

SCIENTIFIC DATA SYSTEMS, INC.

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CPF Panel Safety and Installation Guide

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# Installation and Safety

## Your safety and the safety of others is very important.

We have provided important safety messages on the safe handling and installation of the Standard Cased Hole Panel or “STIP” in this manual. Always read and obey all safety messages. When the ALERT symbols are encountered the manual must be consulted to find out the nature of the potential hazard and any actions required to avoid them.



This is the safety alert symbol  
This symbol alerts you to potential hazards that can kill or hurt you and others.  
All safety messages will follow the safety alert symbol and either the word DANGER or WARNING.



**DANGER**

You can be killed or seriously injured if you don't immediately follow instructions.



**WARNING**

You can be killed or seriously injured if you don't follow instructions.



This is the high voltage symbol.  
This symbol alerts you to the fact that high voltage may be on these connectors.

All safety messages will tell you what the potential hazard is, tell you how to reduce the injury, and tell you what you can happen if the instructions are not followed.

### Important Safety Instructions

**WARNING:** To reduce the risk of fire, electric shock, or injury when using your interface panel, follow these precautions

- : The AC power cord is the main power disconnect.
- : Disconnect AC power cord before servicing or changing fuses.
- : Plug into a grounded 3 prong outlet.
- : Do not remove ground prong.
- : Do not use an extension cord.
- : Disconnect power before making any rear panel connections.
- : Use nonflammable, plastic safe cleaner
- : Keep flammable materials and vapors away.
- : Disconnect power before installing panel

**SAVE THESE INSTRUCTIONS**



## WARNING

### Explosion Hazard

Keep flammable material and vapors, such as gasoline or solvents away from the STIP. Failure to do so can result in explosion, fire or death. The panel is not safe for operation in a hazardous gas environment.

To ensure proper ventilation for the STIP allow at least ½" (1.25 cm) on each side. When installing STIP allow at least 2" (5 cm) behind the panel.



## WARNING

### Electrical Shock Hazard

Only certified service personnel should open the panel, persistent high voltage is present. Connect only to **AC voltage** as indicated on the rear panel.

Use a 3-conductor, 18AWG, 10A, 60 C minimum, 3m maximum length power cord.

Plug into a grounded 3 prong outlet.

Do not remove ground prong.

Do not use an extension cord.

Only Replace Fuses with the fuses of the same rating as indicated on the panel.

Ensure that the AC power supply is properly grounded and hot and neutral wires are properly polarized before installing the panel.

Disconnect panel power before making any rear panel connections.

Ensure there is a sufficient ground connection present at the slip rings as the panel is capable of producing high voltages in excess of 400v DC.

Before installing the panel in its final location, ensure you have a proper electrical connection.

Do not position the panel so that it is difficult to operate the power switches. If the power plug is not readily accessible the breaker controlling the panel rack should be located to allow for a quick disconnect in case of emergency.

The cased hole panel is intended to power downhole oil well logging tools and to digitize the information they send to surface. If the equipment is operated in any other manner, the protection provided by the equipment may be impaired.

For assistance call Scientific Data Systems 281-550-1109.

## EQUIPMENT RATINGS

AC Input Voltage	120VAC or 220VAC	As marked on panel
Frequency	50/60 Hz	Operating
Input Power	225 Watts	Operating
Temperature	(-5 to 50)C	Operating
AC Power Fuse	3.15A/250V TIME LAG	02183.15HXP(Littlefuse)
Encoder Power Fuse	0.5A/250V QUICK ACTING	0235.500HXP(Littlefuse)
DC Power Fuse	0.800A/250V TIME LAG	0218.800HXP(Littlefuse) (INSIDE PANEL-ACSW3)

### REAR PANEL CONNECTORS:

LINE - BNC AND UHF CONNECTOR – TOOL SIGNAL IN AND TOOL  
POWER OUT(Wired in parallel)

DC VOLTAGE OUT: 400 VOLTS NO LOAD  
270 VOLTS, 270 MA, 1000 OHM LOAD  
45 VOLTS, 450 MA, 100 OHM LOAD  
POSITIVE OR NEGATIVE VOLTAGE, SOFTWARE OR  
MANUALLY SELECTABLE  
SOFTWARE LINE ENABLE TURNS ON D.C. POWER  
SUPPLY WHEN TOOL POWER SWITCH IS ON

