



## INSTRUCTION MANUAL



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FISH FINDER

**MXF-5000**

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

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**Icom Inc.**

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## FOREWORD

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Thank you for purchasing Icom's **MXF-5000 FISH FINDER**.

The fish finder is designed for use with the Icom MarineCommander™ system through the supplied connection cable.

It has powerful transmission power and many other advanced features can be used with the Icom MarineCommander™ system.

After studying this manual, if you have any additional questions regarding the operation of the fish finder, contact your nearest authorized Icom Inc. dealer.

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## IMPORTANT

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**READ THIS INSTRUCTION MANUAL CAREFULLY** before attempting to operate the fish finder.

**SAVE THIS INSTRUCTION MANUAL.** This manual contains important safety and operating instructions for the MXF-5000.

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## EXPLICIT DEFINITIONS

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WORD	DEFINITION
⚠ <b>DANGER</b>	Personal death, serious injury or an explosion may occur.
⚠ <b>WARNING</b>	Personal injury, fire hazard or electric shock may occur.
<b>CAUTION</b>	Equipment damage may occur.
<b>NOTE</b>	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

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## FCC INFORMATION

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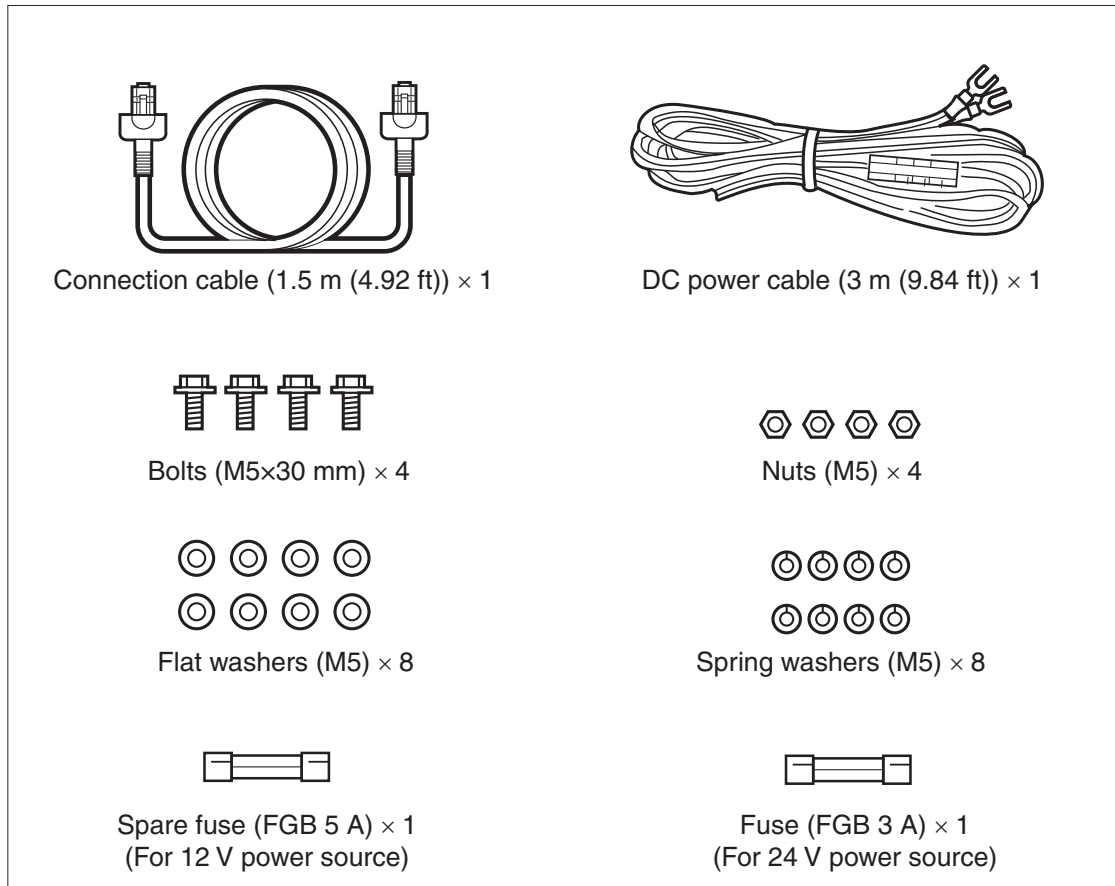
• **FOR CLASS A UNINTENTIONAL RADIATORS:**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**CAUTION:** Changes or modifications to this fish finder, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

