



# Coden Hydrographic Survey Remote Controlled Boat

# RC-S3

GPS, Echo-Sounder equipped



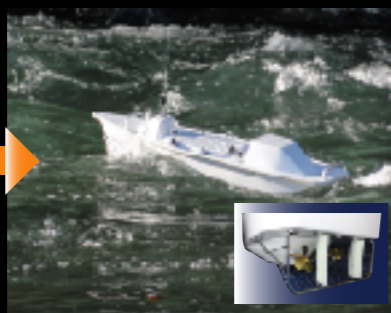
Safe and Easy Data Collection  
One-Man Operation  
Quick Deployment  
Auto-Pilot  
Auto Returning

**RC-S3 is equipped with GPS and Echo-Sounder.**  
**Deployment time and man hours are less.**  
**Total costs are less compared to conventional surveying methods.**



**Conventional Survey**

**RC-S3 Survey**



- RC-S3 is the perfect solution for difficult situations like shallow waters and hard to reach areas.
- Boat size is portable enough for one man to carry, 1200mm long at 16kg (under 4 feet at 35 lbs).
- RC-S3's twin electric motors are environmentally safe, free of oil and smoke.
- Twin high-power motors and twin props enables surveys in strong currents.
- Depth range is from 0.5 to 80 meters.
- Operating range is 800 meters.

**Real-time data collection**

**Editing and processing data example**

**Auto-pilot : Line survey**

- This feature allows for total autonomous operation tracking planned lines, no controls from the operator, except at end of each line.
- Maximum 128 lines (one project)
- Tracking of lines averages a DOL of only 0.5 meters from the line.

**Auto-pilot : Target survey**

- This feature allows for total autonomous operation going from one target point to the next target point.
- Maximum 255 points (one project)



**Auto returning**

- The boat returns automatically to the initial starting point in 2 cases:

  - 1, Loss of wireless LAN communications.
  - 2, 20% left of boat battery power.

**Data (CSV)**

X,Y,Depth,Latitude,Longitude, GPS date, GPS time and more.

Line No	Start X	Start Y	Start Depth	Start Lat	Start Lon	End X	End Y	End Depth	End Lat	End Lon
1	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
2	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
3	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
4	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
5	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
6	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
7	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
8	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
9	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619
10	100.0	100.0	1.0	35.6884	139.7619	100.0	100.0	1.0	35.6884	139.7619

**SD memory card drive**

Data is kept storing in SD memory card inside boat.



**Application**

Position information can be collected by auto tracking total station with 360 degree prism on board RC-S3 if there is no GPS reception in the target area.



## RC-S3 Standard equipment

Remote controlled boat  
Boat antenna  
CODEN boat control software  
Wireless LAN modem  
Antenna with work board  
Power supply cable  
Boat controller  
Battery  
For boat x 2  
For remote control unit x 1  
Battery charger  
For boat x 2  
For remote control unit x 1

## Specifications

<b>Boat size</b>	
Length	1200mm
Width	350mm
Height	250mm (Without antenna)
Weight	12kg (16kg with batteries)
<b>Power</b>	
Motor	Brushless DC motor x2
Boat Speed	4.5kt
Power Source	Rechargeable lithium ion battery 20Ah x2
Battery Life	210 minutes (Auto-pilot)
<b>Geodesy</b>	Transverse Mercator (User-settable)
<b>Auto-Pilot</b>	
Boat Speed	2.0kt
Line Survey	Maximum 128 lines (one project) Tracking between waypoints within 0.5m
Target Survey	Maximum 255 points (one project)
<b>Echo Sounder</b>	<b>Single Beam</b>
Frequency	200kHz
Depth Range	From 0.5m to 80m
Resolution	0.01m
Gain	Manual (H/L 20 levels each)
Beam width	6 degrees
<b>GPS</b>	<b>DGPS (SBAS)</b>
Resolution	1/10000s
<b>Communication</b>	
System	2.4GHz Wireless LAN
Operating Range	800m
Sampling Interval	1000ms
<b>Computer OS</b>	WindowsXP (32bit) 、 Windows7(32bit)

### Patented Product



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