TOOL SIGNALS INPUT MEASUREMENT CIRCUITRY PROTECTED BY  
600 VOLT, 2UF CAPACITOR

ENCODER: VOLTAGE OUT: 5 VOLTS OR 12 VOLTS DC, SELECTABLE  
INSIDE PANEL  
SIGNAL IN: QUADRATURE ENCODED DEPTH 20 TO 2000  
PULSES PER FOOT

TENSION: VOLTAGE OUT: 12 VOLTS DC  
SIGNAL IN: 4 TO 20 MA CURRENT LOOP, OR STRAIN GAUGE

AUX1: SIGNAL INPUT -10 TO +10 VOLT DC

CCL: PASSIVE CCL INPUT 1 VOLT P-P, 0 TO 10HZ

AUX4: PIN 2, 3, 4, 5, 6 SIGNAL IN -10 TO +10 VOLTS P-P  
PINS 9 AND 10 COUNTER INPUT, 5 VOLT LOGIC  
PIN 21: 5 VOLT OUT  
PIN 22: GND  
PIN 23: -15 VOLT OUT  
PIN 24: +15 VOLT OUT

USB-B CONNECTOR: CONNECTION TO COMPUTER. CONNECTOR ON FRONT OF PANEL HAS PRIORITY.

USB-A: FIVE CONNECTORS FOR PERIPHAL EQUIPMENT SUCH AS PRINTER/PLOTTER. CURRENT LIMITED TO 500MA.

WHP1: WELLHEAD PRESSURE +12 VOLTS OUT, 4 TO 20 MA IN

WHP2: WELLHEAD PRESSURE +12 VOLTS OUT, 4 TO 20 MA IN

#### FRONT PANEL CONNECTORS:

AUDIO OUT: HEADPHONE CONNECTION FOR NOISE LOGGING

USB-B CONNECTOR FOR CONNECTION TO COMPUTER

#### FRONT PANEL CONTROLS:

SW1 – MAIN POWER ON/OFF – APPLIES AC POWER TO PANEL  
SW2 – TOOL POWER ON/OFF – TURNS ON DC TOOL SUPPLY IF LINE IS ENABLED IN SOFTWARE  
SW3 – AUTO-NEG-POS – SELECTS TOOL POWER POLARITY OR SOFTWARE CONTROL OF POLARITY AND VOLTAGE  
NEG ADJUST – VOLTAGE ADJUST IF POLARITY IS NEGATIVE  
POS ADJUST – VOLTAGE ADJUST IF POLARITY IS POSITIVE

The interface panel is intended to be operated inside a dry, air conditioned, logging unit. The panel is rated to 125F.

The panel is rated for continuous operation.

## TECHNICAL SPECIFICATIONS

The interface panel is capable of powering and digitizing a wide variety of downhole tools information including:

- Analog tools - such as CCL,
- Pulse tools, such as GR, Temperature, Pressure, CNL, etc.  
Pulse tools can be measured as ratemeter, or period inputs, polarity specific.
- Bond tools - Standard bond, radial, analog/digital combinations
- CNL telemetry, or multiple pulse heights - tools have user selectable algorithm files as provided from the tool manufacturer.
- PL - Lee telemetry, Spartek, CBG, flexstack, Sondex first generation, Sondex ultralink  
(\*with the addition of sondex hardware), Geofizika, XIPE, Madden, Maxim, Panex, Probe, GO MUXB, etc.
- Multifinger calipers, casing inspection - XIPE, Sondex (\*with the addition of sondex hardware).
- Hotwell PNN
- Noise tools - all analog tools (have wave file recording capability)
- Freepoint motorized, spring type, signal attenuation, pulse outputs, etc.

The digitized information is sent to a computer to be recorded in standard log format and plotted at the operator's convenience.

# **Installation and Operation**

The interface panel is intended to be operated inside a dry, air conditioned, logging unit. Do not operate panel in a hazardous gas environment. It will ideally be installed in a 4U slot in an equipment rack. If the power cord is not readily accessible then the operator should locate the main power breaker for the equipment rack or the wall plugs that are being used to power the panel to permit a quick disconnect in case of emergency.

The panel is earth grounded through the power cord. The Line out connector will be connected to the slip rings. The slip rings must be grounded to cable armor and to the line connector.

