

Raymarine®



DRAGONFLY Ice Fishing Kit

Installation instructions

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Chapter 1: Important information



Warning: Portable product operation

This product has been designed for portable operation. When connecting to a compatible display, the display's power supply must be a standalone power source that is not connected to any other device, and it must not be part of a vessel or vehicle electrical system.

Connecting to an electrical system or to a power source which powers other devices could cause product damage and / or poor product performance.



Warning: User safety

As the user of this product it is your responsibility to ensure that, before spending time on the ice, all necessary safety precautions are in place to prevent damage or harm to yourself or your equipment.



Warning: Transducer operation

Only test and operate the transducer in the water. Do NOT operate out of water as overheating may occur.



Warning: Potential ignition source

This product is NOT approved for use in hazardous/flammable atmospheres. Do NOT install in a hazardous/flammable atmosphere (such as in an engine room or near fuel tanks).



Warning: High voltages

This product may contain high voltages. Do NOT remove any covers or otherwise attempt to access internal components, unless specifically instructed in the documentation provided.



Warning: Battery degradation

To prevent shortened life and possible irreparable damage to your battery:

- Do NOT allow your battery to run flat before charging.
- Charge the battery before and after use.
- Charge before storing the battery.
- Remove the battery from charge soon after charging is complete.

Caution: Do not cut transducer cables

- Cutting the transducer cable severely reduces sonar performance. If the cable is cut, it must be replaced, it cannot be repaired.
- Cutting the transducer cable will void the warranty and invalidate the European CE mark.

Caution: Service and maintenance

This product contains no user serviceable components. Please refer all maintenance and repair to authorized Raymarine dealers. Unauthorized repair may affect your warranty.



Warning: Battery warnings

Before handling, charging, installing or using your battery please ensure you have read and understood the safety related information provided below.

- Always store the battery in a cool and dry area that is well-ventilated and not in direct sunlight.
- Do NOT expose the battery to sources of excessive heat, flame or sparks.
- Do NOT leave the battery in high temperature areas such as in a vehicle on a sunny day.
- Do NOT drop, throw or attempt to disassemble the battery
- Do NOT use the battery if it is damaged.
- Do NOT submerge the battery.
- Always ensure correct battery polarity before connecting to the charger or display.
- Do NOT short the battery terminals.
- Only charge the battery in a well ventilated area using the charger provided.
- Do NOT operate the battery outside of its operating temperature range: -15°C (5°F) to 50°C (122°F).
- Do NOT store the battery outside of its storage temperature range: -15°C (5°F) to 40°C (104°F).
- Ensure battery disposal is in accordance with applicable local laws and regulations.
- Do NOT use solvents or solvent based cleaning agents to clean your battery.
- Keep batteries away from children.
- Contact with battery acid may cause irritation or chemicals burns, irritation may occur to the eyes, skin or respiratory system. If contact is made flush with clean water immediately.

Failure to adhere to the guidelines above may result in shortened battery life, risk of damaging the device, fire, chemical burns, acid leakage or injury to persons.

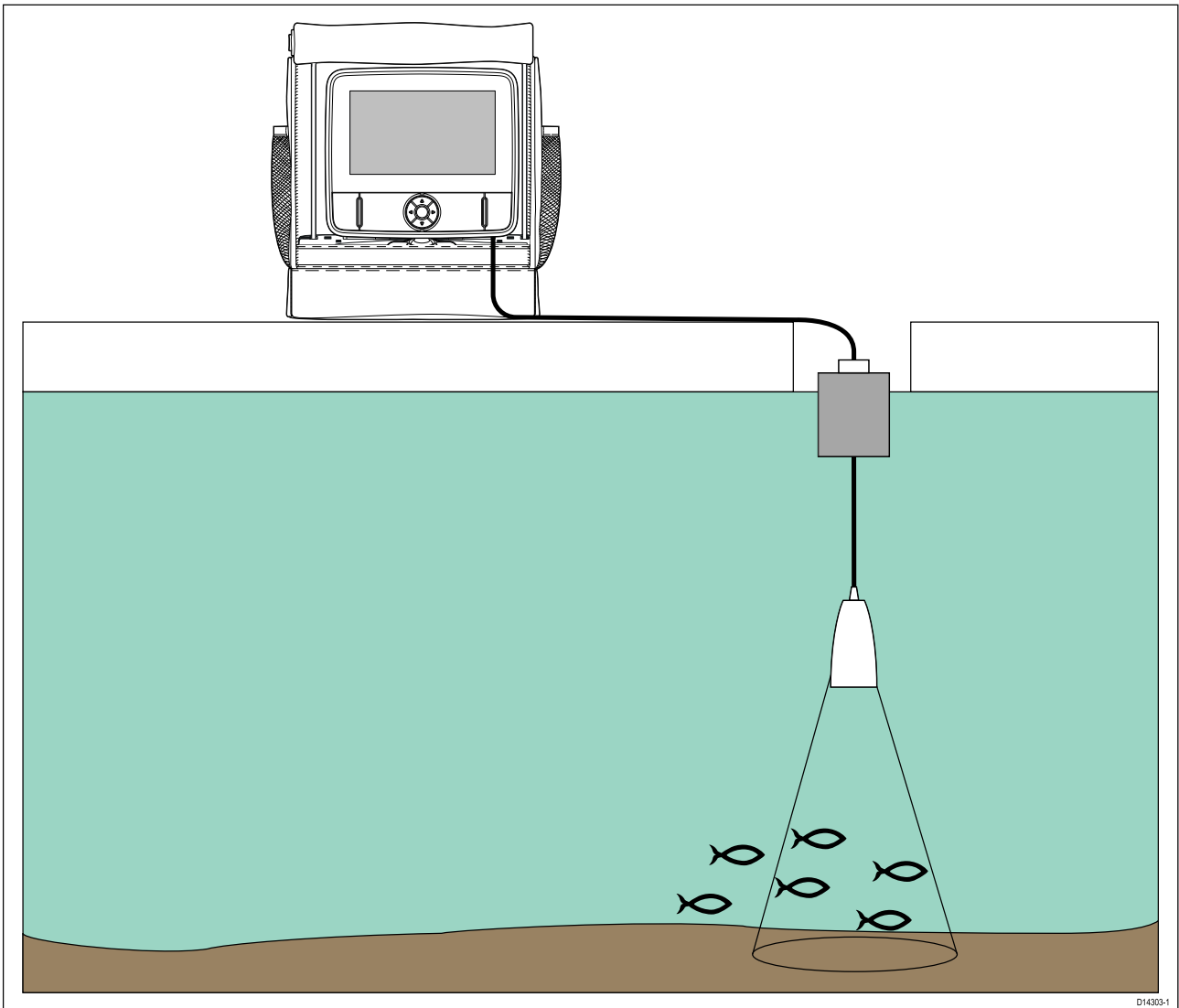
Chapter 2: Document and product information

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- [2.1 Ice fishing kit overview on page 12](#)
- [2.2 Applicable products on page 13](#)
- [2.3 Parts supplied on page 16](#)

2.1 Ice fishing kit overview

When combined with a compatible display the Ice fishing kit creates a portable, standalone Fishfinder that can be used for Ice fishing.



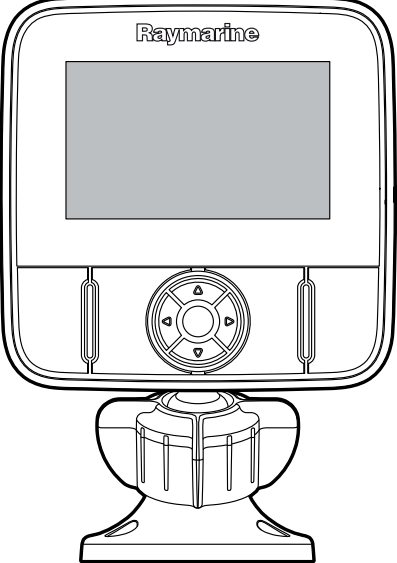
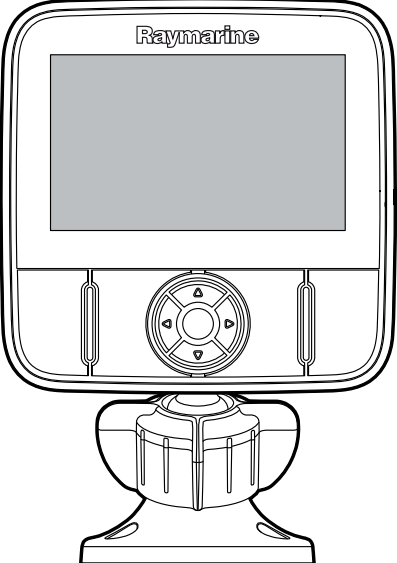
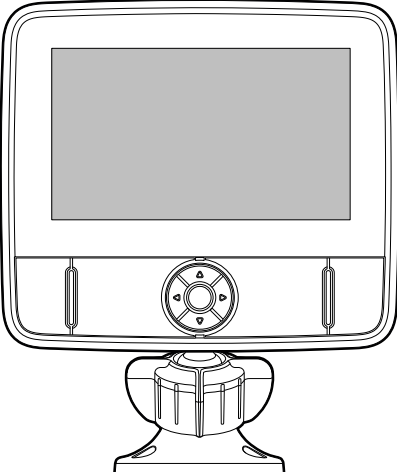
2.2 Applicable products

