

Sales Bulletin

Attention: All Furuno distributors/subsidiaries

Date: July 23, 2010

SB No : FSB10-0008

Number of Pages: 8

Bottom Discrimination Sounder

BBDS1

New Product Information

A. What is BBDS1?

1. *Bottom Discrimination helps...*
2. *What BBDS1 offers*
3. *How to Activate Bottom Discrimination Function*
4. *Required Conditions for Bottom Discrimination*

B. Specifications

1. *Comprising and Options*
2. *Specifications*
3. *Comparison with DFF1*

C. Installation

D. Outline Drawing



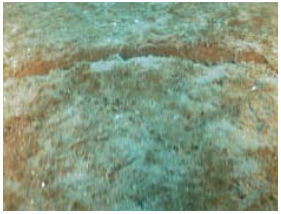



A. What is BBDS1?

1. Bottom Discrimination helps...

The sea bottom consists of several kinds of materials, and it could be a big help if you could see them – You may be able to find a suitable point of target fish, guess a type of fish down below, and anchor at an appropriate place.

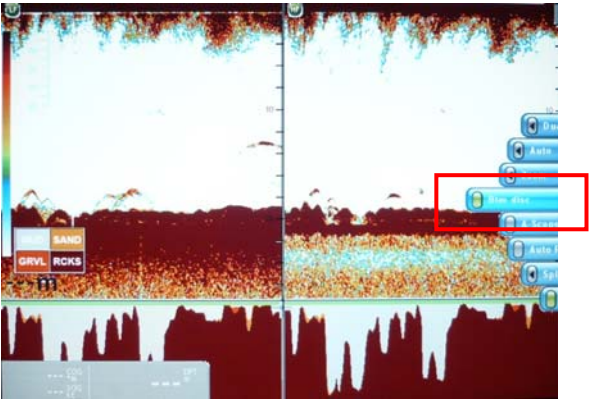
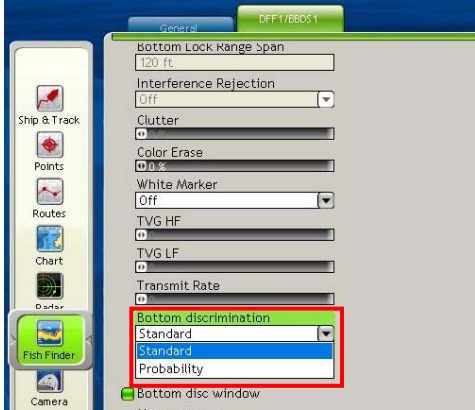
2. What BBDS1 offers

The BBDS1 is the new network sounder featuring the **bottom discrimination function** as well as the digital filter technology succeeded from the DFF1, and enables to indicate a major component of the bottom among **mud, sand, gravel, and rock**, which is achieved by analyzing a different echo from each component made of varieties of size and hardness. Connect the BBDS1 on the NavNet 3D network and get ready for this unique feature.

	Mud	Sand	Gravel	Rock
Indicated Bottom Type				

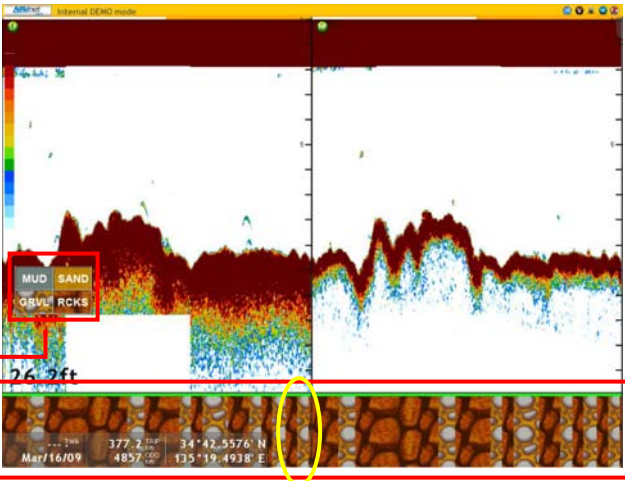
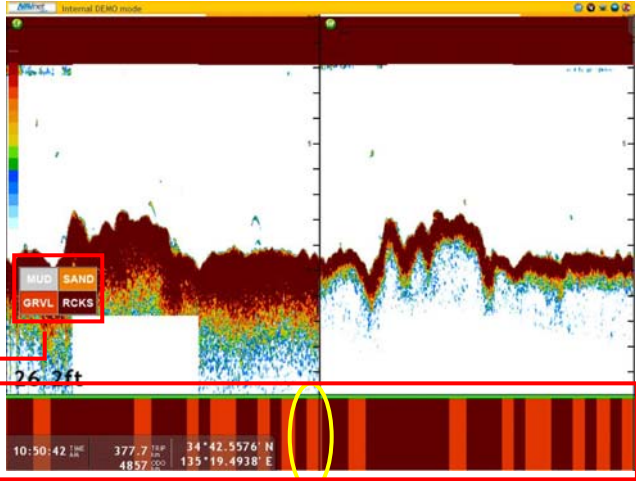
3. How to Activate Bottom Discrimination Function