Install the Warrior software on the CD that came with the panel or download the current version from [Warrior.com/downloads](http://Warrior.com/downloads). On the Warrior menu the program: Warrior FOM, (Field Operating Manual) has detailed instructions on how to use the software, install device drivers, etc.



# Pin Out Connectors

## DEPTH CABLE

### Depth Panel 7 Pin Female

A \_\_\_\_\_  
 B \_\_\_\_\_  
 D \_\_\_\_\_  
 F \_\_\_\_\_  
 G \_\_\_\_\_

### Interface Panel 7 Pin Male

A (Signal A)  
 B (Signal B)  
 D (+12VDC)  
 F (GND)

## ENCODER CABLE

### 7 Pin Male

A \_\_\_\_\_  
 B \_\_\_\_\_  
 D \_\_\_\_\_  
 F \_\_\_\_\_  
 G \_\_\_\_\_

### Depth Encoder 7 Pin Female

A (Signal A)  
 B (Signal B)  
 D (+5VDC)  
 F (GND)

## TENSION CABLE

### Depth Panel 5 Pin Female

C \_\_\_\_\_  
 D \_\_\_\_\_  
 E \_\_\_\_\_

### Interface Panel 5 Pin Male

A  
 B  
 E

## TENSION TRANSDUCER CABLE (XPRO-HONEYWELL PRESSURE TRANSMITTER)

### 5 Pin Male

D \_\_\_\_\_  
 B \_\_\_\_\_  
 A \_\_\_\_\_  
 E \_\_\_\_\_

### Pressure Transducer

1 (Excite Usually Red)  
 2 (Signal Usually Black)

Shield 3 (Case)

## TENSION TRANSDUCER CABLE (ASCO PRESSURE TRANSMITTER)

### 5 Pin Male

D \_\_\_\_\_  
 B \_\_\_\_\_  
 A \_\_\_\_\_  
 E \_\_\_\_\_

### Pressure Transducer

3 (Excite Usually Red)  
 2 (Signal Usually Black)

