



SIDE-POWER Thruster Systems

Installation & User Manual Radio Remote RCS 20E



SLEIPNER MOTOR AS

P.O. Box 519
N-1612 Fredrikstad
Norway
Tel: +47 69 30 00 60
Fax: +47 69 30 00 70



www.side-power.com
sidepower@sleipner.no

Made in Norway

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Model range

The radio remote control can control a single bow thruster or a bow and stern thruster combined.
The receiver can receive the signals of up to four transmitters.

Remote control kit RCS-20E consists of:

- Receiver: Part no. RCRS-2E
- Transmitter (incl. battery): Part no. RCT-20E
- Holding bracket for transmitter unit: Part no. RC-HOLDER

Additional transmitters can be ordered separately; Part no. RCT-20E



We **Sleipner Motor AS** declare that this device complies with health and safety requirements according to the Directives
EN301 489-3 V1.4.1:2002
EN301 489-1 V1.4.1:2008
IEC 60533:1999
EN300 220-1 V2.3.1:2010
EN300 220-2 V2.3.1:2010



Technical specifications



	Transmitter	Receiver
Power feed	1x3V battery (type: CR2032)	12V or 24V power source
Frequency (MHz)	868MHz	868MHz
Operation temp.	-10°C / +55°C	-15°C / +55°C
HxWxD (mm)	107x47x21	110x35x35
Weight (g)	60	170
Voltage		8-30V
Operating range	15m under normal operating conditions	

Important precautions

- With the boat on land, only run the thruster for a fraction of a second, as without resistance it will accelerate very fast to a damaging rpm.
- This manual is intended to support educated / experienced staff.
- When installed in boats approved or classified according to international or special national rules, the installer is responsible for following the demands in accordance with these regulations / classification rules. The instructions in this guide can not be guaranteed to comply with all different regulations / classification rules.
- The transmitter and the receiver have the same factory preset code so no programming is necessary. When additional transmitters are to be used, follow the instructions in the programming section.

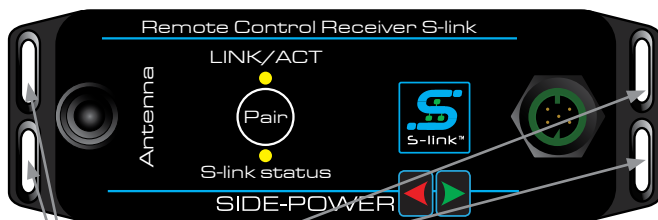


Receiver installation

Prior to installation, it is important that the responsible installer reads this guide to ensure necessary acquaintance with this product.

- Install the receiver minimum 1 meter (3ft) from high power cables and data communication cables or other sources of electrical interference, i.e. navigation instruments, radio communication devices, electric motors and generators.
- Install the receiver minimum 1 meter (3ft) above sea level.
- Install the receiver outside of shielded areas for radio signals, i.e. boxes made of metals or other material with shielding properties.
- Install the receiver in a dry environment, where no condensation can enter the unit. (The receiver assembly is not waterproof.)
- The receiver is powered by the S-link cable.
- Mount the receiver using the four holes (please see picture on page 5).

Note! Faulty installation will render all warranty given by Sleipner Motor AS void.

