OREGON SCIENTIFIC

English

## OWNER'S MANUAL
TP-329

INTRODUCTION

Thank you for selecting the Oregon Scientific™ TP329 as your product of choice. This product is a portable, easy-to-use two-way radio transceiver. You can use it to contact your family and friends at shopping malls, amusement parks, or even sports events!

The transceiver has 14 channels and 38 CTCSS (Continuous Tone Coded Squelch System) codes. If someone else is using the same channel as yours, and you do not want to hear that person, you can select another channel or use the CTCSS feature. You can talk with a person who has the same transceiver if both are tuned to the same channel and/or CTCSS code.

KEY FEATURES

1. PWR button
Press and hold the PWR button for two seconds to enable/disable the transceiver.

2. ▲ button
The Up button is used to adjust volume and settings up one notch.

3. MENU button
a) Press MENU to enter the Menu Functions mode.
b) Press and hold MENU for 2 seconds to disable Auto-Squelch of the current channel.

4. ▼ button
The Down button is used to adjust volume and settings down one notch.

5. Push-To-Talk button
To talk, press and hold the PTT (Push-To-Talk) button, then speak into the MIC to transmit.

6. Battery Compartment
Your transceiver uses three (3) AAA Alkaline batteries for power.

7. External Microphone/Speaker Jack
Connect optional microphones, speakers, or earphones into this jack.

8. Charging Contacts
If Ni-MH rechargeable batteries are installed, rest the unit on the optional 2-bay Cradle Charger to recharge.
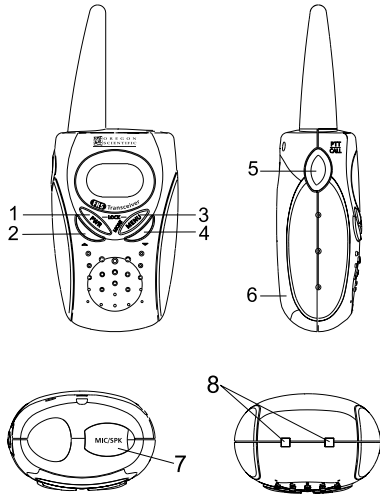
LCD DISPLAY SYMBOLS
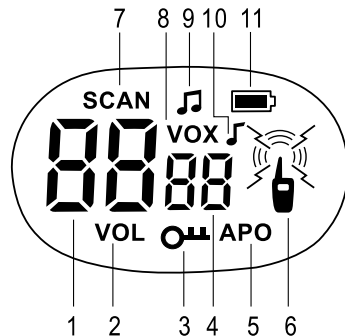
Number	Symbol	Explanation
1.	88	Shows the selected channel number.
2.	VOL	Displays when the volume of radio is being adjusted higher or lower.
3.	🔒	Display when the Key Lock is activated.
4.	88	Shows the selected CTCSS code number.
5.	APO	Indicates the Automatic Power Off mode is activated.
6.	📡	Displays when your radio is transmitting or the CALL function is set.
	🔻	Displays when your radio is receiving a signal.
7.	SCAN	Indicates when the scan mode is activated.
8.	VOX	Displays when the voice detection mode is activated.
9.	♫	Displays when the key tone function is activated.
10.	♩	Indicates that the Roger Beep mode is activated.
11.	🔋	Indicates current battery level. The symbol flashes when battery is low.

SAFETY AND CARE INSTRUCTIONS

Safety precautions

Please observe the following safety precautions when setting up and using this product.

· LCD panel – The LCD panel is made of glass, and may break if the unit is dropped or impacted.

· Heat sources – Keep the product away from heat sources such as radiators, stoves, heaters, and other heat-generating products.

· Water and moisture – Do not use the product in or near water or in high moisture areas such as a bathroom.

Caring for this product

To ensure you receive the maximum benefit from using this product, please observe the following guidelines.

· Cleaning – Use a damp cloth. Do not use liquid cleaning agents, benzene, thinner, or aerosols.

· Repair – Do not attempt to repair the product or modify the circuitry by yourself. Dangerously high voltages are contained inside the unit. Contact the retailer or a qualified repairman if the product requires servicing. Only use replacement parts that are recommended by the manufacturer.

· Do not scratch hard objects against the LCD display as this may cause damage.

Caution

· To avoid risk of fire or injury, do not attempt to charge non-rechargeable batteries.

· Replace only batteries with the same or equivalent type recommended by the manufacturer.