Shield

## DC CABLE 12V DC

### 3 or 2 Pin Male

A \_\_\_\_\_  
 B \_\_\_\_\_  
 C \_\_\_\_\_

### Battery Truck (12 VDC)

Positive  
 Negative  
 NC

## LIGHTS CABLE

### 4 Pin Male

A \_\_\_\_\_  
 B \_\_\_\_\_  
 C \_\_\_\_\_  
 D \_\_\_\_\_

### Lights

Common  
 RED Light  
 GREEN Light  
 NC

## ISO ADAPTER BOX

### P1 (TENSION TRASDUCER CABLE)

4 Pin Male

**Pressure Transducer**

A	_____	(- Signal In)
B	_____	(+ Signal In)
C		
D		

### P2 (ISO TENSION TRASDUCER CABLE)

3 Pin Male

**Depth Panel 5 Pin Female**

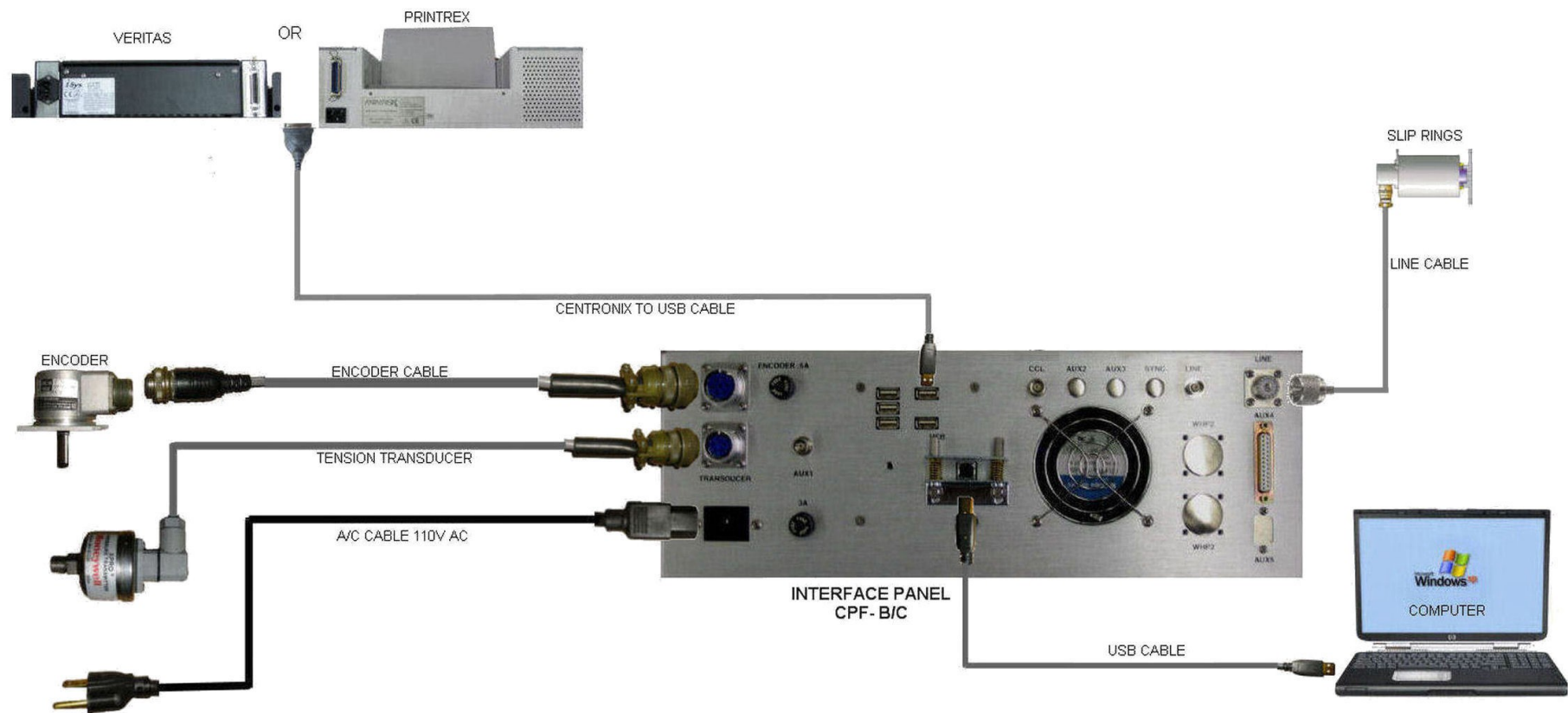
A	_____	B(+ Signal Out)
B	_____	D(- Signal Out)
C		

### P3 (DC CABLE 12 V DC)

2 Pin Female

**Battery Truck (12 VDC)**

A	_____	(+12 VDC)
B	_____	(GND)



