

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 except any interference received, including interference that may cause undesired operation.

SAFETY TRAINING INFORMATION



Your SYD, KYD radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, **Warning** and the ways to minimize such hazards. This radio is not intended for use by the “General Population” in an **uncontrolled environment**.

This radio has been tested and complies with the FCC RF exposure limits for “Occupational Use Only.” In addition, your SYD, KYD radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1–1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3–1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields— RF and Microwave.

To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following



CAUTION guidelines:

- **DO NOT** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with

this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.

- **DO NOT** transmit for more than 50% of total radio use time ("50% duty cycle").

Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX indicator" lights red. You can cause the radio to transmit by pressing the "PTT" switch.

- **ALWAYS** use **SYD, KYD** authorized accessories (antennas, batteries, belt clips, speaker/mics, etc). Use of unauthorized accessories can cause the FCC RF exposure compliance requirements to be exceeded. Body-worn operations are restricted to belt-clips, holsters or similar accessories that have no metallic component in the assembly and that provide at least 1.5 cm separation between the device, including its antenna, and the user's body. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from mouth, and slightly off to one side. The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates within the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmissions, your SYD, KYD radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. **DO NOT** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

FOREWORD

Thank you for purchasing the TD-790 transceiver.

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL—This instruction manual contains important operating instructions for the transceiver.

INSTALLATION NOTES

- Body-worn operations are restricted to belt-clips, holsters or similar accessories that have no metallic component in the assembly and that provide at least 1.5 cm separation between the device, including its antenna, and the user's body
- If you wear a portable two-way radio on your body, ensure that the antenna is at least 2.5 centimeters (1 in.) from your body when transmitting.

IMPORTANT

RF CAUTION! NEVER hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 2 to 4 in. (5 to 10 cm) away from the lips and the transceiver is vertical.

RF **CAUTION! NEVER** operate the transceiver with a headset or other audio accessories at high volume levels.

RF **CAUTION! NEVER** short the terminals of the battery pack.

DO NOT push the PTT when not actually desiring to transmit.

AVOID using or placing the transceiver in direct sunlight or in areas with temperatures below +14°F (−10°C) or above +122°F (+50°C). The basic operations, transmission and reception of the transceiver, are guaranteed within the specified operating temperature range (depending on version). However, the LCD display may not be operate correctly, or show an indication in the case of long hours of operation, or after being placed in extremely cold areas.

DO NOT modify the transceiver for any reason.

KEEP the transceiver from the heavy rain, and **never** immerse it in the water. The transceiver construction is **water resistant**, not waterproof.

The use of non SYD, KYD battery packs/chargers may impair transceiver performance and invalidate the warranty.

TO USER

Thank you for purchasing NEW CENTURY serial transceiver. We appreciate your trust in our products and believe that this easy to operate and state of the art 2-way transceiver would well serve your diverse communication needs.

MODEL COVER BY THIS MANUAL:

TK-588A VHF FM TRANSCEIVER

TK-688A UHF FM TRANSCEIVER

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1 SAFETY INFO

NOTICES TO THE USER

- Government law prohibits the operation of unlicensed radio transmitters within the territories under government control.
- Illegal operation is punishable by fine or imprisonment or both.
- Refer service to qualified technicians only.

SAFETY:

- It is important that the operator is aware of and understands hazards common to the operation of any transceiver.
- NEW CENTURY does not guarantee the safety and operation of the transceiver when using accessories and /or attachments sold by NEW CENTURY.

▲ WARNING ←

- **EXPLOSIVE ATMOSPHERES(GASES, DUST, FUMES, etc.)**
- Turn off your transceiver while taking on fuel, or while parking in gasoline service stations.

PRECAUTIONS

Observe the following precautions to prevent fire, personal injury or transceiver damage.

- ◆ Do not modify or attempt to adjust this transceiver for any reason.
- ◆ Do not expose the transceiver to long periods of direct sunlight, place it close to heating appliances.
- ◆ Do not place the transceiver in excessively dusty, humid, and wet areas, nor on unstable surfaces.
- ◆ If an abnormal odor or smoke is detected coming from the transceiver, switch OFF the power immediately and remove the optional battery pack from the transceiver. **Contact your NEW CENTURY dealer.**

2 UNPACKING AND CHECKING EQUIPMENT

Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

SUPPLIED ACCESSORIES

Item	Quantity
Antenna	1
Charger (with AC adaptor)	1
Li-ion Battery Pack (or Ni-MH Battery Pack)	1
Belt clip	1
User's manual	1
Tie	1

3 BATTERIES

CHARGING WARNINGS:

Initially charging the battery pack after purchase or extended storage (greater than 2 months) will not bring the battery pack to its normal operating capacity. After repeating the charge/discharge cycle two or three times, the operating capacity will increase to normal. Please replace or charge the battery pack while low power alert.