Clicking **"Btm disc"** in the **RotoKey** menu, the bottom discrimination function is available with two presentation patterns – **"Standard Mode"** and **"Probability Mode"**.

Activating bottom discrimination function	Selecting presentation mode
	
<p>Push the RotoKey and set "Btm disc" on.</p>	<p>Select "Standard" or "Probability" in Fish Finder menu, DFF1/BBDS1 tab, Bottom discrimination.</p>

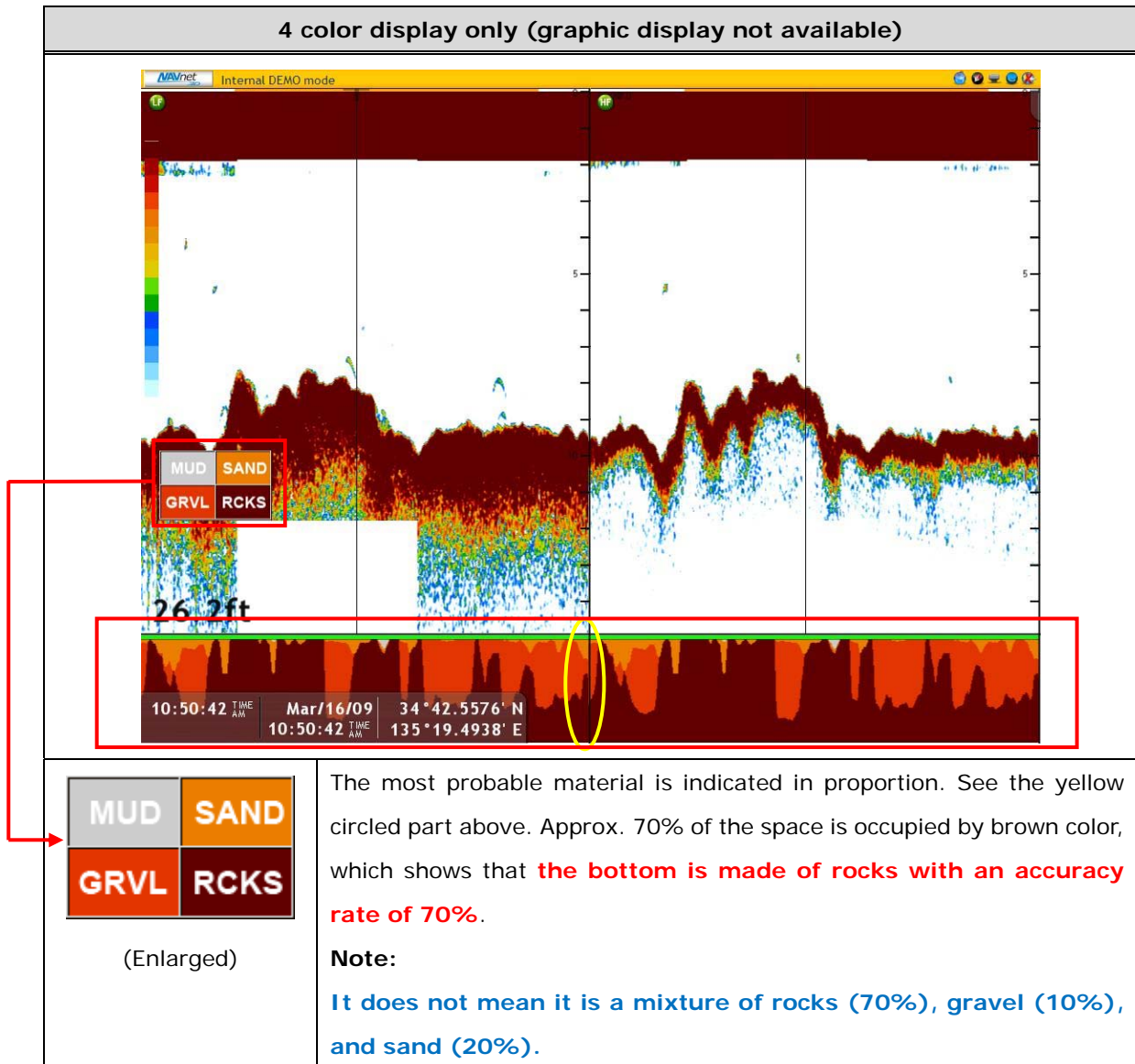
1) Standard Mode

The most probable material on the sea bed among mud, sand, gravel, and rock is indicated graphically or with 4 colors in the bottom of the display.