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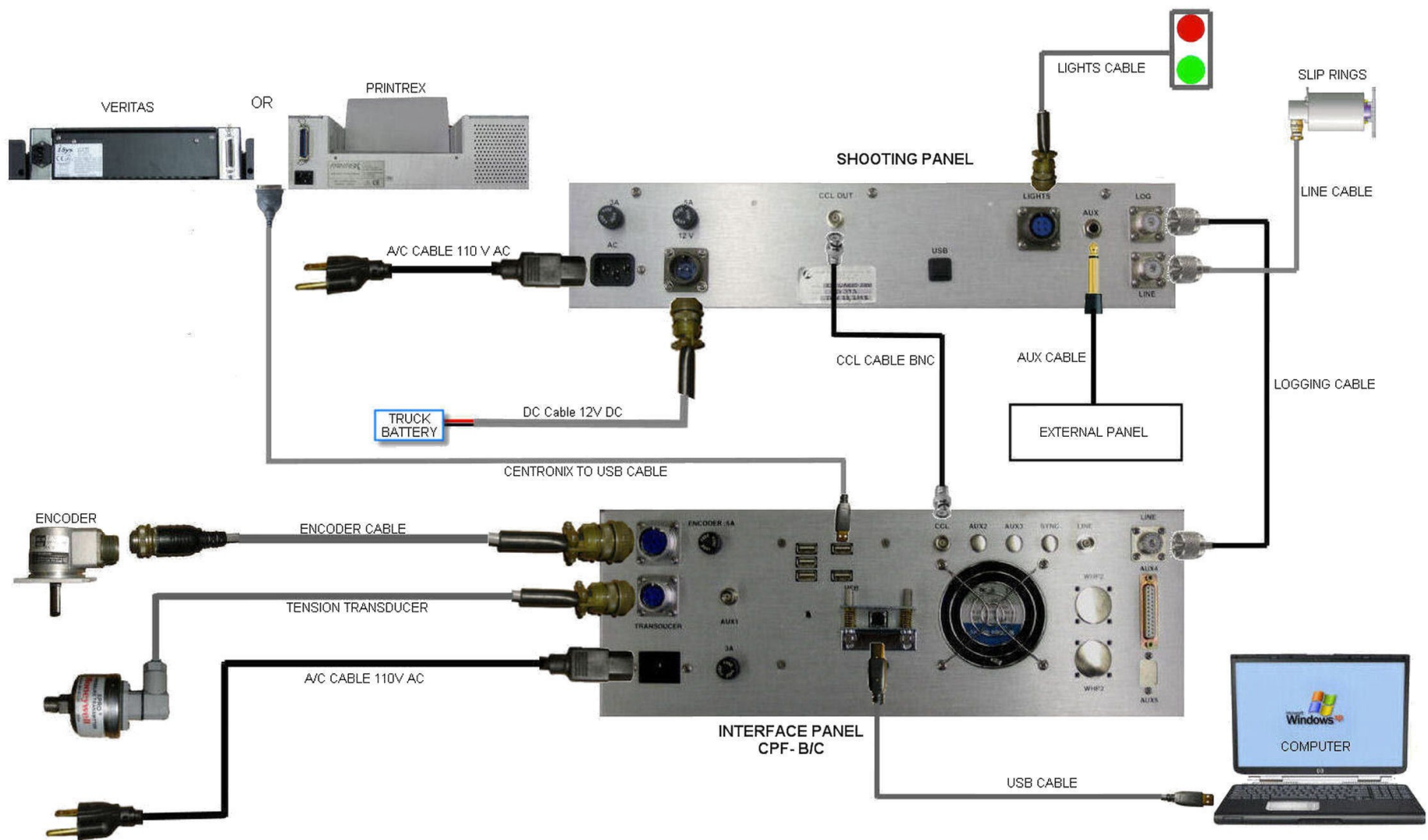
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