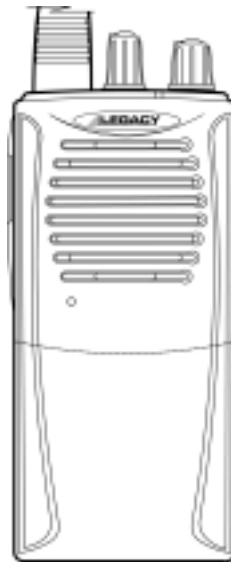




ProLine Series



PL2445 / PL2415 Operating Instructions

About Topaz3

Topaz3 is the exclusive supplier of Maxon®, Legacy and TruTalk brand communication products.

Our product line ranges from FCC licensed two-way radios suitable for Business and Industry (B&I) markets like farm, government, law enforcement, utility, etc. to consumer recreational and light-duty business markets.

Product offerings include a variety of UHF and VHF handheld and mobile radios, repeaters and RF link modules as well as FRS (Family Radio Service), GMRS (General Mobile Radio Service) radios, Citizen's Band radios and weather monitors.

Available accessory items include carrying cases, spare batteries, desktop and mobile chargers, ear bud speaker microphones and more for each radio model.

For additional information on our product line, visit our website: [*www.topaz3.com*](http://www.topaz3.com)

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I. FCC RF Exposure Compliance Requirements - for Occupational Use Only

The Federal Communications Commission (FCC), with its action in General Docket 93-62, November 7, 1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Topaz3 / Legacy subscribes to the same safety standard for the use of its products. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act (OSHA) and Federal Communications Commission limits.

CAUTION - 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.

- This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where radio operator must have the knowledge to control the user's exposure conditions for satisfying the higher exposure limit allowed for occupational use.
- When transmitting, hold the radio in a vertical position with its microphone 2 inches (5 cm) away from your mouth. Keep the antenna at least 2 inches (5 cm) from your head and body.
- This device has been approved for use, at a maximum duty factor of 50%, using the specific belt clip tested for body-worn SAR compliance. Other belt clips or body-

I. FCC RF Exposure Compliance Requirements - for Occupational Use Only, continued

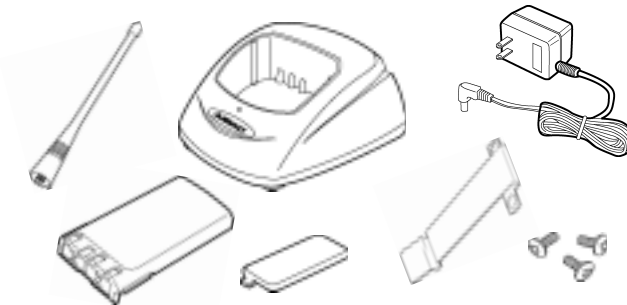
worn accessories may not comply and should be avoided. ALWAYS use Maxon, Legacy and TruTalk authorized accessories: antennas, batteries, belt clips, speaker mics, etc.

- The radio is transmitting when the red LED on the front of the radio is illuminated. You can cause the radio to transmit by pressing the P-T-T bar on the radio.
- These are required operating configurations for meeting FCC RF exposure compliance. Failure to observe these restrictions mean violation.

II. Unpacking and Checking Equipment

Carefully unpack the radio and its accessories. Use the item list below to identify the components included in the product packaging, to ensure that no items are discarded in the packing materials.

Radio Body
Antenna
Battery Charger (with plastic spacer
stored in charger base)
AC Adapter
NiMH Battery Pack
Speaker Microphone Jack Cover
Belt Clip
Screw Set
Operating Instructions



If any items are missing or damaged, you should contact the Topaz3 Customer Service Department. Dial 1-800-821-7848, Ext. 499 for assistance.

III. Getting Started

Charging the NiMH Battery Pack

You will need to charge the battery pack fully before initial use. ***For best results from your charging cycle, follow these tips:***

- Ensure the ambient temperature is between 41 and 104° F (5 and 40° C) while charging. Temperatures outside this range may not fully charge the battery.
- Always switch OFF the transceiver equipped with a NiMH battery pack before charging. Using the radio during the charging cycle will hinder correct charging.
- 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.
- If the battery is stored for 2 months or more, it is a good idea to complete the charge / discharge cycle two or three times to allow the battery capacity to return to normal.
- Never dispose of the battery in fire - it can explode causing personal injury.
- Never attempt to disassemble the battery or remove its case material or charging contacts. Do not short the battery terminals.

III. Getting Started, continued

Charging the NiMH Battery Pack, continued

NOTE: The first few uses from the battery will not be at “normal” capacity. After repeating the charge / discharge cycle two or three times, the battery capacity will increase to provide full capacity.