Graphic display	4 color display								
									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; background-color: #cccccc;">MUD</td> <td style="text-align: center; background-color: #cccccc;">SAND</td> </tr> <tr> <td style="text-align: center; background-color: #cccccc;">GRVL</td> <td style="text-align: center; background-color: #cccccc;">RCKS</td> </tr> </table> <p style="text-align: center;">(Enlarged)</p>	MUD	SAND	GRVL	RCKS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; background-color: #cccccc;">MUD</td> <td style="text-align: center; background-color: #cccccc;">SAND</td> </tr> <tr> <td style="text-align: center; background-color: #cccccc;">GRVL</td> <td style="text-align: center; background-color: #cccccc;">RCKS</td> </tr> </table> <p style="text-align: center;">(Enlarged)</p>	MUD	SAND	GRVL	RCKS
MUD	SAND								
GRVL	RCKS								
MUD	SAND								
GRVL	RCKS								
<p>The bottom type is presented graphically. The sample circled in yellow shows the bottom under the boat is most probably made of gravel.</p>	<p>The bottom type is presented in 4 colors. The sample circled in yellow shows the bottom under the boat is most probably made of gravel.</p>								

2) Probability Mode

Sometimes it is difficult to specify one certain material depending upon conditions, which change frequently. The probability mode enables to present the bottom type with an accuracy rate.



4. Required Conditions for Bottom Discrimination

Detection Range	5-100m
Boat Speed	0-10kt
Transducer mounting	Thru-hull or transom mount only
MFD8/12/BB software	v2.06 or later

< Limitation > Performance

- 1) The result shown on the display may sometimes be different from the actual one.
- 2) The good performance is not secured with inner-hull mounted transducers.
- 3) The BBDS1 may show an incorrect result especially when there is a big fish school right under the boat because enough echoes are not received from the bottom.
- 4) Materials such as shell, coral, sunken ship are detected as the most similar material to either one among mud, sand, gravel, or rock, according to reflected echoes.

< Limitation > Operation / Installation

- 1) **Auto mode** is automatically activated when the bottom discrimination function is turned on. (Manual mode is not selectable.)
- 2) The BBDS1 is **not compatible with the NavNet 1 and NavNet vx2**.
- 3) It is **not possible to modify the DFF1 and DFF3** to have the bottom discrimination function.

B. Specifications

1. Comprising and Options

Standard

Name	Type	Code	Qty	Remarks
Bottom Discrimination Sounder	BBDS1	—	1	
Spare Parts	SP02-05201	001-007-860	1	Fuse
Installation Materials	CP02-08700	001-105-120	1	Power cable (3.5m) LAN cable (5m for NavNet 3D)
Installation Materials	CP02-08101	001-007-210	1	Self-tapping screws

Options

Name	Type	Code	Remarks
Matching Box	MB-1100	000-041-353	for 1kW
Cable Assembly	MOD-Z072-020+	000-167-175	2m, for NavNet 3D
	MOD-Z072-100+	000-167-177	10m, for NavNet 3D
Transducer	520-5PSD	000-015-204	Thru-hull mount, plastic
	520-5MSD	000-015-212	Thru-hull mount, Metallic
	525-5PWD	000-146-966	Transom mount, plastic
	50/200-1T	000-015-170	10m, 1kW
	50/200-12M	000-015-171	10m, 1kW

Triducer	525STID-MSD	000-011-783	Thru-hull mount, metallic
	525STID-PWD	000-011-784	Transom mount, plastic
Speed/Temperature Sensor	ST-02MSB	000-137-986	Thru-hull mount, steel hull
	ST-02PSB	000-137-987	Thru-hull mount, plastic hull
Temperature Sensor	T-02MTB	000-040-026	Transom mount
	T-02MSB	000-040-040	Thru-hull mount
	T-03MSB	000-040-027	
Cable Assembly	02S4147-1	000-141-082	for Speed/Temperature Sensor
Rectifier	PR-62	000-013-484	100VAC
		000-013-485	120VAC
		000-013-486	220VAC
		000-013-487	240VAC

