

ABELL

INSTRUCTION MANUAL

FM TRANSCEIVER / TWO WAY RADIO

MODEL: TH-307



ABELL ELECTRONICS, INC.

THANK YOU!

Thank you for choosing Abell transceiver. We strive to make this transceiver easy to use and dependable so it could be a useful tool for you.

MODELS COVERED BY THIS MANUAL

TH-307: UHF/VHF FM Transceiver (Two-Way Radio)

WARNING

Government Law prohibits operating unlicensed two-way radios within the areas under government control. Illegal operation is punishable by fine or imprisonment or both. Refer Service to licensed technician only.

SAFETY WARNING:

Turn off your transceiver, and do not change/charge your battery pack in stormy lightening weather or in explosive environments, such as gas station, or any area with explosive dust, fumes, etc.

PRECAUTIONS

- 1. Do not operate this transceiver in any areas that may require the product to remain off. Those areas may be in hospital or on airplane, etc.**
- 2. Do not push the PTT button when antenna is not loaded or when the unit is being charged.**
- 3. Do not modify this transceiver for any reason. Modifying this transceiver causes losing the warranty.**
- 4. Do not leave the transceiver under direct sunlight for long periods, close to heating appliances, in excessively dusty, humid areas, nor on unstable surfaces.**
- 5. Do not leave this transceiver in the reachable area of air bags in a car.**
- 6. If an abnormal odor or smoke is detected coming from the transceiver, turn it off immediately and remove the optional battery pack from the transceiver. Contact your ABELL dealer.**
- 7. The battery pack must be disposed of properly. Do not connect the battery terminals or dispose of by fire. Do not open the battery pack.**
- 8. This transceiver is rain proof, but do not immerse into water.**
- 9. Skin maybe slighted burned if touched by a damaged radio antenna.**

One or more of the following statements may be applicable:

FCC WARNING

Caution:

Changes or modifications to this unit not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment. Any change to the equipment will void FCC grant.

NOTE:

This equipment has been tested and found to comply with the limits for a device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC

This equipment has been tested and found to comply with part 90 of the FCC Rules.

A QUICK GUIDE OF USING THIS TRANSCEIVER

Here is a quick guide about how to start using it.

1. Fully Charge the battery pack. Load the antenna and battery pack to the transceiver.
2. Turn the power switch on, select a channel
3. Hold down PTT to talk, release PTT to listen.

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UNPACKING AND CHECKING

Carefully unpack it. We recommend that you check the items listed below before discarding the packing material. If any damage occurred during shipment, file a claim with the carrier immediately.

Item	Qty
Transceiver	1
Antenna	1
Belt-clip, Screw set	1
Instruction manual	1
Warranty card	1
Battery (may be packed in separate box)	1
Charger (may be packed in separate box)	1

PREPARATION

Important Information About Battery Charging

- The battery pack is not charged at the factory. Please charge it before use. Fully charge it and fully consume the battery power before recharging it. After 2 or 3 charging cycles, the battery can reach maximum capacity.
- Charging Time:

Charging Timing	Abell Standard Charger		Abell Intelligent/Rapid Charger
	170 mA	100 mA	500 mA
1200 mAh	8.5 Hrs	14.5 Hrs	3 Hrs
1500 mAh	10.5 Hrs	18 Hrs	3.5 Hrs
1800 mAh	13 Hrs	21.5 Hrs	4.5 Hrs

NOTE:

About Abell Standard Charger:

- Use the switch at the topside of the charger to switch between 170mA and 100mA charging current.
- The standard charger won't indicate the charging status.
- The charging current remains the same no matter it is fully charged or not. It is recommended that you should not overcharge the battery pack when using standard charger.

About Abell Intelligent/Rapid Charger:

- Abell Intelligent/Rapid Charger indicates the charging status by light green when fully charged.
- After fully charged, the charging current will automatically change to trickle current (about 70mA).
- You can charge the battery pack with the transceiver or just the battery pack.
- Always use Abell Charger to charge Abell Battery packs. Charges with other brand name products may cause mismatching, or damages.
- Always turn off the transceiver while charging the battery pack.
- Do not charge the battery pack at a temperature below -10° C(14F) or above 35° C(95F) .

Install/Remove the Battery Pack

Install: Position the four grooves of the battery pack over the corresponding guides on the back of the transceiver. Slide the battery pack upward the back of the transceiver until you feel a click and the battery is locked.

Remove: One hand holds the transceiver with battery pack facing outside of palm. The other hand push down the release catch at the bottom of transceiver with thumb, and use fingers to hold and slide the pack away from the transceiver.

Install the Antenna

Hold and screw the antenna into the connector on the top of the transceiver.

Install the Speaker-Microphone

Use screwdriver to remove the cap from the speaker-microphone jack. Then plug the speaker-microphone in the jack.

Install the Belt-Clip

Use the 3mm×8mm screws from the supplied screw set to attach the belt-clip.

