

HDD LOCATING SYSTEMS

# Sense

IT MAKES SENSE

## Russian Multi-Frequency Locating Systems for Horizontal-Directional Drilling

### 2021 CATALOG

# NewVision



## SNS 1t

- 1 frequency 12 kHz (SNS1t protocol);
- 1 working segment screen;
- non-sleep transmitter mode;
- compatible with all t-series transmitters;
- depth up to 9,90 m;
- transmitter working time – 20 hours;
- angle accuracy 0,1%;
- 24 roll positions.



## SNS 2t/7t/8t New Vision



1. 2 (12, 30 kHz) or 7 (2, 8, 12, 18, 24, 30, 41 kHz) frequencies;
2. Internal power supply (up to 50 hours) – lifetime warranty;
3. Oled display;
4. Energy safe mode;
5. Locating screen ClockFace view: Cross ⊕/Ball and depth/distance;
6. Noise test with predicted depth according to the type of transmitter;
7. Programming the transmitter modes: frequency/power mode/sleep mode ⊕;
8. Permanent real-time displaying all locating information ⊕;

9. Visual and sound transmitter heating indication;
10. Predicted depth to drill on-target in auto mode ⊕;
11. Ultrasonic sensor for correction altitude position;
12. Roll position correction;
13. One-step calibration with memory;
14. Calibration test;
15. Depth correction by two heights;
16. 4 telemetry channels, up to 450 meters;
17. Wireless telemetry antenna up to 2 km\* (option);
18. DataLog;
19. User password and password on date;
20. Diagnostics;
21. Active and passive trace seek (for SNS 8t);
22. 3+ power modes;
23. Up to 45 meters depth;
24. 24 roll positions;
25. Angle accuracy 0.1%;
26. Distance accuracy: 0 – 5%;
27. One-step programming of frequencies/power modes/sleep mode ⊕;
28. Switching to any frequency during the drilling;
29. Programmed Modes underground switching;
30. Self-diagnostics and diagnostics of battery and transmitter housing;
31. All types of batteries, up to 20V.

## SNS Seek Generator\* – active seeking function

Seek generator made for creating AC with setted frequencies in steel communication (pipe). Generator and all needed accessories are put down to shock-proof case.

\* for SNS 8t



# Repeater SNS Vision



## Full-functional Repeater – Tablet ©, OS Android

- dimensions: 215 x 135 x 20mm, 8-inch screen;
- shock-, dust-, moisture-prooff;
- Power source: 5V, 2A. Internal power supply – 7400mA/h.

### Kit:

Repeater, leg, 2 antenna, 2 cables, car adapter.

## SNS Vision App

### Telemetry:

- transmitter temperature;
- angle (% ,  $\angle^\circ$ );
- locating line, clockface position, locating points, # of shot;
- visual and sound transmitter heating indication;
- predicted depth (only at front (F) point);
- permanent real-time displaying all needed locating information ©;
- current depth;
- horizontal distance Receiver Transmitter.

### Graphic editor:

- surface profile;
- project trajectory;
- obstacles;
- actual drilling trajectory;
- actual surface profile;
- double window view.

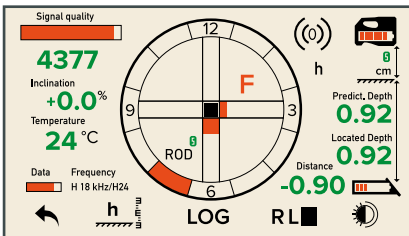
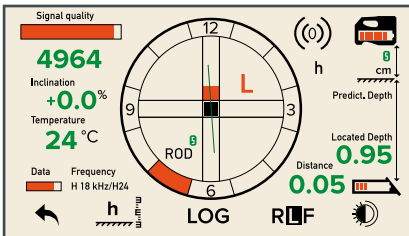
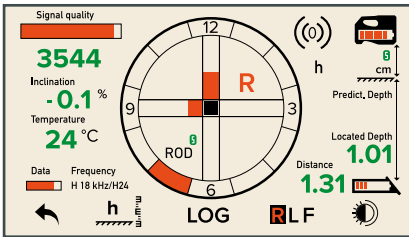
### Main Menu:

- import and creating of drilling project. Real-time project managing ©;
- operations with project;
- project export;
- drilling reports;
- possibility to add comments;
- GPS coordinates with connection to Google Maps.

