

1.3 Standard Faceplate Connections

The functions of the standard connectors on the 130-01 Broadband Seismic Recorder faceplate are as follows:

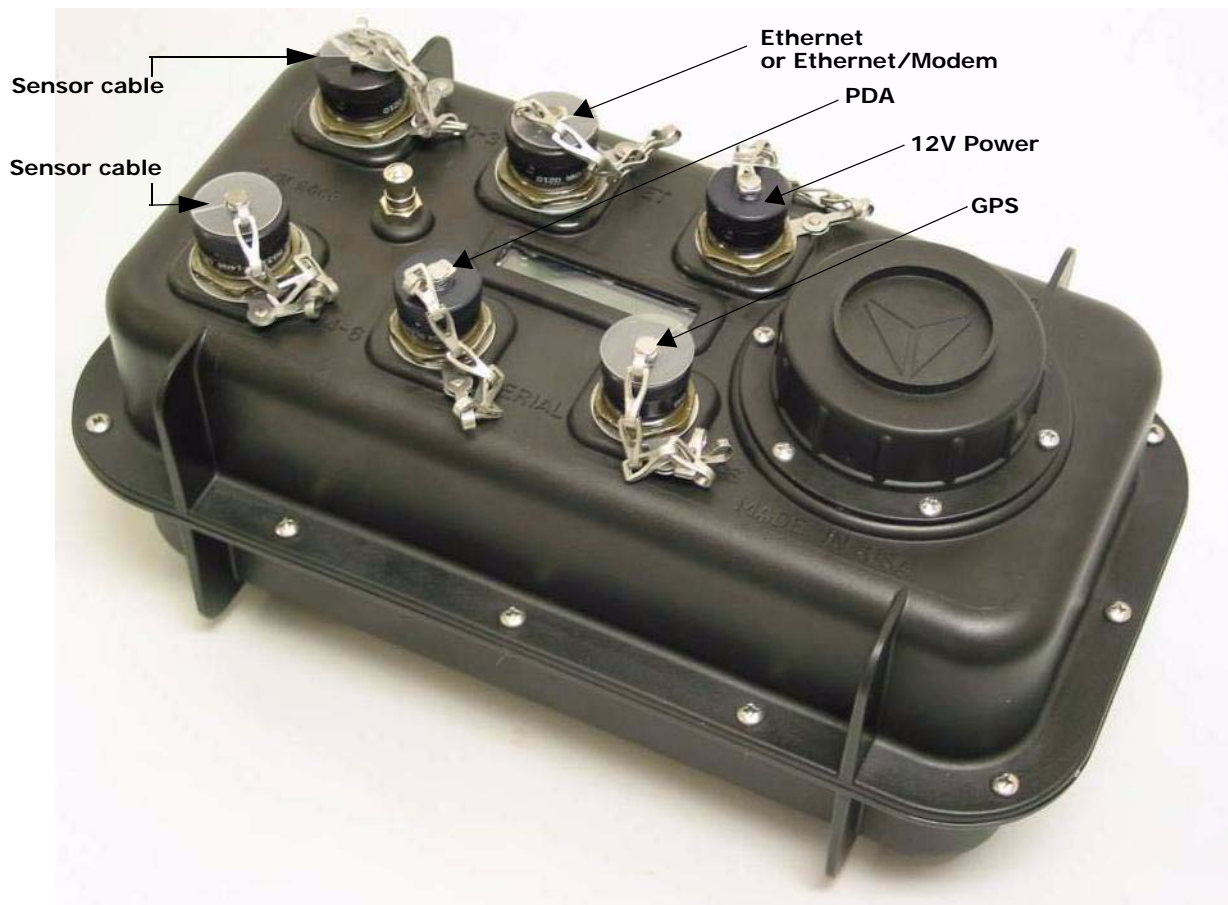


Figure 1 - 1 View of 130 top connections

1.3.1 Power connector

Power is supplied to the 130 DAS unit through one power connector. Hardware connection shows typical hardware connection for the 130 DAS. The following chart details individual connectors and **REF TEK** cable numbers.

Recorder faceplate connector	Connector and Cable	130 Pin	Pin Desc	Electrical Desc	Voltage Range
Power	PT06A12-4P	A	+12 VDC	Input	10-15 VDC
Cable:	130-8075	B	+12 VDC	Input	10-15 VDC
		C	DGND	Power Return	
		D	DGND	Power Return	

1.3.2 Control Connector (Serial)

The 130 DAS unit's **SERIAL** connector provides general-purpose serial communications. Commonly, a personal computer, such as a DOS-based desktop, laptop, or PDA using **REF TEK** software is connected here to monitor and control 130 DAS operations.

