

WICKED



## FORWARD

**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

**SAVE THIS INSTRUCTION MANUAL** - This instruction manual contains important operating instructions for the ALPHA 1 UHF transceiver.

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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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## SAFETY TRAINING INFORMATION

**Occupational/Controlled Use** - The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

## SAFETY TRAINING INFORMATION

- **ALWAYS** keep the antenna at least 2.5 cm (1 inch) away from the body when transmitting and only use the Wicked Technology belt-clip which is listed on page 31 when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from your 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 with the FCC RF exposure limits of this radio.

**Electromagnetic Interference/Compatibility** - During transmissions, your Wicked Technology 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.

## PRECAUTIONS

- **DANGER!** NEVER short the terminals of the battery pack.
- **DANGER!** Use and charge only specified Wicked Technology battery packs with Wicked Technology radios or Wicked Technology chargers. Only Wicked Technology battery packs are tested and approved for use with Wicked Technology radios or charged with Wicked Technology chargers. Using third-party or counterfeit battery packs or chargers may cause smoke, fire, or cause the battery to burst.
- **WARNING! 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 5 to 10 cm (2 to 4 in.) away from the lips and the transceiver is vertical.
- **WARNING! NEVER** operate the transceiver with a headset or other audio accessories at high volume levels. Hearing experts advise against continuous high volume operation. If you experience a ringing in your ears, reduce the volume level or discontinue use.
- **WARNING! NEVER** operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.
- **CAUTION: MAKE SURE** the flexible antenna and battery pack are securely attached to the transceiver, and that the antenna and battery pack are dry before attachment. Exposing the inside of the transceiver to water will result in serious damage to the transceiver. **DO NOT** push [PTT] when not actually intending to transmit.

## FCC INFORMATION

### 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 device, not expressly approved by Wicked Technology Corporation could void your authority to operate this transceiver under FCC regulations.

## SAFETY TRAINING INFORMATION

- The accessories (antennas, batteries, belt clips, etc. that are listed on pages 31) are authorized for use with this product. Use of accessories other than those specified may result in RF exposure levels exceeding the FCC requirements for wireless RF exposure.
- **CAUTION:** To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following 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 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”). “50% duty cycle” is also applicable to VOX/PTT mode. Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “LED indicator” lights red. You can cause the radio to transmit by pressing the “PTT” switch or VOX function.

## SAFETY TRAINING INFORMATION

Your Wicked Technology 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, 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 Wicked Technology 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.

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## PRECAUTIONS

- **DO NOT** use or place the transceiver in direct sunlight or in areas with temperatures below  $-30^{\circ}\text{C}$  ( $+22^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ). The basic operations, transmission and reception of the transceiver are guaranteed within the specified operating temperature range. However, the LCD display may not 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. The transceiver warranty does not cover any problems caused by unauthorized modification.
- DO NOT use harsh solvents such as benzine or alcohol when cleaning, as they will damage the transceiver surfaces.
- KEEP the transceiver away from heavy rain, and never immerse it in the water. The transceiver meets IP55\* requirements for dust protection and splash resistance. However, once the transceiver has been dropped, dust-protection and splash resistance cannot be guaranteed because of possible damage to the transceiver's case or the waterproof seal. \*Only when the battery pack and jack cover are attached.
- MAKE SURE to turn the transceiver power OFF before connecting the supplied/optional equipment.
- **WARNING!** Immediately switch the power OFF and remove the battery pack from the transceiver if an odor or smoke is detected. *Contact your authorized dealer.*

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## PRODUCT LIST

Replacement Battery: 2000 mAh Li-Ion Rechargeable Battery  
**Part# 111-0101-2000**

Rapid Rate Desktop Charger  
**Part# 111-0101-D01**

UHF Antenna: 450-470 mHZ  
**Part# 902-02034-01**

USB PC Programming Cable  
**Part# 116-0101**

Windows Programming Software for Alpha 1 Radio  
**Part# 550-0101**

# TROUBLESHOOTING

Problem	Solution
No Electrical Source	<ul style="list-style-type: none"> <li>The battery has been exhausted/replace or recharge the battery</li> <li>The battery is installed incorrectly/ remove it and install again.</li> </ul>
The operating time becomes short, even when the battery is fully charged	<ul style="list-style-type: none"> <li>Replace the battery</li> </ul>
Unable to communicate with the transceiver of the same group	<ul style="list-style-type: none"> <li>Confirm the CTCSS/ DCS is the same</li> <li>The distance is outside the range</li> </ul>
The voice of another group can be heard	<ul style="list-style-type: none"> <li>Change all CTCSS/ DCS of the group</li> </ul>