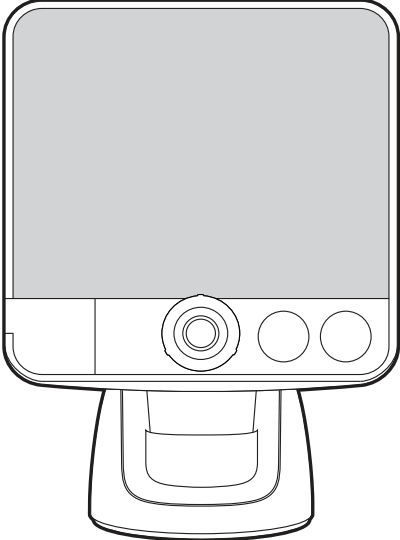
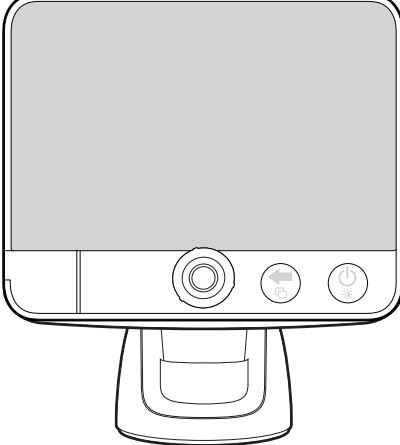
This document is applicable to the products listed below:

Part number	Description
A80580	Dragonfly ice fishing kit

Compatible displays

The ice fishing kit requires a compatible display to view the sonar image. See the list of compatible displays below:

 <p>A line drawing of a Raymarine Dragonfly 4DVS display. It features a rectangular screen at the top with the 'Raymarine' logo above it. Below the screen is a circular control knob with four directional arrows. The display is mounted on a pedestal base.</p>	<ul style="list-style-type: none">• Dragonfly® 4DVS display• Dragonfly® 4PRO display	<ul style="list-style-type: none">• E70292• E70294
 <p>A line drawing of a Raymarine Dragonfly 5DVS display. It features a rectangular screen at the top with the 'Raymarine' logo above it. Below the screen is a circular control knob with four directional arrows. The display is mounted on a pedestal base.</p>	<ul style="list-style-type: none">• Dragonfly® 5DVS display• Dragonfly® 5PRO display	<ul style="list-style-type: none">• E70306• E70293
 <p>A line drawing of a Raymarine Dragonfly 7PRO display. It features a rectangular screen at the top. Below the screen is a circular control knob with four directional arrows. The display is mounted on a pedestal base.</p>	<ul style="list-style-type: none">• Dragonfly® 7PRO display	<ul style="list-style-type: none">• E70320

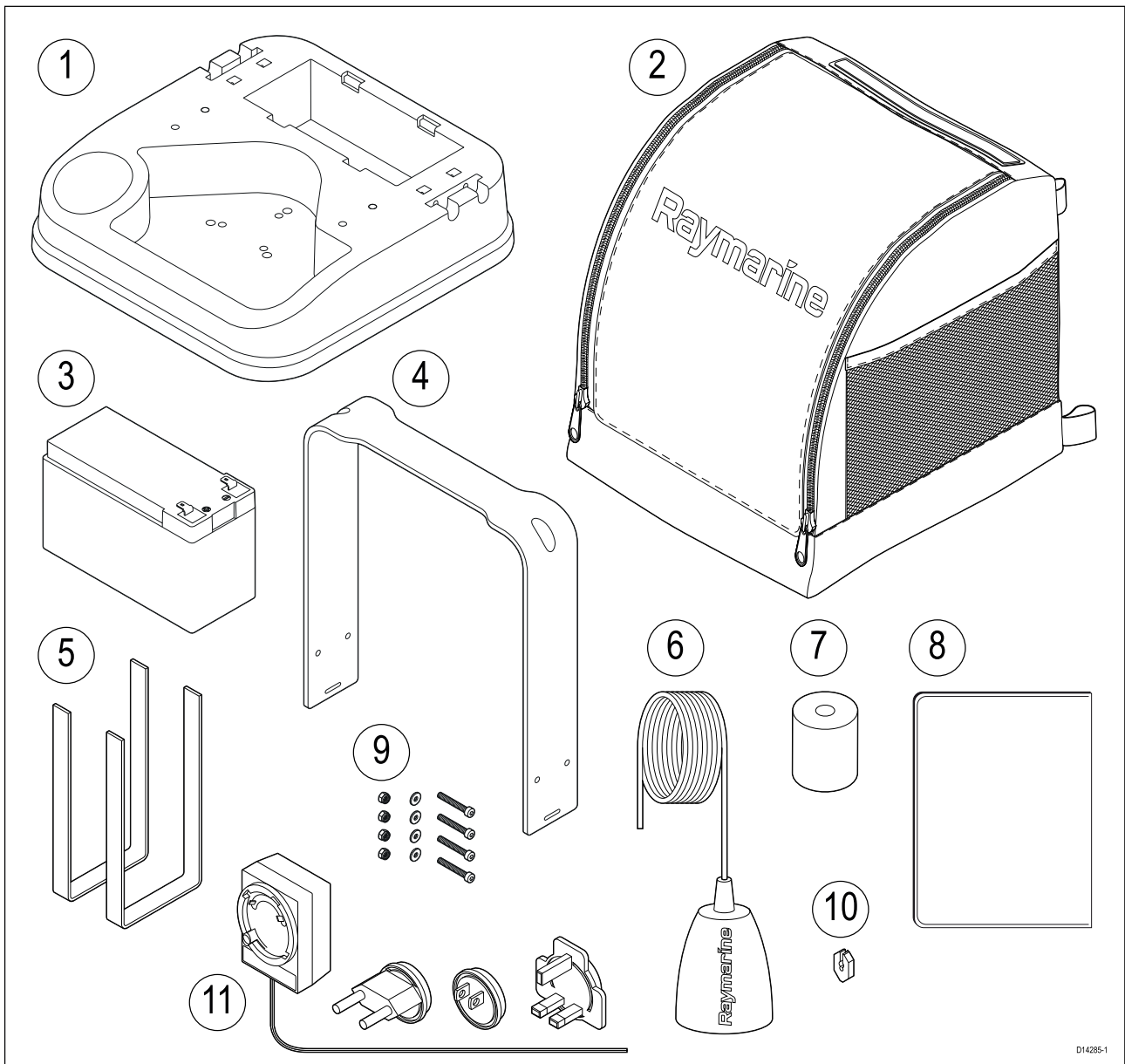
	<ul style="list-style-type: none"> • Dragonfly® 6 legacy display 	<ul style="list-style-type: none"> • E70085
	<ul style="list-style-type: none"> • Dragonfly® 7 legacy display 	<ul style="list-style-type: none"> • E70231

Important:

Adaptor cable A80331 is required to connect an ice fishing transducer to a legacy Dragonfly® display that utilizes the one keyway Red connector.

2.3 Parts supplied

Unpack your product carefully to prevent damage or loss of parts. Check the box contents against the list above. Retain the packaging and documentation for future reference.



D14285-1

1. Base
2. Bag
3. 12 V dc Battery (supplied fitted to the base)
4. Handle
5. Battery straps x2 (supplied fitted to the base)
6. CPT-S ice fishing transducer
7. Transducer float
8. Documentation
9. Handle fixings (4 x locking nuts, hex bolts and washers)
10. Cable clamp
11. Mains battery charger (including adaptors for EU, UK and US mains electrical outlet systems)

Additional fixings and components

Display bracket fixings

When mounting the display's bracket on the base it is recommended that additional, shorter fixing bolts are purchased.

