

**YAESU**  
*The radio*

C4FM/FM 144/430MHz  
DIGITAL/ANALOG TRANSCEIVER

*FT-70DR*  
*FT-70DE*

Operating Manual



# Table of Contents

<b>Introduction</b> .....	1
Features of the FT-70DR/FT-70DE .....	1
About this manual.....	1
Downloading the "Advance Manual".....	1
<b>Safety Precautions (Be Sure to Read)</b> .....	2
<b>Accessories &amp; Options</b> .....	5
Supplied Accessories .....	5
Available Options.....	5
<b>Controls &amp; Connections</b> .....	6
Transceiver .....	6
Display .....	10
<b>Preparation</b> .....	12
Installing the Antenna .....	12
Attaching the Belt Clip .....	12
Installing the Battery Pack.....	13
Removing the Battery Pack .....	13
<b>Charging the Battery Pack</b> .....	14
Charging the Battery Pack using the Battery Charger .....	14
Charging the Battery Pack using the Rapid Charger. ....	15
Connecting an External Power Supply for Use in Vehicle .....	16
Connecting to an External Power Supply Using a Power Cable .....	17
<b>Basic Operation</b> .....	18
Turning on the Transceiver .....	18
Inputing the call sign.....	18
Adjusting the Volume Level .....	19
Selecting a Frequency Band .....	19
Tuning to a Frequency.....	19
Selecting the Communication Mode.....	20
Transmission .....	22
Changing the Transmission Power Level .....	23
Locking Keys and Dial .....	23
Communicating Via the Repeater.....	24
Tone Calling (1750 Hz burst tone).....	24
Restoring to Defaults (All Reset) .....	25
<b>Specifications</b> .....	26





## Introduction

### Features of the FT-70DR/FT-70DE

- Digital communication (C4FM 4Level-FSK)
- Equipped with AMS (Automatic Mode Select) Function  
 Automatically selects between 4 modes of transmission according to the signal being received.
- External power supply connection
- Wide-band reception over the range of 108 MHz to 579.995 MHz
- Waterproof design equivalent to IP54, which protects the transceiver from dust and splashes
- Equipped with GM function
- Large-capacity 999ch with 10 memory banks (maximum of 100 channels can be saved on each bank)
- Display memory tags comprised of up to 6 one-byte characters
- A wide variety of scan functions
- A variety of individual selective calling functions; such as DSQ (Digital Code Squelch) and tone squelch (CTCSS) and DCS functions
- New pager function for calling only specific stations
- LED Backlight for easy viewing of the LCD and keys
- Battery save function to extend battery operating time
- Data terminal (Mini USB) for communication with PC and firmware updates

### About this manual

This manual is described on the symbols and conventions.

Symbols	Description
	This icon indicates cautions and information that should be read.
	This icon indicates notes, tips and information that should be read.
	This icon indicates other pages containing relevant information.
	This icon indicates FT-70DR/DE Advance Manual on the YAESU Website containing relevant information.

- The setting at the time of purchase is referred to as the “default” or “default setting”.
- The names of Set Mode items displayed in the LCD, and the key names of transceiver appear in bold character.

### Downloading the “Advance Manual”

The Advance Manual provides more detail features except for described on this manual. Download the FT-70DR/DE Advance Manual from the YAESU website and refer to it along with this manual.


<http://www.yaesu.com/>


## Safety Precautions (Be Sure to Read)


### Be sure to read the safety precautions to use this product safely.

Yaesu is not liable for failures and other problems caused due to misuse or use of this product by you or a third party. Also, Yaesu is not liable for damages caused through use of this product by you or a third party except in the case where ordered to pay for damages under the laws.



### Type and meaning of the marks



 **DANGER** Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.


 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or only property damage.


### Type and meaning of symbols


 Indicates a prohibited action, not to be done in order to use this product safely. For example,  indicates that the product should not be disassembled.


 Indicates a required action, to be done in order to use this product safely. For example,  indicates that the power plug should be removed.


## DANGER


 **Do not use this product in "an area where use of it is prohibited", e.g., inside the hospital, airplane, or train."**  
This product can affect electronic or medical devices.


 **Those who are carrying a medical device such as a cardiac pacemaker should not perform transmission near the device. When transmitting, use an external antenna and keep as far as possible away from the external antenna.**  
The radio wave emitted by the transmitter can cause the medical device to malfunction and result in an accident.



 **Do not perform transmission in a crowded place for the safety of persons using a medical device such as a cardiac pacemaker.**  
The radio wave emitted from this product can cause the medical device to malfunction and result in an accident.

 **If it starts thundering when the external antenna is used, immediately turn off this product and disconnect the external antenna from it.**  
A fire, electrical shock, or damage may result.

 **Do not use this product or the battery charger in a place where inflammable gas is generated.**  
A fire or explosion can occur.

 **Do not use this product while riding a bicycle or driving a car. Accidents can result.**  
Be sure to stop the bicycle or car at a safe place before using this product.

 **Do not touch any material leaking from the battery pack with bare hands.**  
The chemical that has stuck to your skin or entered your eye can cause chemical burns. In such a case, consult the doctor immediately.

