TELEDYNE ODOM HYDROGRAPHIC

Echotrac E20

Singlebeam Echosounder - Quick Reference Guide*

Echotrac E20 Singlebeam Echosounder

The portable Echotrac E20 single/dual-channel echosounder for surveys in any environment:

- Frequency: 10-250kHz
- Ping rate: Up to 50Hz
- Range: from 0.5-6000m depending on frequency and product variant
- Power requirements: 10-30VDC, max. 50W
- Operating temperature: -20°C to +55°C

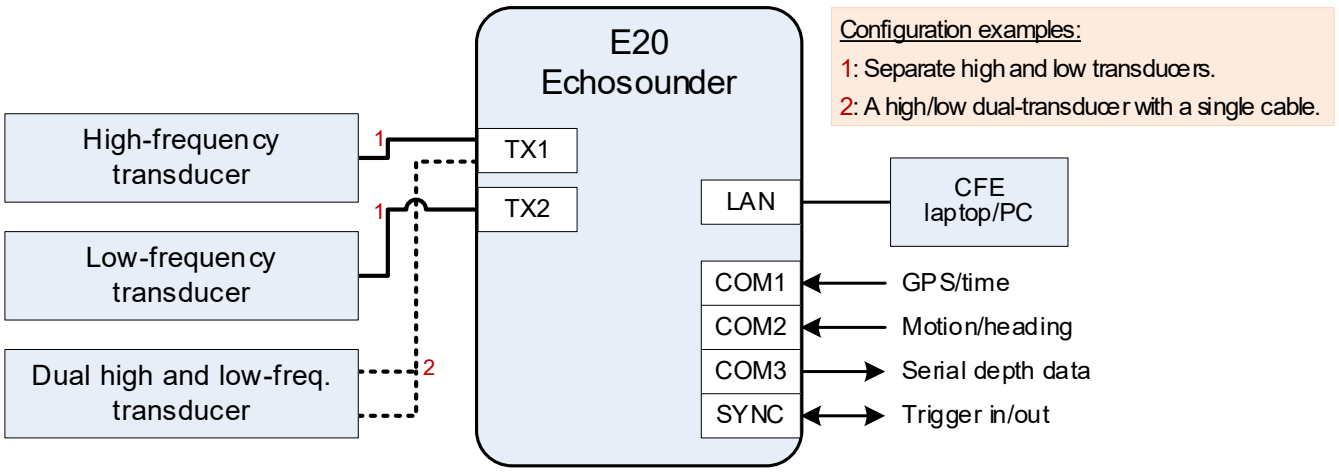
Echotrac E20

E20	
Height	83.0mm
Length	300.0mm
Depth	221.0mm
Weight	5.7kg

Standard Cables

E20 to laptop/PC (5m)	
Bend radius	60mm (minimum)
Power cable (5m)	
Bend radius	60mm (minimum)

System Block Diagram



* This Quick Reference Guide is not intended as a substitute for the Operator's Manual (provided on a USB key).

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Operator Laptop/PC – Minimum Requirements

There are two different sets of minimum requirements for the customer-furnished laptop/PC depending on how much software is to be run on the unit:

Only SBES User Interface:

- Moderate size laptop

  For example:
  - Gb Ethernet
  - 4GB RAM memory
  - Windows 10 (64 bit mandatory)

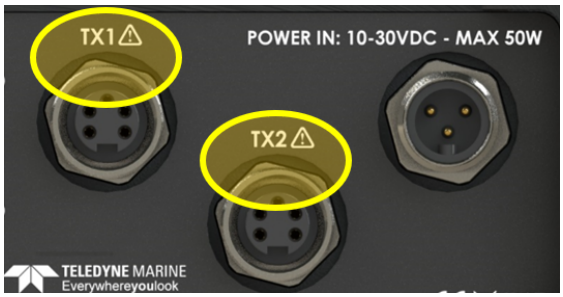
SBES User Interface and Teledyne PDS*:

- CPU: high-end quad core processor
- Gb Ethernet
- Graphic card: with OPENGL 3.30 support and 4GB memory, e. g. NVidia GeForce GTX 9xx
- 8GB RAM memory
- Hard disk: 1 x 1TB

For system requirements, check:
www.teledyne-pds.com/support/pds-system-requirements/

Personal Safety

- The projector connections must be handled with great care, as the output power voltage is hazardous to human safety.
- Do **not** pull out the cables with power on.



Equipment Safety

- Do **not** transmit without transducers connected, as this may damage the E20 unit.
- To disconnect the connectors from the E20, first unscrew the locking sleeves (at the arrows) before pulling the connectors out.
- Do **not** pull directly on the cables, as this will damage both the cables and the E20.
- Do **not** bend the cables beyond the recommended limits when positioning the cables. Flexing the cable to less than the specified bend radius will damage the cable.
- Do **not** place any objects on top of the E20 and do not expose the unit to direct sunshine, as this may cause the unit to overheat.

