



English version 1.0
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CALYPSO
i n s t r u m e n t s

www.calypsoinstruments.com

CALYPSO ULTRASONIC Portable Solar & Mini Developer Manual

Notes:

- Firmware versions compatible: 2.0 and above
- All the measures are referenced to the orientation mark, in the side of the device. The mark is orientated to the bow of the boat.
- The device enters in low power mode at values <20% of the battery level
- The device enters in sleep mode at values <10% of the battery level
 - o Only Bluetooth advertising

Device Information Service

Service UUID: 0x180A

0x2A29 Manufacturer Name String (Calypso)

0x2A24 Model Number String (UP10)

0x2A25 Serial Number String (Not used)

0x2A27 Hardware Revision String (Not used)

0x2A26 Firmware Revision String (0.47)

0x2A28 Software Revision String (Not used)

Data Service

Service UUID: 0x180D

Principal Characteristic: Notify
Characteristic: UUID: 0x2A39

Wind Speed	Wind Direction	Battery level
39-02	CE-00	09
		
		
Hex to Decimal	Hex to Decimal	Hex to Decimal
569		9
		
/100		X10
5.69 m/s	206°	90%
0-40m/s (0.01m/s)	0-360° (1°)	0%-100% (100%)

Status Characteristic: Read

UUID: 0xA001

0x00-> Sleep Mode, Only Advertising
0x02-> Normal Mode, All data rate and sensors availables

Environmental Calculations: Notify & Read

UUID: 0x181A

Apparent Wind Speed

UUID: 0x2A72

Apparant Wind Direction

UUID: 0x2A73

Environmental Sensing Service
(UUID 0x181A)

Apparent Wind Speed (UUID 0x2A72)

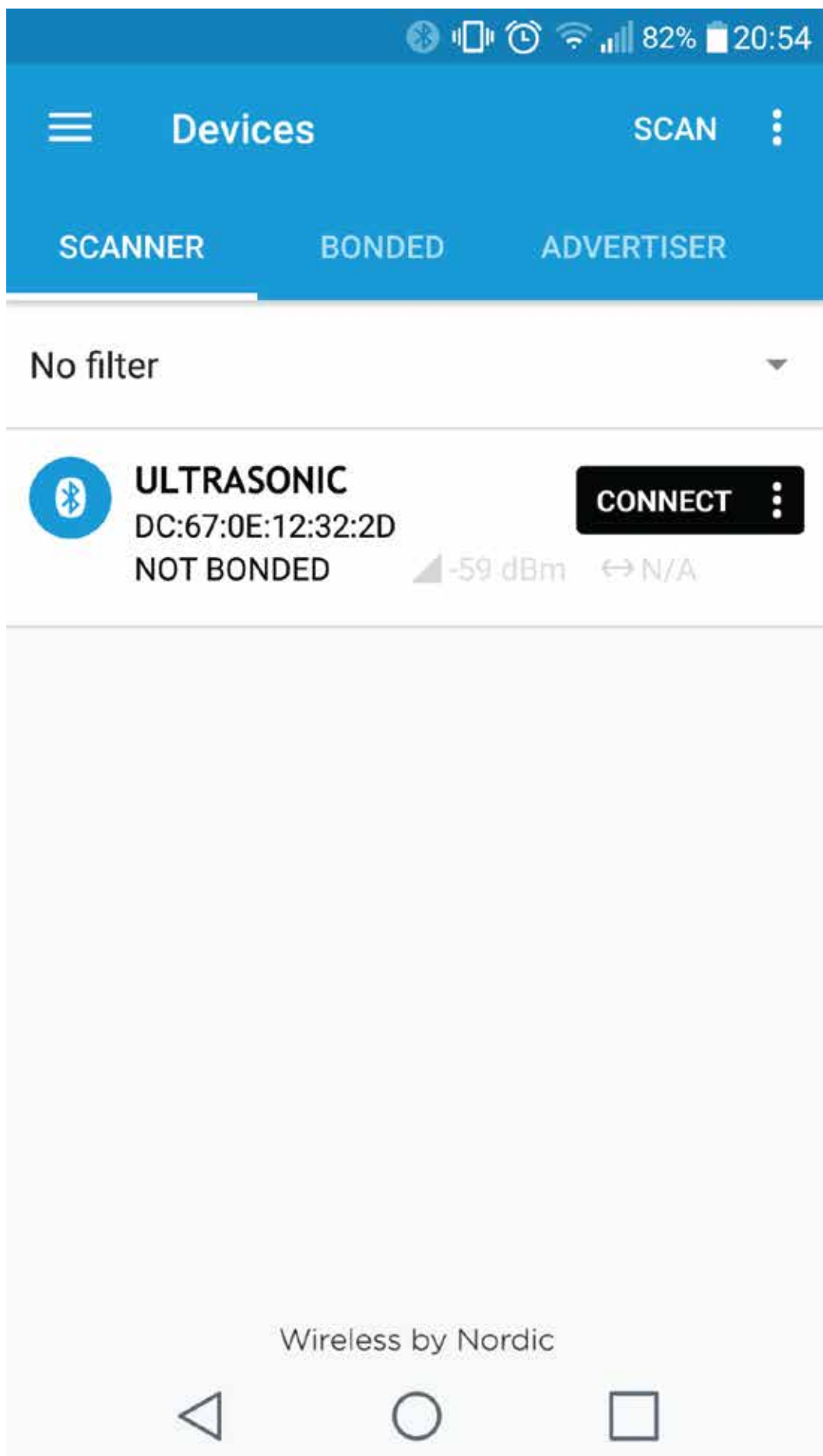
2 bytes little endian, unsigned short (uint16).

