DNG R1 jigging machine

Version 1.33

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Foreword

Dear customer,

We are thrilled to welcome you to the community of sailors who have chosen to incorporate the R1 jigging reel onto their boats. We want to provide you with some helpful tips and information to ensure you have the best experience possible.

This manual covers everything you need to know about setting up your jigging machine, connecting it to your boat's electric system, and configuring and using it. We highly recommend taking the time to read through the manual thoroughly. Previous users who have done so have encountered fewer problems and have been able to customise the machine to their specific needs. Even if you do not use all the features initially, having knowledge of them will make it easier for you to utilise them when you need to in the future.

The R1 jigging machine has undergone rigorous quality control tests, including waterproofing and pressure testing. We are confident the machine will provide you with many years of reliable use.

Lastly, we at DNG want to congratulate you on purchasing the R1 jigging machine. We believe it will deliver many successful catches for you in the years to come.

Sincerely,

DNG ehf.

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Overview

Features of the R1 jigging machine

The R1 jigging machine is a very sophisticated device. Its primary function can be split into three parts. First, pay out the line with a weight at the leader and detect when it reaches the bottom. Second, jig to attract fish and detect when they bite. Third, haul the fish up to the surface.

Its main features include:

- High performance with low current consumption.
- Works on both 12V and 24V systems.
- Completely waterproof.
- Communication with other R1 machines.
- Built-in and customisable fishing systems.
- Fish searching system.
- Configurable to practically every situation.
- Special settings for mackerel and squid fishing.

Manual

This manual intends to help you set up and use the R1 jigging machine, whether you are a new or an experienced user.

Connection Diagram

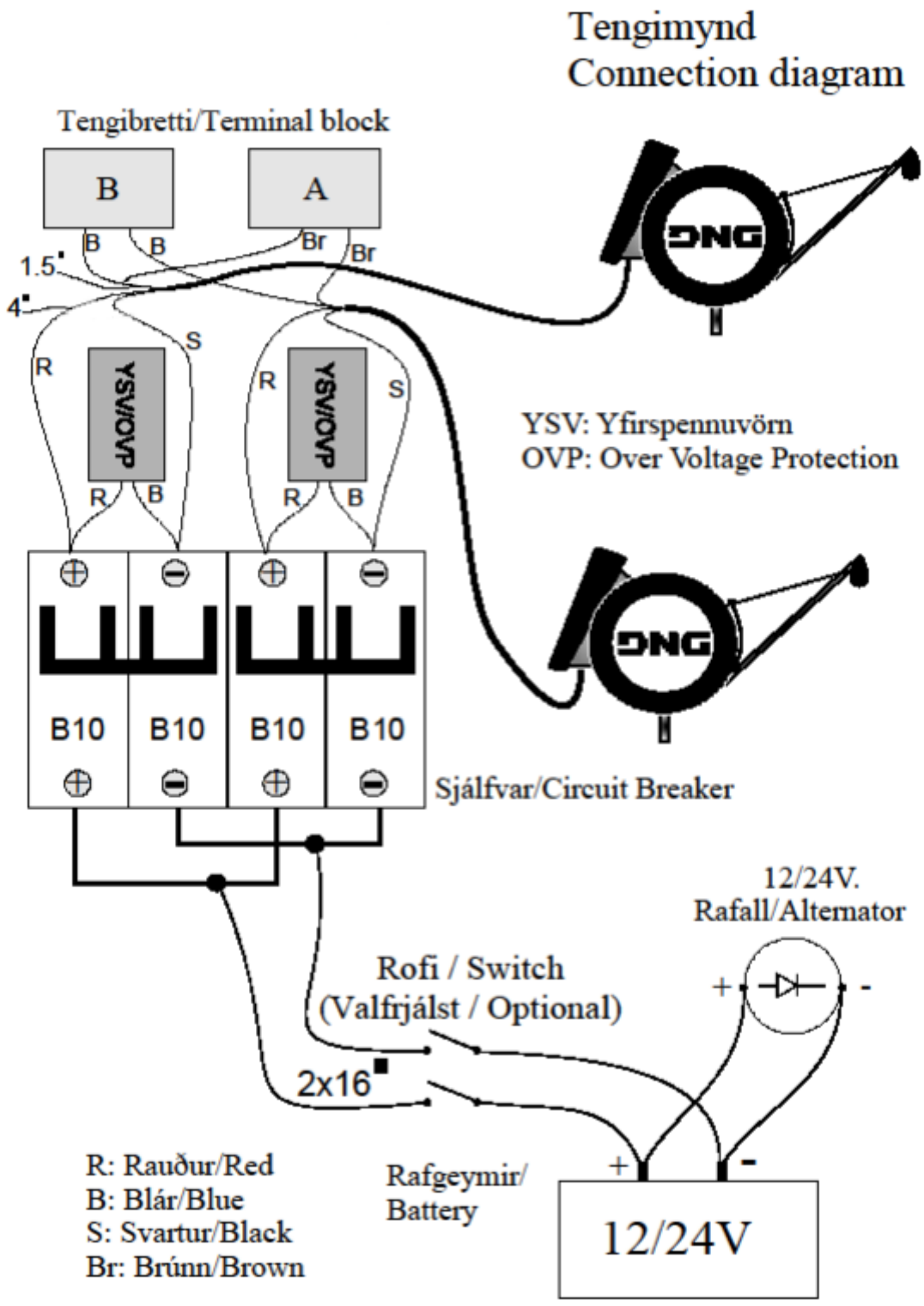


Figure 1: Connection diagram

Installation

Securing the machine

The “foot” of the machine will fit into a one-inch pipe. It’s best to have a stainless-steel pipe securely fastened down (bolted down).

Electricity

The electrical cable should not be too long or short. The cable has four wires: two 4 mm^2 power wires and two 1.5 mm^2 communication wires. The power wires are red (positive) and black (negative). The machine should be connected to a connection box from DNG or distributors. The connection box should include a two-pole circuit breaker for each machine and an overvoltage protection unit. The circuit breaker preferred is type B10.