* For further details, please refer to the appropriate manual.

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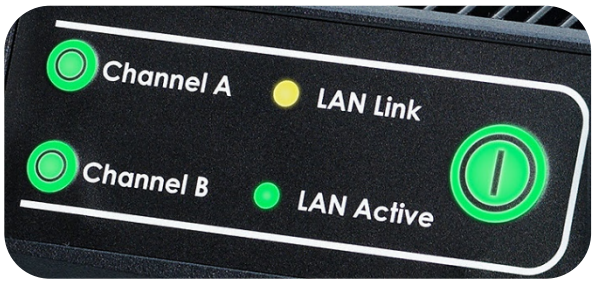
E20 Rear Panel Connections

Grounding	Protective earth screw for equipotential connection
LAN	Gigabit Ethernet
COM1, COM2, COM3 w/status LEDs	Serial ports for external sensors and serial depth data
SYNC w/status LED	Connector for external trigger input and/or output of trigger signal
TX1 and TX2 ⚠	Transducer connections, one or two channels can be connected
Power	DC power supply: 10-30VDC, max. 50W

Unused connectors must be sealed with dummy plugs.

E20 – Power Button and BITE LEDs



- **Channel A/B buttons:**
  - Pressing both buttons at power up forces the unit into Recovery mode*.
  - Pressing during operation starts/stops pinging.
- **Channel A/B LEDs:**
  - No light: Channel off.
  - Green: Channel on.
  - Orange, flashing: Receiving a ping.
  - Red: Error.
- **LAN Link LED:**
  - Yellow: A link has been established.
- **LAN Active LED:**
  - Green, flashing: Data is received/transmitted.
- **Power button:**
  - A short push enters/exits standby.
  - Pressing for more than 5 seconds reboots the system.
- **Power button light indicator:**
  - No light: Not connected to power.
  - Blue: Booting.
  - Red: On standby.
  - Red, flashing: In transition to “standby”.
  - Green: Turned on.
  - Green, flashing: In transition to “on”.
  - Orange: Warning.
  - Purple: Booted to update/recovery mode.

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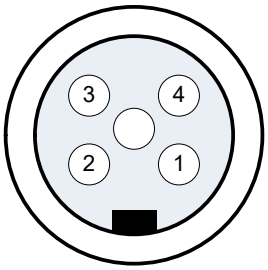
Pin Designations for COM Ports
(M12 4-pole male)

Pin	Signal
1	RS-232 out
2	RS-232 GND
3	RS-232 in
4	Shield



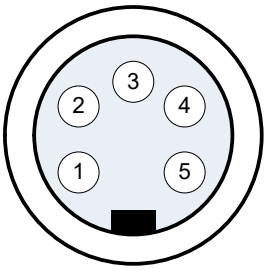
Pin Designations for SYNC Port
(M12 4-pole male)

Pin	Signal
1	Trig out
2	Trig in/out GND
3	Trig in
4	Shield

Pin Designations for TX1/TX2 Connectors
(7/8" 5-pole male)

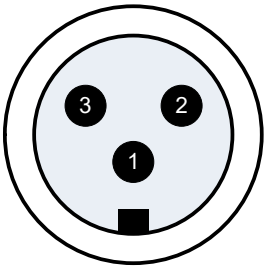
Pin	Signal
1	Ch B+ (low frequency)
2	Ch B- (low frequency)
3	Shield
4	Ch A+ (high frequency)
5	Ch A- (high frequency)

Note: Connectors TX1 and TX2 are connected in parallel.
Connect only 1 transducer for each pair.



Pin Designations for Power
(7/8" 3 pole female)

Pin	Signal
1	Protection Earth (chassis)
2	GND
3	10-30VDC



Setup of E20 in SBES UI*

- Connect the E20 and operator laptop/PC to the network.
- On the Echosounder tab, click the Connect echosounder drop-down menu. Your E20 system can be identified by its serial no. next to the IP address. Find the serial no. on the front of the E20.
- If the SBES UI does not list your E20 system, your network does not allow UDP to pass through. You can manually enter the IP address of the unit in this scenario.
  - Connect the E20 directly to the laptop/PC with a network cable. (They must be in same IP-range and subnet mask (e.g. 10.11.10.1/255.255.255.0)).
  - Change the computer IP address in your Windows Settings, or use the E20 System Tool to change the E20 IP address.
  - By simultaneously pressing the Channel A and B buttons and the power button for 5 seconds, the E20 shifts to Recovery mode and factory default IP 10.11.10.1, and the power button turns purple.

* For further details, please refer to the appropriate manual.

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