Wind speed in m/s *100
(example: 39 02 => 569 => 5.69m/s)

Apparent Wind Direction (UUID 0x2A73)

2 bytes little endian, unsigned short (uint16).

Wind direction in degrees * 100
(example: 78 50 => 20600 => 206°)
(example: f8 75 => 30200 => 302°)



Devices

DISCONNECT

BONDED

ADVERTISER

ULTRASONIC

DA:72:D5:76:76:AA

CONNECTED

NOT BONDED

CLIENT

SERVER

Generic Access

UUID: 0x1800

PRIMARY SERVICE

Generic Attribute

UUID: 0x1801

PRIMARY SERVICE

Secure DFU Service

UUID: 0xFE59

PRIMARY SERVICE

Nordic UART Service

UUID: 6e400001-b5a3-f393-e0a9-e50e24dcca9e

PRIMARY SERVICE

Device Information

UUID: 0x180A

PRIMARY SERVICE

Battery Service

UUID: 0x180F

PRIMARY SERVICE

Environmental Sensing

UUID: 0x181A

PRIMARY SERVICE

Heart Rate

UUID: 0x180D

PRIMARY SERVICE

Devices

DISCONNECT

DFU

BONDED

ADVERTISER

ULTRASONIC

DE:76:51:14:17:29

CONNECTED

NOT BONDED

CLIENT

SERVER

PRIMARY SERVICE

Nordic UART Service

UUID: 6e400001-b5a3-f393-e0a9-e50e24dcca9e

PRIMARY SERVICE

Device Information

UUID: 0x180A

PRIMARY SERVICE

Manufacturer Name String

UUID: 0x2A29

Properties: READ

Model Number String

UUID: 0x2A24

Properties: READ

Serial Number String

UUID: 0x2A25

Properties: READ

Firmware Revision String

UUID: 0x2A26

Properties: READ

Software Revision String

UUID: 0x2A28

Properties: READ

Battery Service

UUID: 0x180F

PRIMARY SERVICE

Devices

DISCONNECT

BONDED

ADVERTISER

ULTRASONIC

DE:76:51:14:17:29

X

CONNECTED

NOT BONDED

CLIENT

SERVER

Generic Attribute

UUID: 0x1801

PRIMARY SERVICE

Secure DFU Service

UUID: 0xFE59

PRIMARY SERVICE

Nordic UART Service

UUID: 6e400001-b5a3-f393-e0a9-e50e24dcca9e

PRIMARY SERVICE

Device Information

UUID: 0x180A

PRIMARY SERVICE

Battery Service

UUID: 0x180F

PRIMARY SERVICE

Battery Level

UUID: 0x2A19

Properties: NOTIFY, READ

Descriptors:

Client Characteristic Configuration

UUID: 0x2902

Environmental Sensing

UUID: 0x181A

PRIMARY SERVICE

Apparent Wind Speed

UUID: 0x2A72

Properties: NOTIFY, READ

Devices

DISCONNECT

0FU

BONDED

ADVERTISER

ULTRASONIC

DE:76:51:14:17:29

CONNECTED

NOT BONDED

CLIENT

SERVER

UUID: 0x180F

PRIMARY SERVICE

Environmental Sensing

UUID: 0x181A

PRIMARY SERVICE

Apparent Wind Speed

↓

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UUID: 0x2A72

Properties: NOTIFY, READ

Descriptors:

Client Characteristic Configuration

↓

UUID: 0x2902

Characteristic User Description

↓

↑

UUID: 0x2901

Apparent Wind Direction

↓

✖

UUID: 0x2A73

Properties: NOTIFY, READ

Value: 129.00°

Descriptors:

Client Characteristic Configuration

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UUID: 0x2902

Value: Notifications enabled

Characteristic User Description

↓

↑

UUID: 0x2901

Heart Rate

UUID: 0x180D

PRIMARY SERVICE

Heart Rate Control Point

UUID: 0x2A39

82%

20:55

Devices
DISCONNECT

BONDED
ADVERTISER
ULTRASONIC

DC:67:0E:12:32:2D

CONNECTED
NOT BONDED
CLIENT
SERVER

Heart Rate

UUID: 0x180D

PRIMARY SERVICE

Heart Rate Control Point

UUID: 0x2A39

Properties: NOTIFY, READ

Descriptors:

Client Characteristic Configuration

UUID: 0x2902

Unknown Characteristic

UUID:

0000a001-0000-1000-8000-00805f9b34fb

Properties: READ

Unknown Characteristic

UUID: 0000a002-0000-1000-8000-00805f9b34fb

Properties: READ, WRITE

Unknown Characteristic