<ul style="list-style-type: none">• Dragonfly® 4DVS display• Dragonfly® 4PRO display• Dragonfly® 5DVS display• Dragonfly® 5PRO display• Dragonfly® 7PRO display	M5x20mm pan head pozi A4 Stainless steel
<ul style="list-style-type: none">• Dragonfly® 6 legacy display• Dragonfly® 7 legacy display	M4x15mm pan head pozi A4 Stainless steel

Power supply components

When connecting the display to the battery it should be properly fused.

Waterproof fuse holder
5 A fuse

Chapter 3: Installation

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- [3.1 Charging on page 20](#)
- [3.2 Assembly on page 21](#)

3.1 Charging

Use the supplied charger to charge your battery. The charger includes 3 plug adaptors for either USA, UK or EU regions.

1. Unplug the display's power cable from the battery.
2. Ensuring correct polarity, connect the charger terminals to the relevant battery terminals.
3. Wait for the charger LED to indicate charging is complete.
4. Remove charger from battery terminals.

Charger status

The LED indicator on the Charger will identify the charger status.

- **Not charging** — When the charger is plugged into the mains and is not connected to the battery, a Blue LED indicates that it is not charging.
- **Charging** — When the charger is charging the battery, the LED will illuminate Red.
- **Charging complete** — When the battery is fully charged, the LED will illuminate Blue.

Note:

It should take approximately 7 hours to fully charge the battery at room temperature.

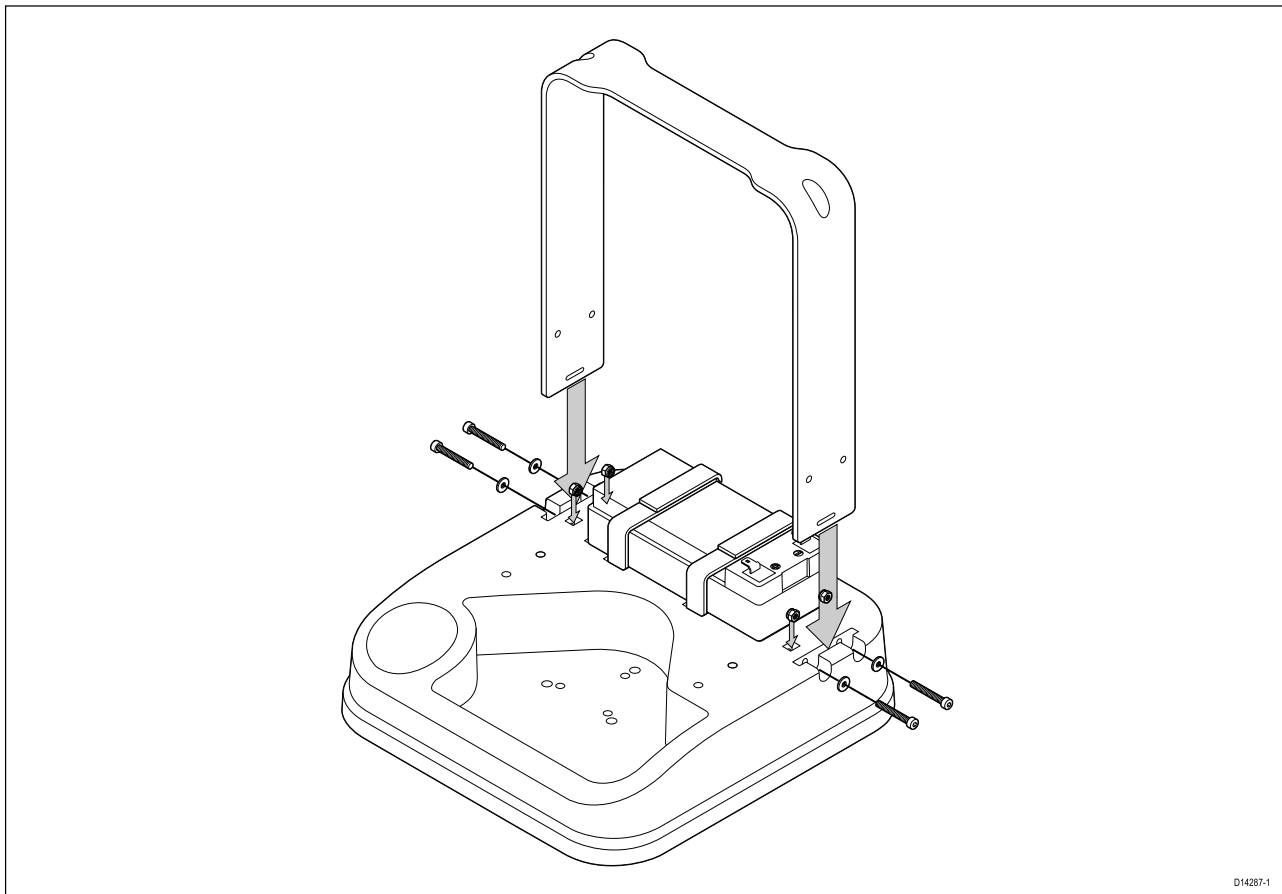
The quoted charge time is an approximate time calculated in optimum conditions, based on a new battery. Raymarine will not be liable for batteries that fail to meet this charge time as factors such as battery age, condition, charge cycles and usage all affect the charging time.

3.2 Assembly

Fitting the handle to the base

Once you have unpacked all the items from the box, assemble your ice fishing kit following the instructions below.

Note: The battery is supplied already fitted to the base using the battery straps; there is no need to remove the battery from the base.

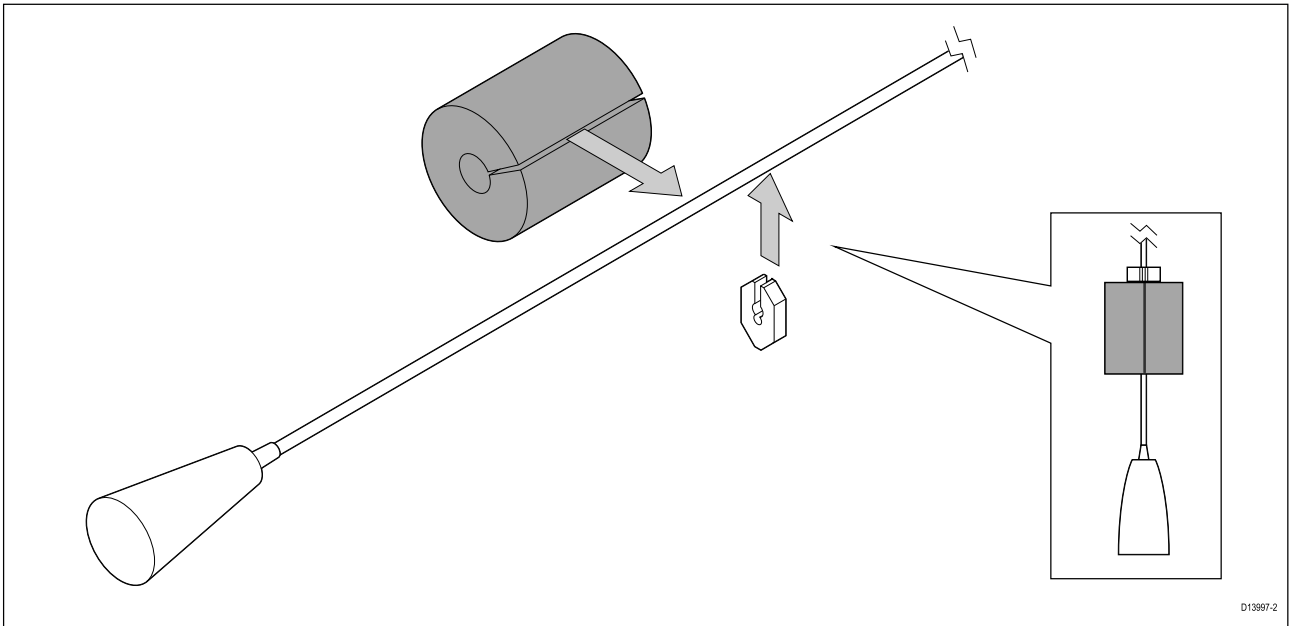


1. Insert the handle into the slots in the base.
The handle should click into place.
2. Place the 4 x locking nuts into the relevant slots as shown.

Ensure that the locking nuts are correctly orientated before inserting them in the base. The round locking part of the nut should face inwards towards the battery.