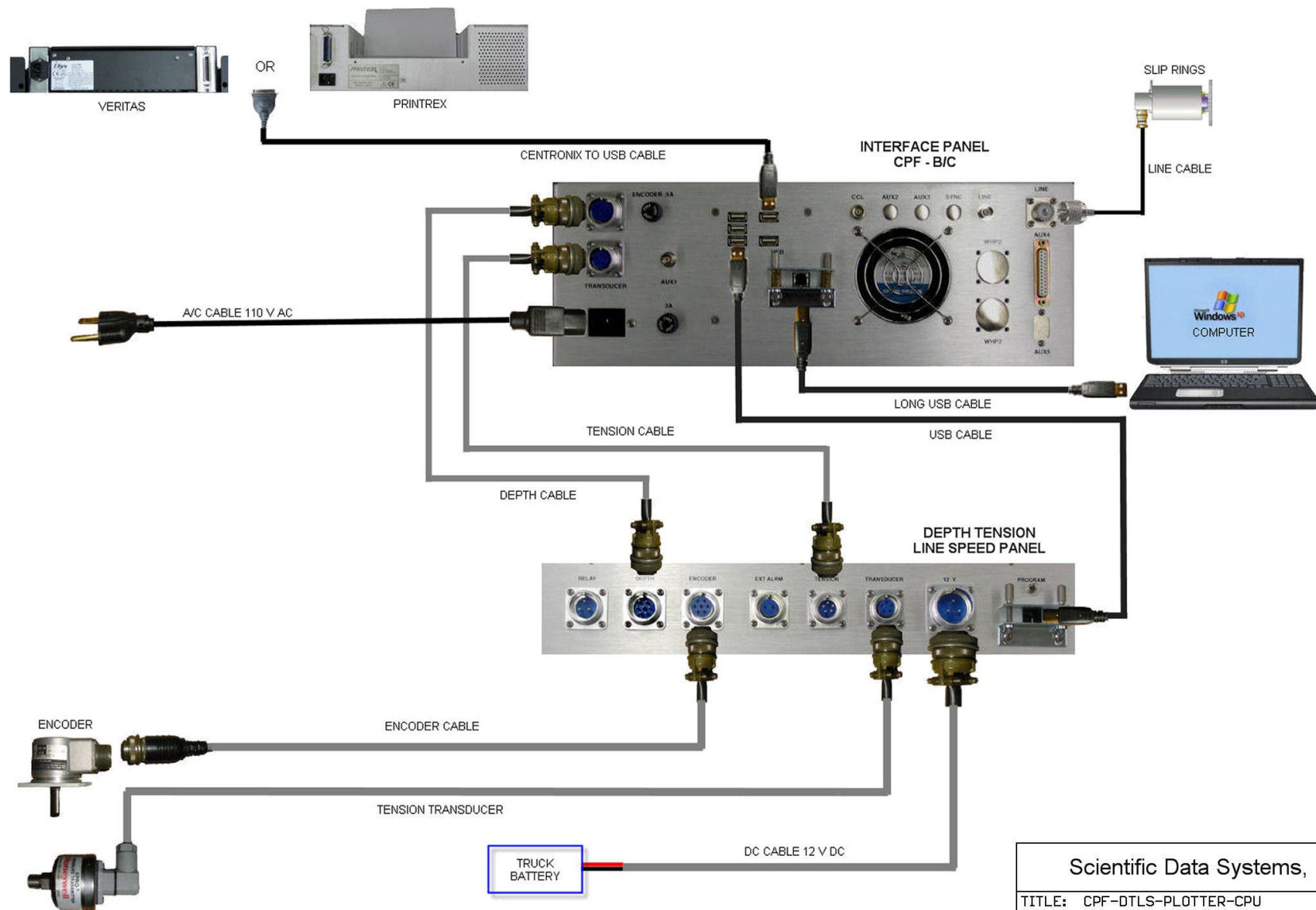
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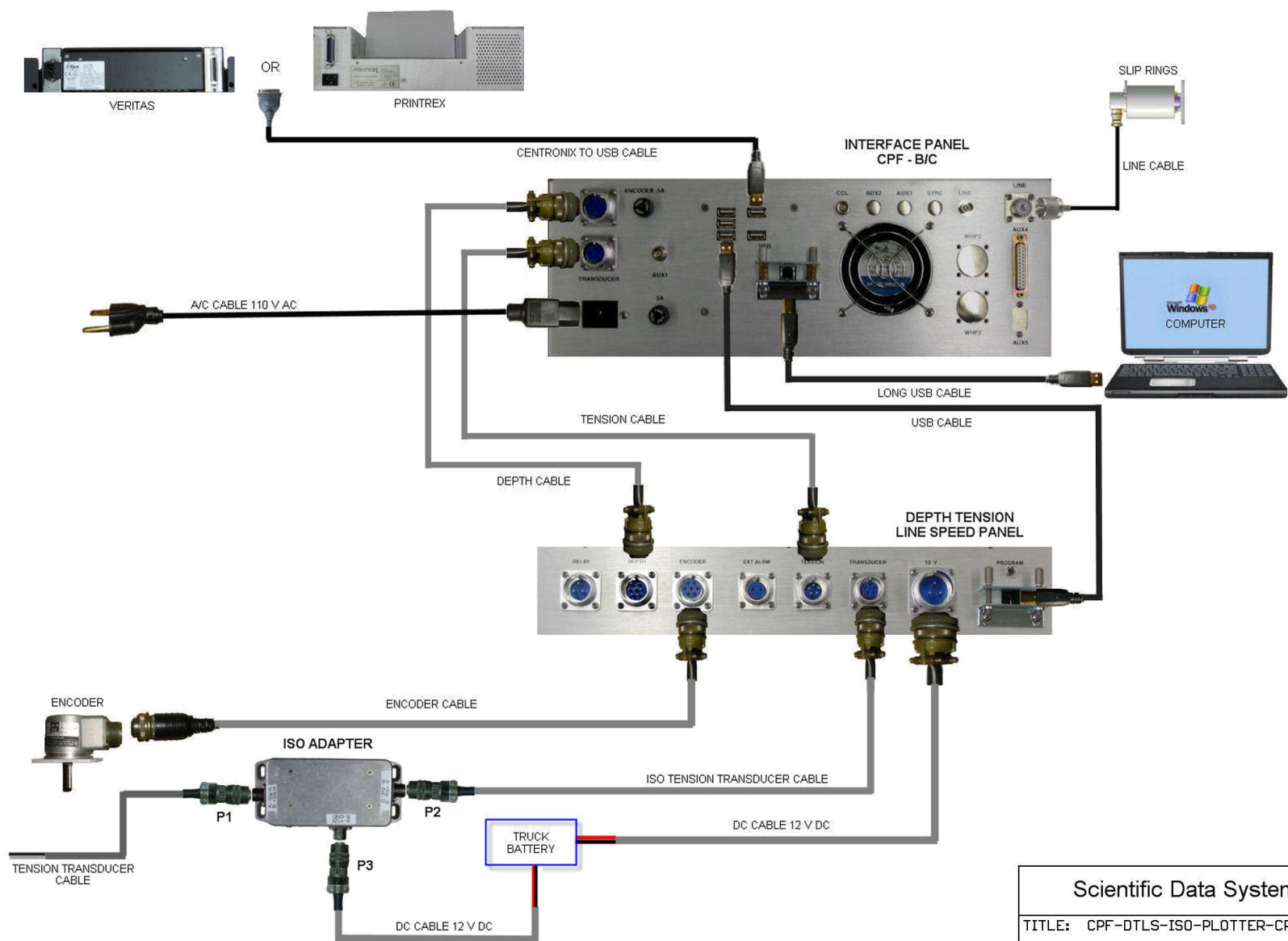