Recorder Faceplate Connector	Connector and Cable	130 Pin	Pin Desc	Electrical Desc	Voltage Range
Serial	PT07A12-60	A	TX B	Output RS232	±5 Volts
		B	RX B	Input RS232	±12 Volts
	Serial device	C	RTS B	Output RS232	±5 Volts
Cable(s):	130-8062 Palm	D	CTS B	Input RS232	±12 Volts
	130-8025	E	DSR B	Input RS232	±12 Volts
		F	DCD B	Input RS232	±12 Volts ₁
		G	DTR B	Output RS232	±5 Volts
		H		No Connect	
		J	DGND	PWR	
		K	PWR	Output ₂	+ 5 Volts ₁

- Volts₁ = Controlled by software

- Output₂ = Protected by self resetting fuse

1.3.3 GPS Connector

The **GPS** connector allows an external clocking device, such as the **REF TEK** 130-GPS Global Positioning System clock. This connector provides power and serial connections to the 130-GPS Receiver via the 130-8015 cable. See the 130-GPS manual for more information.

Recorder Faceplate Connector	Connector and Cable	130 Pin	Pin Desc	Electrical Desc	Voltage Range
GPS (External Clock)	PT06A12-8P	A	GPS 1Hz	Input Pulse	0-5 Volts
		B	DGND	PWR/Signal GND	
Cable(s):	130-8015	C	GPS RX	Output RS232	±5 Volts
	130-8015R	D	DGND	PWR/Signal GND	
		E	GPS TX	Input RS232	±12 Volts
		F	PWR 12V	PWR	10-15 Volts ₁
		G	GPS RST	Output Pulse	0-3.3 Volts
		H	PWR 5V	5 Volts ₁	Default

- Volts₁ = Controlled by software and protected by a self resetting fuse

1.3.4 Net Connector

Communications between the 130 DAS and an external TCP/IP and/or Modem occur across the 130 DAS unit's **NET** connector. The cable (130-8004) has two connectors to allow two connections, one for ethernet and one for serial communications.



WARNING: A 130 DAS is shipped pre-configured with a default IP address. Be sure to change this address before connecting the DAS to an ethernet port. Any IP addresses on one of the same subnets, as the 130 DAS unit, may connect using FTP and/or the command socket. However, the 130 DAS unit restricts the external IP addresses from which it will accept connections, to the equivalent of a Class C subnet containing the RTP host. If no RTP host is set for an interface, no connections can be established to the unit from outside its subnet.



WARNING: The 130 DAS uses a 10BaseT ethernet chip. The 130 DAS ethernet port will not work when connected to all 100BaseT and some 10/100BaseT ethernet hubs.

- [1] This connector also functions as the point of input for the external trigger. It also serves as the point of output for an event detection pulse.
- [2] There is also a 12VDC nominal input on this connector to allow for lab setup via ethernet using only this connector.

Recorder Faceplate Connector	Connector and Cable	130 Pin	Pin Desc	Electrical Desc	Voltage Range
Net Communi-cations	PT07A14-19P	A	TX A	Output RS232	±5 Volts
	Modem	B	RX A	Input RS232	±12 Volts
	Ethernet 10BaseT	C	RTS A	Output RS232	±5 Volts
	Serial PPP	D	CTS A	In RS232	±12 Volts
	Freewave	E	DSR A	In RS232	±12 Volts
Cable(s):	130-8004	F	DCD A	In RS232	±12 Volts
	130-8019	G	COM1PWR	PWR VDC ₁	+5 Volts ₂
		H	ENET TX+	Output Ethernet ₃	
		J	ENET TX-	Output Ethernet ₃	
		K	ENET RX+	Input Ethernet ₃	
		L	ENET RX-	Input Ethernet ₃	
		M	ENETPWR	PWR Ethernet ₄	+12 Volts ₅
		N	DGND		
		P	DGND		
		R	DTR A	Output RS232	±5 Volts
		S	TRIGOUTB	Output, Tristate	0-5 Volt Pulse
		T	TRIGINB	Input	0-5 Volt Pulse
		U	+12VDC	Input	10-15 VDC ₆
		V	OSC	Output, Tristate ₇	0-5 Volts