The two communication wires are brown and blue. They should connect to a terminal block, as shown on the connection diagram.

Note: A polarity reversal will not harm the reel in any way, but it will result in an operational failure of the machine while incorrectly connected. If nothing happens on the screen when power is applied, check the polarity of the connection.

Switching the power on

When the machine has been mounted and connected to the electric system, the power can be applied by the switch on the circuit breaker (or an optional switch). The machine may take a few seconds to perform a self-test and then displays the program version and serial number for 5 seconds. Then, the main screen will appear on the display. It is necessary to turn the drum as much as one turn to initialise. Then, the machine enters a Stop state, and the drum can no longer be rotated freely.

Note: Each time power is applied, the reel won’t work if not initialised by turning the drum. This will, however, happen automatically when the sinker is thrown overboard.

High and low voltage

Suppose the voltage of the electrical system rises above approximately 32V. In that case, the overload voltage protection unit in the connection box will short-circuit the output of the circuit breaker, which then disconnects the reel from the electrical system. If, on the other hand, the voltage is too low (below 10V on a 12V system and below 20V on a 24V system), the machine will show a popup on the display and emit a sound as a warning. If the voltage continues to drop, it will finally result in an operational failure of the reel.

This will not harm the machine in any way, but it can damage the batteries of the electrical system.

Figure 2: An R1 reel with a line

Line and sinker

When the reel has been mounted and power applied, the line is fitted on the drum. The figure above shows a typical configuration when fitting the line on the drum.

How to put the line on the drum:

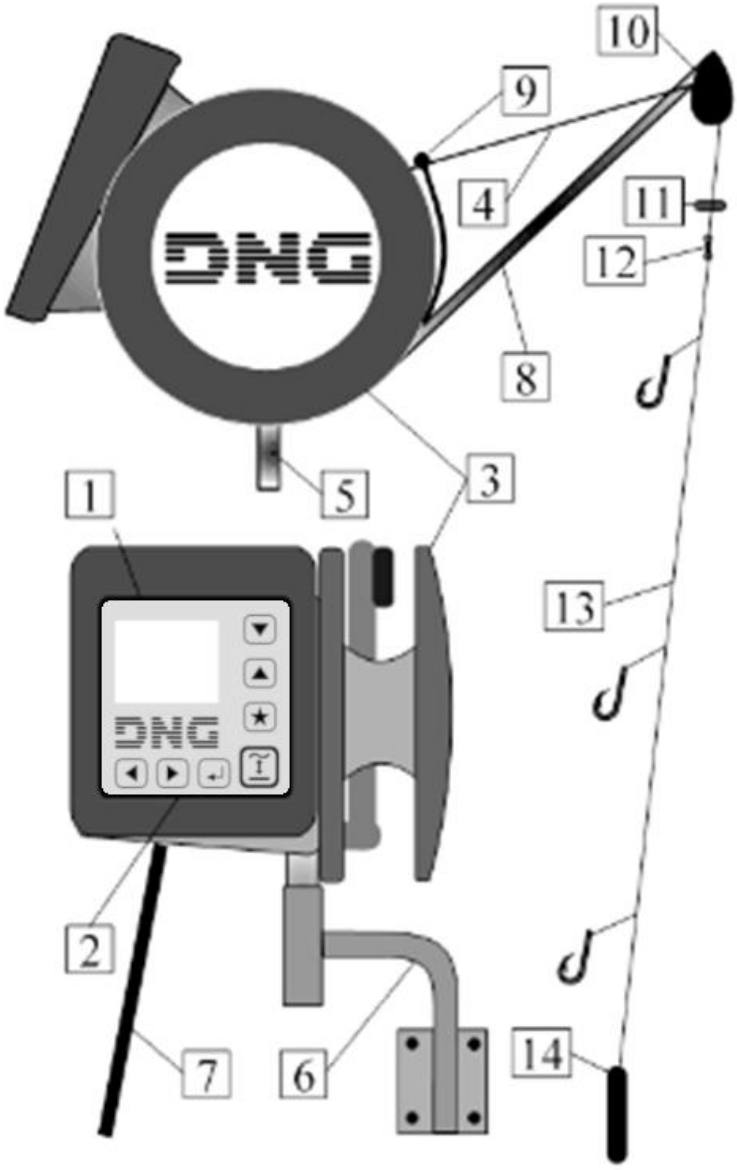
1. Remove the cap on the drum and fasten the line via the small hole near the drum's centre.
2. Press the **MAIN** button twice to start hauling the line.
3. Hold the line so that it is threaded tightly around the drum. **Take care not to get your hand stuck in the wheel. Wear protective gloves.**
4. If you are comfortable with more speed, you can press the **UP** button.
5. When the entire line has been fitted onto the drum, press the **MAIN** pad again to stop the reel.

Using a stop ring is unnecessary, but the "Stop at zero" (page 20) setting must be enabled if you don't.

Note: The reel will not work correctly if the line does not go through the slack sensor arm

A sinker is used at the end of the leader. The reel is factory-tested with a sinker weighing 2kg.

The main parts of the reel



1. Display
2. Control panel
3. Drum
4. Line
5. Reel foot
6. Mounting pipe
7. Power cable
8. Arm
9. Slack sensor
10. Pulley
11. Stop ring
12. Swivel
13. Leader
14. Sinker

Figure 3: The parts of the reel

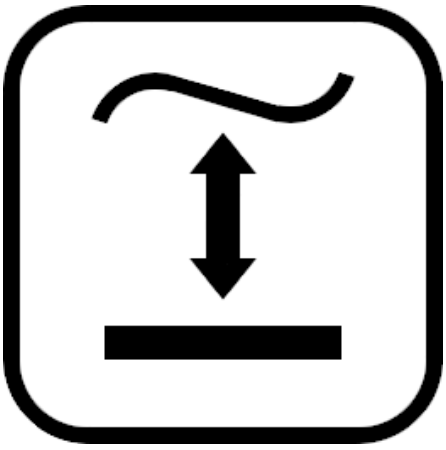
Control panel

The parameters that control the reel are shown as icons on the display. The values of the parameters are shown below the icons.