3. Place a washer over each of the hex bolts.
4. Insert the hex bolts into the sides of the base and tighten using a 3 mm hex wrench (Allen Key).

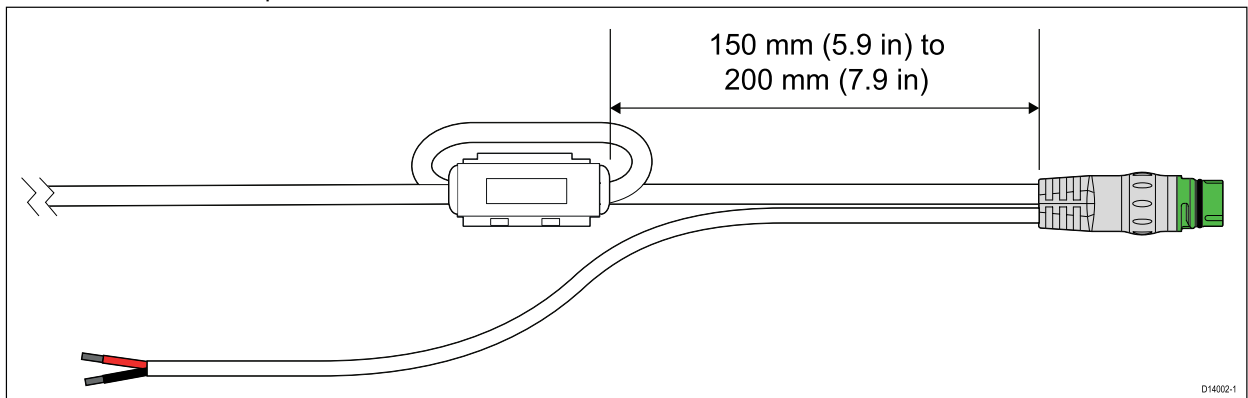
Fitting the float



1. Slide the transducer cable through the slot in the side of the float.
2. Adjust the position of the float so that the transducer will be at the desired depth when submerged.
3. Attach the cable clamp to the transducer cable, above the float.

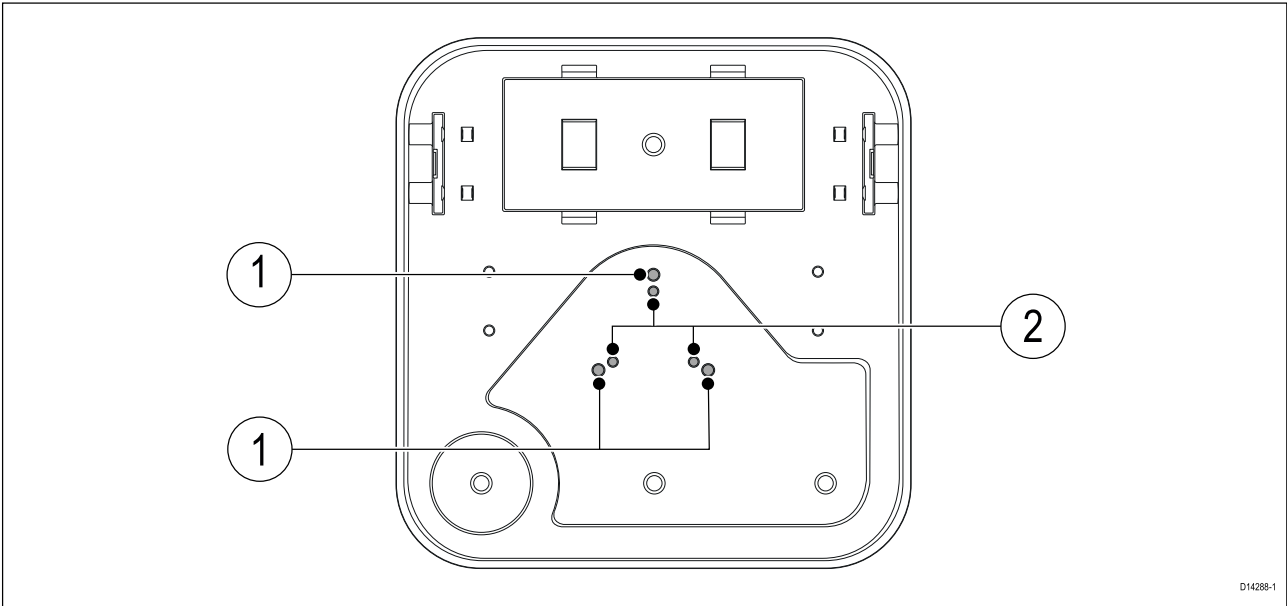
Fitting the suppression ferrite

1. To ensure optimal performance, loop the transducer cable through the supplied suppression ferrite and lock into place, as shown below.



Mounting the display

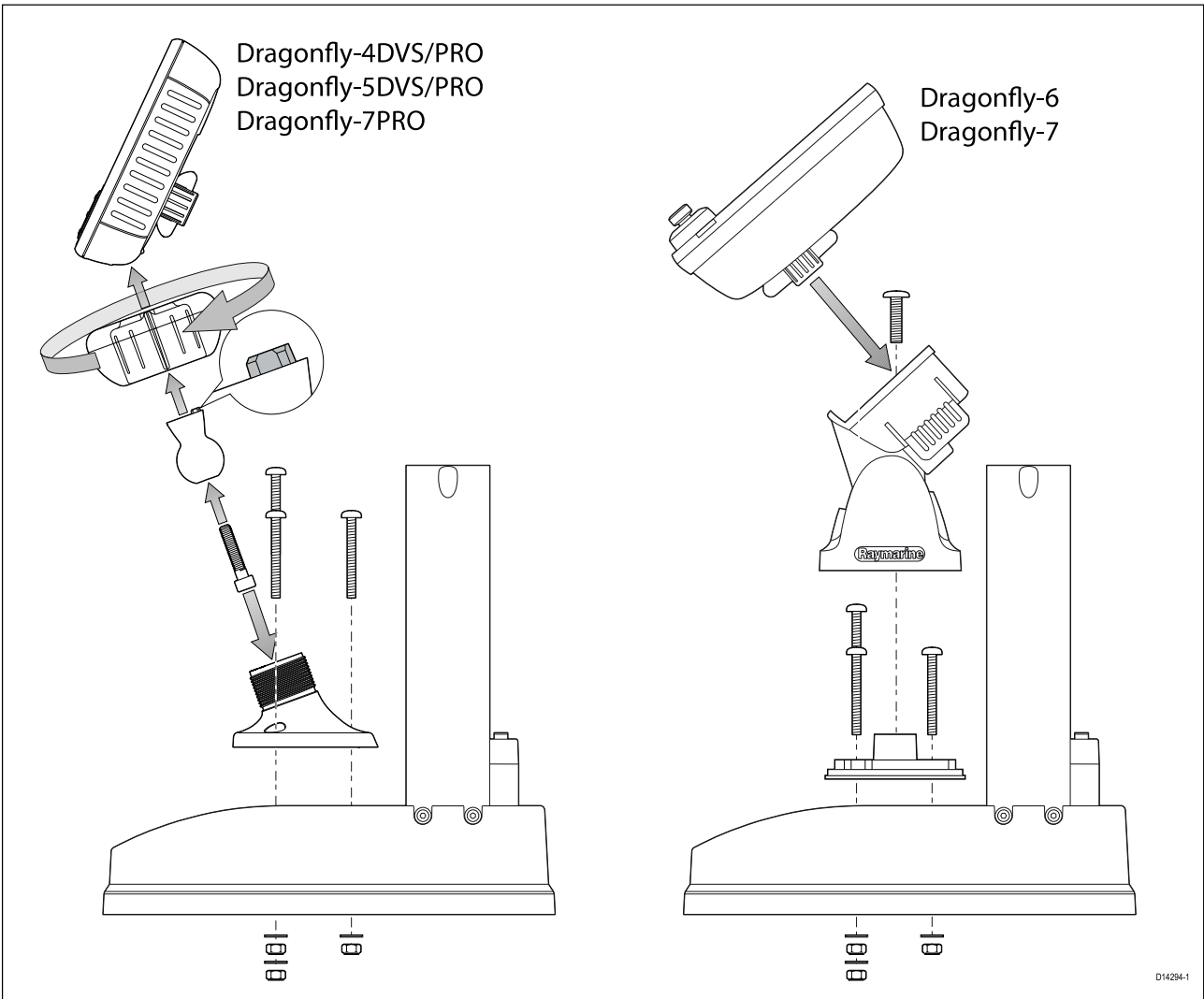
Mounting hole locations



- 1. Dragonfly®-4, Dragonfly®-5 and Dragonfly®-7 bracket holes
- 2. Legacy Dragonfly®6 and Dragonfly® 7 bracket holes

Important:

Take care when tightening the display bracket fixings as over tightening may cause the base or bracket to crack.



