

# *NEW* Model 825C

## Portable Survey Recorder

**The technology in a Ross Smart Sounder outputs reliable depth data for data acquisition systems.**

All of the quality and performance that you expect from a Ross sounder in a small easy to operate splash proof package.

- Simple key pad control panel
- Digital storage of sounding chart
- Data logging software (optional)
- Single or dual frequency
- 6.4inch color display
- NMEA-0183 output
- USB data port
- Position data input ports with logging software option.

Size - 9.5"w x 13.0"h x 7.5"d

Weight - 13lbs

Temperature - operating 0° to 50° C  
- storage -25° to 75° C

Humidity - 0 to 95% RH



200 kHz Standard

Additional frequency choices:

100 kHz      50 kHz

28 kHz      12 kHz

Custom frequencies are also available.

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# ***Model 825C Portable Survey Recorder***

The Model 825C Portable Survey Sounder is a high performance instrument designed to meet the needs of surveyors who require a source of clean, reliable depth data for hydrographic survey systems.

One feature of the 825C is the easy-to-use key pad operation. Another is the bright 6.4" screen for the sounding chart display. The bright display provides for easy operation in bright summer sunlight or dark night operation. A simple, user friendly menu system has been developed from Ross Laboratories' many years of experience in the field.

Depth soundings are displayed on the screen and sent to a data collection system via a standard serial port. GPS position information (lat., long. and time) can be connected to the sounder and recorded along with the corresponding depth providing a simple but complete data logging system when using the optional data logging software.

## **General**

The Ross 825C sounder is a leading edge portable hydrographic survey sounder that uses Ross Smart Sounder technology to provide a source of reliable depth data for data collection systems. A key pad operated menu system and sounding chart are both shown on a high visibility 6.4 inch 700nit TFT display. The sounding chart or "sonogram" can be recorded on the internal solid state hard drive and transferred to an office computer for display and editing using optional software.

## **Hardcopy**

When the sounding chart or sonogram is recorded on the internal hard drive, the digitized analog data can be printed (with optional Ross Playback™ software) on any Windows compatible printer.

## **Serial Output**

Custom NMEA-0183 output string in feet or meters (interfaces with Hypack™ software). Standard NMEA-0183 data string.

## **LCD Display**

Displays the actual chart recording or sonogram. The sonogram represents the bottom echo trace by digitizing the analog echo signal levels.

## **Data Storage and Playback**

The entire sonogram (received echo) can be stored on the sounder's Solid State hard drive for future playback and printing. The playback of the data can be done on the sounder. Optional playback software is available for display and editing of the soundings on a personal computer. The transfer of data to the second computer is done using a USB jump drive or memory stick.

# **Ross 825C Portable Survey Recorder**

## **Specifications**

### **Physical**

Size: W 9.5"(24.1cm) x H 13.0"(33.0cm) x D 7.5"(19.1cm)  
Weight: 13 lbs  
Case: High impact fiberglass  
Power Supply: 10-18vDC, 24 Watts, 2.0 Amps @ 12v  
Display: 6.4 inch 700nit color TFT  
Operating Temperature: 32°F to 122°F (0°C to 50°C)  
Storage Temperature: -13°F to 167°F (-25°C to 75°C)  
Humidity: 0% to 95% RH

### **Sounder**

Scale: Feet or meters  
Range: 0-25, 0-100, 0-250, 0-500 ft. (or metric equivalent) fixed scales

### **Display**

Display Type: 700nit color TFT  
Size: 6.4" diagonal  
Pixels: 640 X 480  
Luminance: 700nit backlight  
Functions: Operator key pad control panel, sounding chart, and large numeric depth readout

### **Transceiver**

Frequencies: 12kHz, 28kHz, 50kHz, 100kHz and 200kHz.  
Transmitter output power: 100 watts (RMS)  
Pulse length: 0.1msec or .5msec  
Min Depth: 200kHz – 1.0 (30cm) below draft

### **Interfacing and Annotation**

Serial Ports: Two ports, 110 to 19,200 baud  
USB: Two, one internal one external  
Ethernet: One Ethernet  
Digital Depth output: Continuous, user selected interval or requested output using a custom NMEA-0183 sentence. XXX.X Ft. Fa. or M.  
Compatibility: HYPACK™, HYDROpro™, and Ross Playback Software  
Annotation: Internally generated event marks at 1 minute to 10 minute intervals

# Ross 825C Portable Survey Recorder

## Specifications continued

**Data logging:** Option 1 – Windows™ playback software. Allows playback of “sonogram” on standard PC when down loaded from 825C’s 40GB internal hard drive.

Option 2 – Record sounding and position data ( Lat., Long.) on internal solid state hard drive.

### Controls

Sound Velocity: 4800 ft/sec  $\pm$ 25% (1463 m/sec  $\pm$ 25%)  
Draft: 1’ (0.30m) to 100’ (30m)  
Gauge, Tide:  $\pm$ 100’ ( $\pm$ 30m)  
Operating Range: 25, 50, 100, 250, 500, Feet, Fathom or Meter equivalents  
Auto range: Bottom following 25, 50, 100, 250 ft. range window  
Annotation: On / Off, selected items for annotation

Additional Features: Adjustable Blanking and Bottom Following Gate.  
Bar Check depth gate  
AGC and TVG functions.

Sounding Rate:

<i>Range</i>	<i>Soundings/second</i>
0’ - 25’ (0m - 8m)	10
0’ - 50’ (0m - 15m)	9
0’ - 100’ (0m - 30m)	7
0’ - 200’ (0m - 61m)	5
0’ - 250’ (0m - 76m)	5
0’ - 500’ (0m - 152m)	3