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# UNPACKING & CHECKING EQUIPMENT

ITEM	QUANTITY
Antenna	
AC Adapter	
Li-ion Battery Pack	
Battery Charger	
Belt Clip	
Owners Manual	

# FREQUENCY LIST

Model No:

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Serial No:

---

Channel	TX Frequency	RX Frequency	QT/ DQT
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			



## BACKGROUND OPERATION

### Low Battery Warning

Low battery warning alerts the user when the battery needs to be recharged or replaced. If the battery power becomes low while operating the transceiver, an alert tone will sound every 30 seconds and the LED indicator light will blink red. Replace or recharge the battery pack.

### Channel Annunciation

When changing the channel using the channel selector, an audio will announce the selected channel number after the channel changing has stopped. Channel annunciations can be activated or deactivated from the programming software.

### Voice Options

1. Turn OFF
2. English

## BATTERY PACK

### Charging Notices

- The new or stored battery pack cannot reach its full capacity during the first charging. After two or three cycles of charging/discharging, the battery will achieve a full charge.

### Applicable Battery

- **DANGER!** Use the specified battery for charging. Using the wrong battery could result in an explosion.
- Do not short circuit the battery terminals, throw the battery into a fire, or disassemble the battery pack.
- The battery pack cannot achieve a full charge if it is charged outside of the range of temperature (0 or 40 C) 32 or 104F.
- Do not use the transceiver while charging the battery pack. It is recommended to power off the transceiver while charging.
- Do not take out the battery or shut off the power source while charging.
- Replace the battery pack when the operating time becomes short, even if the battery is fully charged.
- **CAUTION!** Do not recharge a fully charged battery pack. This may result in damage to the battery pack.
- Do not charge if the battery pack or transceiver is wet.

## WARNING

All batteries can cause property damage or bodily injury if conductive materials touch exposed terminals. Conductive materials may cause a short-circuit in the battery pack, becoming very hot. When placing a battery pack inside a pocket, purse, or other container with metal, exercise care.

### Charging Instructions

1. Plug the charger into an electric socket.
2. Insert the battery or transceiver into the drop (charging tray).
3. Ensure the battery's contacts connect with the drop properly (in charging tray). While charging, the LED indicator will be red.
4. The LED indicator will be purple when fully charged (approximately 8 hours). Remove the battery or transceiver.

LED INDICATOR	CHARGING STATUS
Red	Charging
Purple	Full Charge

## BACKGROUND OPERATION

### Battery Save

If activated via the programming software, the battery save function will decrease the amount of power used when a signal is not being received and no operations are being performed (no keys are being pressed and no switches are turned on). This occurs if the channel is not busy or an operation is not in use for 5 seconds.

### Battery Voltage Prompts

1. High Voltage: When transmission is prohibited in high power (high voltage), pressing PTT, VOX, or Alert are invalid. The LED indicator light will flash red until PTT, VOX, or any other Alert is released and transmissions are complete.
2. Low Battery Indicator: When the voltage falls below a certain level, the LED indicator will blink red continuously - transmission is still effective.
3. Low Battery Warning: When the voltage falls below a certain level, the LED indicator light will continuously blink and beep - transmission is still effective.
4. Low Voltage: When the voltage falls below a certain level, the LED indicator light will continuously blink and beep. When transmission is prohibited in high power, pressing PTT, VOX, or Alert buttons will not work. The LED indicator light will flash a magenta color until release of the PTT, VOX, or Alert buttons are complete.

## BACKGROUND OPERATION

### Time-out Timer (TOT)

The purpose of the time-out timer is to prevent any caller from using a channel for an extended period of time.

If continuously used for an extended period of time, the transceiver will stop transmitting. The transceiver is pre-set to 1 minute. To stop the tone, release the PTT switch.

The dealer can program the alert function to prompt the user before the time-out timer alerts.