1. Plug the AC adapter cable in the adapter jack located on the rear of the charger, then into an AC outlet.
2. Slide the NiMH battery pack (or the radio equipped with a NiMH battery pack) into the charging slot.
3. Ensure that the metal contacts on the battery pack come in contact with the charging terminals.
4. When charging the NiMH battery pack alone, insert the provided plastic spacer (stored in charger base) into the charging well, then insert the battery pack.
5. The charger LED will light to advise that charging has begun. Charge the standard battery pack for 9 hours. THEN REMOVE THE PACK OR RADIO FROM THE CHARGER.

IMPORTANT NOTE: The charger DOES NOT TURN OFF AUTOMATICALLY after the charging cycle has been completed. Damage to the battery or reduced battery life may result if charged in excess of the recommended charging time.

III. Getting Started, continued

Attaching and Removing the Battery Pack

NOTE: After recharging the battery pack, REMOVE IT FROM THE CHARGER. Charging the battery pack for more than 5 days may reduce the battery life.

The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Replace the pack with the manufacturer's recommended model.

Average battery pack life from the supplied 750 mAh battery is 11+ hours; the optional 1350 mAh battery, 19+ hours. This service time is calculated using 90% standby, 5% transmit and 5% receive time.

After charging the battery pack as described, you are ready to install it to the radio body. Simply;

1. Match the four grooves of the battery pack with the guides on the back of the radio.
2. Slide the battery pack up along the back of the radio until the release latch locks.

To remove the battery pack, push down on the release latch and slide the pack downward, and away from the radio.

III. Getting Started, continued

Installing the Antenna

Screw the antenna into the connector on the top of the radio by holding the antenna at its base and turning it clockwise until seated. Do not overtighten.

The antenna should never be used to carry your radio, or as a base to clip radio accessories. Misuse of the antenna can cause damage, and reduce your radio's performance.

Installing the Belt Clip

We recommend that the belt clip is installed on the radio. It keeps the radio from coming in contact with hot surfaces, and away from your body if heat build-up occurs with excess transmissions.

Use the two supplied screws to install the belt clip. If a replacement is needed, use a screw designed to the exact specifications as the original, to prevent accidental contact with internal circuitry, or possible personal injury. Never use glue in conjunction with the provided screws. Some of the glue's components may crack the radio back panel, causing radio damage and possible personal injury.

Installing the Speaker Microphone Jack Cover

If you are not using an accessory, install the provided cover over the speaker microphone jack using the screw supplied. This will keep the radio water resistant.

III. Getting Started, continued

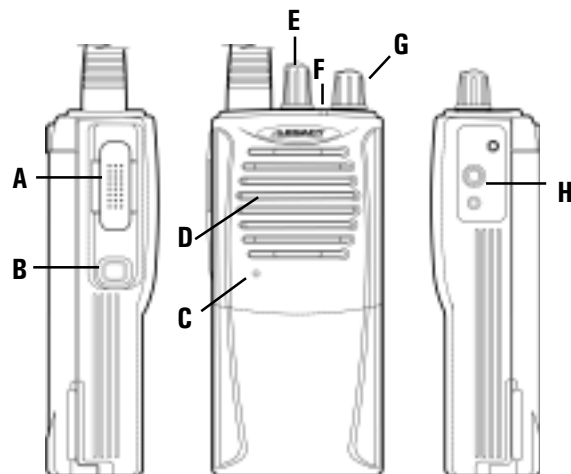
Attaching the Optional Speaker Microphone

1. Insert the speaker microphone jack into the radio.
2. Use the thumbscrew attachment on the speaker microphone to make connection to the radio.

NOTE: The radio is not fully water resistant while the speaker microphone is attached.

IV. Radio Control Buttons / Operation Features

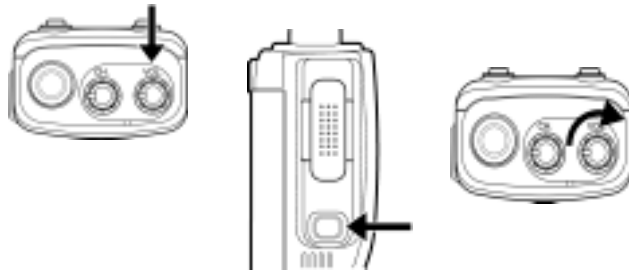
- A) **Push-To-Talk (P-T-T) button (left side of radio)** Press and hold while speaking into the radio microphone, release to listen to incoming messages
- B) **Monitor button (left side of radio)** Press and hold to turn radio squelch off. Release to turn squelch back on.
- C) **Microphone (front of radio)**
- D) **Speaker (front of radio)**
- E) **Channel selector knob (top panel of radio)**
- F) **LED Indicator (top panel of radio)** Identifies transmit (red), receive (signal only) orange, (signal + TONE) green, setup mode (orange), battery low (flashing red)
- G) **Power / volume control (top panel of radio)** Powers radio on and adjusts radio volume
- H) **Speaker microphone jack (right side of radio)**



V. Radio Operation

Power On / Transmit

Power on the radio by turning the power / volume control clockwise out of detent. You will hear a confirmation tone on power-up. To adjust radio volume, press and hold the monitor button then rotate the control further clockwise.