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## SUPPLIED ACCESSORIES



## TABLE OF CONTENTS

FOREWORD .....	i
IMPORTANT .....	i
EXPLICIT DEFINITIONS .....	i
FCC INFORMATION .....	i
SUPPLIED ACCESSORIES .....	ii
TABLE OF CONTENTS .....	ii
PRECAUTIONS .....	iii
<b>1 PANEL DESCRIPTION .....</b>	<b>1</b>
<b>2 INSTALLATION AND CONNECTIONS .....</b>	<b>2</b>
■ Jumper setting (When connecting an EX-3195 ONLY) .....	2
■ Connection .....	3
■ Power source requirement .....	3
■ Ground connection .....	3
■ Mounting .....	4
■ Installing the transducer .....	4

<b>3 MAINTENANCE AND OPTIONS .....</b>	<b>7</b>
■ Maintenance and inspection .....	7
■ Periodic maintenance .....	7
■ Fish finder maintenance .....	7
■ Fuse replacement .....	7
■ Options .....	7
<b>4 SPECIFICATIONS .....</b>	<b>8</b>

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## PRECAUTIONS

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**⚠ DANGER:** A transducer **MUST BE** installed by a shipbuilder or a qualified installer. Improper installation could cause water leaks and other severe damage.

**⚠ WARNING: NEVER** let metal, wire or other objects touch any internal part or terminals of the fish finder. This may result in an electric shock.

**⚠ WARNING: NEVER** apply AC voltage to the DC input terminals of the fish finder. This may pose a fire hazard, result in an electric shock or damage the fish finder.

**⚠ WARNING: NEVER** apply more than 32 V DC to the DC input terminal of the fish finder. This may pose a fire hazard or damage the fish finder.

**⚠ WARNING:** Immediately turn the Icom MarineCommander™ system and fish finder power OFF, and remove the power cable if it emits an abnormal odor, sound or smoke. Contact your Icom dealer or distributor for advice.

**⚠ WARNING: NEVER** touch the fish finder with wet hands. This may result in an electric shock or damage the fish finder.

**⚠ WARNING: NEVER** open the bottom cover of the fish finder by yourself. This should only be done by qualified equipment installers. There are no user adjustment points. Opening the case may expose you to electric shock and incorrect reassembly may cause a fire hazard.

**⚠ WARNING: NEVER** modify or attempt to repair the equipment by yourself. ONLY qualified persons are allowed to modify or repair the equipment.

**CAUTION! NEVER** connect the fish finder to a DC power source using reverse polarity. This will damage the fish finder.

**CAUTION! NEVER** remove the fuse holders from the DC power cable. This will damage the fish finder.

**CAUTION! KEEP** the fish finder at least 1 meter (3.28 ft) away from your vessel's magnetic navigation compass.

**DO NOT** place the fish finder in excessively dusty environments.

**DO NOT** place the fish finder near heating equipment or in direct sunlight or where hot or cold air blows directly onto it.

**DO NOT** use or place the fish finder in areas with temperature below  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ).

**DO NOT** use chemical agents such as benzine or alcohol when cleaning the fish finder, as they can damage the fish finder's surfaces. To clean the equipment, wipe it using a soft cloth dampened with a water-diluted detergent.

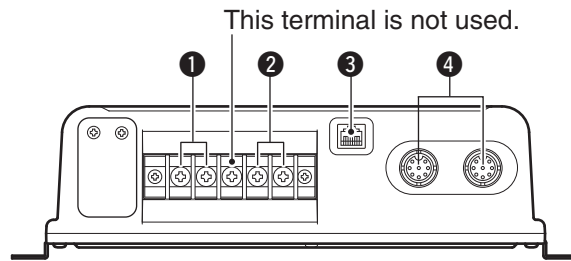
**DO NOT** place the fish finder in areas that will block air passage or put anything around the fish finder. This will obstruct heat dissipation.

**KEEP** the fish finder out of the reach of children.

**KEEP** the fish finder away from heavy rain, and never immerse it in the water.

The fish finder meets IPX4 requirements for splash resistance when the transducer is attached to one connector, and the connector cap is installed on the other connector.

