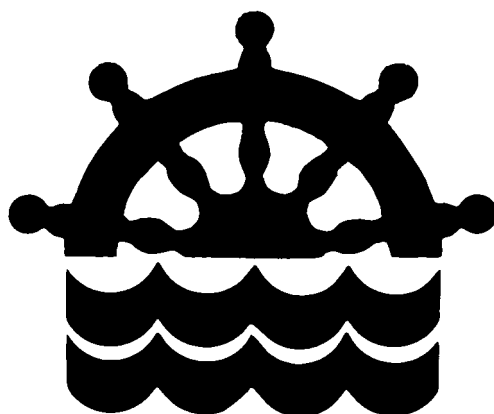


BRA 200 REPEATER

Operation
and
Installation
manual

V.3 February 2001



SCAN-STEERING

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1. BRA-200 - a brief description.

The BRA-200 is a bearing repeater, designed to withstand the conditions on a ships bridge. The BRA-200 is mounted in a bracket.

The repeater is provided with an illuminated scale for proper course reading. Also it is provided with a reset function and dimmer key located on the front.

The BRA-200 repeater only needs a 24V DC power and a NMEA 0183 or step by step input signal.

2. Input signals.

BRA-200 is provided with various input facilities. It is possible to input any common 24V/30V/70V step signals or NMEA183 RS422.

The step signals are selectable to have either positive or negative reference and a voltage of 24V, 30V or 70V.

The NMEA signal has to be NMEA183 RS422.

The choice of input is made through several switch-settings gives an easy selection of the desired input type.

3. BRA-200 REPEATER OVERVIEW.

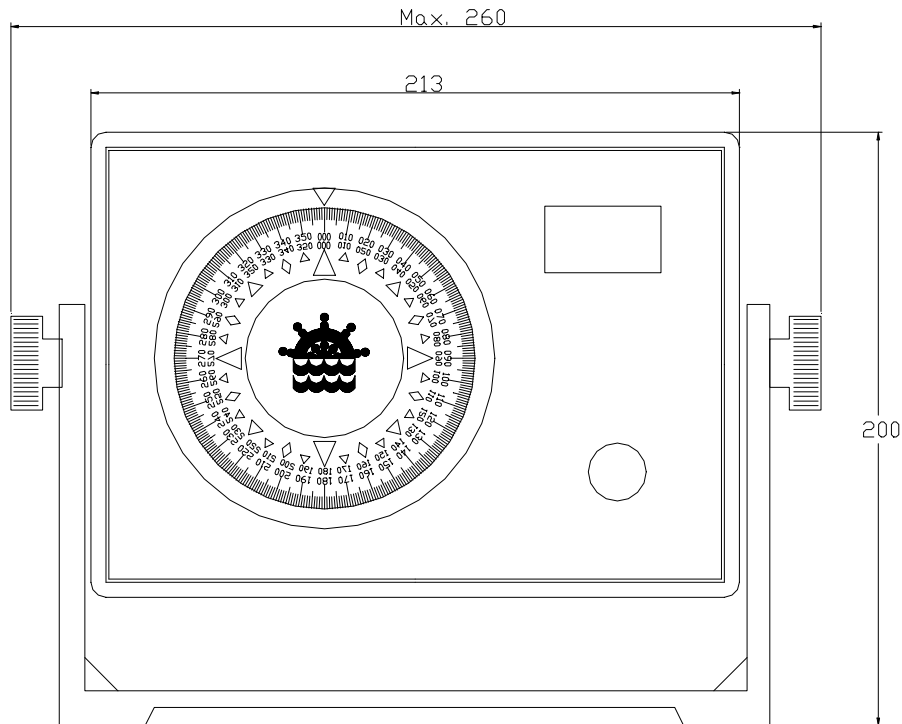


Fig. 1.

3.1. COMPASS ROSE:

The top of the repeater consists of a compass rose field with diameter 200mm.

3.2. DIMMER:

Enables dimming of the scale light. Turned clockwise to increase the light intensity.

3.3 RESET:

The reset button is used for adjustment of the repeater reading when the repeater is setup to step by step. Push the button and keep it pushed. Doing this will make the repeater change its reading. First slowly (for app. 2 sec.) and then fast.

4. Configuration.

Before applying power to the repeater, be sure that a proper configuration has been set up.

The configuration is done by setting 24 small dip switches. Those 24 dip switches are divide into 4 switches with 6 dip switches in each. These switches are called SW1, SW2, SW3 and SW4. Each little dip switch is numbered with 1 - 6 and are referred to as e.g. SW2.3 (Switch nr. 2, Dipswitch nr. 3).

The switches must be set to the right type of input signal. The settings are shown in figure 2.

		SW4						SW3						SW2						SW1					
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
24-30V Step	ON							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Neg. common	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24-30V Step	ON							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pos. common	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
70V Step	ON							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Neg. Common	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70V Step	ON							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pos. common	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
NMEA 183	ON			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														
RS 422	OFF	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Fig. 2. Dip-switch settings.

5. Connections.

The BRA-200 repeater only needs a supply of 24V DC and NMEA or Step by Step input signal. All the connections are made in the connection box with dimmer and reset

6. Disassembly.

To disassembly the repeater, remove the 8 screws in the top of the repeater. Remove the ring and the top plate. Loosen the 3 small screws in the side of the repeater. Now the scale and the mounting plate can be removed by lifting in the two big holes in the scale and in the mounting plate.

7. Technical Data.

Input: STEP by STEP (24V/30V/70V)
NMEA 183 RS422 (\$xxHDT,\$xxHCC)

Power supply: 24V dc.

Power consumption: Max. 10 Watt.

8. Dimension of Casing.