 **Do not solder or short-circuit the terminal of the battery pack.**  
A fire, leak, overheating, explosion, or ignition can result.  
 Do not carry the battery pack together with a necklace, hair pin, or small metal objects. A short circuit can result.

## Safety Precautions (Be Sure to Read)

### WARNING



**Do not disassemble or make any alteration to this product.**  
An injury, electric shock, or failure can result.



**If smoke or strange odor is emitted from the main body, battery pack, or battery charger, immediately turn the transceiver off; remove the battery pack, and remove the power plug from the outlet.**

A fire, leak, overheating, damage, ignition, or failure can result. Contact the dealer from which you purchased this product or Yaesu Amateur Customer Support.



**Do not handle the battery pack or charger with wet hands. Do not insert or remove the power plug with wet hands.**

An injury, leak, fire, or failure can result.



**Keep the terminals of the battery pack clean.**

If terminal contacts are dirty or corroded, a fire, leak, overheating, explosion, or ignition can result.



**Do not power this transceiver with a voltage other than the specified power supply voltage.**

A fire, electric shock, or damage may result.



**Do not make very long transmissions.**

The main body of the transceiver may overheat, resulting in a failure or burns.



**Do not use the battery pack for any model other than the specified transceiver.**

A fire, leak, overheating, explosion, or ignition can result.



**Do not use the battery pack which is externally damaged or deformed.**

A fire, leak, heating, explosion, or ignition can result.



**When transmitting, keep the transceiver at least 5.0 mm (3/16 inch) away from your body.**

**Use only the supplied antenna. Do not use modified or damaged antennas.**



**If charging of the battery pack cannot be completed within the specified charging time, immediately remove the power plug of the battery charger from the outlet.**

A fire, leak, overheating, explosion, or ignition can result.

### CAUTION



**Do not dangle or throw this product by holding its antenna.**

This product can hit and injure someone. In addition, doing so can result in a transceiver failure or damage.



**Do not place this transceiver in a humid or dusty place.**

A fire or failure can result.



**Do not clean the case with thinner or benzene.**

Use a soft, dry cloth to clean the case.



**Do not drop, strike, or throw the transceiver.**

A failure or damage may result.



**If the transceiver is not being used for an extended period, turn it off and remove the battery pack for safety.**



**Keep magnetic cards and video tape away from the transceiver.**

The data recorded on cash cards or video tape can be erased.



**Do not place this transceiver in a place subject to direct sunlight or near a heater.**

The transceiver can deform or discolor.



**Before using this transceiver in a hybrid or fuel-saving car, be sure to check with the automobile manufacturer regarding use of the transceiver in that car.**

Noise generated by an onboard electrical device (inverter, etc.) can disrupt the normal operation of the transceiver.



**Do not operate the transmitter near the TV or radio.**

Radio disturbance can occur in the transceiver, the TV, or the radio.



**During transmission, keep the antenna as far from you as possible.**

Long-time exposure to electromagnetic waves can have a negative impact on your health.

## Safety Precautions (Be Sure to Read)



### CAUTION



**Charge the battery pack within the temperature range from +5 °C to +35 °C (+41 °F to +95 °F).**

Charging the battery pack outside this temperature range can cause leak, overheating, decrease in performance, or reduction in service life can result.



**When unplugging the power cord of the battery charger, be sure to hold the power plug.**

Pulling the power cord can damage it and cause a fire or electronic shock.



**Do not use transceiver in a crowded place.**

The antenna can hit someone, resulting in an injury.



**Keep this product out of reach of children.**

An injury, etc. can result.



**Do not use the earpiece microphone, earphones, or headphones at an extremely high volume level.**

Hearing impairment can result.



**Install the hand strap and belt clip securely.**

If they are installed improperly, the FT-70DR/FT-70DE may fall or drop, resulting in an injury or damage.



**Do not place a heavy object on the power cord of the battery charger.**

The battery cord can be damaged, resulting in a fire or electric shock.



**Do not use the included battery charger to charge any battery pack which is not specified for use with the charger.**

A fire can result.



**Do not use any products other than the specified options and accessories.**

A failure can result.



**When the battery charger is not in use, remove its power plug from the outlet.**



**Before discarding the worn battery pack, affix tape or the like to its terminals.**

### About Waterproofing Feature Conforming to IP54

When the included antenna and battery pack are installed and the MIC/SP jack, EXT DC IN jack and DATA terminal are securely covered with rubber caps, this product is dust and splash resistant. To ensure continued waterproofing protection, be sure to check the following points before use.

**Check for damages, deterioration, and dirt.**

Antenna rubber, key switch rubber, MIC/SP jack, EXT DC IN jack, DATA terminal rubber cap, and battery pack joint.

**Cleaning**

When this product is contaminated with seawater, sand, or dirt, rinse with fresh water, and then wipe with a dry cloth immediately.

**Recommended maintenance interval**

To insure continued water resistance and optimal performance, it is recommended that maintenance be performed annually, or when any damage or deterioration is found. Note that the maintenance service is subject to fees.

**Do not immerse this product in the following liquids:**

Sea, pool, hot spring, water containing soap, detergent, or bath additive, alcohol, or chemicals

**Do not leave this product for an extended time in the following places:**

Bathroom, kitchen, or humid place

**Other precautions**

Since this product is not totally waterproof, it cannot be immersed in water.