Only a part of all the parameters and other information can be shown on the display at any time. The parameters are grouped into six categories on seven display pages, and only one display page is shown on the at a time. Each display page is labelled from 1 to 6. Display page 5 is split into 5-1 and 5-2.

These display pages also show other information like the speed of the drum, the battery voltage, etc.

The user can adjust the reel parameters by moving between these display pages and changing their values. The reel is mainly operated from display page 1.



The **MAIN** button has two functions. Each time it is pressed, it switches the reel between three states, i.e., hauling, stop and pay-out. If the button is held for more than 5 seconds, the reel will enter a neutral state and release control of the drum, which can then be turned freely.

Note: If the sinker is in the water when entering a neutral state, it will pull out the line until it hits the seafloor, or the MAIN button is pressed again.

Figure 4: Main button

The **STAR** button has two main functions. It enables the user to select icons on the current page and, if held, manually adjust the depth of the false bottom.

When pressed once, an icon on the page will start blinking. That icon is the currently selected icon. If pressed again, the icon will stop blinking.

On a keyboard page, the **STAR** button is used to change pages.

Figure 5: Star button

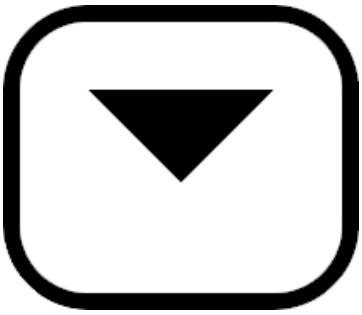


Figure 6: Down arrow button

The **DOWN** button has three different functions. Navigating the page, decreasing a value, disabling parameters.

Its primary function is navigating the current page, i.e., when an icon is blinking, the button can be pressed to select the icon below.

It's also used to decrease a parameter's value when a parameter has been selected.

If pressed on page 1 while paying out the line, the false bottom will be disabled if it has been set. If the drum is stopped, it will zero out the current depth status.

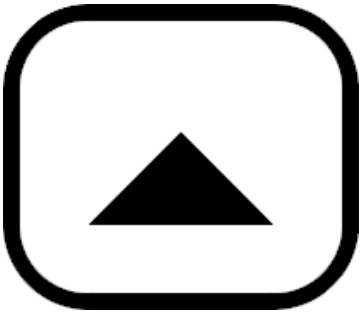


Figure 7: Up arrow button

The **UP** button has three different functions. Navigating the page, increasing a value, and enabling a parameter.

Its primary function is navigating the current page, i.e., when an icon is blinking, the button can be pressed to select the icon above.

It's also used to increase a parameter's value when a parameter has been selected.

If pressed on page 1 while paying out the line, it will enable the false bottom at the current depth.

If pressed on page 1 while the reel is stopped on the surface (0 depth), the reel will pull the line regardless of the weight on the line. To increase the pulling power, press the button again until the desired power is reached.
Note: The reel will not stop until the MAIN button is pressed.

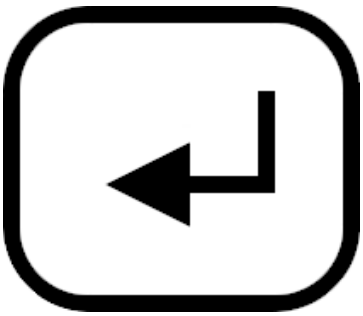


Figure 8: Enter button

The **ENTER** button is used to select a blinking icon for changing. If a popup is open, the button is used to confirm the change. If no icon is blinking, the button will bring you back to page 1.

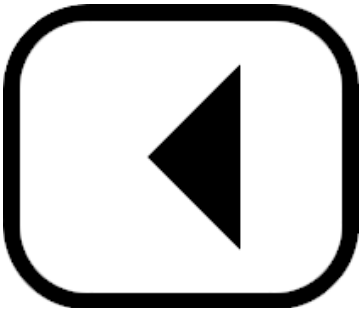


Figure 10: Left arrow button

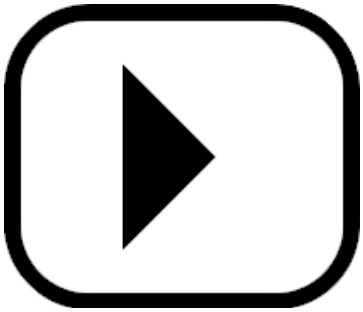


Figure 9: Right arrow button

The **LEFT** and **RIGHT** arrow buttons are used to navigate the current page or, if no icon is blinking, to change the current page.

Display

The top part of the screen is mainly used to display information such as depth, currently selected icon, current page number, current status of the reel, etc. Below are the icons for different statuses of the reel.


Jigging


Hauling

Neutral

Custom jigging (1-4)

Stop


Paying out


Paying out slowly

If the reel detects fish on the hooks, a fish will appear on page 1, which shows the depth where the fish was detected. The icon will be removed if the fish escapes or when it reaches the surface. It will not appear if the user is altering parameters on one of the pages.

If the “Always at least one jigging” parameter is activated (see page 33) it is possible for the reel to detect fish on the line but, not have permission to haul it right away. If by the time the reel receives permission to haul, it can no longer detect the fish on the line, a fish icon with a question mark is displayed.

Pages, icons, and parameters

Display page 1

Basic settings

Fish sensitivity

The fish sensitivity is used to select how much weight must be added to the line (the weight of fish on the hooks) for the reel to haul it in automatically. The higher the fish sensitivity, the more weight must be added to the line before the reel hauls it in.

The reel detects (in each jigging action) how much power is required to haul in the line, and it compares this power to a calculated value based on the value of the fish sensitivity. If the power consumption exceeds this value, the line is hauled. If the fish sensitivity is set too low (compared to the weight of the sinker), the reel will bring up small fish or even haul when there are no fish.

This parameter has a range of 0 – 16. The factory default is 6.

Note: The fishing systems were made with a sinker weighing 2 kg, and the fish sensitivity is set accordingly. If a lighter sinker is used, a corresponding adjustment must be made to fish sensitivity.