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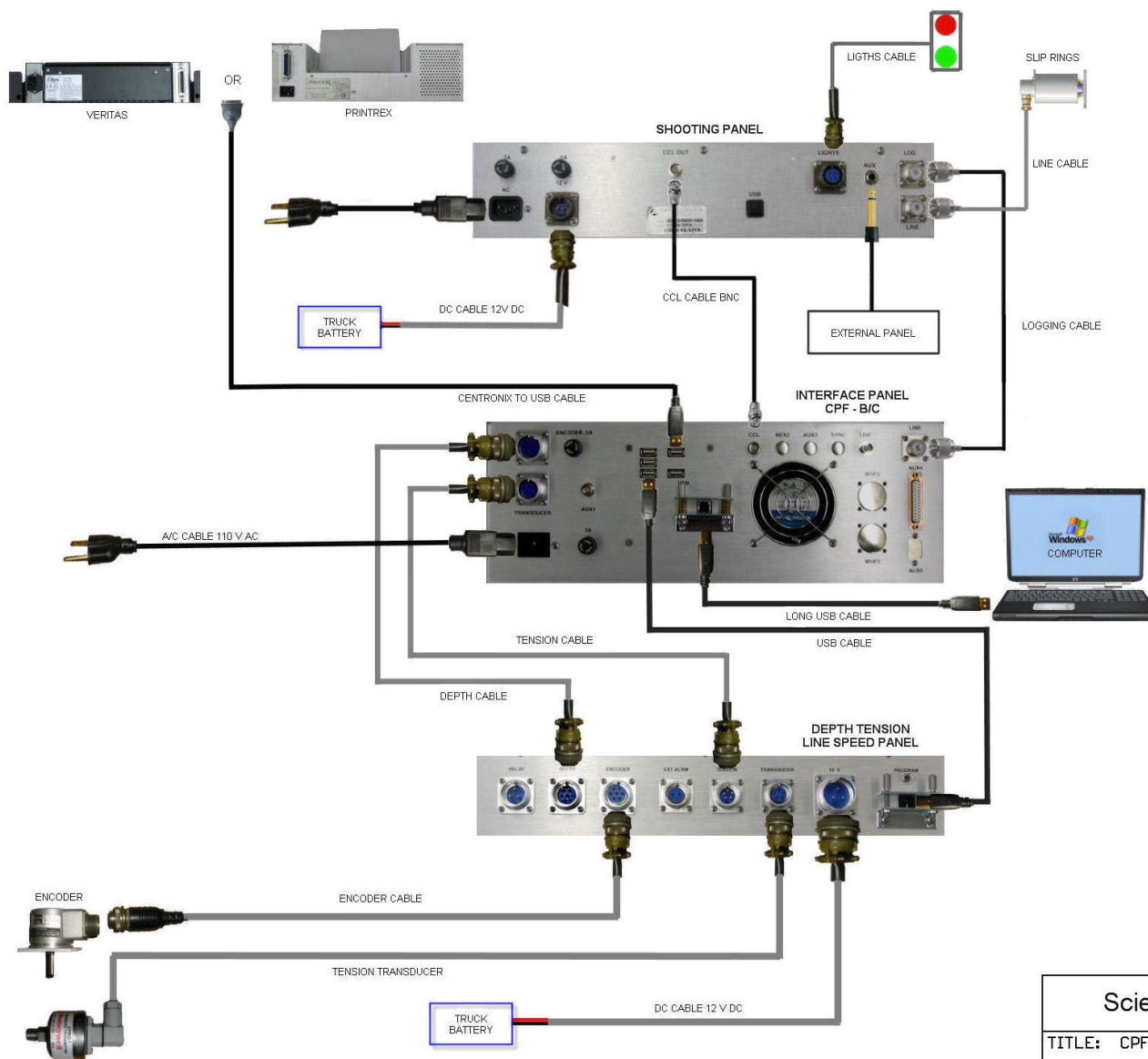