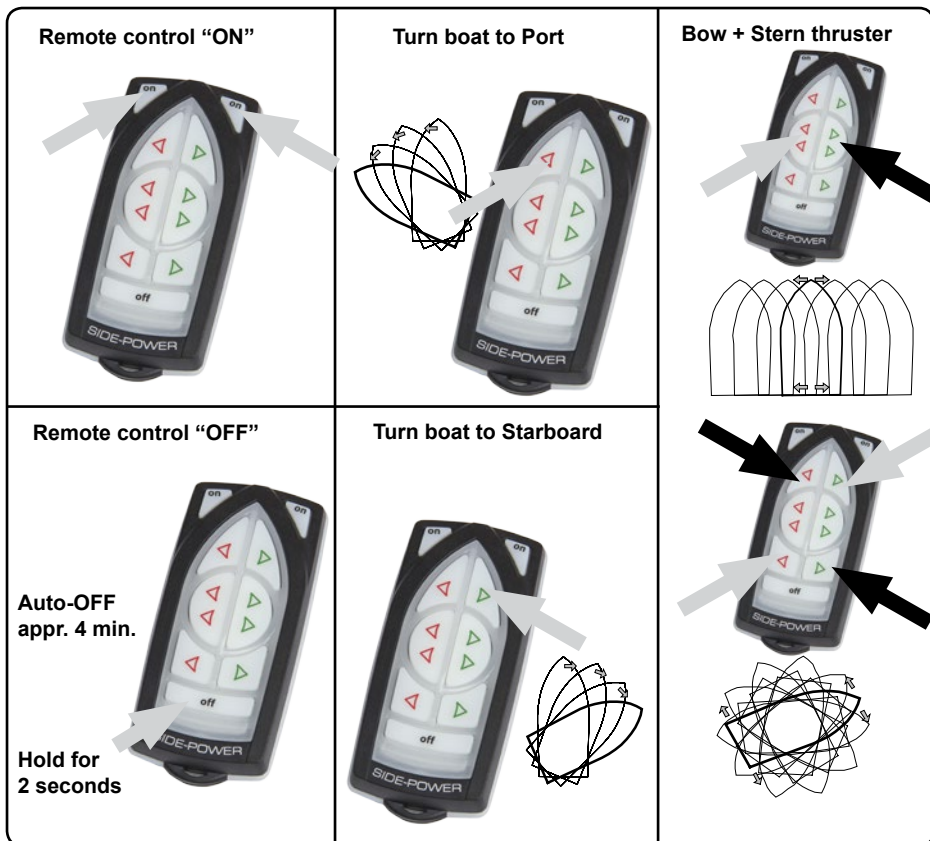


Mount the receiver by using
the 4 holes.

User precautions

- Ensure that you know the location of the main battery switch that disconnects the thruster from all power sources (batteries) so that the thruster/windlass can be turned off in case of a malfunction.
- The maximum continuous usage time of the electrical thruster is approx. 3 minutes. The electric motor has a built-in thermal cut-off switch that will shut it off when overheating and re-engage it when it has cooled down some. This should be considered when planning your maneuvering.
- Never use a thruster close to somebody in the water, as the thruster will draw objects close by into the tunnel and contact with the rotating propellers will cause serious injuries.
- Never use a windlass close to somebody in the water, as an unexpectedly dropped anchor can cause serious injuries.
- If the thruster stops giving thrust while the electric motor is running, chances are that there is a problem in the drive-system. You must then immediately stop trying to run it, and turn it off, as running the electric motor for more than a few seconds without resistance from the propeller, can cause serious damage to the electric motor.
- When leaving the boat always turn off the main power switch for the thruster/windlass and turn off the power to the receiver.
- We advise to always keep the main engine(s) running while using a thruster/windlass. This will keep the batteries in a good charge condition. This will also give better performance to the thruster.
- It is the owner/captain/other responsible party's full responsibility to assess the risk of any unexpected incidents on the vessel. If the thruster stops giving thrust for some reason while maneuvering you must have considered a plan on how to avoid damage to persons or other objects.

RC-20E



How to use a bow/stern thruster

1. Turn the main power switch for the bow/stern thruster on. Turn on the power to the receiver.
2. Turn on the transmitter by pushing the transmitter's two "ON" buttons. The remote system is now activated and then turns off automatically appr. 4 min. after the last usage.
3. Please take some time to exercise thruster usage in open water to avoid damages to your boat.
4. Turn the bow/stern in the desired direction by pushing the red button for port movement or the green button for starboard movement.

How to use a bow & stern thruster combined

The combination of a bow and stern thruster offers total manouverability to the boat and the opportunity to move the bow and the stern separately of each other. The remote middle buttons gives you the opportunity to operate both thrusters in the same direction with one keypress, making sideways movement easier.

Remote Control Deactivation

Push the transmitter's "OFF" button for 2 seconds (the remote control deactivates automatically after approx. 4 minutes after the last usage).