· Please dispose of old, defective batteries in an environmentally friendly manner in accordance with the relevant legislation.

· No naked flames, such as lighted candles, should be placed near the apparatus.

BASIC FUNCTIONS

Operating the Transceiver

1. To start using your radio, insert three AAA batteries or Ni-MH rechargeable batteries (previously charged) into the battery compartment, noting the polarities

2. Press Power On/Off button to turn on the radio. Adjust the volume to a desired level.

3. Select a channel and /or CTCSS code.

4. Press and hold down the PTT (Push-To-Talk) button and speak into the MIC to transmit. The 📡 icon will then appear. When you have finished your transmission, release the PTT button.

5. The transceiver will automatically play received transmissions if the PTT button is not held.

NOTE: You can only communicate with another radio that is using the same channel and/or the same CTCSS code as your radio.

Call Function

You can send a ringer sound to all radios tuned to the same channel and/or the CTCSS code as your radio. To send a call, quickly press PTT key twice.

Using the Key Lock

You can lock the buttons on the transceiver to avoid accidentally enabling the device. Press and hold the POWER and MENU buttons to enable or disable the Key Lock.

Auto-Squelch Function

Your FRS transceiver has an Auto-Squelch function, which means you will not hear anything on a channel unless someone is transmitting nearby on the same channel. You can turn off the Auto-Squelch to hear weaker, distant transmissions by pressing and holding MENU for 2 seconds. The enable the function again, press and hold MENU for 2 seconds.

MENU OPTIONS

To access the Menu Options, press the MENU button. The transceiver will then toggle between the following configurable settings.

Symbol	Setting	Description
88	Channel	Selects channel for transmission
88	CTCSS	Selects a CTCSS code for the current channel
VOX	VOX	Enable/disable voice-activated transmission
♩	Roger Beep	Enable/disable beep heard after the finish of a received transmission
♫	Key Tone	Enable/disable beep when a key on the transceiver is pressed
APO	Automatic Power-Off	Enable/disable automatic shut-off after device is idle for 2 hours

NOTE: When you are finished configuring the current setting, press **MENU** again to confirm and move to the next setting. To confirm the changes but quit the Menu Options, press **PTT**.

Selecting a Channel
Select between the 14 channels of the transceiver to use to communicate with others. To transmit, the transmitter and the receiver must be on the same channel.

Scanning
When you are selecting a channel, you can also activate the channel scan function by pressing and holding ▲ or ▼. **SCAN** will be shown on the display. If a valid signal is present, the transceiver will pause on the current active channel. Press a button to set this as your channel. Otherwise, the scan mode will then immediately search for the next channel if no button is pressed after 5 seconds. During scan, pressing **PTT** or **MENU** key will stop the scan mode and exit the menu. Or, pressing **MENU** key will stop scanning and go to the next setting.

Selecting a CTCSS code
The CTCSS is like having a sub-channel within a channel, giving you greater communication flexibility. It lets you talk and listen to other transmitters set to BOTH the same channel and CTCSS code. There are 38 CTCSS codes to choose from (see Appendix).

Scanning the CTCSS
You can also activate the CTCSS scan function by pressing and holding ▲ or ▼. **SCAN** will be shown on the display. If a valid signal is present, the transceiver will pause on the current active CTCSS channel. Press a button to set this as your CTCSS channel. Otherwise, the scan mode will then immediately search for the next CTCSS channel if no button is pressed after 5 seconds. During scan, pressing **PTT** or **MENU** key will stop the scan mode and exit the menu. Or, pressing **MENU** key will stop scanning and go to the next setting.

Setting VOX
This setting automatically detects and transmits your voice through the selected channel, without needing to push and hold **PTT**. Select between 3 levels of VOX by pressing ▲ or ▼ key. The icon **VOX** is displayed when this function is enabled.

LCD Symbol	Description
0	VOX disabled
1	Low sensitivity – only audibly loud voices are transmitted (useful for noisy environment)
2	Normal sensitivity – ideal setting for voice-activated transmission
3	High sensitivity – all detected sounds (includ ing noise) are transmitted

Roger Beep Mode
If the Roger Beep mode is enabled, the receiving party will hear a beep tone when you finish transmitting a message. This avoids situations where messages are interrupted because the other party is not aware that the transmission is not finished. Press ▲ or ▼ to activate or deactivate the Roger Beep function. Icon ♪ will be shown if activated.