- VDC₁ = Controlled by software
- Volts₂ = Protected by self resetting fuse
- Ethernet₃ = Transformer coupled
- Ethernet₄ = Controlled by software and protected by self resetting fuse
- Volts₅ = Tracks main input voltage
- VDC₆ = Alternate main power input
- Tristate₇ = Controlled by software

1.3.5 Channel Input Connectors

Both three channel and six channel units have channel input connectors on the faceplate. The three channel unit has a red "sticker" over the (Channel 4-6) connector socket to designate the unit as only three channel. Signals from an external sensor enter the 130 DAS through the channel input connector labeled **CH 1 - 3**. Six channel 130 DAS units (130-01/6 and 130-02/6) use a second input connector labeled **CH 4 - 6**. Channel connectors also provide pins for calibration signals to be sent to a sensor.



Note: The 130 DAS (Station Info) PDA display will show how many channels are enabled for your 130 DAS.

1.3.6 Channels 1-3 connector signals

Recorder Faceplate Connector	Pin	Name	Dir	Electrical Desc	Voltage Range	Note
Channels 1-3	A	Ch1+	In	Channel 1 input +	±10 Volts	
On All models	B	Ch1-	In	Channel 1 input -	±10 Volts	
	C	Ch2+	In	Channel 2 input +	±10 Volts	
	D	Ch2-	In	Channel 2 input -	±10 Volts	
	E	Ch3+	In	Channel 3 input +	±10 Volts	
	F	Ch3-	In	Channel 3 input -	±10 Volts	
	G	AGnd	In	Analog ground		
	H	Pwr 123	Out	Sensor Power	10-15 Volts	1, 2, 3
	J	PGnd	-	Power ground		
	K	CalEn- 123	Out	Calibration Enable active low	OC	4, 6
	L	CalEn+ 123	Out	Calibration Enable active high	OC	5, 6
	M	Center- 123	Out	Center Enable active low	OC	4, 6
	N	CalSig 123	Out	Calibration signal	±5 Volts	6
	P	Aux1	In	Aux (Mass Position) channel 1	±10 Volts	6
	R	Aux2	In	Aux (Mass Position) channel 2	±10 Volts	6
	S	Aux3	In	Aux (Mass Position) channel 3	±10 Volts	6
	T	DGND	-	Digital Ground		
	U	Center+ 123	Out	Center Enable active high	OC	5, 6
	V	Sensor ID1	In/Out	Sensor ID	0-5 Volts	6

Note: 1 = Tracks main input voltage

Note: 2 = Protected by self resetting fuse.

Note: 3 = Output on/off controlled by software

Note: 4 = Open Collector, pulls to Ground

Note: 5 = Open Collector, pulls to + 5 V

Note: 6 = Functions provided by Optional RT527 Sensor Control board

1.3.7 Channels 4-6 connector signals

Recorder Faceplate Connector	130 Pin	Name	Dir	Electrical Desc	Voltage Range	Note
Channels 4-6	A	Ch4+	In	Channel 4 input +	±10 Volts	
On All models	B	Ch4-	In	Channel 4 input -	±10 Volts	
	C	Ch5+	In	Channel 5 input +	±10 Volts	
	D	Ch5-	In	Channel 5 input -	±10 Volts	
	E	Ch6+	In	Channel 6 input +	±10 Volts	
	F	Ch6-	In	Channel 6 input -	±10 Volts	
	G	AGnd	In	Analog ground		
	H	Pwr 456	Out	Sensor Power	10-15 Volts	1, 2, 3
	J	PGnd	-	Power ground		
	K	CalEn-456	Out	Calibration Enable active low	OC	4, 6
	L	CalEn+456	Out	Calibration Enable active high	OC	5, 6
	M	Center-456	Out	Center Enable active low	OC	4, 6
	N	CalSig 456	Out	Calibration signal	±5 Volts	6
	P	Aux4	In	Aux (Mass Position) channel 4	±10 Volts	6
	R	Aux5	In	Aux (Mass Position) channel 5	±10 Volts	6
	S	Aux6	In	Aux (Mass Position) channel 6	±10 Volts	6
	T	DGND	-	Digital Ground		
	U	Center+456	Out	Center Enable active high	OC	5, 6
	V	Sensor ID2	In/Out	Sensor ID	0-5 Volts	6

Note: 1 = Tracks main input voltage

Note: 2 = Protected by self resetting fuse.

Note: 3 = Output on/off controlled by software

Note: 4 = Open Collector, pulls to Ground

Note: 5 = Open Collector, pulls to + 5 V

Note: 6 = Functions provided by Optional RT527 Sensor Control board