- If in doubt, try in open water first!



Transmitter LED operation and alarm indication

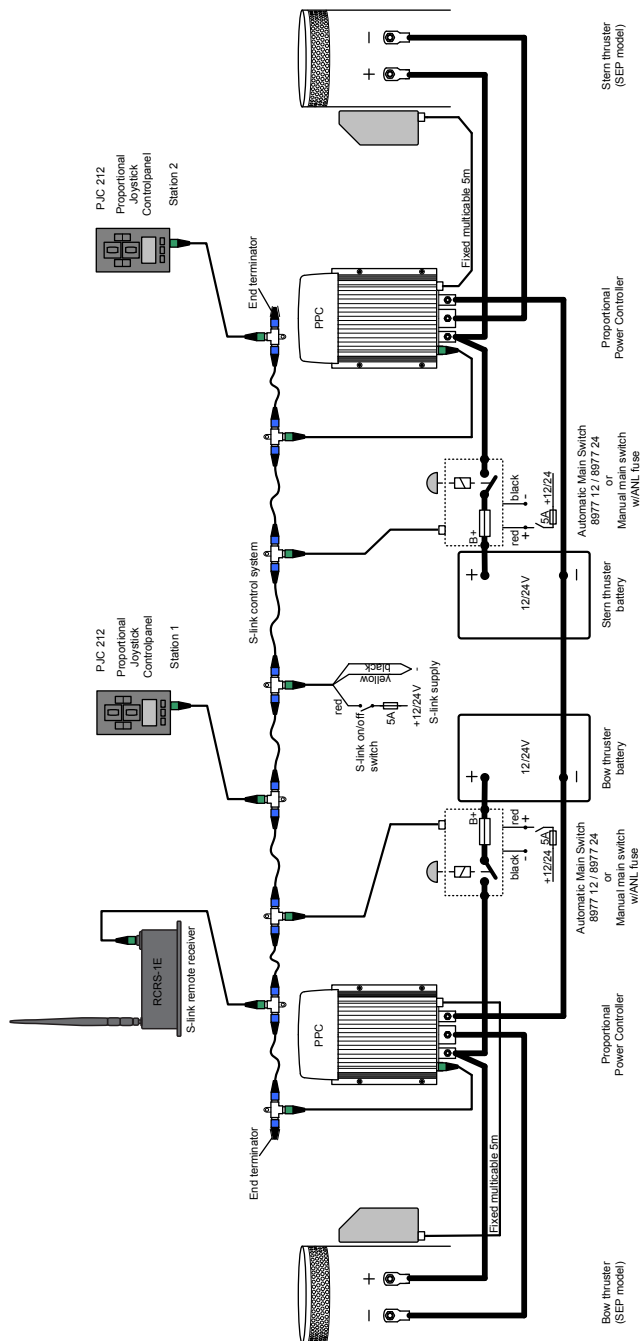
State	LED status	Alarm status
Transmitter ON	The yellow LED's blink each second	No sound
Buttons activated	The yellow LED's blink fast	No sound
Pairing mode	All LED's on	No sound
Connection lost	Red LED is blinking once each second	3 beeps from the buzzer each second
Low battery	Red LED blink	One beep

Receiver LED indicator

S-link status LED	Status
OFF	No power to receiver
Continuous green	OK, S-Link Bus active
Blinking green	No activity on S-link Bus

LINK/ACT LED	Status
OFF	Remote off
ON	At least one transmitter connected.
Blinking	Device in pairing mode.

Electric diagram



Observe PPC battery
terminal polarity !