1. Using the parts supplied with your display and the relevant, additional fixing bolts (not supplied), attach the display's bracket to the base using the relevant mounting holes.

Important:

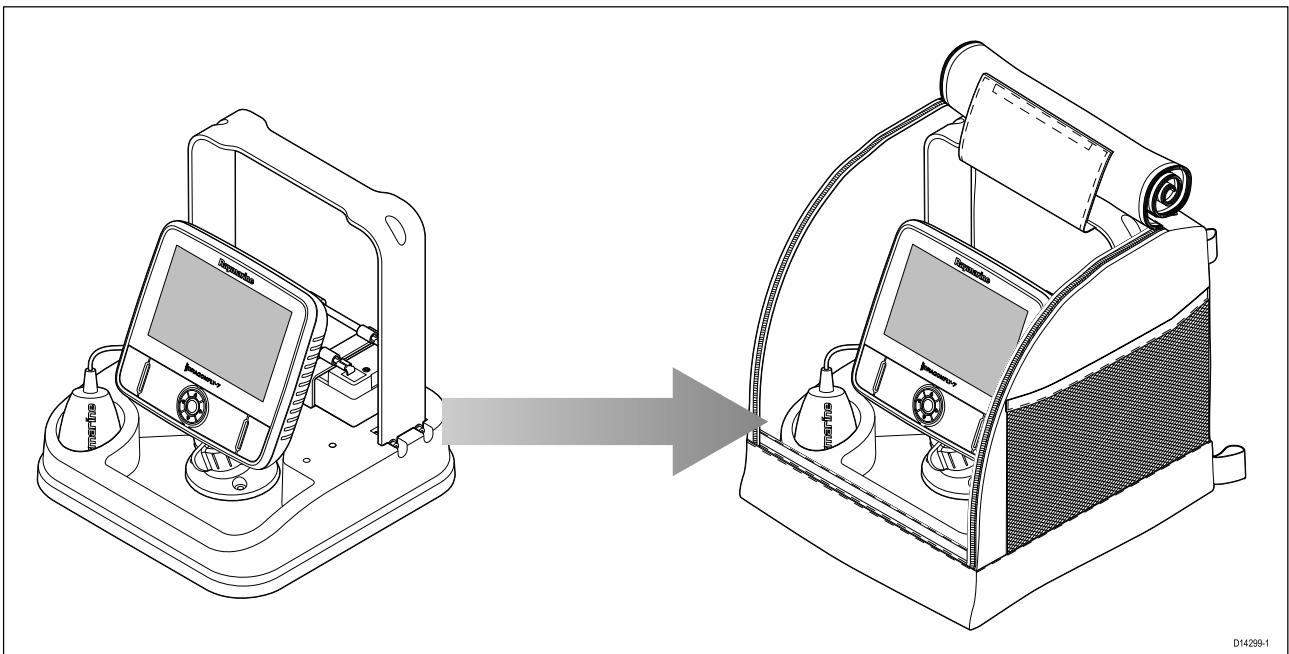
Additional bolts are required to connect your display to the ice fishing kit's base. The washers and locking nuts supplied with your display can be used with the new bolts.

2. When fitting the display to its bracket / cradle, follow the relevant mounting instructions that were included in the documentation that accompanied your display.
3. To prevent the fixings from damaging the material bottom of the ice fishing kit bag it is recommended that the threads on the underside of the base are covered using insulation tape or similar.

Transducer placement

1. Place the transducer in the oval recess located on the front left of the base.
2. Coil the excess transducer cable and store in the recess in front of the display.

Fitting assembly in the bag



1. Open the bag using the zip and roll up the flap so that it is out of the way of the opening.
2. Place the assembly inside the bag with the display facing the opening.
3. Feed the bag handle material under the metal assembly handle and fasten using the hook and loop strips.

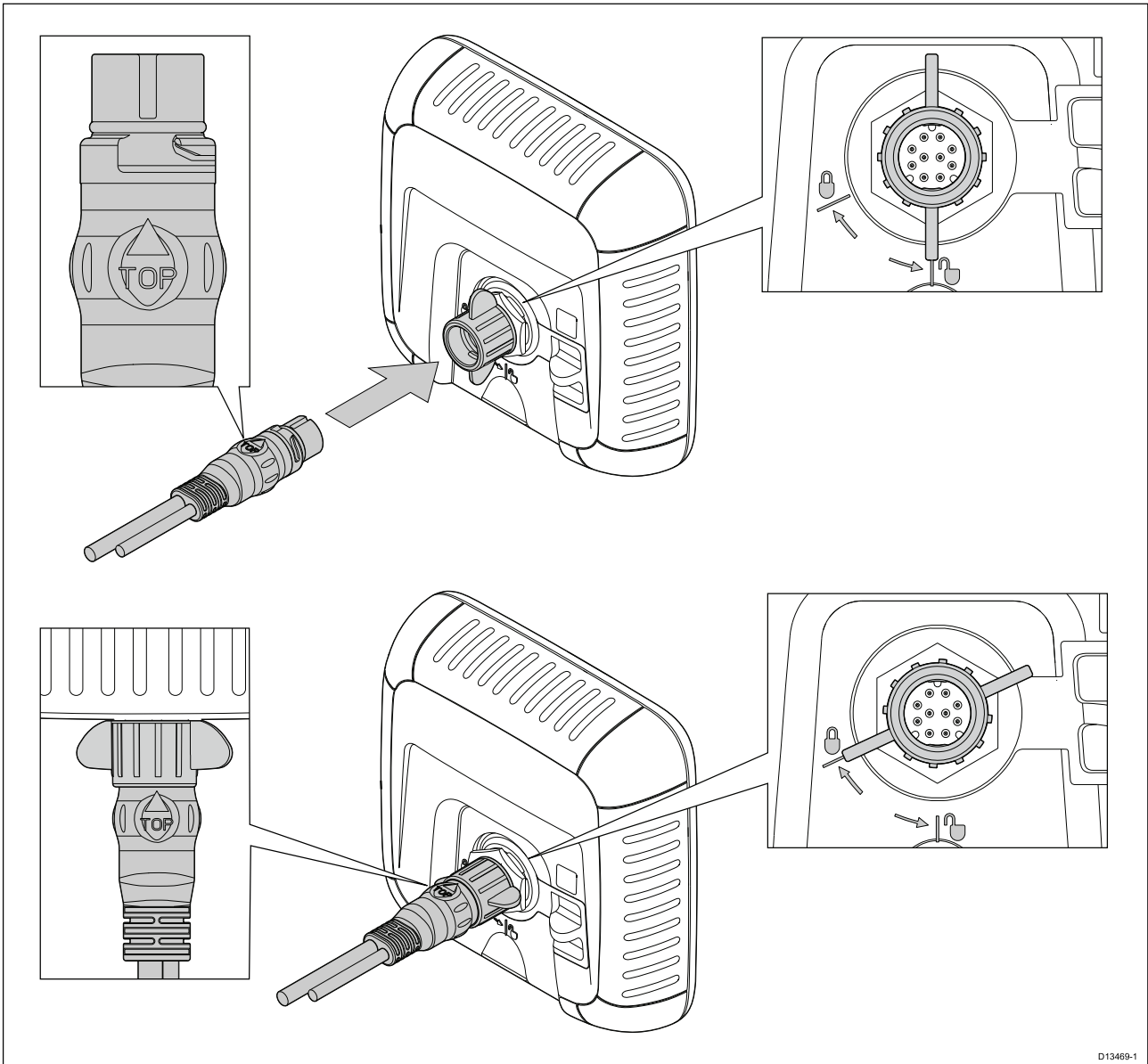
Chapter 4: Connections

Chapter contents

- 4.1 Connecting the cable to the display on page 26
- 4.2 Battery connection on page 28

4.1 Connecting the cable to the display

With the suppression ferrite and float fitted to the transducer cable, follow the steps below to connect the transducer cable to your display.