Keep in mind that the reels are hand made and therefore no two reels are the same. Fish sensitivity may differ between reels.

Hauling power

This parameter controls the hauling speed and the line pull. The reel tries to maintain constant power. This means that if little weight is on the line, the speed is high. On the other hand, if there is much weight on the line, the speed will be low.

This behaviour is particularly important when fishing in rough seas because it minimises the risk of losing fish off the hooks when the boat is rocking in the waves. This is because even though the boat is rocking, the fish is pulled at almost constant speed up to the surface.

A higher number indicates more hauling speed and harder pull. The reel slows down for the last few meters before it stops when all the line has been hauled.

Jigging power

The jigging action is performed at constant power. This means it is impossible to maintain the same jigging speed since the speed will depend on how much weight is on the line (how much fish is on the hooks). The more weight, the less speed. The higher the parameter value, the more power will be used when jigging upwards.

The value can be varied between 0 and 99, but the default value is 12.

Note: If, for a given value of jigging power, the weight on the line is enough to prevent the reel from turning the drum, then it will always interpret it as fish, no matter how high the value of the fish sensitivity.

Jigging length

Jigging length is the span of each jigging action. Each step of the jigging length parameter equals 0.5 unit of the currently selected unit system (metres, feet, fathoms) (see page 30).

Bottom margin

The bottom margin constitutes the minimum distance of the sinker from the seafloor during the jigging operation. Each time the sinker hits the seafloor, the reel will haul this length of line to maintain the distance from the seafloor according to the value of this parameter.

Squid settings

On display page 5 – 1 is an icon to select the squid system. When active, display pages 1 and 2 will change to show the special parameters used for squid fishing.

The method used to fish for squid is quite different from the conventional method of jigging. Special hooks are used since the squid grabs them instead of biting them. The leader has many hooks spaced approximately 1 m from each other. Powerful light sources are used to attract the squid up to the surface.

No jigging movement is performed; the line with the leader is simply paid out to a certain depth and then hauled back in. The haul is very special since the speed of the line is changed periodically. A specialised squid machine has an oval-shaped drum (elliptical), which causes periodic changes in the line's speed. If the haul is done this way, the squid will hold on to the hook. But it will release the hook when it has been hauled on board and dragged horizontally for a moment.

Since the drum is not oval, the motor must simulate the movement. The user can achieve this movement by means of three parameters: the hauling power, pulling time and relax time. While hauling, the power of the motor is periodically changed, and the user can alter the duration of each period. The first time the reel pays out the line, the user must set a false bottom at the depth where he wants the reel to start hauling. Then the reel starts hauling the line, and when it is hauled in altogether, it pays it out again until the same depth is reached. Then it starts hauling it in again etc. The user can make the reel decrease the depth of the false bottom by a certain value each time it pays out the line. This is useful when the squid is moving towards the surface, e.g., due to the use of lights.

Note: When the squid system is active, the reel will ignore the slack sensor, so threading the line through is unnecessary.

Decrease depth

Each time the line is paid out, the depth at which the reel starts to haul is decreased by this value. This is useful when light is used to attract the squid up to the surface. The squid is then constantly moving upwards, and the depth that the reel must start hauling must be decreased each time the line is paid out.

Hauling Power

See page 10. Default value is 30 when squid fishing.

Pulling time

When the line is hauled in, the power is periodically changed. This parameter controls the duration of the period when the power is increased, i.e., the line is pulled.

Relax time

This parameter denotes the duration of the period where the hauling power is decreased, i.e., the line is not pulled.

Release waiting time

When the reel has hauled the line in altogether, it stops for a period before it pays out the line again. Each step equals 1 second, and the default value is 2.

This can be useful to ensure that the squid on the last hook has released the hooks before the line is released into the water again.

Haul waiting time

The duration of a complete stop when the line has been paid out to the depth of the false bottom before the reel starts hauling the line. The default value is 2.

Maximum hauling speed

The maximum speed when hauling in the line, i.e., the reel will never exceed this speed when hauling the line, no matter the value of the hauling power (see page 10).

This parameter is necessary when fishing with many hooks and/or strippers, e.g., when fishing for mackerel. In that case, the power must be sufficient to haul the line when there is fish on every hook and to tear the fish off the hooks by pulling them through the stripper. But when there isn't fish on every hook, the reel would haul it very fast, making the "tear off" process hard to control.

The default value is 250, but the value can be varied from 0 to 500. Each step equals 10 RPM. This default value should be suitable in most cases, but if fish tends to be thrown into the sea during the "tear-off" process, decrease this value.

Mackerel settings

On display page 5 – 1 is an icon to select the mackerel system. When active, display pages 1 and 2 will change to show the special parameters used for mackerel fishing.

The jigging reel can be used without accessories for mackerel fishing, just like when fishing for cod, pollock, etc. But since the fish must then be stripped off the hooks by hand and the leader must also be hauled in by hand (it cannot be wound onto the drum), this is a very tedious job. It's much more efficient to use a stripper and pulleys. The high pulling force capability of the reel makes it possible to have up to 70 hooks on the leader.

When fishing for mackerel with the R1 and a stripper, the mackerel program is selected. The leader usually has 30 - 70 hooks approximately 30 – 40 cm from each other. The length of the leader (and consequently the number of hooks) depends on how long a line the pulleys can accommodate. The same thing applies as for squid fishing, i.e., the hooks can never be reeled onto the drum.

The hooks used for mackerel fishing are different from those used for conventional jigging. They are smaller, and usually, only red-coloured artificial bait (rubber) is used.

When the mackerel has been spotted underneath the boat, the line is paid out until it reaches the same depth as the mackerel. Then, a false bottom is set at that depth. The reel will start hauling the line until it reaches zero depth. Then, it stops for a while before it pays out the line again. When it reaches the depth of the false bottom, it will start hauling the line, and everything starts over again.

Due to the number of hooks used in mackerel fishing and how heavy the line tends to become, the brake in the mackerel system works differently than in other systems. If the brake slips, it will automatically self-correct after slipping 1/6th of a full rotation of the drum.