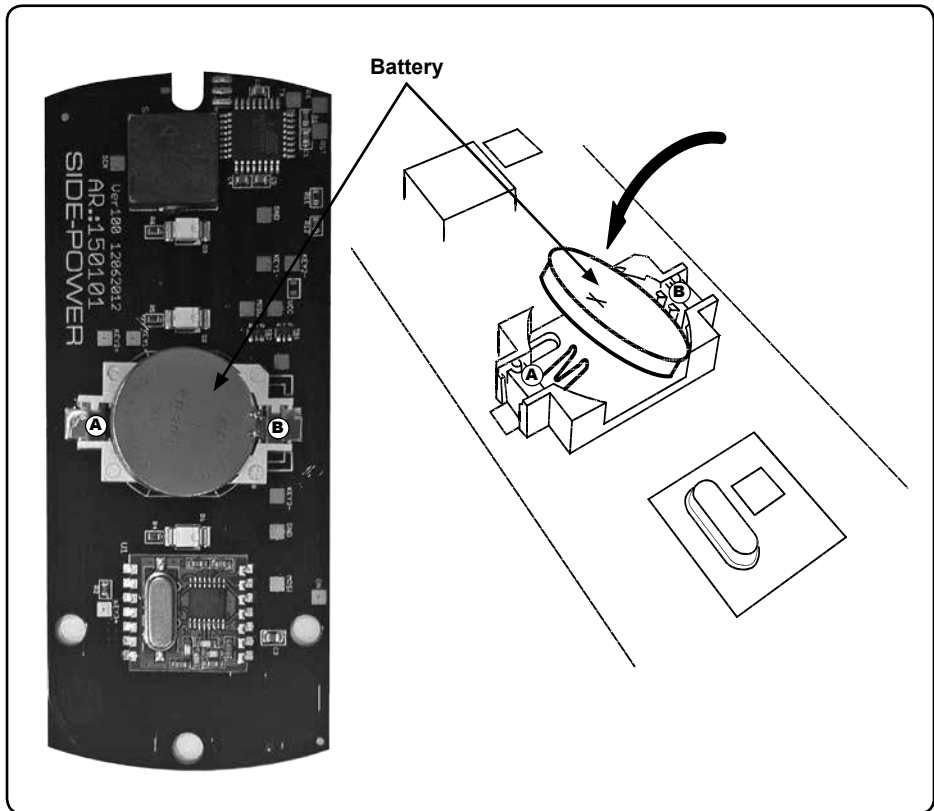
Programming additional receivers



The original transmitter and receiver have the same factory preset code so that no programming is necessary. When additional transmitters are to be used, the additional transmitters has to be paired with the receiver.

1. Be sure there is power on the receiver (S-link status LED is blinking green or continuous green) and the transmitter that should be paired is off.
2. Push the Pair Button on the receiver to put the receiver in pairing mode (as shown above). The LINK/ACT LED should start to blink.
3. Within 10s after the receiver pair button is pushed, set the transmitter in pairing mode by holding the off button and pressing both "ON" buttons at the same time, all the transmitter LED's turn on indicating that it is set in pairing mode. When a pairing signal is received from the receiver the transmitter LED's will turn off and the system is ready to be used. If no pairing signal is received within 10s the transmitter will leave the pairing mode.
4. Additional transmitters must be programmed according to step 2-3. You can pair up to 4 transmitters.
5. To clear all transmitters paired with the receiver hold the pair button on the receiver for approximately 10s until the LINK/ACT LED stops blinking. When the LED stops blinking release the pair button. The receiver is then ready to pair with up to four transmitters.