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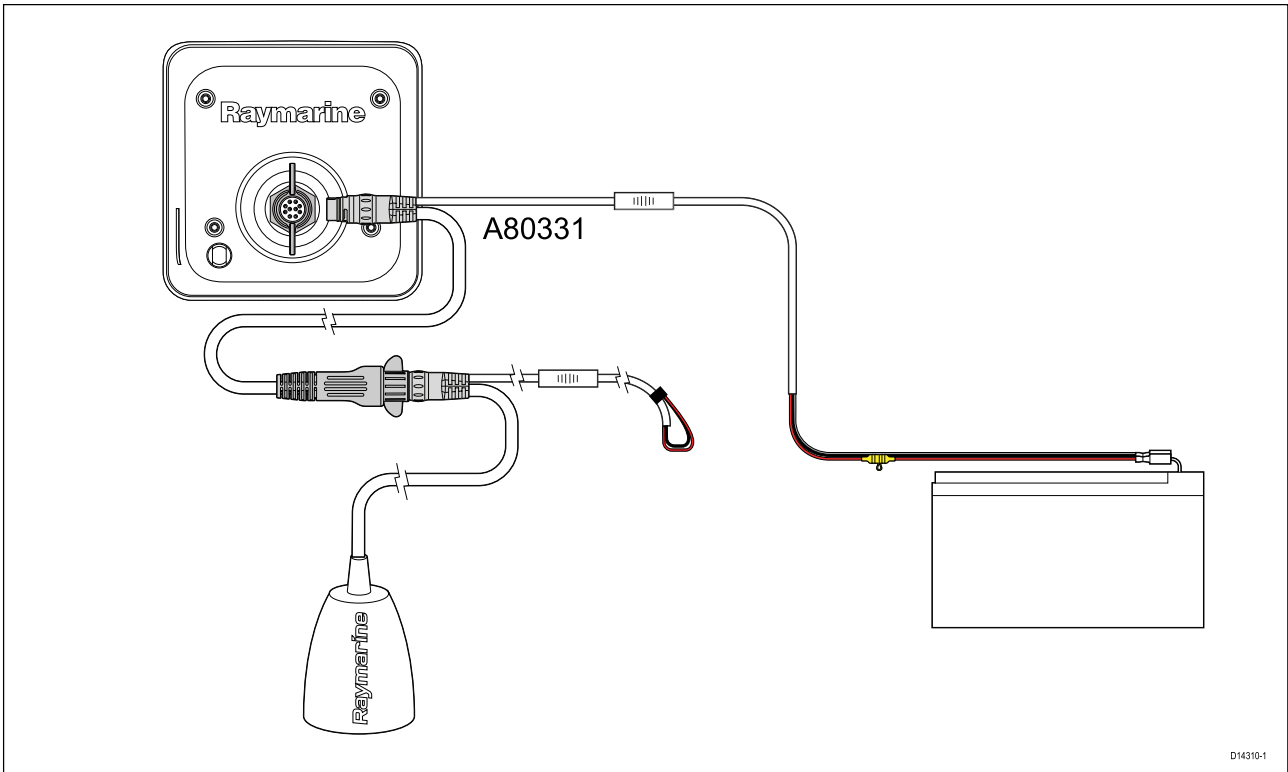
1. Rotate the display's connector locking collar to the unlocked position.
2. Rotate the cable connector so that the word 'TOP' is pointing upwards.
3. Push the cable connector all the way in, the tip of the arrow should be close to the locking collar.
4. Rotate the locking collar clockwise 2 clicks, until in the locked position.

Important:

Do NOT rotate the cable connector once it has entered the display connector as this could damage the connector pins.

Connecting Cable To Legacy Display Using Adaptor Cable

Adaptor cable A80331 is required to connect an ice fishing transducer to a legacy Dragonfly® display that utilizes the one keyway Red connector.



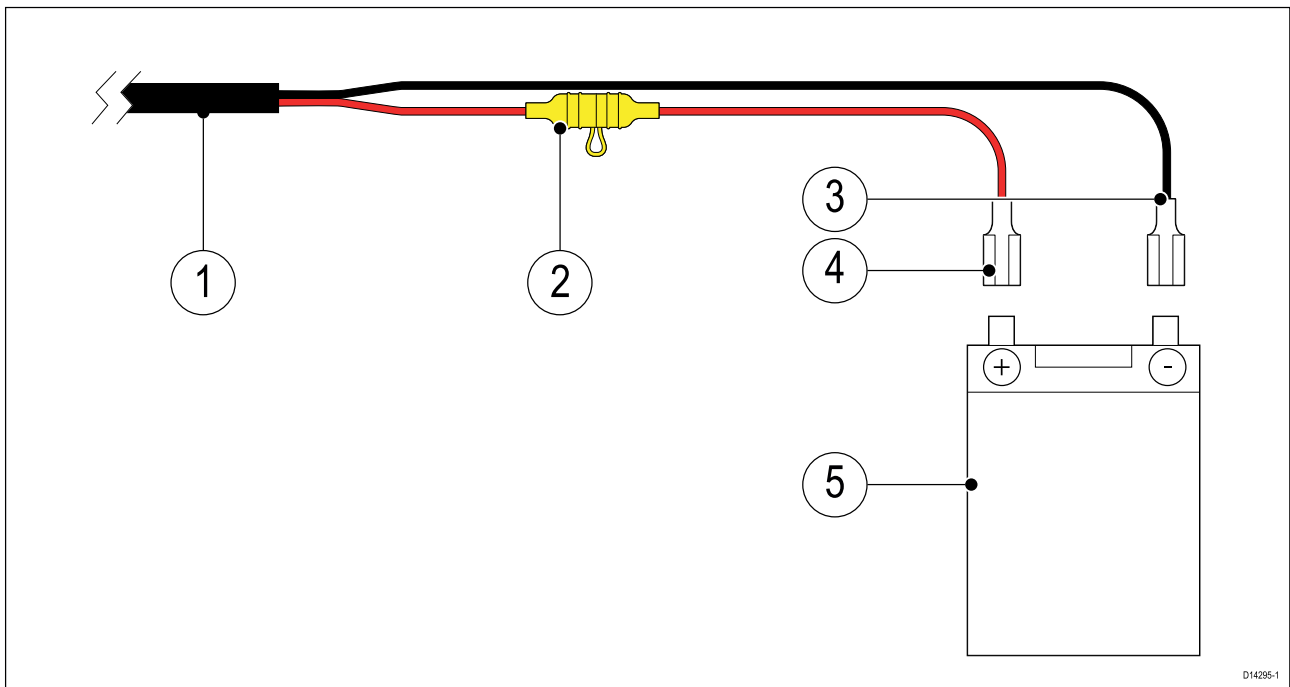
1. Connect the adaptor cable's power cable to the battery as follows:
 - i. Connect the Red (positive) wire to the battery's positive terminal.
 - ii. Connect the Black (negative) wire to the battery's negative terminal.
 - iii. Connect the Black/Gray earth wire to the battery's negative terminal.
2. Connect the adaptor cable to the transducer as follows:
 - i. Rotate the adaptor cable's connector locking collar to the unlocked position.
 - ii. Ensure correct orientation of both connectors.
 - iii. Insert the transducer connector into the adaptor cable connector.
 - iv. Rotate the locking collar clockwise 2 clicks, until in the locked position.
3. Connect the adaptor cable to the display as follows:
 - i. Rotate the display's connector locking collar to the unlocked position.
 - ii. Rotate the adaptor cable's connector so that the word 'TOP' is pointing upwards.
 - iii. Push the cable connector all the way in, the tip of the arrow should be close to the locking collar.
 - iv. Rotate the locking collar clockwise 2 clicks, until in the locked position.

4.2 Battery connection

When connecting the power cable to the supplied battery, a waterproof fuse holder and 5 amp fuse (not supplied) must be fitted.

Important:

Only use the battery supplied with your ice fishing kit to power your display.



1. Display power supply cable (part of the ice fishing transducer's cable).
2. Waterproof fuse holder with 5 amp fuse fitted (not supplied).
3. Black (negative) power supply terminal.
4. Red (positive) power supply terminal.
5. Supplied 12 V dc battery.

Chapter 5: Operations

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- [5.1 Operation on page 30](#)

5.1 Operation

Refer to the operation instructions supplied with your display for details on operating the transducer using the Sonar app.

Battery operation

Guidance for battery operation is provided below.