Rotate the channel selector knob to choose the desired channel.

To transmit, place the radio microphone approximately 2" (5 cm) from your mouth. Press and hold the P-T-T bar while speaking in a normal tone. Release the P-T-T bar when you are finished speaking; the radio will be placed into receive mode.

When the battery pack voltage becomes too low for operation to continue, the LED will blink red and a tone will sound. The radio will allow only one more transmission. Change or charge your battery. Refer to "Low Battery Warning" on page 14.

VI. CTCSS Tone Signaling

To help block out unwanted calls to your radio, the PL2445 and PL2415 can be programmed by your radio communications Dealer to scan for tones.

VII. Radio Functions

Scan Modes

Scanning is a Dealer programmable feature that allows you to monitor a number of channels or channels within a Group. Your Dealer will help you define a scanning mode and your channel "scan list".

Normal Channel Scan

Once the scan list has been established, initiate scan by pressing and holding the monitor button and rotating the channel selector knob to the "scan enable" channel. The LED will blink green to confirm radio scanning.

If a conversation is detected on any of the channels in the scan list, the radio will stop on that channel and you will be able to hear the conversation. In normal scan, you will be able to transmit on that active channel during the programmable scan delay time. (The scan delay time is the amount of time the radio will stay on that channel once activity has ceased. Dealer programmable, 4 - 7 seconds is typical).

VII. Radio Functions, continued

Normal Channel Scan, continued

The radio will resume scanning once the scan delay time has expired, and will continue to scan until the channel is changed. The LED will flash green. In scan mode, if radio power is turned off and on, the radio will return to the scan mode until a channel is changed.

Nuisance Delete

During receiving a signal or scan delay time, if the monitor button is pressed, the current receiving channel is deleted in scan list and no longer scanned. When the power is turned off and on, the deleted channel is restored to the scan list.

Priority Channel Scan

A single channel may be programmed as the "Priority" channel. The radio will constantly monitor this channel while scanning and when stopped on an active channel. If a call is detected on the priority channel, the radio will automatically move to, and remain on, the priority channel. Priority channel activity takes precedence over all other conversations.

Busy Channel Lockout

When the RX signal is being received, the radio's transmitter is disabled. Dealer programming makes this feature active or disabled.

VII. Radio Functions, continued

Marked Idle

When used in conjunction with busy channel lockout, the transmitter is allowed to operate as long as valid RX tone is received. Dealer programming makes this feature active or disabled.

TX Delay

The TX will remain active for approximately 180 seconds even though P-T-T button is released when using CTCSS tones. This eliminates squelch tail by sending CTCSS turn-off code (No Tone TX).

Time-Out-Timer (TOT)

The purpose of the time-out-timer is to prevent any single person from using a channel for an extended period. The time-out-time can be programmed from 10 seconds to 990 seconds by your radio Dealer.

Time-Out-Timer Penalty (TX Inhibit)

When TOT is applied, transmission will be inhibited after time-out-time expires. This TX inhibit time can be selected and programmed by your Dealer from 1 second to 100 seconds. For instance, when TOT is set to 3 minutes and TOT penalty is set to 5 seconds, if you continuously transmit for 3 minutes, the radio will stop transmitting. A tone will sound with each P-T-T bar press until the 5-sec. TX inhibit time expires.

VII. Radio Functions, continued

Time-Out-Timer Penalty (TX Inhibit), continued

Press the P-T-T bar after the TX inhibit time expires to resume transmitting.

Battery Save

The battery save function decreases the amount of power used when a signal is not being received and no operations are being performed (no bars are being pressed, no controls are being used, etc.)

When the channel is not busy and no operation is performed, battery save is enabled. When an operation is performed, or a signal is received, battery save is disabled.

Low Battery Warning

When the battery power goes below a pre-determined value, the LED will blink red and a tone sounds. The radio will then allow only one more transmission. After that, the transceiver will stop transmitting. Replace or recharge the battery pack.

Two-Tone Decode

Each channel can be programmed with two-tone decode by your Dealer. Two-tone selections are: Individual Call, Group Call and Super Group Call.

VIII. Licensing, Safety and Service Information

FCC Licensing

The Federal Communications Commission requires the operator of this radio be properly licensed under the applicable Part and / or Parts of the FCC Rules and Regulations.

Consult with your Topaz3 / Legacy radio communications Dealer, or contact the nearest FCC Field Office for information about obtaining a license.