However, if it is dropped, splash resistance cannot be guaranteed because of possible damage to the case or the waterproof seals.



- ❶ **DC POWER INPUT TERMINALS (p. 3)**  
Connect the 12 V/24 V DC power supply through the supplied DC power cable.
- ❷ **GROUND TERMINALS (p. 3)**  
Connect these terminals to ground to prevent electrical shocks.
- ❸ **MarineCommander™ CONNECTOR (p. 3)**  
Connect this connector to the Icom MarineCommander™.
- ❹ **TRANSDUCER1/2 CONNECTORS (pgs. 3–6, 8)**  
Connect the transducer to either connector.  
// **NEVER CONNECT** 2 transducers to these connectors at the same time.

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## INSTALLATION AND CONNECTIONS

**For qualified equipment installers ONLY**

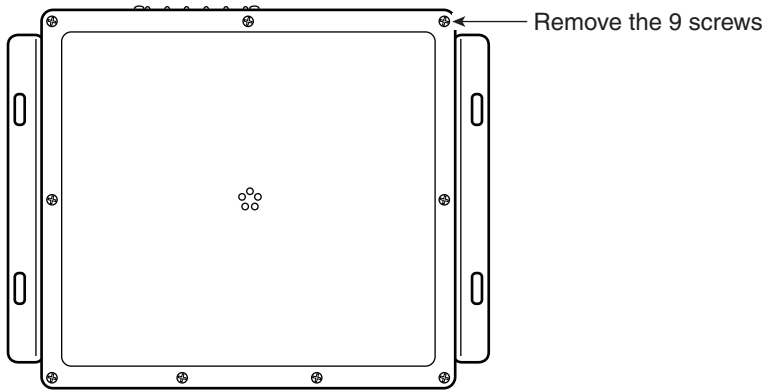
### ■ Jumper setting (When connecting an EX-3195 ONLY)

**DO NOT** open the bottom cover of the fish finder unless connecting an EX-3195.

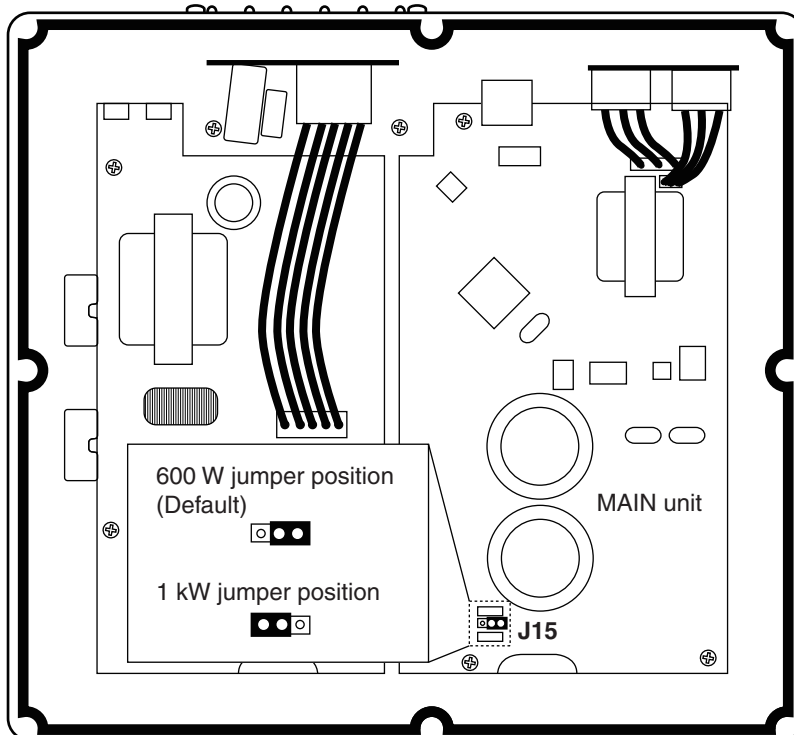
When connecting an EX-3195, move the jumper (MAIN unit; J15) to the 1 kW position as follows.

**CAUTION:** Before changing the jumper setting, make sure disconnecting the fish finder's DC power cable from the battery.

- ① Remove the 9 screws from the bottom cover and remove it.