KNOWING THIS TRANSCEIVER

① CHANNEL selector

Selects operating channels. The channels need to be preset by your dealer.

② POWER/VOLUME control

Switches on/off the transceiver; you can hear a click. A beep can also be heard if the dealer programs it. Also adjusts the transceiver volume.

③ LED indicator

Lights red when transmitting. Flashes red when the battery voltage is low. Lights green when received a signal.

⑩ PTT (Push-to-Talk) switch

Hold down to talk and release to listen.

⑫ MONI button

Hold down to monitor any signal even so weak that below the squelch level on your selected channel. You will hear the background noises when held down.

Hold down to check and adjust the speaker volume.

Hold down to check the transceiver is working or not. If no noise coming out when pressed, that probably means low battery, or the transceiver was turned off.

⑬ Speaker-Microphone jacks

To plug in the speaker-microphone pins here.

BASIC FUNCTIONS & FEATURES

Calling & Receiving

1. Press [**Moni**] and listen to make sure the channel is not being used.
2. Hold the transceiver 3~4 cm (1 1/2 inches) from your lips, hold down [**PTT**] and speak in normal voice. The **LED** lights red while transmitting.
3. Release the **PTT** button to return to the receiving mode.

CTCSS & DCS

If your dealer programmed **CTCSS** or **DCS** signaling for you and your group, you will hear your group **ONLY** without interference from outsiders who work on the same frequencies. (But that does not mean your conversations are absolutely private).

Time-Out Timer (TOT)

TOT is a self-protection function to prevent continuous transmission over a long period of time that can overheat and harm the transceiver. Transceiver would stop transmitting and generate a warning tone if [**PTT**] were held down for longer than the programmed time (preset as 60 seconds). Releasing [**PTT**] stops the warning tone.

Busy Channel Lockout

Activated by your dealer, this function prevents the interference with others by prohibiting you from transmitting and generating an audible warning tone while the selected channel is in use by others. Release [**PTT**] to cancel the alarm and

restore the receiving mode.

Low Battery Warning

Holding down [PTT] and if the LED flashes red, that indicates the battery level drops to the predetermined value. When drops further, the transceiver stops transmitting and generates an alarm. Recharge the battery pack if this occurs.

Automatic Power Save

While transceiver is idle for 10 seconds, it automatically turns into power save mode. When an operation is performed or a signal is received, it turns back on.

Scan Operation (Available in TH307E)

Scan is for monitoring activity on different channels. Switch the channel selector to position "S", the transceiver will start scanning by checking channel 1 to channel 15 and stop on a channel if a signal is present. Your dealer can Lockout each channel so this channel will be skipped from scanning. And the scan operation can be preset as Time-operated or Carrier-Operated Operation.

Time-Operated Operation

The transceiver stays on a busy channel for a period of time that is preset by your dealer. Then the scan moves on even if the channel remains busy.

Carrier-Operated Operation

The transceiver stays on a busy channel until it is no longer busy. Then after a delay time that is preset by your dealer, the scan moves on.

Priority Scan

When the radio stays on a non-priority channel, it checks regularly the Priority channel that is preset by your dealer. Once a signal is received on the Priority channel, the transceiver will quickly switches to that Priority channel.

Channel Lockout

Your transceiver's scan operation will skip those Locked out channels, if programmed so.

Revert Channel

When [PTT] is pressed while scanning, the transceiver stops scanning and jumps to that REVERT CHANNEL to transmit. The REVERT CHANNEL can be programmed by your dealer.

TROUBLESHOOTING

1. Cannot turn the power on

The battery pack may not be installed correctly.

The battery pack may need to be recharged or maybe replaced.

2. Battery power runs out quickly

The battery pack may reach the end of its life.

3. Cannot talk or hear others

Make sure the frequencies are same and CTCSS/DCS codes are set as the same. Or maybe your group members are just too far away to reach.

4. Heard voice of unknown person

You can set or change the CTCSS or DCS code. Make sure the whole group has the same code.

5. The range is not long enough

Make sure the antenna is correctly loaded. Walk to a higher place or a place with less building in between.

For other problems, please contact your dealer or send email to sales@abell.com.cn

SPECIFICATIONS

Channels	: 16 channels (TH307)
Frequencies	: see description sticker on the radio
	DH 450-470 Mhz
Power Supply	: 7.2V/DC
Output Power	: 4-5W

Working Temperature : -30-60°C(-22-140F) for 307
Size : 125 X 60 X 38 mm
Weight : 370g (with battery pack)
Audio Output : 0.6W (4Ω)
Receiving Sensitivity : 0.18 μ V (12dB SINAD)

FREQUENCY CHART

Model Name: TH-307 _____

Serial Number: _____

Channel	Transmit Frequency	Receive Frequency	CTCSS/DCS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

Note:

The contents of this manual are intended to be correct and complete in the course of writing. ABELL cannot guarantee that no error, mistake or any missing of the contents will occur. ABELL reserves the rights to modify the product design or specification and will not make any advice before any change.

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