### Busy Channel Lock (BCL)

When activated, BCL prevents interference with other parties using the same selected channel. Pressing the PTT switch while the channel is in use, will cause the transceiver to emit an alert tone and transmission will be interrupted (no transmission). Release the PTT switch to stop the tone and return to receive mode.

*NOTE: When using QT, DQT, or DTMF signals, consult with the dealer for BCL function explanation.*

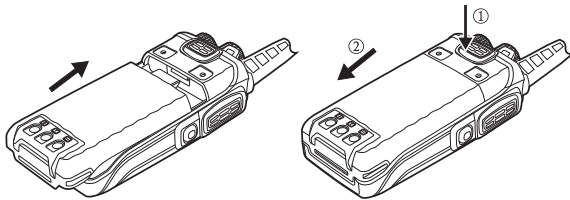
## MAINTENANCE

1. Do not hold the antenna of the transceiver or the speaker mic directly.
2. Using a non-cotton cloth, wipe the dust/dirt off the transceiver.
3. If the transceiver is left unused, use the cap to cover the speaker mic port.
4. Clean the case and knob of the keypad with a moist cloth using a neutral detergent.

## INSTALLING ACCESSORIES

### Installing/Removing the Battery Pack

- Push the battery pack and transceiver firmly together until it clicks into place.
- Before removing the battery pack, turn the transceiver OFF. Push down on the release latch while pulling the battery away from the transceiver.



### Installing/Removing the Belt Clip

- Using a screwdriver, install the belt clip. Remove the screw to remove belt clip.



## SOUND ENCRYPTION (SCRAMBLER FUNCTION)

Sound encryption allows for complete privacy. Once this function is activated, the transceiver will disturb sound frequency, ensuring that other radios listening to the call(s) cannot understand unless they are also programmed with the same encryption.

To ensure all group members can understand the conversation, their transceivers also need to be in sound encryption mode. This will disturb every member's sound signaling frequency for transmission.

## VOX

VOX eliminates the manual operation of the transceiver. This function must be activated by the programming software.

When operating the VOX function, set the VOX gain level, allowing the transceiver to recognize the sound level.

If the microphone is too sensitive, the transceiver will begin transmitting when there is noise in the background. If the microphone is not sensitive enough, it will not pick up speaking voices. Be certain to adjust the VOX gain level to an appropriate sensitivity ensuring smooth transmission.

*NOTE: If a speaker microphone is connected to the transceiver while the VOX function is on and the gain level is not configured correctly, transmission will be impacted. Adjust the gain level accordingly.*

## ADVANCED OPERATIONS

### Monitor

Adjust the volume level to receive weak signals.

### Scan

Scan is useful for monitoring signals on the transceiver channels. When scanning the transceiver checks for a signal on each channel and only stops if a signal is present. The transceiver will remain on a busy channel until the signal is no longer present. From the programming software you can delay time between signal drop-out and scan resumption. If a signal is received during delay time, the transceiver will remain on the same channel.

*NOTE: The scan function can only be used if the radio has been programmed with at least two unlocked channels in the scan list.*

To start scanning, press the key programmed as scan.

\*Scan from the current channel and ascend through the channels.

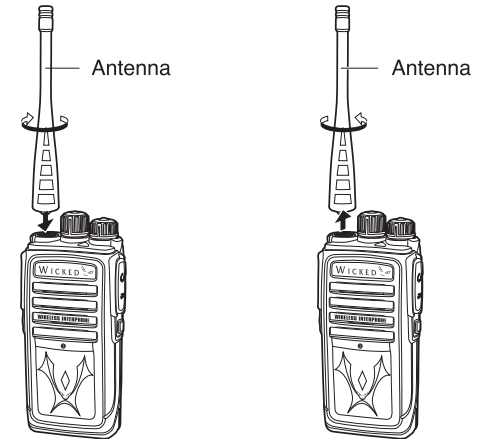
\*The LED indicator light will flash red.

\*When a signal is received on a channel and the signals match, the LED indicator light will be red.

\*To end scanning, press the scan button again.

## INSTALLING/REMOVING ANTENNA

- Screw the antenna into the connector on the top of the transceiver by holding the antenna at the base and turning it clockwise until secure.
- Turn the antenna counter clockwise to remove it.