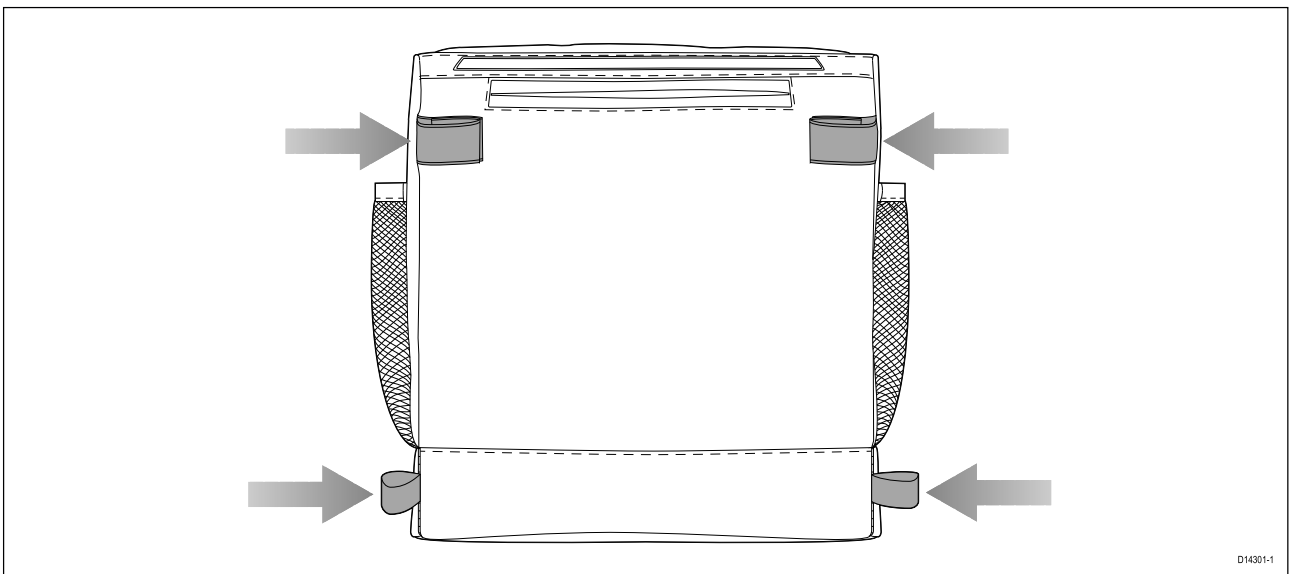
- When used in colder temperatures the battery will discharge more quickly than in warmer conditions.
- Lowering your display's brightness setting can extend the time it takes for the battery to discharge.
- Battery life can be extended by not allowing your battery to completely discharge before recharging.
- Stored batteries will slowly discharge over time, to prolong usage, charge the battery prior to use.
- The battery is recyclable and you must follow local laws and regulations for safe battery disposal.
- The battery is a sealed lead-acid battery that requires no maintenance.

Adjusting transducer depth

1. Move the cable clamp up and down the cable to adjust the depth of your transducer.

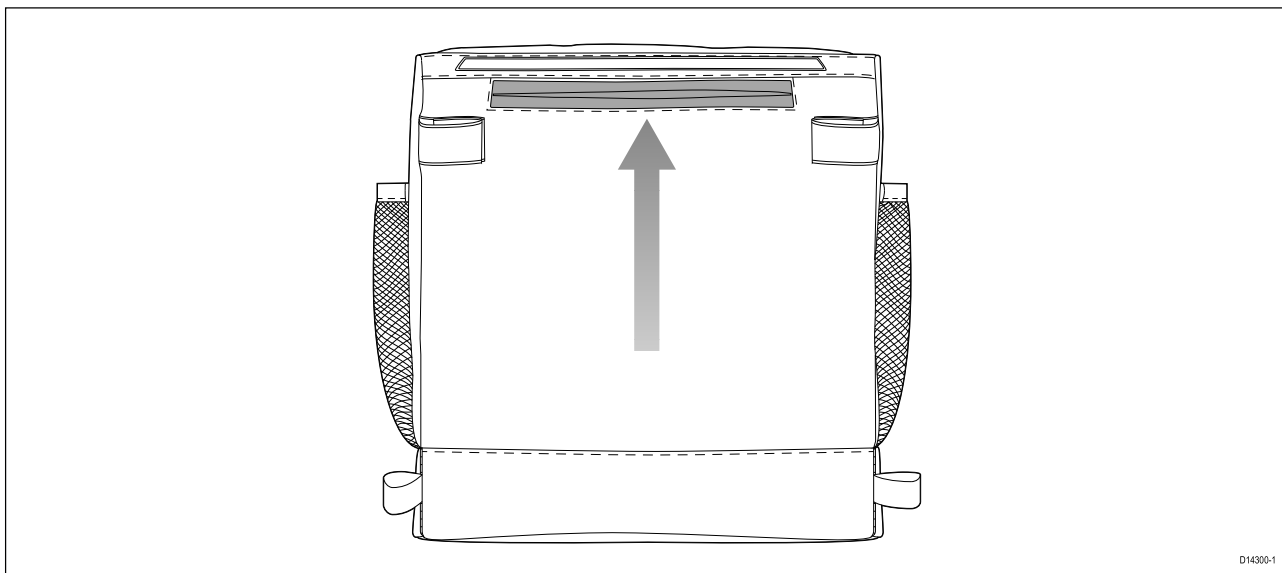
Rod storage holders

2 x rod storage holders are included on the rear of the bag.



Slide the bottom of your rod through the elastic loop at the bottom and then fasten the hook and loop strap located at the top.

Transportation



D14300-1

1. Before transporting your ice fishing kit, unplug the power terminals from the battery.
2. Close the front flap using the zips provided.
3. Place your hand inside the handle hole located on the back of the bag.

Your hand should slide under and grasp the metal handle through the material.

Battery storage

Prior to storage, the battery should be fully charged and then stored in a cool dry place with the battery terminals disconnected.

Chapter 6: Maintaining your display

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- [6.1 Service and maintenance on page 34](#)
- [6.2 Product cleaning on page 35](#)

6.1 Service and maintenance

This product contains no user serviceable components. Please refer all maintenance and repair to authorized Raymarine dealers. Unauthorized repair may affect your warranty.



Warning: High voltage

This product contains high voltage. Adjustments require specialized service procedures and tools only available to qualified service technicians. There are no user serviceable parts or adjustments. The operator should never remove the cover or attempt to service the product.

Routine equipment checks

It is recommended that you perform the following routine checks, on a regular basis, to ensure the correct and reliable operation of your equipment:

- Examine all cables for signs of damage or wear and tear.
- Check that all cables are securely connected.

6.2 Product cleaning

Best cleaning practices.

When cleaning products:

- Lightly rinse or flush with clean, cool fresh water.
- If your product has a display screen, do NOT wipe the screen with a dry cloth, as this could scratch the screen coating.
- Do NOT use: abrasive, acidic, ammonia, solvent or chemical based cleaning products.
- Do NOT use a jet wash.

Transducer cleaning and maintenance

Air bubbles that can accumulate on the transducer's face, may reduce transducer performance. If this happens wipe the transducer face whilst it is in the water.

To clean the transducer wipe the surfaces with a damp cloth soaked in fresh water.

Chapter 7: Troubleshooting

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- [7.1 Sonar troubleshooting on page 38](#)

7.1 Sonar troubleshooting

Problems with the sonar and their possible causes and solutions are described here.

Scrolling image is not being displayed

Possible causes	Possible solutions
Sonar disabled	Select Ping Enable from the Sonar app's Sounder menu.
Incorrect transducer selected	Check that the correct transducer is selected in the Sonar app's Transducer menu.
Damaged cables	<ol style="list-style-type: none"> 1. Check that the transducer cable connector is fully inserted and locked in position. 2. Check the power supply cable and connectors for signs of damage or corrosion, replace if necessary. 3. With the unit turned on, try flexing the cable near to the display connector to see if this causes the unit to re-boot/loose power, replace if necessary. 4. Check the vessel's battery voltage, the condition of the battery terminals and power supply cables, ensuring connections are secure, clean and free from corrosion, replace if necessary. 5. With the product under load, using a multi-meter, check for high voltage drop across all connectors/fuses etc (this can cause the Sonar applications to stop scrolling or the unit to reset/turn off), replace if necessary.
Damaged or fouled transducer	Check the condition of the transducer ensuring it is not damaged and is free from debris/fouling, clean or replace as necessary.
Wrong transducer fitted	Ensure the transducer is compatible with your system.
External sonar module: SeaTalkhs™ / RayNet network problem.	<ul style="list-style-type: none"> • Check that the unit is correctly connected to the multifunction display or Raymarine network switch. If a crossover coupler or other coupler cable / adapter is used, check all connections ensuring connections are secure, clean and free from corrosion, replace if necessary.
External sonar module: Software mismatch between equipment may prevent communication.	