Note: Due to the self-correcting brake, do not handle the hooks on the line while the sinker is overboard. Make sure that there is no pull on the line before handling the hooks to prevent injury.

Mackerel with equipment settings

On display page 5-2 is an icon to select a fishing system to use with the DNG-FS1 fishing equipment. When active, display pages 1 and 2 will change to show the parameters used for this system.

When this system is selected, it's important that the reel knows how far to haul the laine and belt. Have the reel haul the line as far as it can by pressing the **MAIN** button and stop it if it hauls the line all the way. If the belt is not all coiled on the drum of the DNG-FS1 equipment when the reel stops hauling, you can press the **UP** button to tell the reel to keep hauling slowly. When the belt is completely coiled on the drum, press the **UP** or **MAIN** buttons to stop hauling. Then press the **DOWN** button to zero the depth counter. When the depth counter is zeroed, the counter should blink a few times to confirm.

The reel can not automatically detect the seafloor while using the DNG-FS1 equipment, so it has to be set manually by pressing the **UP** button at the desired depth.

Belt length

Length of the belt used in the DNG-FS1 fishing equipment. It's important that this setting is configured correctly so the reel knows when to slow down. This is not the same parameter as line length (see page 21).

Belt speed

The speed that the reel will use to haul and pay out the belt. It's important that "belt length" is set correctly for this to work.

Display page 2 – Fishing settings

Bottom detecting interval

If the reel uses a false bottom instead of the actual seafloor, it will periodically redetect the bottom depth to maintain the correct depth. This parameter controls the amount of time that passes between redetecting. Each step equals 10 seconds, and the default value is 60 seconds. If set to 0, the reel will detect the bottom on every jig.

This is useful when fishing for groundfish. It's common for groundfish to gather near an edge on the seafloor, and if the boat drifts over the edge, then the reel might suddenly be fishing far from the seafloor.

Waiting time at top of jig

If this is set to anything above 0, the reel will stop at the top of the jig for the set amount of time before going back down.

Waiting time at bottom of jig

Same as the parameter above, except for the bottom of the jig.

Step jigging

Instead of going up and down, the line is pulled up a number of times equal to the "Step number". Between each haul, the reel stops for one "Waiting time at bottom of jig".

Step number

Sets the number of steps used in “step jigging”. The default setting is 5.

Mud bottom

If fishing is carried out on a very soft seafloor (mud or sand), the sinker may get buried, and the reel thus wants to interpret the resistance as fish if this parameter is not used. If enabled, the reel does not try to detect fish in the first few rounds of the drum, and hence, there is no chance that the reel will mistake the mud for fish.

Bottom sensing time

This parameter controls the bottom sensing time. The higher the number, the longer the slack duration must be before the reel interprets it as having hit the seafloor.

The line goes through the loop on the slack sensor arm, and when the line is taut, it pulls the arm down. On the other hand, when there is slack on the line, a spring will pull the slack sensor arm back up, and the reel will know there is slack on the line. Therefore, it is essential that the slack sensor arm can move freely.

If the value is too low, the reel will quickly interpret any slack as the bottom. This can, however, be useful if the bottom is rocky to prevent the sinker from getting stuck between rocks.

On the other hand, it can be inconvenient when the sea is choppy. When the boat is rocking in the waves, there will, occasionally, be a slack on the line even though the sinker has not reached the seafloor. In this case, it is necessary to increase the value of this parameter.

When a small fish bites the hooks (not big enough for the fish sensitivity to trigger), and the reel keeps on jigging, it will not be able to jig as fast downwards since the fish resists the downward pull of the sinker. In this situation, the reel sometimes erroneously concludes that it has hit the seafloor. Due to this, the reel jigs a shorter distance downwards than it jigs upwards and hence is slowly moving away from the seafloor. A solution to this problem is to increase the value of this parameter. This has the drawback of delaying the bottom sensing when the sinker hits the seafloor. This delay can lead to loss of the sinker when fishing on a rocky seafloor, e.g., a volcanic rock field.

Drift

This parameter is used when fishing in heavy drift conditions. If not in zero position, the reel will haul the line in altogether and then pay it out again automatically. This ensures the line does not stray from the boat while the fish is underneath.

Drift - Time

The frequency at which the line is hauled in a drift system. Each step corresponds to 1 minute.

Brake

If this parameter is above 0, the motor will not pay out the line; instead, the sinker will pull the line. The higher the value, the more resistance of the motor. This also disables the slack sensor, so the reel will detect the bottom when the drum stops spinning.

Display page 3 – Various settings

Slack sensor up and down

These are the values of the slack sensor in its up and down position. The “up” value is the value of the slack sensor when there is no strain on the line, while the “down” value is the value when completely down. If set correctly, there should be a decent gap between the numbers.

Note: The most common cause for errors is these values being set incorrectly. If you encounter odd jigging behaviour, try resetting these values.

Bottom sensing slack

There will be slack on the line when the sinker hits the bottom. If the signal drops below this value for a certain amount of time (see “bottom sensing time” on page 17), the reel will interpret it as the bottom. This value, below which the slack sensor signal must drop, is determined by this parameter. The default value is 14, but it can be varied between 1 and 48.

In some cases, when there is not much line left on the drum, it might be necessary to decrease the value of this parameter. This could happen when fishing at much depth or when there is not enough line on the drum.

In these cases, the slack sensor arm is not pulled down far enough when the line is taut, and the slack sensor signal will be close to 14 or even below. If the slack sensor signal drops below 20, the pay out speed will drop considerably, and the risk of detecting the bottom falsely due to the rocking of the boat will increase a lot.

Maximum pay out speed

This parameter controls the maximum speed when paying out. Each step equals 10 RPM, and the default value is 380 RPM. The value can be varied between 0 and 600.

The best value of this parameter depends on circumstances and the type of line on the reel. If the sea is choppy, it may be necessary to decrease this parameter. However, if the sea is calm, it may be possible to increase the value of this parameter and hence gain more speed and efficiency.

Maximum hauling speed

The maximum speed when hauling in the line, i.e., the reel, will never exceed this speed when hauling the line, no matter the value of the hauling power. If too much weight is on the line, the reel might not reach the maximum speed unless the hauling power (see page 10) is increased.