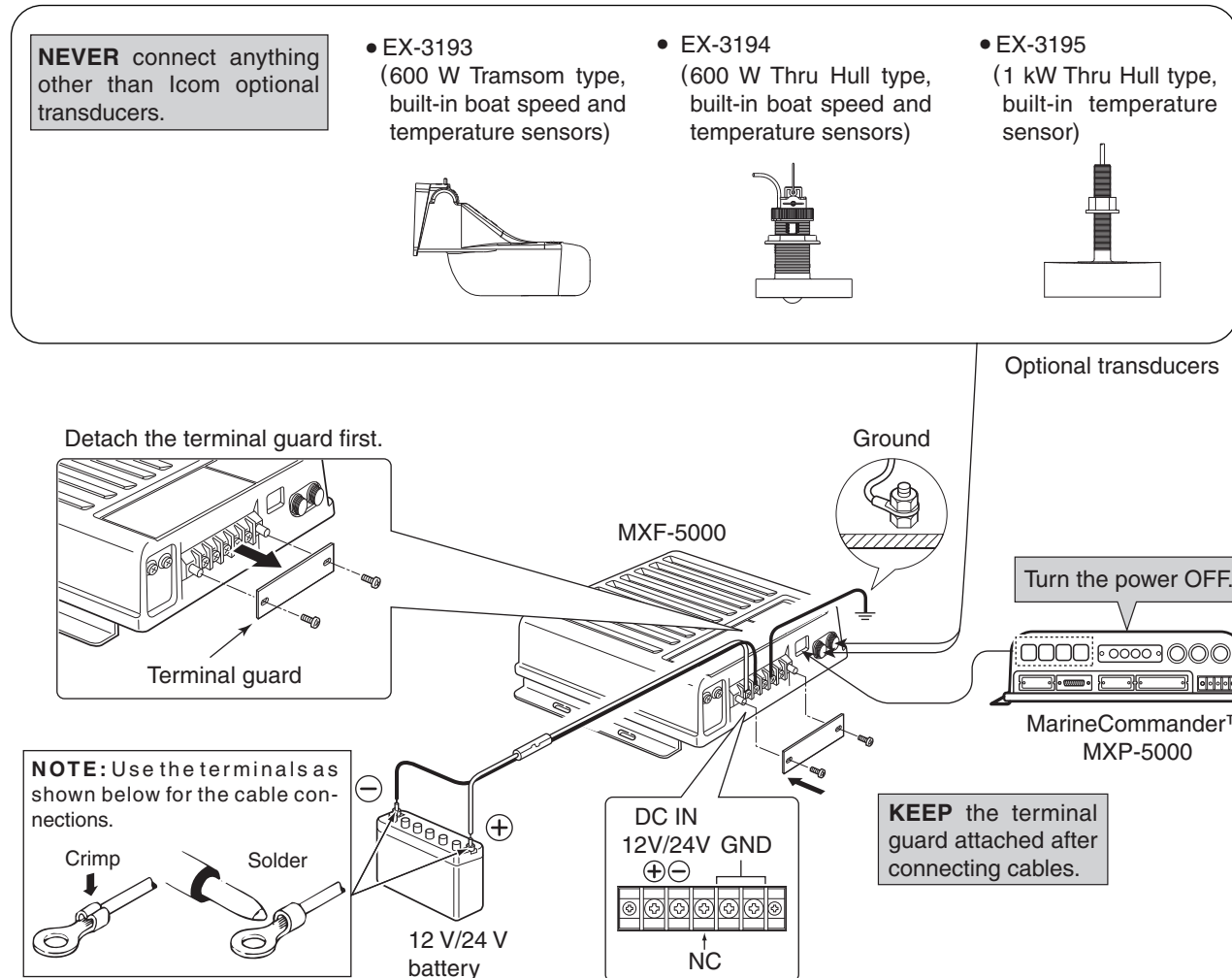
- ② Move the jumper to the 1 kW position.



- ③ Return the bottom cover to the original position, and then reinstall the 9 screws.