No depth reading / lost bottom lock

Possible causes	Possible solutions
Transducer location	Check that the transducer has been installed in accordance with the instructions provided with the transducer.
Transducer angle	If the transducer angle is too great the beam can miss the bottom, adjust transducer angle and recheck.
Transducer kicked-up	If the transducer has a kick-up mechanism, check that it has not kicked up due to hitting an object.
Power source insufficient	With the product under load, using a multi-meter, check the power supply voltage as close to the unit as possible to establish actual voltage when the current is flowing. (Check your product's Technical specification for power supply requirements.)
Damaged or fouled transducer	Check the condition of the transducer ensuring it is not damaged and is free from debris / fouling.

Possible causes	Possible solutions
Damaged cables	<ol style="list-style-type: none"> 1. Check the unit's connector for broken or bent pins. 2. Check that the cable connector is fully inserted into the unit and that the locking collar is in the locked position. 3. Check the cable and connectors for signs of damage or corrosion, replace if necessary. 4. With the unit turned on, try flexing the power cable near to the display connector to see if this causes the unit to re-boot/loose power, replace if necessary. 5. Check the vessel's battery voltage, the condition of the battery terminals and power supply cables, ensuring connections are secure, clean and free from corrosion, replace if necessary. 6. With the product under load, using a multi-meter, check for high voltage drop across all connectors/fuses etc (this can cause the Sonar applications to stop scrolling or the unit to reset/turn off), replace if necessary.
Vessel speed too high	Slow vessel speed and recheck.
Bottom too shallow or too deep	The bottom depth may be outside of the transducers depth range, move vessel to shallower or deeper waters as relevant and recheck.

Poor / problematic image

Possible causes	Possible solutions
Vessel stationary	Fish arches are not displayed if the vessel is stationary; fish will appear on the display as straight lines.
Scrolling paused or speed set too low	Unpause or increase sonar scrolling speed.
Sensitivity settings may be inappropriate for present conditions.	Check and adjust sensitivity settings or perform a Sonar reset.
Damaged cables	<ol style="list-style-type: none"> 1. Check the unit's connector for broken or bent pins. 2. Check that the cable connector is fully inserted into the unit and that the locking collar is in the locked position. 3. Check the cable and connectors for signs of damage or corrosion, replace if necessary. 4. With the unit turned on, try flexing the power cable near to the display connector to see if this causes the unit to re-boot/loose power, replace if necessary. 5. Check the vessel's battery voltage, the condition of the battery terminals and power supply cables, ensuring connections are secure, clean and free from corrosion, replace if necessary. 6. With the product under load, using a multi-meter, check for high voltage drop across all connectors/fuses etc (this can cause the Sonar applications to stop scrolling or the unit to reset/turn off), replace if necessary.

Possible causes	Possible solutions
Transducer location	<ul style="list-style-type: none"> • Check that the transducer has been installed in accordance with the instructions provided with the transducer. • If a transom mount transducer is mounted too high on the transom it may be lifting out of the water, check that the transducer face is fully submerged when planing and turning.
Transducer kicked-up	If the transducer has a kick-up mechanism, check that it has not kicked up due to hitting an object.
Damaged or fouled transducer	Check the condition of the transducer ensuring it is not damaged and is free from debris / fouling.
Damaged transducer cable	Check that the transducer cable and connection is free from damage and that the connections are secure and free from corrosion.
Turbulence around the transducer at higher speeds may affect transducer performance	Slow vessel speed and recheck.
Interference from another transducer	<ol style="list-style-type: none"> 1. Turn off the transducer causing the interference. 2. Reposition the transducers so they are further apart.
Unit power supply fault	Check the voltage from the power supply, if this is too low it can affect the transmitting power of the unit.

Chapter 8: Technical support

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- [8.1 Raymarine product support and servicing on page 42](#)
- [8.2 Learning resources on page 44](#)

8.1 Raymarine product support and servicing

Raymarine provides a comprehensive product support service, as well as warranty, service, and repairs. You can access these services through the Raymarine website, telephone, and e-mail.

Product information

If you need to request service or support, please have the following information to hand:

- Product name.
- Product identity.
- Serial number.
- Software application version.
- System diagrams.

You can obtain this product information using diagnostic pages of the connected MFD.

Chapter 9: Technical specification

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- [9.1 Ice fishing kit specification on page 46](#)
- [9.2 Transducer specification on page 47](#)
- [9.3 Sonar specification on page 48](#)
- [9.4 Charger specification on page 49](#)
- [9.5 Battery specification on page 50](#)

9.1 Ice fishing kit specification

Included Transducer:	CPT-S ice fishing transducer (with 2.5 m (8.2 ft) transducer cable and display 0.5 m (1.64 ft) power supply cable)
Bag dimensions (approximate):	<ul style="list-style-type: none">• Width: 290 mm (11.42 in)• Height: 270 mm (10.63 in))• Depth: 290 mm (11.42 in)
Boxed weight:	4.7 Kg (10.36 lb)

9.2 Transducer specification

Operating temperature range:	-2°C (28.4°F) to +35°C (95°F)
Storage temperature range:	-20°C (-4°F) to +70°C (158°F)
Display power supply:	12 V dc, 7 Ah (amp hour) or greater
Power:	90 W
Depth:	0.6 m (1.97 ft) to 274 m (898.95 ft)
Offset angle:	0°
Waterproofing:	IPx8 — Continuously submerged at a depth of 3 meters (9.84 ft)
Cable length:	<ul style="list-style-type: none">• Power = 0.5 m (1.6 ft)• Transducer = 2.5 m (8.2 ft)
Connections:	<ul style="list-style-type: none">• Display power = Crimp terminals• Transducer = Dragonfly 10-pin 3 keyway connector (Green)
Weight:	0.260 kg (9.17 oz)
Temperature sensor:	N/A

9.3 Sonar specification

Channels	1 x CHIRP sonar
Beam coverage	Conical beam
Depth range	0.6 m (2 ft) to 274 m (900 ft) depending on water conditions
Power	90 W

9.4 Charger specification

Type:	Class 2 power supply, suitable for indoor use only.
Input voltage:	100 V ac to 240 V ac
Input current:	0.4 A
Input frequency:	50/60 Hz
Output voltage:	13 V dc
Output current:	0.8 A
Output power:	15.0 W max
Included adaptors:	<ul style="list-style-type: none">• USA (type A)• UK (type G)• EU (type C)
Cable length	1 m (3.28 ft) fixed cable

9.5 Battery specification

Battery type:	Sealed, valve regulated lead-acid (VRLA), rechargeable
Nominal voltage:	12 V dc
Capacity 20 hours @ 25°C (77°F):	7.0 Ah (7000 mAh)
Internal resistance:	22 m Ω
Approximate usage time — from fully charged @ -20°C (-4°F):	<p>Examples:</p> <ul style="list-style-type: none"> • Dragonfly-7PRO: 5 hours @ 100% brightness • Dragonfly-5PRO: 10 hours @ 100% brightness <div style="border: 1px solid black; padding: 5px;"> <p>Note: The values above are approximate usage time examples using a new battery. Battery capacity degrades over time so older well used batteries will discharge more quickly than a new battery.</p> </div>
Self-discharge @ 25°C (77°F):	<ul style="list-style-type: none"> • 3 months: 91% remaining capacity • 6 months: 82% remaining capacity • 12 months: 65% remaining capacity
Capacity affected by temperature (20 hours):	<ul style="list-style-type: none"> • 40°C (104°F): 102% • 25°C (77°F): 100% • 0°C (32°F): 85% • -15°C (5°F): 65%
Operating temperature range:	-15°C (5°F) to 50°C (122°F)
Float charging voltage @ 25°C (77°F):	13.6 V to 13.8 V
Cyclic charging voltage @ 25°C (77°F):	14.5 V to 14.8 V
Maximum charging current:	2.8 A
Terminal material:	Copper
Maximum discharge current:	105 A (5 seconds)
Conformance	The battery conforms to UN2800 classification as 'Batteries, wet, non-spillable and electric storage'
Transportation	The battery is exempt from hazardous goods regulations for the purpose of transportation by DOT and IATA/ICAO and therefore are unrestricted for transportation by any means.

Chapter 10: Spares and accessories

Chapter contents

- [10.1 Spares on page 52](#)

10.1 Spares

A80582	CPT-S ice fishing transducers (with 2.5 m cable)
R70671	Ice fishing bag
R70672	Ice fishing mount
R70673	Ice fishing float and clips
R70674	Ice fishing battery and charger

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