Stop at zero

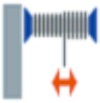
If enabled, this parameter tells the reel to stop once the depth counter reaches zero when hauling in the line. If disabled, the reel hauls the line until the stop ring reaches the pulley.

Sinker weight

The weight of the sinker used on the line. The default setting is 2kg, but it can be increased to 5kg. The weight is used to when calculation fish sensitivity. If a sinker heavier than 5kg is used, raise the value of “fish sensitivity” (see page 10).

Line length

The length of the line on the drum. The length and diameter of the line are used to calculate the correct depth. All R1 reels are shipped from DNG with 500m of DynIce Thunderline jigging twine.



Line diameter

The diameter of the line on the drum. Regardless of the selected unit system, this will always be shown in millimetres. The length and diameter of the line are used to calculate the correct depth. All R1 reels are shipped from DNG with DynIce Thunderline jigging twine which has a diameter of 1.1mm.

Factory reset

If you are in trouble and have lost your way in all the parameters, you can reset the reel by activating this function.

Display page 4 – Jig settings

Here you can change the jigging settings and even record your own jigging type. i.e., you can turn the drum, and the reel will record your movements so you can use them later.

DNG jig

The standard jigging action, going up and down, sensing fish when moving up.

Speed controlled downward jig

If disabled, the reel will pay out the line as fast as "maximum pay out speed" (see page 20) when jigging downwards. If enabled, the reel will control the speed of the downward jig and try to maintain the speed set by the "jigging down speed".

Jigging down speed

This parameter controls the speed of the downwards jig if the "speed controlled downward jig" is activated. This value is also used when paying out slowly. The default value is 80 RPM.

Jigging power to hauling power

When the reel detects fish on the line, it changes states from jigging to hauling. Since fish is detected when jigging upwards, the only change is the power, i.e., from jigging power (page 11) to hauling power (page 10). To avoid losing the fish off the hooks, the reel increases the power ten times slower than normally when hauling. This is done the first few meters. The number of meters that the reel behaves this way is controlled by this parameter. Each step equals 0.5m. The default value is 5m. The parameter can be varied between 0 and 20m.

Tangle detection

This parameter, if set to a value above zero, activates the tangling detection, i.e., the machine will detect if the line is tangled with the line/leader from the next jigging machine.

If the reel cannot start a single downward jig (due to slack on the line) many times in a row, it is a sign that the depth is decreasing rapidly or, more likely, two reels on the same boat have their leaders tangled.

As an example of how it works, let's say that the value is set to 2 (the default value). Now, the reel can detect the bottom two times in a row without being able to start a single downward jig (due to slack on the line). If it happens three times in a row, the reel interprets it as "a tangle" and starts hauling.

If the parameter is set to 0, this feature will be inactive.

Custom jig

You can record your own jig and store the recording in memories labelled 1 to 4.

This is done as follows:

First, while the reel is in the stop state, select the desired number to configure and press the **ENTER** button. When ready, press the **DOWN** button and start the jigging movement you wish to record. The reel can record up to 80 seconds of jigging, but you don't have to use the entire 80 seconds.

When you've finished the jigging movement, press the **DOWN** button again. The jig is now saved and can be selected with the **ENTER** button.

Note: The reel starts recording the moment you press the DOWN button, so if any time passes between pressing the button and moving the wheel, that time will also be recorded.

Use slack arm

The reel uses a slack arm and sensor to detect slack on the line. Slack can mean that the reel is pulling too slow, paying out too fast, or the sinker has hit the bottom. If the slack sensor or slack arm are damaged or malfunction, it is possible to deactivate the sensor.

With the slack sensor deactivated, the reel with behave similarly to when using the brake system (see page 27), letting the sinker drag the line out instead of using the motor.

The reel was designed with the slack arm in mind. Deactivating it is only recommended in the slack arm is malfunctioning.

Display page 5 – Fishing systems

Fishing systems hold stored values for all parameters on display page 1. They also include information on what type of jig should be used, and they always set the number of steps for "step jigging" (page 16) to a value of five.

The fishing systems also store information about the downward jig, i.e. the factory-made systems always disable "speed controlled downward jig" (page 22), unless it's a custom fishing system.

Selecting a fishing system with the **ENTER** button activates that fishing system. When a system has been activated, a black frame will appear around the icon, and the corresponding icon will be displayed on display page 1. Search systems differ from the other systems since they do not hold values for any parameters or jigging type.

If a search system is activated, the reel will use the active fishing system to search the sea for fish, i.e., it will jig a defined number of times (default: 10) at one depth, then haul one jig length (page 11) and start jigging again, then haul one jig length etc. When it reaches the top of the search span, it will check for the bottom and start again. The icons show the defined search span. If the reel finds fish, it sets a false bottom at that depth, deactivates the search system and hauls the fish. Next time the user makes the reel pay out, it will stop at the depth where the fish was caught and start jigging.

The system currently in use will have a black border around its icon.

DNG

This system holds the factory default settings. This is the active system when the reel is connected to a power source for the first time.

If you have trouble and have lost your way in all the parameters, you can set the basic parameters to the factory setting by activating this fishing system.

Fishing with bait

This system is used when bait is used on the hooks instead of rubber. When fishing with bait, the reel waits shortly at the bottom and top of the jigging motion and jigs in short and slow movements. **Fish sensitivity is low.**

Pollock fishing

Pollack fishing uses rapid jigging and high fish sensitivity. Since it is not likely that the fish will get off the hook, a powerful hauling force is used for increased efficiency.

Step jigging

This system is similar to fishing with bait, but instead of going up and down, the reel jigs upwards a defined number of times (see “step number” on page 17), waiting slightly between each jig upwards. When completed, it will go down to the depth where the first jig was made and start again.

Squid fishing

This system is very much different from the other systems. This is because the method used for squid fishing differs from the conventional jigging method. For a more detailed explanation, see “squid settings” on page 12.