2. Specifications

- Frequency 50/200kHz Two frequencies alternately transmitted
- Output Power 600W/1kW
- Power Supply 12-24VDC: 1.1-0.4A (Output Power: 1kW)

- Ambient temperature -15 to +55
- Relative Humidity 93% at 40
- Waterproofing IP20 (not waterproof)

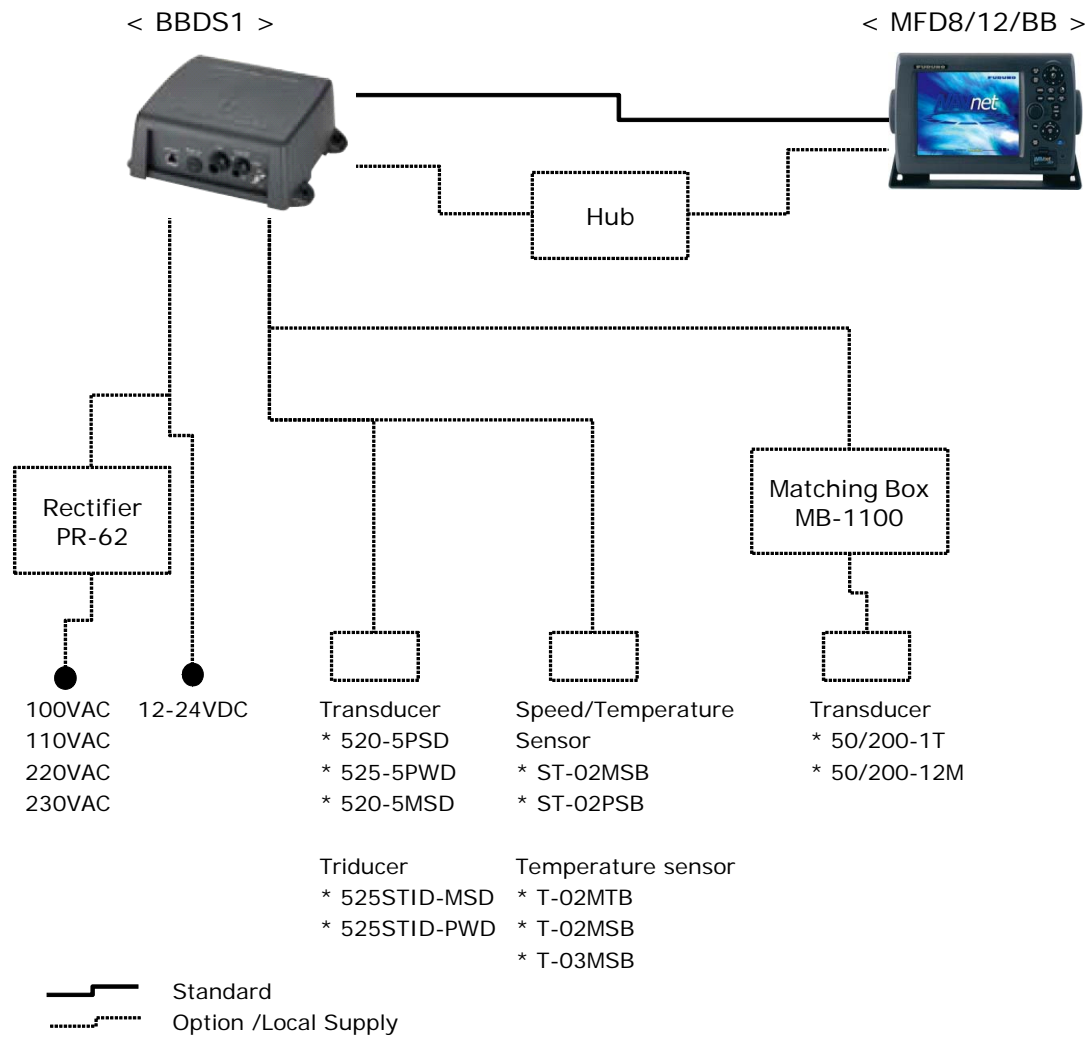
3. Comparison with DFF1

	BBDS1	DFF1
Bottom discrimination	Available	Not available
Accu-fish	Available	Available
Compatible unit	NavNet 3D (MFD8/12/BB) only	NavNet 1, NavNet vx2, NavNet 3D
Transducer installation	Thru-hull, transom only (No inner-hull)	Thru-hull, transom, inner-hull (No inner-hull for accu-fish)
Frequency	50/200kHz (Single frequency not available)	50kHz, 200kHz, 50/200kHz (50/200kHz for accu-fish)

