, but not SELNET

## **EXOR DESIGNER BENEFITS:**

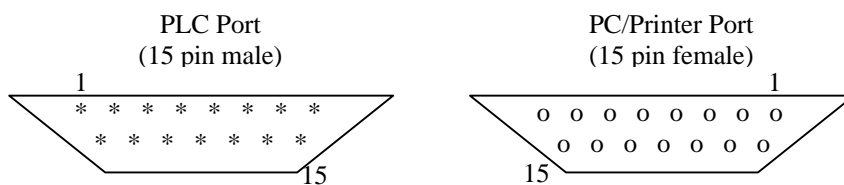
- Use of recipes (individual settings that can vary from part to part, or user to user)
  - Standard feature on most HMI packages and very common w/ PLCs
  - Similar to running a different program for each different part
- Preset pictures for buttons, knobs, meters and graphs.
  - Creates a user-friendly interface to the SEL controller
- Ability to import bitmap (.BMP) files into the screen workspace
  - Bitmap files such as company logos, product logos, etc.
- Graphic representation of any data (i.e. bar graph for position)
  - Good way to show movement.
- Designate certain fields as either read or read/write.
  - Good way to "lock out" fields that do not need to be edited by the operator

- Allows customer to assign names to variables
  - Not able to assign names to variables through v4.2x SuperSEL software
- Back-up lithium battery
  - Mainly for storing screen configurations and macros

## **WHAT IS NEEDED TO RUN EXOR:**

- EXOR touch screen
- Either SELNET Cable (SuperSEL) or 2 ch. RS232 (IH-SEL) to 15-pin female cable
- EXOR PLC-style cable (EXOR # “CA2”) to connect to PC
- SuperSEL controller with SELNet option or 2-ch RS232 option if using SELNET driver
- 24VDC power source for EXOR panel
- EXOR HMI Interface design software
- Communication program running in SuperSEL controller (exorreal.prg)

## **HOW TO CONNECT:**



Above is the pin out of the two ports on the back of the EXOR panel. The PLC Port is used to connect to the SEL Controller, either SELNET or Teach Port. The PC/Printer port is used for programming screens and/or printing screens.

Panel Signal	EXOR PC/Printer Sub 15-pin (CA2)	COM port Sub 9-pin	PC Signal
F.Ground	1 (shield)	1	Conn. Ground
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
RTS	10	-	
CTS	11	-	

connected

*EXOR – to – PC Cpnnection*

SIGNAL	4-pin SELNET	EXOR PLC 15 Pin	Teach Port 25 Pin	IH-SCARA 2-ch. 9-pin
RD	3	2	3	2
TD	4	3	2	3
GND	5	5	7	5
FG	6	1	1	9
RTS	-	10	4	7
CTS	-	11	5	8