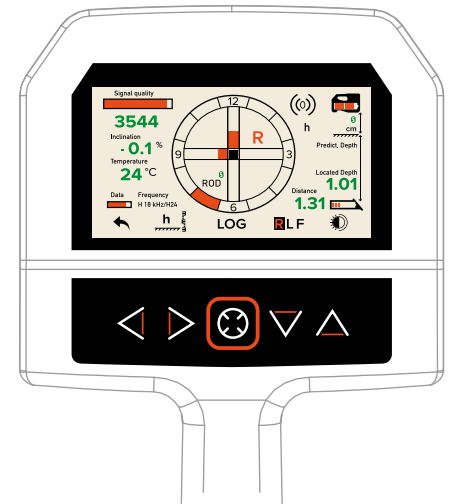


# Locating Screens

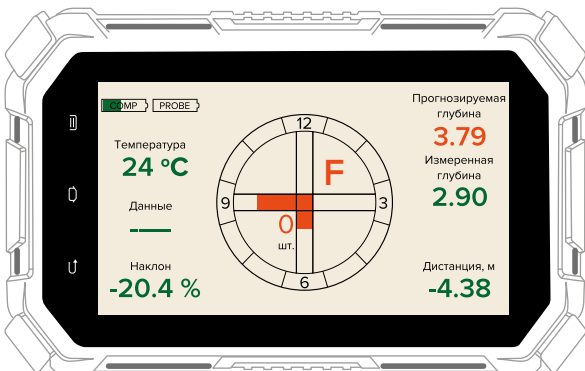
Advantage of SNS Receiver locating screen is constant displaying of all needed information



- quality of transmitter signal;
  - power of transmitter signal;
  - transmitter angle;
  - transmitter temperature;
  - transmitter power;
  - transmitter frequency.
- No. of telemetry channel;
  - receiver battery level;
  - distance to surface;
  - predicted depth (in the vicinity of the Front point);
  - current depth;
  - horizontal distance to the transmitter;
  - transmitter battery level.
- back to menu;
  - correction distance to surface;
  - record the shot (DataLog);
  - switching locating points;
  - day/night mode.



Main information from the Receiver transfers to the Repeater, including directions to locating points



- transmitter angle;
- transmitter battery level;
- transmitter temperature;
- repeater power;
- telemetry status;
- predicted depth (in the vicinity of the Front point);
- current depth;
- horizontal distance to the transmitter.

## Relay – increase your range

Additional outside wireless antenna that increases telemetry between Receiver and Repeater. Each Relay increases distance of transferring signal by 500 meters. Relay also helps to keep telemetry when there is no direct vision between Receiver and Repeater.



## WiFi R-Box – create your Repeater

Hardware-software complex that make Repeater from your Android device. It helps to keep Clients money on one side and make drilling process for operator more comfortable on another. Machine operator can choose convenient dimensions of the Android device and type of fixing it on panel.

## Azimuthal cable navigation system SNS 100



This system was built to control HDD process with big depth and length. Working principle is based on measuring of gravity and magnetic field of the Earth using special sensors in the probe. All data goes by cable to the Interface module of the system for decoding. From module data goes to PC where it is calculating to define depth, probe position, angle etc. Final information is assembling to convenient table and goes to Control Panel of Drillmaster.

## SNS t-series transmitters

##	Name	Dimensions	Power Supply	Depth, m
1	SNS st/100	Ø 43, L 550 mm	6x18650, up to 25V	100 m
2	SNS st/A	Ø 32, L 480 mm	2C, up to 10V	70 m
3	SNS st/EA	Ø 32, L 580 mm	4C, up to 10V	70 m
4	SNS st/C	Ø 32, L 480 mm	cable, up to 24V	50 m
5	SNS st	Ø 32, L 380 mm	2C, up to 10V	45 m
6	SNS st/E	Ø 32, L 480 mm	4C, up to 10V	45 m
7	SNS MKt1	Ø 15, L 222 mm	AAA, up to 5V	10 m
8	SNS MKt2	Ø 22, L 205 mm	AA, up to 5V	10 m
9	SNS MKt3	Ø 25,4, L 205 mm	AA, up to 5V	10 m
10	SNS MSt2	Ø 22, L 205 mm	AA, up to 5V	10 m
11	SNS Pt	Ø 15, L 205 mm	AAA, up to 5V	30 m

Adapters for transmitters for DitchWitch (DW) and TractoTechnik (TT) transmitter housings.

## Sense Lithium Battery

### ER261020M – high capacity battery

Lithium Battery  
3.6V, 2C Type  
Nominal capacity 13000mAh  
Max. constant current 1800mA

### ER26500M\* – increased range by 25%

Lithium Battery  
3.6V, C Type  
Nominal capacity 6500mAh  
Max. constant current 1500mA

\*only for SNS transsitor (!)



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