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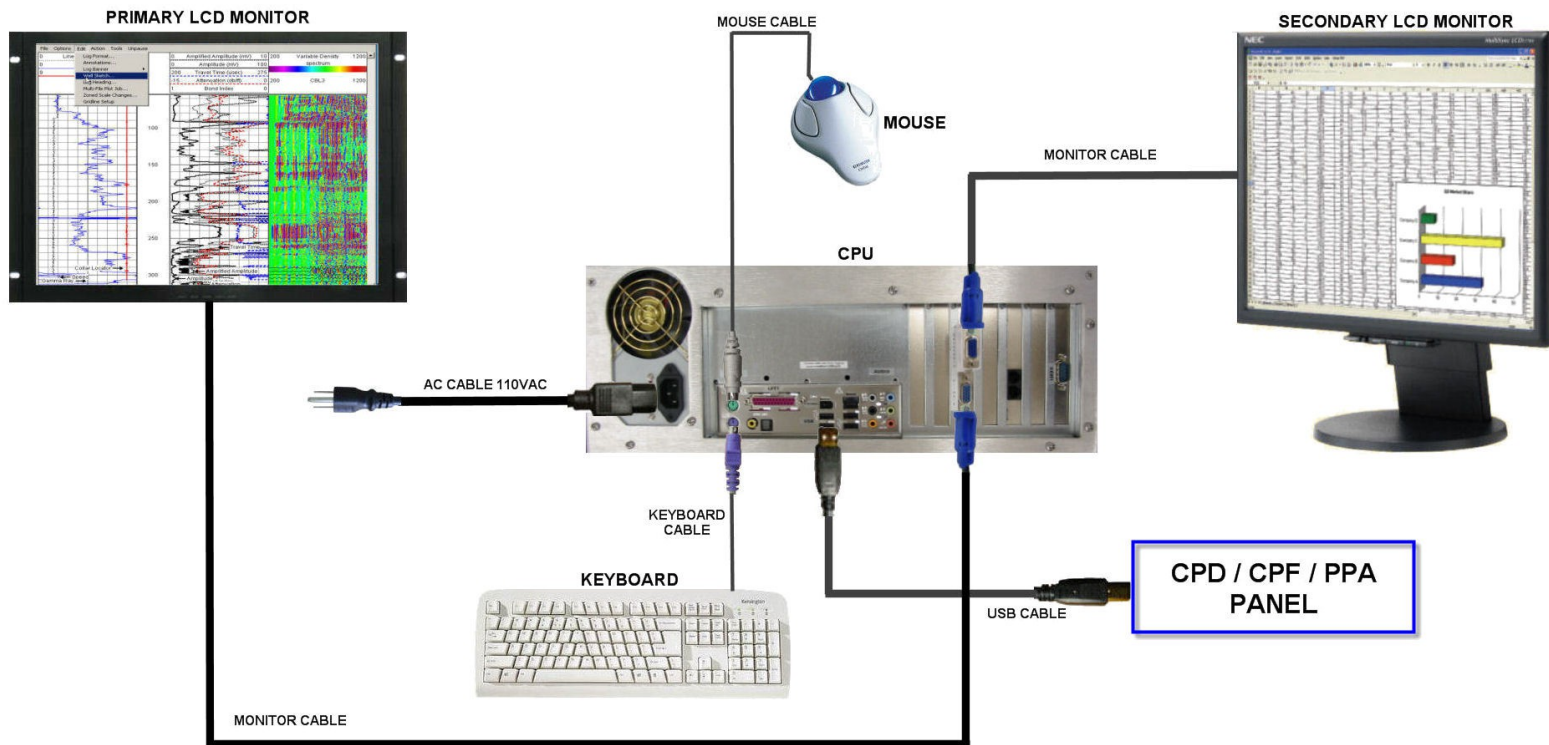
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