Mackerel fishing

This system is similar to the squid fishing system but uses a stripper to fish for mackerel. For a more detailed explanation, see ”mackerel settings” on page 14.

Norwegian system

A system used for deep water, using long jigs.

Faroese System

A system that stops for 10 seconds at the surface.

Brake system

This system is unique because it does not use the slack sensor. The motor will not pay out the line; instead, the sinker will pull the line. The higher the value of the “brake” (page 18) parameter, the more the motor will resist the pull. The reel will detect the bottom when the drum stops spinning.

Winching

A system for winching. There’s no jigging; the reel will just switch between hauling and stopping when the **MAIN** button is pressed.

Scottish mackerel

Mackerel system with jigging. High fish sensitivity and high power.

Mackerel belt system

A mackerel system used with the DNG-FS1 mackerel fishing equipment.

Total search

In this search system, the search span is from the bottom to the surface. If a false bottom is set at some depth, it will search from that depth up to the surface.

Bottom search

The search span is from the bottom and halfway to the surface. A false bottom can be set to change the bottom of the search span.

Surface search

This system is just like the total search system with a false bottom at a depth of 8 times the jigging length. It automatically sets the false bottom at this depth and then searches from there to the surface. If the depth at the bottom is less than eight times the jigging length, the false bottom will be set at that depth, and each time the sinker hits the bottom, the false bottom will be set accordingly.

Custom fishing system

You can store your own settings in custom systems 1 to 5. Select the desired system, press **ENTER** to open a popup window, and then press **DOWN** to save the current settings as a custom fishing system. After this, the configuration is enabled but, can be selected again by pressing the **ENTER** button on the popup window.

Display page 6 – Infrequently used settings

Language

This switches the display language between Icelandic and English.

Brightness

Sets the brightness of the display. By default, the brightness is set to 10, but it can be lowered, e.g., when fishing in dark conditions.

Buzzer

This parameter changes when the buzzer will sound.
If set to “Off” no sound will play.
If set to “Keys” only the keypresses will make a sound.
If set to “Jig” the buzzer will only sound when it detects fish or when it hauls to the surface.
If set to “All” both keypresses and jigs will make a sound.

Note: this has no effect on the external buzzer.

Whistle when up

This parameter controls when (at what depth) the reel will whistle when it has hauled the catch up to the surface. This is disabled by default.

This feature can be essential, e.g., when fishing for cod, since the fish sometimes escapes if someone isn’t ready to grab the leader and continue hauling it before the reel has come to a complete stop.

Pay out automatically

If enabled, the reel will wait for a number of seconds before automatically paying the line out again. If this is disabled, the reel will not pay out the line until the **MAIN** button is pressed again.

Power factor

This parameter controls the elasticity of the hauling action. The lower the value, the softer (gentler) the hauling action. The power factor can be adjusted from 0% to 100%, but the default value is 30%.

As an example of how the power factor works, let's say that its value has been set at 3. Now, the reel will use 30% of the power, as set by the hauling power (page 10) parameter when the speed is 0 RPM and 100% when the speed is 500 RPM. At any other speed, the power is linearly interpolated between these two values. In this case, the power used at 250 RPM would be 65%.

This has the effect that if the power factor is set at a low value, e.g., 0% - 50%, then the reel will haul in slowly and elastically when there is some weight on the line but hauls in fast and powerfully if there is not. If the power factor is set at 100%, the reel will use full power at all speeds.

If set to a low value, it can help counteract the movement of the boat on the waves so that the fish is hauled at a consistent speed.

Unit of measurement

This parameter changes the unit in which units are shown on the display. You can choose between meters, feet and fathoms. Below the icon, there is a label that indicates the current unit (m = meters, ft = feet, fa = fathoms)

PIN lock

The reel can be locked with a 4-number PIN code. If active, you must enter the PIN code every time you turn on the reel. To set a PIN code, select this setting and enable it. Once it's enabled, you will be prompted to enter a code. Press **ENTER** and re-enter the code to confirm it. You can also disable the lock with this setting.

Note: You must remember the PIN code you selected. If the reel is locked with a forgotten PIN code, bypassing it is impossible. The reel must then be sent to DNG to reset it.

Simple Mode

If enabled, display page 1 will split into two pages. On the first display page there will be no settings, only the depth, false bottom, current fishing system, and the status of the slack sensor. On the second display page will be the settings usually found on display page 1. With simple mode enabled, you can't use the communication pages.

This mode is ideal for those who feel like the normal display page 1 is too cluttered and only want to see the most important items on screen.

Communication overview

If the reel is connected to other reels via Wi-Fi or Serial V2 communications, their status can be seen here. The reel with the communication ID 1 can also control the other reels by selecting them and using the **MAIN** button to send them commands.

Communication settings

Here you can change the communication method the reel uses.

Communication method

This parameter changes the communication method used by the reel. The available methods are Wi-Fi, Serial V1, and Serial V2. Change the method with the **UP** and **DOWN** buttons.

Wi-Fi communications use a wireless method to connect to other reels through a Wi-Fi network. While the reels are connected to the same network and they don't share a communication ID, they will be able to communicate.

Serial V1 communications go through the blue and brown communications wires in the power cable (see connection diagram on page 3). This method was used in the old c6000i reel and is still available in R1. Using this method, you can connect up to 5 reels to an external buzzer and use the "Always at least one jigging" (page 33) option.

Serial V2 communications go through the blue and brown communications wires in the power cable (see connection diagram on page 3). Using this method, you can connect the reel to a PC and control it from the Reelmaster program.

Note: The Reelmaster program was created for the old c6000i jigging reels and some features of the R1 reel are not available in the program

Communication ID

This is the reel's ID for communications. If set to 0, the reel will not communicate with other reels. If set to 1, this reel is the controller and can send commands to other reels from the communication overview display page. Otherwise, the ID can be set to 2 – 9 for Wi-Fi and Serial V2 communications or 2 – 5 for Serial V1.

Note: Multiple reels cannot use the same ID. If more than one reel shares an ID, it will cause communication errors.

Whistle when up

See “whistle when up” on page 29.