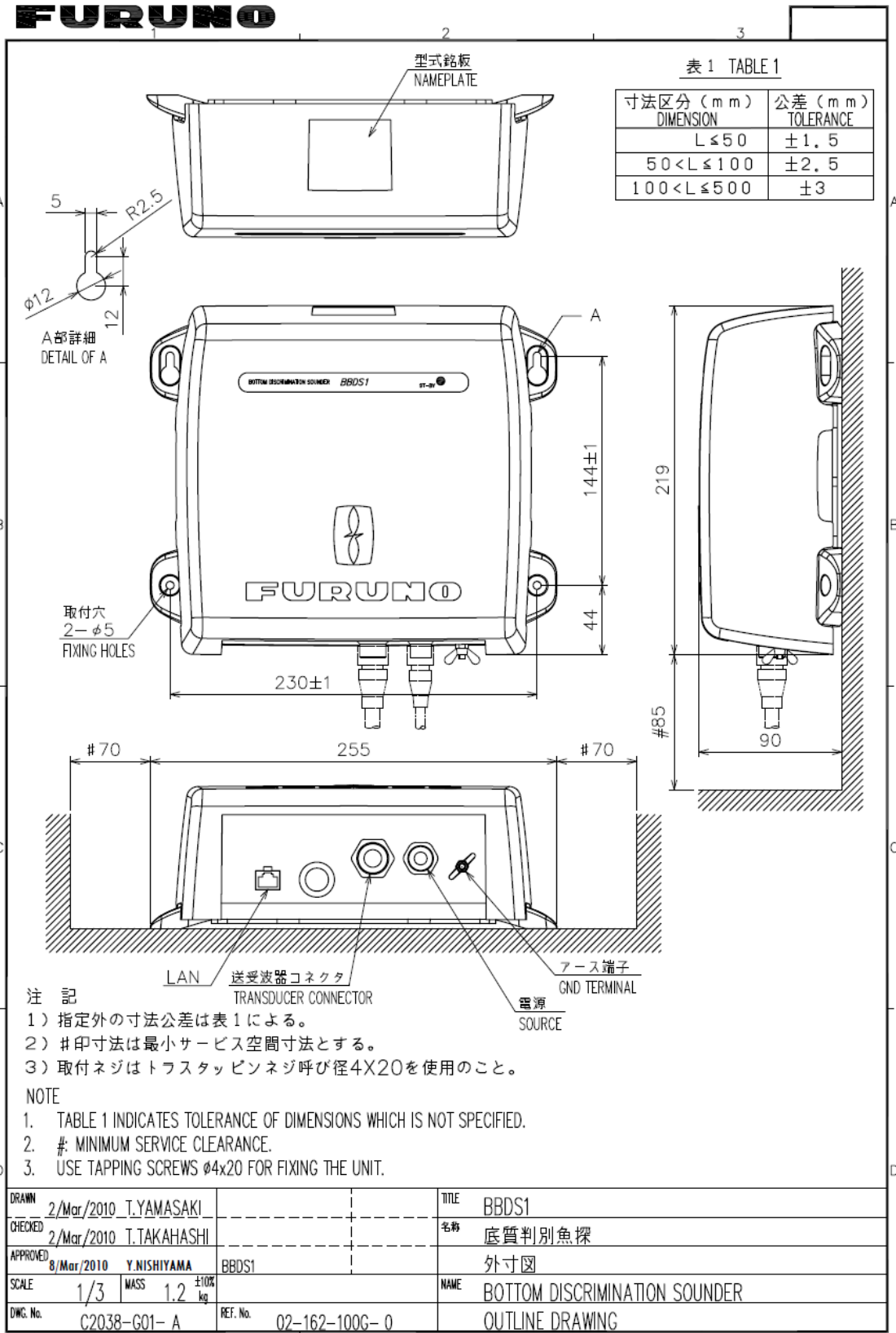
4. Packing Details

	N/W (kg)	G/W (kg)	M3	L (mm)	W (mm)	H (mm)
1 set/ctn	2.0	3.0	0.026	320	310	260
6 sets/ctn	18.0	21.0	0.173	770	660	340

C. Installation



D. Outline Drawing



FURUNO ELECTRIC CO., LTD.

--- END ---