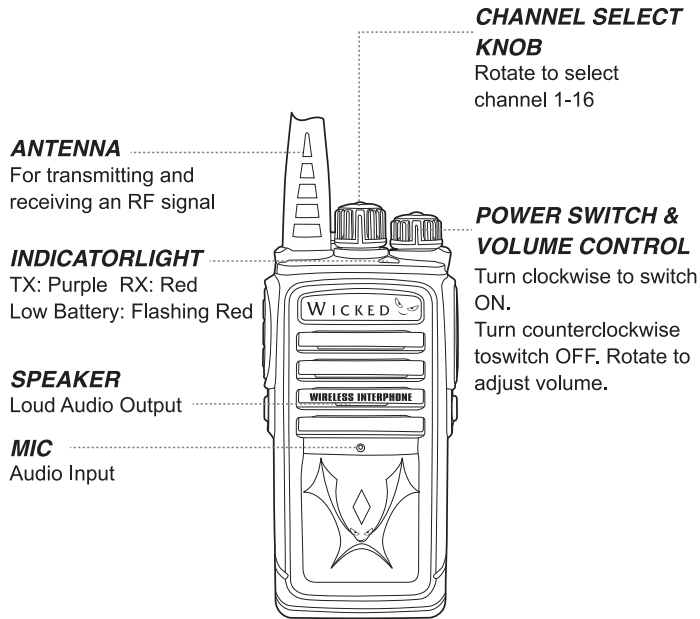


### Installing the Optional Speaker Mic

- Remove the cap and insert the two prongs into the jack.



# GETTING ACQUAINTED



# SHORTCUTS

## 1. Selecting VOX

\*With the radio on a channel between 1 and 5, press and hold the PTT button while turning on the radio.

\*To set VOX on or off: 1 level setting in Channel 1, 3 level setting in Channel 2, 5 level setting in Channel 3, 7 level setting in Channel 4, 9 level setting in Channel 5.

## 2. Voice Prompt Switch

\*Press and hold PTT + KEY 1 + channel 10 to turn voice prompt on or off.

## 3. Alert Switch

\*Press and hold PTT + KEY 1 + channel 11 to turn alert on or off.

## CHANNEL PARAMETERS

### 6. Scan Adding

\*Used to determine if a channel can be added to the scan list.

### 7. Companding

\*Audio companding (compressor and extender) devices can be used to increase the signal-to-noise of the reception audio, which is outstanding in a narrowband system. It is allowed to indicate compander on each channel.

### 8. Scrambler

\*Turn on the scrambler to ensure normal transmission between two parties. A third party can only hear irregular changeable frequency sounds and not the voice audio.

### 9. Busy Channel Lock (BCL)

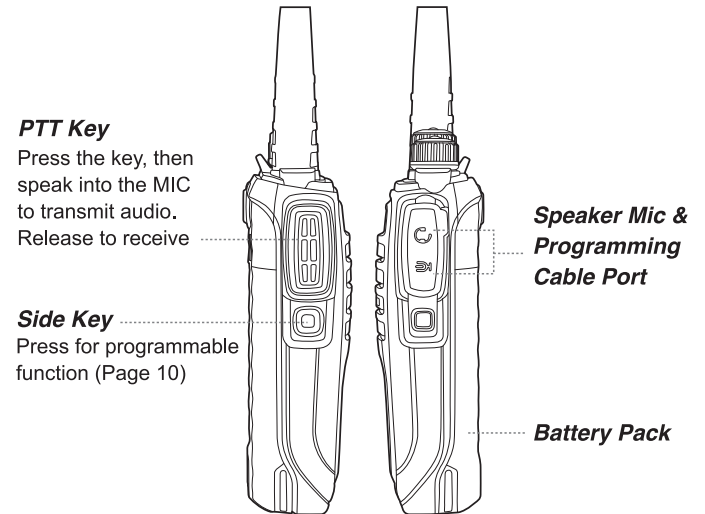
\*Use programming software to turn on and off the BCL function of every effective channel.

\*If the current channel is not set to QT or DQT, receive SQ prohibits transmission.

\*If the current channel is set to QT or DTQ setting, receive QT, without receiving QT or DTQ, prohibits transmission.

\*Receive SQ or DTQ does not prohibit transmission.