## ■ Connection

**CAUTION:** Before connecting, make sure disconnecting the fish finder's DC power cable from the battery.



## ■ Power source requirement

**CAUTION:** Before connecting the DC power cable, check the following important items.

Make sure:

- Output voltage of the power source is 12/24 V DC.
- DC power cable polarity is correct.  
 Red : Positive ⊕ terminal  
 Black : Negative ⊖ terminal
- Fuse rating of the DC power cable is correct. (The 5 A fuse is pre-installed.)  
 3 A : For 24 V power source  
 5 A : For 12 V power source

## ■ Ground connection

To prevent electrical shocks and other problems, ground the fish finder unit through the [GND] terminals. For best results, connect a heavy gauge wire or strap to the nearest grounding point on the boat. The distance between the [GND] terminals and the ground point should be as short as possible.

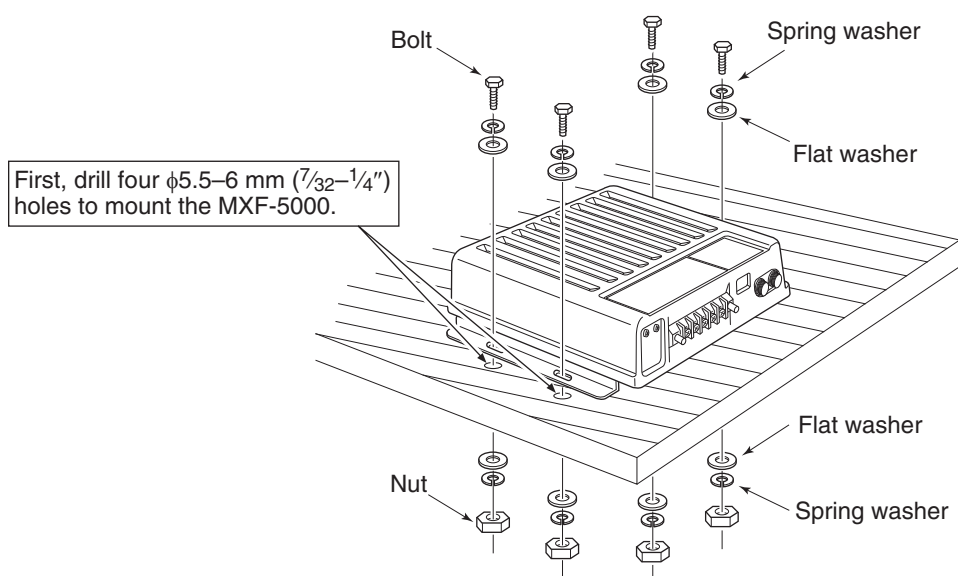
## 2 INSTALLATION AND CONNECTIONS

### ■ Mounting

First, drill four  $\phi 5.5\text{--}6\text{ mm}$  ( $7/32\text{--}1/4''$ ) holes to mount the fish finder using the units base as a pattern.

Mount the fish finder securely with the four supplied bolts (M5 $\times$ 30 mm) to a flat surface which supports more than approx. 5 kg (11 lb).

**CAUTION:** KEEP the fish finder at least 1 meter (3.28 ft) away from your vessel's magnetic navigation compass.



### ■ Installing the transducer

#### ◇ Optional transducers and accessories

Various types of transducers and boat speed/water temperature sensors are available as options, to suit your application.

MODEL NAME	DETAILS
EX-3193	Transom type transducer (600 W, 50 kHz and 200 kHz frequencies, built-in boat speed and temperature sensors)
EX-3194	Thru Hull type transducer (600 W, 50 kHz and 200 kHz frequencies, built-in boat speed and temperature sensors)
EX-3195	Thru Hull type transducer (1 kW, 50 kHz and 200 kHz frequencies, built-in temperature sensor)
OPC-1929	Approx. 6 m (19.69 ft) extension cable for transducer



◇ Installation position

⚠ **DANGER:** A transducer **MUST BE** installed by a shipbuilder or a qualified installer. Improper installation could cause water leaks and other severe damage.

⚠ **WARNING: BE SURE** the fish finder's power is OFF\* whenever you are working with the transducer.

\*The fish finder's power automatically turns OFF approx. 30 sec. after the display unit's power is turned OFF. When 2 display units are connected to the MarineCommander™, all units' power must be turned OFF.

The performance of the fish finder greatly depends on the installation position of the transducer. See transducer's instruction manual for details.