AVAILABLE BATTERIES

Please use NEW CENTURY special battery to charge transceiver, it may happen explode and damaged body if using other brand batteries.

1

User's manual

3 BATTERIES

Notice:

1. Do not short the battery terminals or dispose of the battery in fire. Never attempt to remove the casing from the battery pack.
2. The ambient temperature should be between 5 and 40°C while charging is in progress. Charging outside this range may not fully charge the battery.
3. Always switch OFF the transceiver equipped with a battery pack before charging. Using the transceiver while charging its battery pack will interfere with correct charging.
4. Do not plug/unplug the AC adaptor and battery during charging to avoid interference charging program.
5. The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Replace the battery pack.
6. Do not recharge the battery pack if it is already fully charged. Doing so may cause the life of the battery pack to shorten or the battery pack may be damaged.
7. Do not charge transceiver while the battery or units were wet. Ought to dry it with cloth before charging, avoid to damage the unit.

Notice: All batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewelry, keys, or battery chains touch exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise caution in handling any charged battery, particularly when placing it in a pocket, purse, or other container with metal objects.

User's manual

3 BATTERIES

CHARGE OPERATION

If installing battery, the transceiver lights red and three beeps sound each 30 seconds, it means low power, please start to charge the transceiver.

Please use NEW CENTURY special charger for battery charging, the charger LED display charger cause.

LED appears	status	Battery Type
Lights red	charging	Ni-MH/Li-ion battery
Lights green	Fully charging	Li-ion battery

TO CHARGE BATTERY PACK, PERFORM THE FOLLOWING STEPS:

1. Plug the AC adaptor cable into the adaptor jack located on the rear of the charger.
2. Slide the battery pack or transceiver with a battery pack into the charger.
3. Plug the AC adaptor into AC outlet.
4. Make sure the battery pack contacts are in contact with the charging terminals, the charger LED lights red and charging begins.
5. The supplied charger LED lights green (Li-ion **battery**), complete charged. Remove it or the transceiver equipped with it from the charger.

Notice:

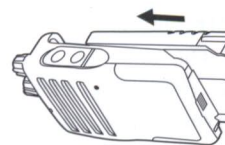
1. The charger LED brights before unplug battery pack, it is normal.
2. When replace a battery pack to charge, please charging after LED is steady.
3. The charger lights red while charging after plug the battery, brights means damage battery or the degree is too high or low.

4 PREPARATION

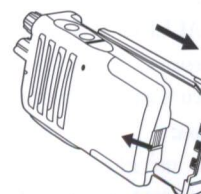
INSTALLING/REMOVING THE BATTERY PACK

The battery pack is not charged at the factory; charge it before

1. Match the two bulges of the battery pack with the corresponding guides on the back of the transceiver, then press the battery pack and transceiver firmly together until the release latch on the base of the transceiver locks.



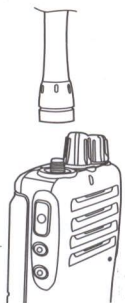
2. While pressing the release latch, pull the battery pack away from the transceiver.



INSTALLING THE ANTENNA

Screw the antenna into the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise until secure.

Note: The antenna is neither a handle, a key ring retainer, nor a speaker/microphone attachment point. Using the antenna in these ways may damage the antenna and degrade your transceiver's performance.