Safety Information

- WARNING -** DO NOT hold the radio in such a manner that the antenna is next to, or touching, exposed parts of the body, especially the face or eyes, while transmitting.
- WARNING -** DO NOT allow children to operate transmitter-equipped radio equipment.
- CAUTION -** DO NOT operate the radio near unshielded electrical blasting caps or in an explosive atmosphere, unless it is a type especially designed and qualified for such use.
- CAUTION -** DO NOT press and hold the transmit bar (P-T-T) when not actually wishing to transmit.

IX. Licensing, Safety and Service Information, con't

Service

Do not tamper with internal radio adjustments. Damage to the equipment and / or improper operation may result. There are no serviceable items inside the radio. It is recommended that you return the radio to a qualified Topaz3 / Legacy radio communications Dealer for any service or repairs.

IX. Maintenance

Your Legacy radio is designed to be maintenance-free, and can be kept in good working condition by:

- Cleaning all external surfaces with a clean cloth, dampened in a mild solution of dishwasher detergent diluted in water. Apply the solution sparingly to avoid any moisture leaking into cracks and crevices - NEVER submerge the radio. Use a non-metallic brush if needed to dislodge stubborn particles. Dry the radio surface thoroughly with a soft, lint-free cloth.
- DO NOT use solvents or spirits for cleaning - they may permanently damage the radio.
- Clean the battery and accessory jack contacts with a lint-free cloth to remove dirt, grease or foreign materials.

X. Software Copyrights

The Topaz3 / Legacy products described in these operating instructions may include copyrighted Topaz3 / Legacy software programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Topaz3 / Legacy certain exclusive rights for copyrighted software programs, including the exclusive right to copy or reproduce in any form the copyrighted software program.

Accordingly, the copyrighted Topaz3 / Legacy software programs contained in the Topaz3 / Legacy product(s) described in this operating instruction manual may not be copied or reproduced without the express written permission of Topaz3, LLC.

Furthermore, the purchase of Topaz3 / Legacy products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Topaz3, LLC, except for normal non-exclusive, royalty-free license to use that arises by operation of law in the sale of a product.

XI. Topaz3 / Legacy Product Warranty

Topaz3, LLC (hereinafter referred to as Topaz3), warrants that its Products and their included accessories will be free from defects in workmanship and materials under normal use for a period of two (2) years (one (1) year for included accessories), from the date of purchase by the original end user, provided that the buyer has complied with the requirements stated herein. This warranty is offered to the initial end user and is not assignable or transferrable. Topaz3 is not responsible for any ancillary equipment which is attached to or used in connection with Topaz3 / Legacy products.

If the Product fails to function under normal use because of manufacturing defect(s) or workmanship during the warranty period above, it will be replaced or repaired at Topaz3's option at no charge when returned to the place of purchase. The defective unit must be accompanied by proof of the date of purchase in the form of a sales receipt.

The user is responsible for the payment of any charges or expenses incurred for the removal of the defective product from the vehicle or other site of its use, for the transportation of the product to the place of repair, for the return of the repaired / replacement product to the site of its use and for the reinstallation of the product.

Topaz3 shall have no obligation to make repairs or to cause replacement required which results from normal wear and tear or is necessitated in whole or in part by catastrophe, the fault or negligence of the user, improper or unauthorized alterations, repairs to the Product, incorrect wiring, use of the Product in a manner for which it was not designed, or by causes external to the Product. This warranty is void if the serial number is altered, defaced or removed.

Topaz3's sole obligation hereunder shall be to replace or repair the product covered in this Warranty. Replacement, at Topaz3's option, may include a

XI. Topaz3 / Legacy Product Warranty, con't

similar or higher-featured product. Repair may include the replacement of parts or boards with functionally equivalent reconditioned or new parts or boards. Replaced parts, accessories, batteries or boards are warranted for the balance of the original time period. All replaced parts, accessories, batteries or boards become the property of Topaz3, LLC.

THE EXPRESS WARRANTIES CONTAINED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

FOR ANY PRODUCT WHICH DOES NOT COMPLY WITH THE WARRANTY SPECIFIED, THE SOLE REMEDY WILL BE REPAIR OR REPLACEMENT. IN NO EVENT WILL TOPAZ3, LLC. BE LIABLE TO THE BUYER OR ITS CUSTOMERS FOR ANY DAMAGES, INCLUDING ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, OR THE LOSS OF PROFIT, REVENUE OR DATA ARISING OUT OF THE USE OF OR THE INABILITY TO USE THE PRODUCT.

This warranty is void for sales and deliveries outside of the U.S.A.

Maxon is a registered tradename of Maxon America, Inc.



*Supplier of Maxon,[®] Legacy
and TruTalk Communication Products*

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