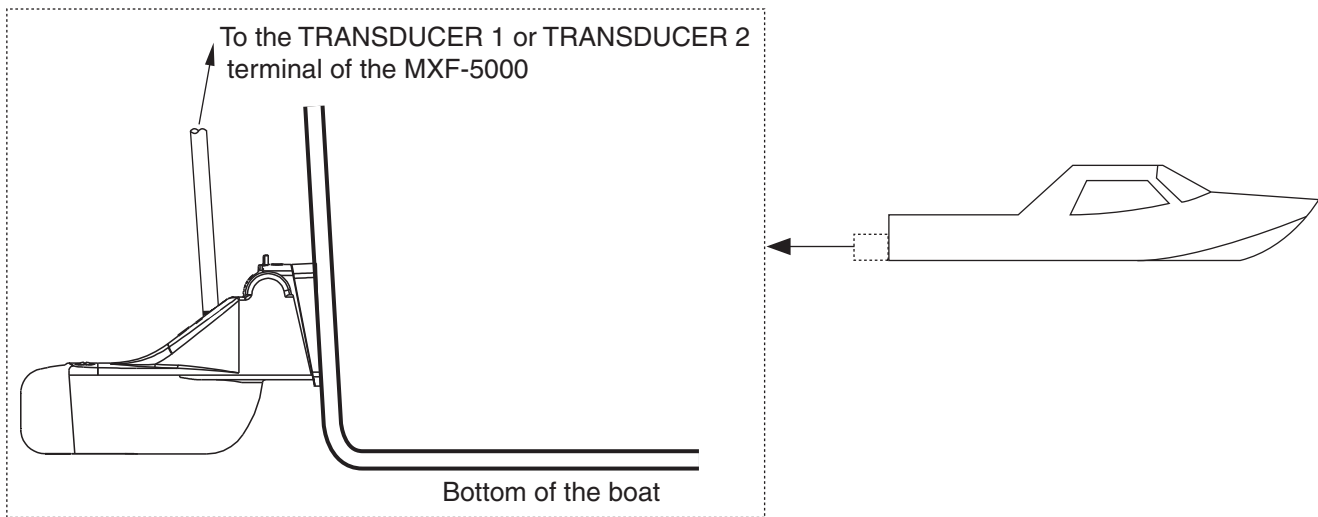
Transducers are mainly divided into two types: the transom type and the Thru Hull type.

Install the transducer in the following area.

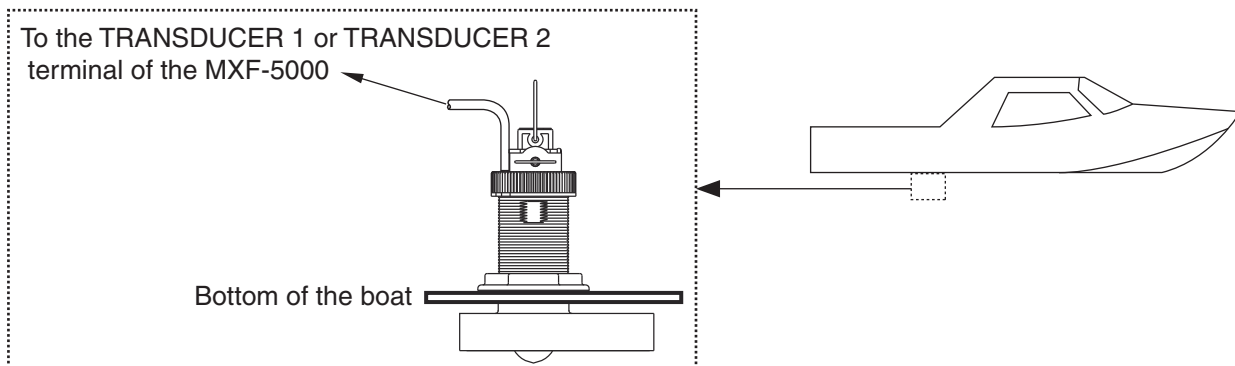
- ① Area where the possibility of on-screen voids due to air bubbles or water turbulence is minimized;
- ② Area that resists being exposed to noises from the engine;
- ③ Area where the transducer is kept horizontal even if the boat runs at high speed;

(The optimum installation position of the transducer is said to be at a distance of a half or one-third of the boat length from the stern for low-speed small boats, and close to the stern for high-speed boats.)

