Contents of the shipping box

Nortek order no: 46317-917

Type of system: GLIDER 1MHz

NORTEK
Vangkroken 2
N-1351 RUD
Norway
Tel: +47 6717 4500
Fax: +47 6713 6770
inquiry@nortek-as.com
www.nortek.no

Instrument type:

[ ] Aquadopp	[ ] AWAC	[ ] Vectrino	[ ] Signature100	[ ] Signature1000
[ ] Aquadopp profiler	[ ] VM AWAC	[ ] Vectrino profiler	[ ] Signature250	[X] NortekDVL
[ ] Aquadopp DW 3000/6000m	[ ] Vector	[ ] Signature55	[ ] Signature500	[ ] NLR DVL

Software version: NORTEK DISCOVER **Firmware version:** 1.4.105, 2021-10-18 **Other:**

Cable:
- [ ] 10m length
- [X] Other: 2m

Connector:
- [X] 8-pin Inline
- [ ] 12-pin UW
- [ ] 6-pin Inline
- [ ] 7-pin Sourlau
- [ ] Other:

Communication:
- [ ] RS232
- [X] Ethernet
- [ ] RS422
- [ ] Other:

Options:
- [ ] Analog input
- [ ] Synch
- [ ] Analog output
- [ ] Other:

Battery cannister:
- [ ] Paradopp battery cannister
- [ ] Single battery aluminium cannister
- [ ] Double battery aluminium cannister

Battery cables:
- [ ] 2pin Inline-2pin
- [ ] 8pin Inline-2pin
- [ ] 8pin rectangular-2pin

Accessories:
- [X] Toolkit
- [X] Quick guide
- [ ] Final test checklist
- [ ] Seeding material
- [X] USB to serial converter RS232
- [ ] Altronix AL310 USB driver
- [ ] Recorder kit/ProLog
- [ ] Battery harness for 2 batteries

Batteries: **Extra set:**

[ ] Alkaline 50Wh	13.5V	[ ]
[ ] Alkaline 100Wh	13.5V	[ ]
[ ] Alkaline 540Wh	13.5V	[ ]
[ ] Alkaline 540Wh	18V	[ ]
[ ] Alkaline 90Wh	15V(Signature1000)	[ ]
[ ] Alkaline 180Wh	18V(Signature500)	[ ]

AC/DC Power supply
- [ ] 15V standard
- [ ] 48V Signature55 Online
- [ ] 24V Vectrino
- [X] 24V DC/DC & Signature

Plug: [ ] EU [ ] UK [X] US

Other: 2m SERIAL CABLE.

Date: 13.8.2021 **Responsible:** Signature

Final test checklist AD2CP

Order number: 46317-917

Name: Glider

Instrument serial number: 102878

Frequency: 1MHz

Main board: AD2CP_3302

Firmware versions: 1.4.6056.3055_10/185

NORTEK
Vangkroken 2
N-1351 RUD
Norway
Tel: +47 6717 4500
Fax: +47 6713 6770
inquiry@nortek-as.com
www.nortek.no

Label checked ☒ OK

Dock test ☒ OK

Baudrate 115200 ☒ OK

Comments:

Tilt check

☒ Pitch up
☒ Roll up
☒ Status bit
☒ Pitch down
☒ Roll down

pitch & roll within +/- 0.2 °

Clock

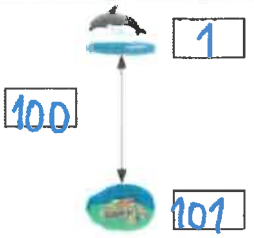
☒ Set clock

Heading

☒ Up
☒ Down

tolerance: +/- 2

Pressure



Psensortemp ☒ OK

tolerance: +/- 0.1 % of 1000 m

Temperature

☒ OK

tolerance: +/- 0.1 °

Beam check

	Correct order	Beam Imp	Noise floor	Amplitude in tank	Range
Beam 1	☒ OK	Ω	27 dB	> 80 dB	☒ OK
Beam 2	☒ OK	Ω	29 dB	> 80 dB	☒ OK
Beam 3	☒ OK	Ω	27 dB	> 80 dB	☒ OK
Beam 4	☒ OK	Ω	27 dB	> 86 dB	☒ OK
~~Beam 5~~	~~OK~~	~~Ω~~	~~dB~~	~~dB~~	~~OK~~