connected

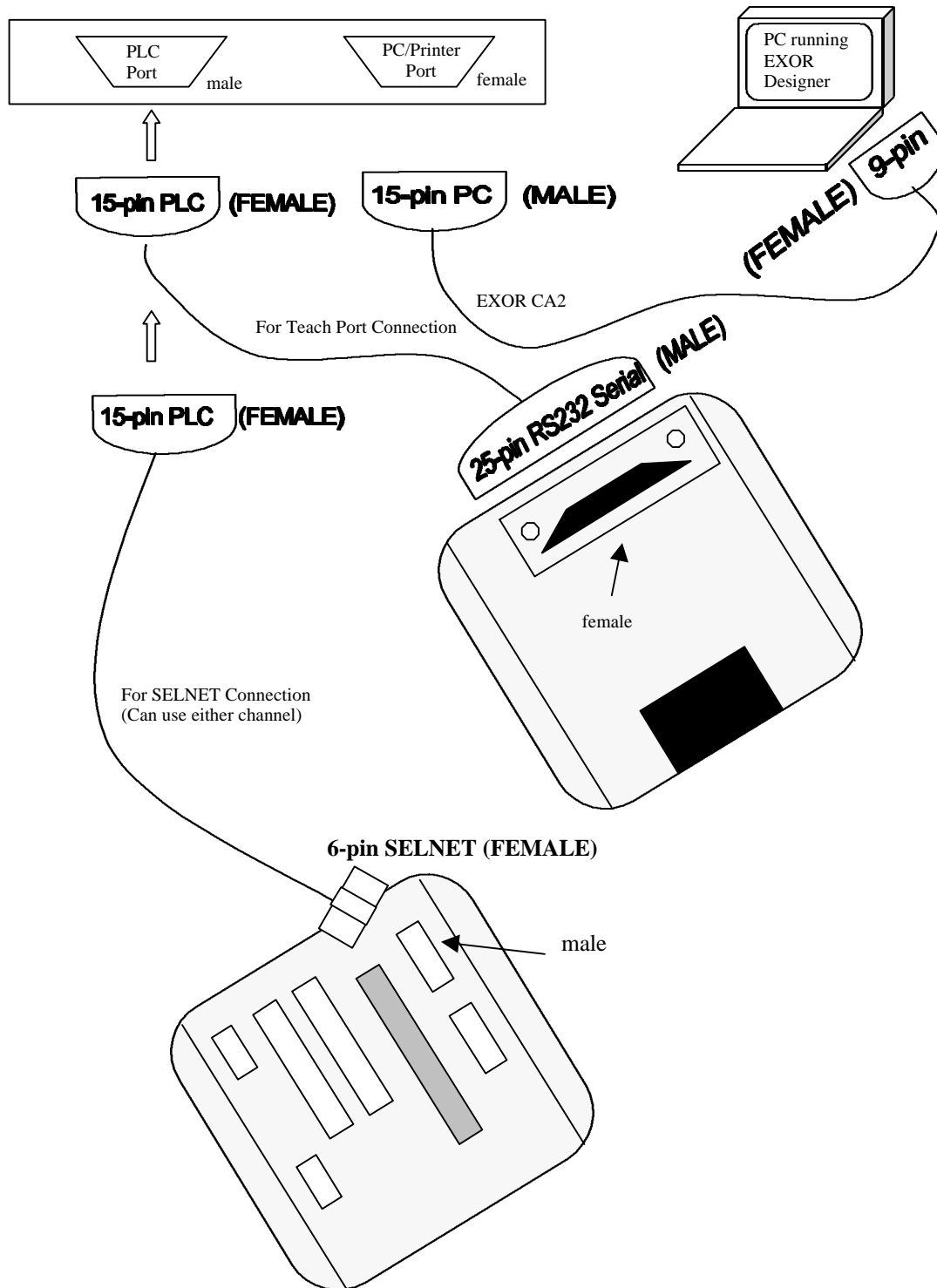
*EXOR – SELNET / Teach Port / 2ch.*

**Note:**

It is critical to abide by these connections. Damage to either the EXOR ports or the controller may occur if critical wires are switched. For communication, the TD to RD connection between EXOR and the SEL controller is the most important.

## TYPICAL SYSTEM DIAGRAM:

Below is how one would configure their system to run in conjunction with the SuperSEL controller via Teach Port / SELNET and a laptop running EXOR Designer software



## **THE EXOR SELNET COMMUNICATION PROGRAM:**

- Sets up SELNET communication protocol between the touch screen and controller
- Listing attached covers most of the tasks the driver is able to perform

- **Note:**

This software continues to grow as more and more commands are added on. Any task the operator wants to perform through the touch screen (e.g. Homing, servo on, off, etc.) must also be reflected in the SELNET communication program. If this task is not taken care of in a section of code, the touch screen will be ineffective for that task.

## **CREATING SCREENS:**

- Install EXOR's "Designer for Windows"
- Connect to PC via CA2 (or CA1) cable to comm. port.
- Enter configuration mode on panel
- Select "Get Panel Resources" the first time through to determine type of screen
- Follow the rest of the "Quick Start and Tutorial" section in the manual (p 2-6 to 2-8)

## **EDITING FIELDS:**

- Numeric Fields : Formatting, accessing, base value, scaling, minimum / maximum (P 3-1 in EXOR manual)
- Bar Graphs: height and width (p 3-3)
- Message fields
- Attributes
- The Scaling Equation
- Macros (p4-3 to 4-4)