• Installation example of the EX-3193 (600 W Transom type, built-in boat speed and temperature sensors)



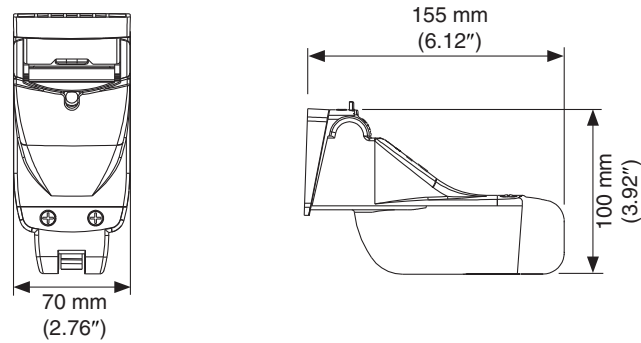
• Installation example of the EX-3194 (600 W Thru Hull type, built-in boat speed and temperature sensors)



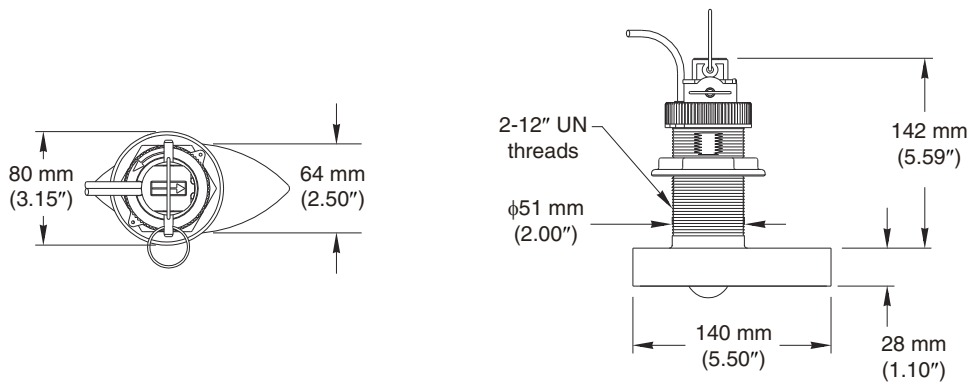
## 2 INSTALLATION AND CONNECTIONS

### ◇ Optional transducer's dimensions (approx.)

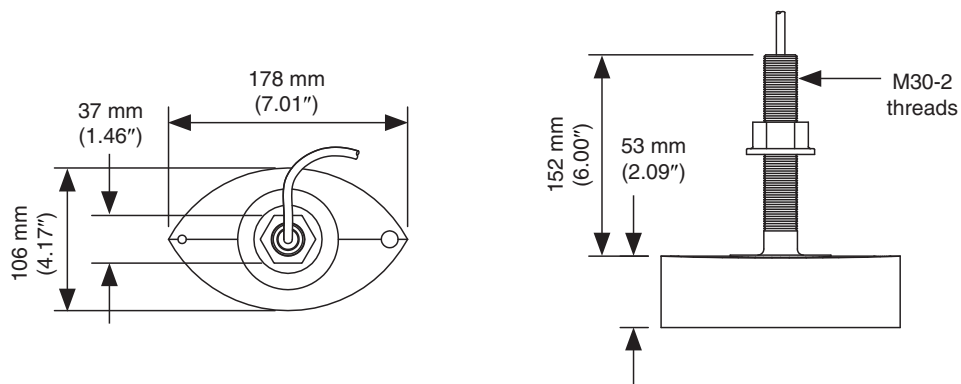
- EX-3193 (600 W Transom type, built-in boat speed and temperature sensors)



- EX-3194 (600 W Thru Hull type, built-in boat speed and temperature sensors)



- EX-3195 (1 kW Thru Hull type, built-in temperature sensor)



## ■ Maintenance and inspection

**⚠ WARNING: BE SURE** the fish finder's power is OFF before performing any maintenance.

Continued, reliable operation of the fish finder depends on how you care for your equipment. The simple maintenance tips that follow can help you save time and money, and avoid premature equipment failures.

## ■ Periodic maintenance

- ① Keep the equipment as clean as possible.
  - Use a soft cloth to remove dirt, dust and water.
- ② Check all hardware for loose screws, bolts, etc.
- ③ Check cables and terminal connections.

## ■ Fish finder maintenance

This fish finder is designed to be easy for the operator to maintain.