Replacing transmitter battery

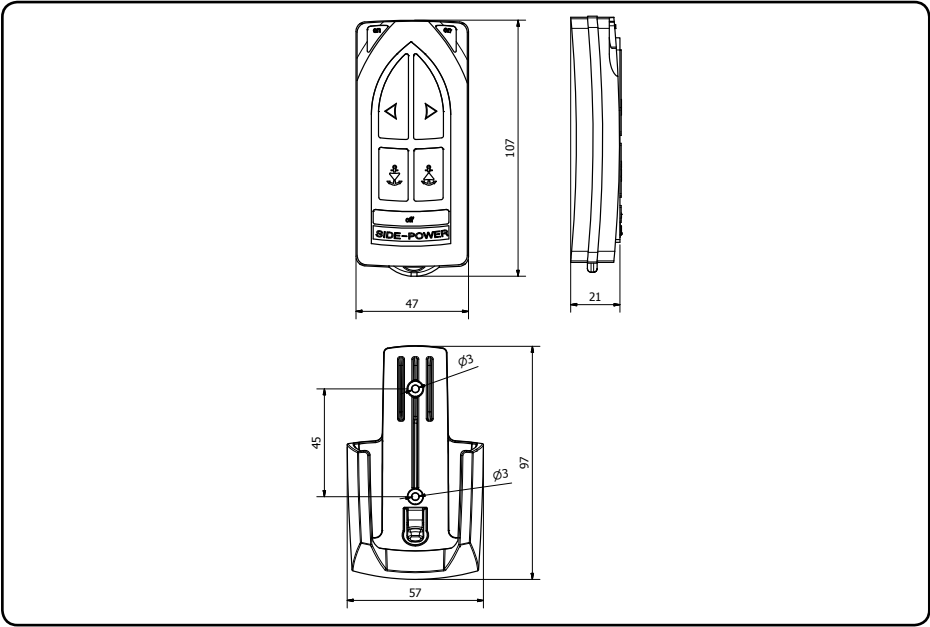
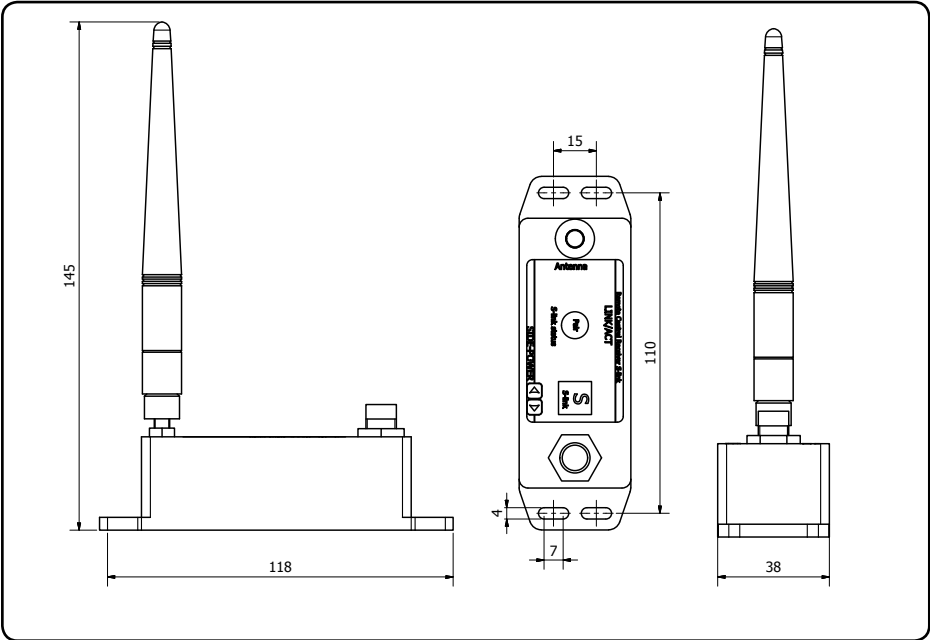


WARNING:

Before working on the transmitter, deactivate the transmitter and the receiver (push "OFF" on the transmitter(s)) and turn off the power to the receiver as well as the thruster mainswitch.

1. Open the transmitter case by removing the 3 torque screws.
2. Remove the battery by inserting a screwdriver or similar between battery and holder at point A, and gently flip the battery out, taking care not damaging the battery grips at point B.
3. Insert the new battery (Type CR2032, 3V - Brand name recommended). Be sure to insert the battery with the positive pole up diagonally into the battery holder, ensuring that the edge of the battery is under the battery grips (B). Press the battery down until secured at point A.
4. Close the transmitter. Put the cover back in place, ensure that the rubber seal between remote upper and lower part is located correctly. Place the 3 screws (remember sealing washer) in their recessed holes and tighten.

Dimensions



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www.side-power.com



SLEIPNER MOTOR • AS P.O. Box 519 • N-1612 Fredrikstad • Norway
Tel: +47 69 30 00 60 • Fax: +47 69 30 00 70 • www.side-power.com • sidepower@sleipner.no

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