Key Tone
The Key Tone function, if enabled, causes the unit to beep whenever a button is pressed. Press ▲ or ▼ to activate or deactivate the Key Tone function. Icon '♫' will be shown if activated.

APO Function (Automatic Power Off)
This function enables your transceiver to automatically shut itself off if left idle for 2 hours. Press ▲ or ▼ key to activate or deactivate the APO function. Icon **APO** will be shown if activated.

NOTE: To re-enable the transceiver after automatic shut-off, simply press PWR button.

CHARGING CONTACTS (OPTIONAL)
You can directly charge Ni-MH rechargeable batteries without taking batteries out from the battery compartment by using an optional 2-bay cradle charger (sold separately). You can recharge up to two radios at the same time. The LED on the cradle charger will light red when the transceivers are charging. Complete charging takes about 14 to 1 6 hours.

Located inside the transceiver's battery compartment is a charging switch, which enables the recharging of batteries. When placed on the cradle. The switch must be set to 'ON' when rechargeable batteries are used and recharged using the cradle. If alkaline batteries are used, the switch should be set to 'OFF'.

WARNING: Do not put transceivers into the charger when using alkaline batteries.

CAUTION: The cradle charger does not automatically switch off after the batteries have been fully recharged. As such, there is a danger of overcharging, which may shorten the batteries' lifespan heavily.

APPENDIX
Channel Frequencies

Channel	Frequency (in MHz)	Channel	Frequency (in MHz)
01	462.5625	08	467.5625
02	462.5875	09	467.5875
03	462.6125	10	467.6125
04	462.6375	11	467.6375
05	462.6625	12	467.6625
06	462.6875	13	467.6875
07	462.7125	14	467.7125
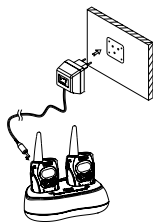
CTCSS Privacy Codes

Channel	Frequency (in Hz)	Channel	Frequency (in Hz)
01	67.0	20	131.8
02	71.9	21	136.5
03	74.4	22	141.3
04	77.0	23	146.2
05	79.7	24	151.4
06	82.5	25	156.7
07	85.4	26	162.2
08	88.5	27	167.9
09	91.5	28	173.8
10	94.8	29	179.9
11	97.4	30	186.2
12	100.0	31	192.8
13	103.5	32	203.5
14	107.2	33	210.7
15	110.9	34	218.1
16	114.8	35	225.7
17	118.8	36	233.6
18	123.0	37	241.8
19	127.3	38	250.3

THE FCC WANTS YOU TO KNOW
This equipment has been tested and found to comply with the limits for a Class B digital 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 your local RadioShack store or an experienced radio/TV technician for help.

The 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.

SAFETY INFORMATION
Your wireless handheld portable transceiver contains a low power transmitter. When the Push-To-Talk (**PTT**) button is pressed, it sends out radio frequency signals. The device is authorized to operate at a duty factor not to exceed fifty percent. In August 1996, the Federal Communications Commission adopted RF exposure guidelines with safety levels for handheld wireless devices.

CAUTION
To maintain compliance with the FCC's RF exposure guidelines, hold the transmitter and antenna at least two inches from your face and speak in a normal voice, with the antenna pointed up and away from your face. If you wear the handset on your body while using the headset accessory, use only the supplied belt clip for this product. When transmitting, take it out of the belt to ensure the antenna is at least one inch (2.5cm) from your body.

Use only the supplied antenna. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

SPECIFICATIONS
RX Frequency .... **462.5625 - 467.7125 MHz**
Channels. **14**
Modulation type .... **FM**
Antenna impedance .... **50 Ohm**
Microphone .... **condenser Type**
Power supply .... **3 × AAA Alkaline**
Sensitivity at 12dB Sinad .... **.0.5μV**
Adjacent Channel Rejection **45dB**
Audio Squelch .... **Auto**
Audio output power .... **100mW @ 8 Ohm**
Audio Distortion .... **7 %**
RF Output Power .... **500 mW @4.5VDC**
Harmonic Emissions .... **> = 46dB**
Dimensions (HWD) .... **87×54×36mm**
Weight(without batteries) **74g**

ADDITIONAL RESOURCES
Visit our website (www.oregonscientific.com) to learn more about your transceiver and other Oregon Scientific™ products such as digital cameras, hand-held organizers, alarm clocks, and weather stations. The website also includes contact information for our customer service department, in case you need to reach us.