Proper maintenance allows to the system to be kept in a optimum state and reduces the possibility of malfunctions.

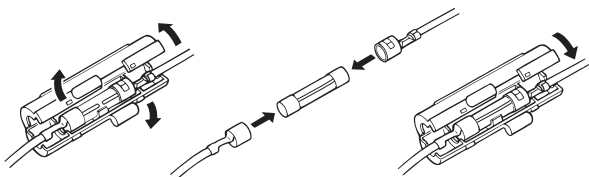
As high voltages is used in the system, be sure to read the PRECAUTIONS (p. iii) before commencing maintenance work.

- To remove dirt from the MXF-5000's cover, wipe it using a soft cloth dampened with a water-diluted detergent.
- To clean the MXF-5000, wipe it using a soft cloth dampened with an anti-static agent or water.
- Check cable connections and the GND terminal for contamination and looseness. Also check cables for wear.
- Check the transducer surface, cables and connectors for rust or adhesion of marine organisms such as algae.

To clean the transducer surface, wipe it using a soft brush dampened with a detergent.

## ■ Fuse replacement

One fuse is installed in the supplied DC power cable. If the fuse blows, find the source of the problem and have it repaired. Then replace the blown fuse with a new, properly rated one (FGB 5 A for 12 V power source, FGB 3 A for 24 V power source) as shown below.



## ■ Options

- OPC-1895 CONNECTION CABLE  
Allows you to connect the Icom MarineCommander™ system. (20 m: 65.6 ft)
- EX-3193 TRANSDUCER  
600 W Transom type, built-in boat speed and temperature sensors
- EX-3194 TRANSDUCER  
600 W Thru Hull type, built-in boat speed and temperature sensors
- EX-3195 TRANSDUCER  
1 kW Thru Hull type, built-in temperature sensor
- OPC-1929 TRANSDUCER CABLE  
6 m (19.69 ft) extension cable for transducer

Approved Icom optional equipment is designed for optimal performance when used with an Icom fish finder.

Icom is not responsible for the destruction or damage to an Icom fish finder in the event the Icom fish finder is used with equipment that is not manufactured or approved by Icom.

### ■ MXF-5000

- Power supply : 10.8 V to 31.2 V DC
- Current drain : Less than 0.6 A (water depth range: 40 m/output power: 600 W at 12 V DC)  
Less than 1.0 A (water depth range: 40 m/output power: 1 kW at 12 V DC)
- Output power : 600 W/1 kW
- Transmission frequency : 50 kHz  $\pm$ 1 kHz  
200 kHz  $\pm$ 1 kHz
- Usable temperature range :  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ;  $-4^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$
- Dimensions : 250(W)  $\times$  67(H)  $\times$  200(D) mm;  $9\frac{27}{32}$ (W)  $\times$   $2\frac{5}{8}$ (H)  $\times$   $7\frac{7}{8}$ (D) in  
(Projections not included)
- Weight (approx.) : 2.18 kg; 4.8 lb

### ■ EX-3193 (Option; 600 W Transom type, built-in boat speed and temperature sensors)

- Operating frequency : 50 kHz, 200 kHz
- Cone angle : 50 kHz:  $45^{\circ}$ , 200 kHz:  $11^{\circ}$
- Vessel speed sensor : 18,000 p/nm\*
- Weight (approx.) : 0.5 kg; 1.1 lb

### ■ EX-3194 (Option; 600 W Thru Hull type, built-in boat speed and temperature sensors)

- Operating frequency : 50 kHz, 200 kHz
- Cone angle : 50 kHz:  $45^{\circ}$ , 200 kHz:  $11^{\circ}$
- Vessel speed sensor : 19,000 p/nm\* (with fairing)  
21,500 p/nm\* (without fairing)
- Weight (approx.) : 2.5 kg; 5.5 lb

### ■ EX-3195 (Option; 1 kW Thru Hull type, built-in temperature sensor)

- Operating frequency : 50 kHz, 200 kHz
- Cone angle : 50 kHz:  $15^{\circ} \times 21^{\circ}$ , 200 kHz:  $3^{\circ} \times 5^{\circ}$
- Weight (approx.) : 3.6 kg; 7.94 lb

\*pulses per nautical mile

All stated specifications are subject to change without notice or obligation.







**Count on us!**