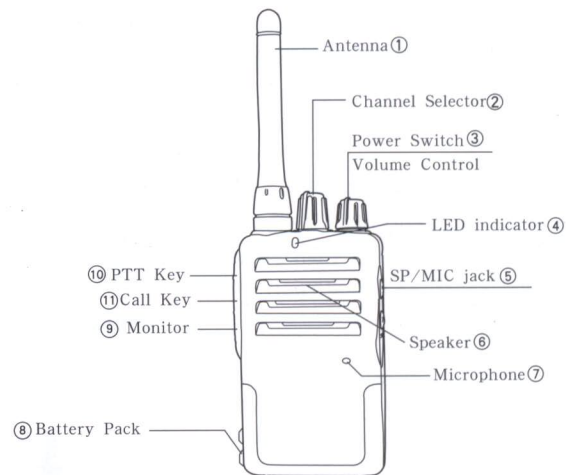
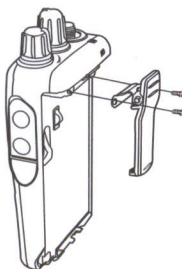


INSTALLING THE BELT CLIP

If necessary, attach the belt clip using the two supplied screws.

Caution:

Do not use glue which is designed to prevent screw loosening when installing the belt clip, as it may cause damage to the transceiver. Acrylic ester, which is contained in these glues, may crack the transceiver back panel.



1. Antenna

2. Channel selector

Rotate to select channels 1-16

3. Power switch/Volume control

Turn clockwise to switch ON the transceiver. To switch OFF the transceiver, turn counterclockwise until a click sounds. Rotate to adjust the volume level.

4. LED indicator

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

5. SP/MIC jack

6. Speaker

7. Microphone

8. Battery pack

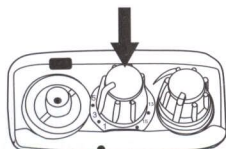
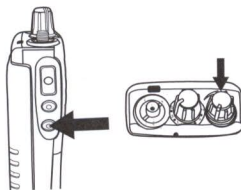
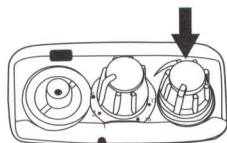
9. Monitor

10. PTT(Push-To-Talk) switch

11. Call key

6 BASIC OPERATIONS

1. Turn the Power switch/Volume control clockwise to switch the transceiver power ON.
 - A beep sounds if enabled by your dealer.
2. Press the key programmed with the Monitor or Squelch Off function to hear background noise, then rotate the Power switch/Volume control to adjust the volume.
3. Rotate the Channel selector to select your desired channel.
 - When you receive an appropriate signal, you will hear audio from the speaker.
4. To make a call, press and hold the **【PTT】** switch, then speak into the microphone using your normal speaking voice.
 - Hold the microphone approximately 1.5 inches (3 to 4 cm) from your lips.
5. Release the **【PTT】** switch to receive.



Note: When the battery pack voltage becomes too low, transmission will stop and an alarm tone will sound. See "Low Battery Warning" introduce.

7 AUXILIARY FUNCTIONS

MONITOR/SQUELCH OFF

You can use the Monitor key to listen to weak signals that you can hear during normal operation, to deactivate channel signaling, to adjust the volume when no signals are present on your selected channel.

- Squelch Off Momentary: Press and hold to hear background noise. Release the key to return to normal operation.
- Monitor Momentary: Press and hold to deactivate QT or DQT signalling. Release the key to return to normal operation.

CALL ALARM TONE

Calling alarm tones are used to identify yourself to your party, can set up a calling alarm tone to one of 16, perform the following steps.

1. Turn OFF power
2. Press and hold **【CALL】** key, turn ON power
 - A calling alarm tone sounds.
 - Adjust channel selector to select desired call tone, select each call alarm tone, the new tone sounds.
 - Press **【PTT】** key to store new setting and a beep sounds to confirm.
 - Currently channel number appears, please turn the channel selector to adjust appropriate channel number.

VOX GAIN LEVEL INSTRUCTION

Adjust desired VOX sensitivity by turning channel selector, and the number is higher, the sensitivity is higher, too, contrary lower.

Channel Number:

- 1 — Least sensitive
- 8 — Mid sensitive
- 16 — Highest sensitive

Note: If the VOX Gain level is configured to a higher, louder received signal may cause the transceiver to start transmission.

ACTIVATE VOX TRANSMISSION OPERATION

If you configured to a appropriate VOX gain level, and activate VOX transmission, perform the following steps.

1. Turn OFF power
2. Press and hold **【PTT】** switch and then turn ON power
3. A double-beep sound, and then release the **【PTT】** switch, the transceiver appear currenty channel number.
4. Press **【PTT】** switch to cannel VOX transmission, press **【PTT】** switch to go on transmit.