Velocity direction

N/A

XYZ coordinate system		ENU coordinate system	
X	☐ OK	E	☐ OK
Y	☐ OK	N	☐ OK
Z	☐ OK	U	☐ OK
Z_2	☐ OK	U_2	☐ OK

Head file

☒ Headfile checked
☒ Saved as read only

Serial communication

☐ RS422
☒ RS232

Trigger

☒ TTL
☐ RS485

Recorder erased

☒ OK

Rec size: 16.6B

Ethernet

MAC address: 8C:68:78:00:0C:E6

Static IP address:

Set host name: 102878

DHCP enabled ☒

FTP OK ☒

Licenses

Averaging mode	☒	Wave mode	☐	Vertical velocity	☐	64GB recorder	☐
Burst Five beams	☐	Echo Sounder	☐	Dual frequency low	☐	128GB recorder	☐
Bottom track	☒	Ice Measurement	☐	Dual frequency high	☐	256GB recorder	☐
High Resolution	☐	Altimeter	☐	16GB recorder	☒		

Calibration license erased ☒
Production license erased ☒
Default configuration set ☒

Cable/Harness

	Cable		Harness
Communication	☒	Communication	☒
Battery	☐	Battery	☐

Electrical isolation test

50V Ok ☒

External sensors

Power down

☒ OK

Date

Day: 13 Month: 08 Year: 2021

Signature

Certificate of Calibrations and Tests

Instrument Information

Customer Reference No.	46317-917
Instrument Type	Glider
Instrument Frequency	1000 kHz
Instrument S/N	102878
Head S/N	D-2878
Interface Board S/N	3302
Interface Board Mfr. S/N	4MO0886950064
Digital Board Mfr. S/N	4MO0870240028
Analog Board Mfr. S/N	4MO0886960030
Sensor Board Mfr. S/N	4MO0789490009
Interface Board Rev.	H-4
Digital Board Rev.	I-3
Analog Board Rev.	G-1
Sensor Board Rev.	I-0

Calibrations and tests performed

Pressure	Passed
Tilt and Compass	Passed

All the tested values are within Nortek AS specifications

August 13, 2021
Date

Reviewed and approved (sign.)

Details

Instrument Type	Glider
Instrument S/N	102878
Pressure Range	1000 dBar
Date	August 11, 2021
Operator	Faramarz Torkzad
Location	Nortek Factory Norway
Result	Passed

Description

Verification is performed in an automated pressure chamber. Fixed-point measurements are collected to verify the sensor.

Criteria of acceptance is ± 0.1% of full scale.

Reference: Paroscientific, Inc. - Digiquartz 9000-10K-101. Accuracy 0.01% of 6895dBar.

Verification Results

Reference (dBar)	Pressure Diff. (dBar)	Pressure Diff. (% of FS)
96.24	0.27	0.03
195.16	0.15	0.02
294.78	0.10	0.01
397.48	0.10	0.01
511.04	0.02	0.00
595.69	-0.01	0.00
707.20	-0.09	-0.01
802.44	-0.08	-0.01
897.53	-0.20	-0.02
1016.19	-0.27	-0.03

Tilt and Compass Report

Details

Instrument Type	Glider
Instrument S/N	102878
Date	August 11, 2021
Operator	Remy Øvereng
Location	Nortek Factory Norway
Result	Passed

Description

Calibration and verification is performed in a two axis automated jig. Continuous and fixed-point measurements are collected to calibrate and verify the sensor.

Criteria of acceptance for tilt sensor is ±0.5°.

Criteria of acceptance for compass sensor is ±3°.

Reference: Generic - Digital Protractor Series 950 Pro 3600. Accuracy ±0.05°.

Tilt Verification Results

	Diff. Up		Diff. Down	
Reference (°)	**Pitch (°)**	**Roll (°)**	**Pitch (°)**	**Roll (°)**
-30.00	-0.12	0.02	-0.11	-0.13
-15.00	-0.03	0.14	0.06	0.00
0.00	0.05	-0.06	0.11	0.08
15.00	-0.13	0.01	-0.14	-0.14
30.00	0.03	0.11	0.04	0.01

Compass Verification Results

Reference (°)	Heading Diff. Up (°)	Heading Diff. Down (°)
0.00	0.59	0.71
45.00	0.40	0.48
90.00	0.06	0.18
135.00	-0.02	-0.14
180.00	0.25	-0.28
225.00	0.46	-0.16
270.00	0.88	0.23
315.00	0.74	0.71