External buzzer

If this reel is connected to an external buzzer and uses the Serial V1 communication method, this parameter changes the buzzer sound. This does not affect the internal buzzer (see page 29). If set to 0, this reel will not use the external buzzer.

Always at least one jigging

If enabled, this reel will always make sure that there is another reel jigging before it hauls in the catch. If there isn’t one reel jigging, it will wait until another reel starts to jig before it hauls in the catch.

If the reel detects fish on the line but does not detect another reel jigging, an icon will appear on the screen alerting the user that fish was caught. If the no longer detects the fish on the line by the time it can haul it up, it won’t haul the line, but the fish icon will remain on screen to alert the user that fish was detected at one point.

Note: If the communication method is set to Serial V1 and this setting is enabled and there is no other reel connected to it, the reel will never detect another reel jigging, so it will never haul the line.

Wi-Fi settings

This display page handles the Wi-Fi communications.

If the machine can not detect any access point, the Wi-Fi program can be restarted by holding the **STAR** button.

Wi-Fi

If this icon is visible, the reel is configured to connect to a Wi-Fi network. If you select this icon and press the **UP** button, this icon will change to the Wi-Fi AP icon.

If the reel is connected to a Wi-Fi network, the display will show “Connected to WI-FI” along with the name of the network and this reel’s IP.

Wi-Fi AP

If this icon is visible, the reel is configured to create its own Wi-Fi access point. The reel can do this without input from the user. If you select this icon and press the **DOWN** button, it will change to the Wi-Fi icon and drop its access point.

When the reel has set up its own access point, the display will show “Created Wi-fi AP” along with the access point name and IP. Other reels can now connect directly to this reel without using a router.

Note: this access point is open and does not have a password. When prompted for a password when connecting to it, leave the field blank.

Scan for Wi-Fi

Before the reel can connect to a network, it must scan for available networks. When selected with the **ENTER** button, the reel will start scanning for available networks.

When the scan is finished, a list of available networks will appear. You can navigate the list with the **UP** and **DOWN** buttons and select a network with the **ENTER** button.

Keyboard

You will be prompted for the Wi-Fi password when a network is selected. You can navigate the keyboard with the arrow buttons and select a letter with the **ENTER** button. You can select the "<--" icon to erase a letter.

There are three different keyboard pages, which can be switched with the **STAR** button.

Keyboard page 1: Lowercase letters
Keyboard page 2: Uppercase letters
Keyboard page 3: Numbers and symbols

When the password has been entered, save it using the "Save" icon.

Note: The "Save" and "Cancel" icons are not visible on keyboard page 3 due to space.

Additional properties

Set zero (zero depth)

Pressing the **DOWN** button while no icon is blinking on display page 1 and the reel is in the stop state will set the current point as the zero point.

This may be necessary when a new line is put on the drum or when the line breaks and is, therefore, shorter.

You may also just not want the reel to haul the line up.

Fast hauling

The hauling speed can be temporarily increased without changing the value of the “power factor” (page 30) or “hauling power” (page 10) by pressing the **UP** button while the reel is hauling. If pressed once, the “power factor” is set to 100%. After that, the “hauling power” is increased by 10% each time it is pressed.

These values will automatically return to their previous values when the line has been hauled or when the **DOWN** button is pressed.

This can be useful if the boat needs to be moved quickly and the line needs to be hauled. Press the **MAIN** button to start hauling, then press the **UP** button a few times to reach the maximum hauling speed.

Slow hauling

The hauling speed can be temporarily decreased similarly by pressing the **DOWN** button while hauling. If pressed once, the “power factor” (page 30) is set to 0%. After that, the hauling power (page 10) is decreased by 10% each time it is pressed.

These values will automatically return to their previous values when the line has been hauled or when the **UP** button is pressed.

This can be useful if the line gets tangled and needs to be carefully untangled.

Troubleshooting

The reel hauls the line without any fish

There are three likely culprits for this. The “fish sensitivity” (page 10) value may be too low compared to the weight of the sinker used in the line. The “drift” (page 18) system might be active, causing the reel to automatically haul the line periodically. If this only happens when the sinker hits the seafloor, the seafloor might likely be muddy or sandy, causing the sinker to sink into the soil. This can be fixed by enabling the “mud bottom” (page 17) setting.

The reel detects the bottom before hitting the seafloor

The simplest cause for this problem is a false bottom is set. To disable the false bottom, press the down button while the reel is paying out the line.

If a false bottom is not set, check the slack sensor up and down values (page 19).

If those values are set correctly, and the problem persists, try increasing the bottom sensing time (page 17) value and/or decreasing the bottom sensing slack (page 19) value.

The reels pays out the line too slowly

The most likely reason for this is that the slack sensor up and down values (page 19) are set incorrectly.

Make sure the motor is not in the “paying out slowly” state.

Check the value of “maximum pay out speed” (page 20).

This can also happen if there is not enough line on the drum, so the slack sensor is not pulled down enough. Check the value of bottom sensing slack (page 17).

The reel seems to have difficulty detecting the bottom and sometimes tangles the line

A correctly configured slack sensor is key when the reel pays out the line and detects the bottom. Check the slack sensor up and down values (page 19).

Bottom sensing time (page 17) also plays an important role, but regardless of its value, the reel will always stop if the slack value reaches the “slack up” value.

The reel always finds fish when it detects the bottom.

The seafloor might be muddy or sandy, causing the sinker to sink into the soil. This can be fixed by enabling the mud bottom setting (page 17).

The reel does not haul when it detects fish on the line

This happens if the communication method (page 32) is set to Serial V1 and "always at least one jigging" (page 33) is enabled. If this reel is not connected to any other reel, it will never detect another reel jigging and will never haul the fish.

The reel does not haul the line all the way

This can occur if the reel has previously hauled the line with slack, or when "Stop at zero" (page 20) is activated. While the motor is stopped and at 0 depth, you can press the **UP** button to make the machine haul the line more. If the motor lacks power, you can press the **UP** button again to increase the power until it starts pulling.

Note: The motor will not stop hauling until the MAIN button is pressed again, regardless of all other settings.