## GETTING ACQUAINTED



## BASIC OPERATION

### Switch ON/OFF

1. Turn the power switch/volume control clockwise. The beep indicates the transceiver is on.
2. Turn the power switch/volume control counter clockwise to shut off the transceiver.

### Adjusting the Volume

1. Hold the monitor key down to listen to audio level, simultaneously rotate the power switch volume control.
2. Rotate clockwise to increase volume and counter clockwise to decrease volume.

### Selecting a Channel

1. Turn the channel selector to select channel. While receiving a signal, the sound will be heard.

### Transmitting

1. To transmit, press and hold (PTT) and speak into the microphone.
  - ⇒ The LED indicator light will be purple while transmitting.
  - ⇒ To maximize sound clarity at the receiving radio, hold the transceiver 2-4 inches from the mouth and talk.
2. Release (PTT) to receive.

*\*PTT = Push To Talk*

## CHANNEL PARAMETERS

### 1. Frequency Receiving and Transmitting

*\*Define receiving and transmitting frequency.*

### 2. QT/DQT Decoder and Encoder

*\*When QT/ DQT signals are set, this allows channels in the same vicinity to be shared by different user groups.*

### 3. Transmitting Power

*\*Set High, Medium, Low power for each channel.*

### 4. Broadband/Narrowband

*\*Set broadband/narrowband for each channel.*

*\*Broadband: maximum deviation is 5KHz.*

*\*Narrowband: maximum deviation is 2.5KHz.*

### 5. Tail Tone Elimination and Ending Tone

*\*When the transmission is complete, the tail tone elimination is to clear the "clicks" caused by the end of the call.*

*\*The ending tone prompt beeps signaling the call is over.*

*NOTE: The ending tone will sound only if the tail tone elimination is turned on.*



## PROGRAMMABLE KEY SET-UP

- Battery Capacity Measurement

\*Upon pressing the key, the transceiver will report the current battery capacity. If voice is turned on, the capacity will be reported as follows: 3 beeps for High, 2 beeps for Medium, and 1 beep for low.

- SOS

\*Long press the SOS key to transmit a 1750Hz tone signal.

## PROGRAMMABLE AUXILIARY FUNCTIONS

Side Key 1 can be programmed from computer software to enable a short-press and a long-press function. The available quick access functions which can be assigned to a short-press or a long-press of the side key button are listed below:

- ⇒ Turn off
- ⇒ Monitor
- ⇒ Transient Monitor
- ⇒ Power Switch
- ⇒ Scan
- ⇒ Alarm
- ⇒ Whisper
- ⇒ Scrambler
- ⇒ Comanding
- ⇒ VOX
- ⇒ Battery Capacity Measurement
- ⇒ SOS

## PROGRAMMABLE KEY SET-UP

Using programming software to define the keys, a voice prompt can be heard when activated.

- Null
  - \*Undefined key/invalid.
- Monitor
  - \*Press the key to enter a monitor mode; press again to exit.
  - \*Under scan, press the key to enter a scan suspend state.
- Transient Monitor
  - \*Press the key to enter monitor state; release to quit.
  - \*Under the scan mode, press the key to enter a scan suspended state (only applicable for long– press key).
- Power Switch
  - \*Use to switch the transceiver power on high, medium, and low.
- Scan
  - \*This key can scan each of the linked channels in order to hear all calls. Relative parameters can be set up to scan through programming software.

## PROGRAMMABLE KEY SET-UP

- Alert
  - \*Press the key to turn ON or OFF the alert function. When turning on, an alert tone will sound. The recipient's unit will beep as well.
- Whisper
  - \*By activating this function, speaking with a whisper voice into the MIC, the transceiver will receive high quality sound.
- Scrambler (voice encryption function)
  - \*Press the key to turn ON or OFF the scrambler function. To ensure normal calls between the two parties, the third party can only hear irregular changeable frequency sounds instead of the calls.
- Companding
  - \*Press the key to turn ON or OFF the companding function. This function helps to curb noise and improve call quality resulting in clearer voices.
- VOX
  - \*VOX eliminates the necessity of manually pressing the PTT key to transmit– it is a hands free function. The transceiver automatically switches to transmission mode when the VOX circuitry senses a voice. When a voice is not detected, the transceiver returns to reception mode.