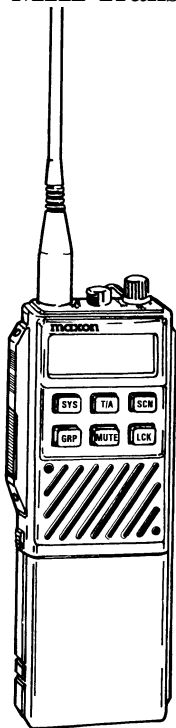

maxon

TP-4800 Series 800 MHz Transceiver



Operating Instructions
(Models TP-4800 and TP-4801)

About Your TP-4800 Series Radio

Maxon's TP-4800 Series is a sophisticated, microprocessor controlled transceiver which operates in the 800 MHz range. Operation and functions for Maxon Model TP-4800 (with DTMF keypad) and TP-4801 (non-DTMF version) radios are described in this manual.

We urge you to thoroughly read this manual before operating the radio.

The TP-4800 Series has been designed for ease of operation and there are many features available. Many of the functions described in this manual are dependent on the System in use. Your Maxon Dealer has programmed the TP-4800 Series Radio to optimize your requirements.

Should you have any questions regarding the operation of the radio, please consult the Maxon Dealer from which you purchased the radio.

About Maxon America, Inc.

Maxon America, Inc. designs and manufactures professional FM two-way radio equipment to serve a wide variety of communication needs. Maxon produces equipment for the Land Mobile Radio and Specialized Mobile Radio markets (business, industrial, government and public safety).

Table of Contents

Safety Information	1
TP-4800 Series Features	2
Quick Reference Guide	3
Description of Radio Components	5
Controls and Connectors	5
Keypad	7
Display Information	11
TP-4800 Series Operation	13
Trunked and Conventional Mode	13
Channel Monitoring	13
System "Handshaking"	13
Transmitting	14
Receiving	15
T/A - Talk Around	15
Transpond Mode	16
Keypad Lock	16
Telephone Calls (Model TP-4800 only)	16
Placing a Telephone Call	17
Auto Interconnect Operation	17
Manual or Direct Dialing	18
Receiving A Telephone Call	19
Additional Telephone Calling Information	20
Entering Telephone Numbers	20
Clearing Telephone Numbers	20
To Store a Number In Memory	21
To Recall a Number Stored In Memory	21
Scan Modes	22
General	22
System Scan	22
System Lockout	22
Group Scan	23
Auto Group Scan	23
Manual Group Scan	24

Transmitting While Scanning	24
Last Active (floating) System and Group	24
"Home" System and Group	25
Scan Resume Delay	25
RX Priority	26
First Available System Scan	26
Trunked Supervisory Tones	27
Busy Tone	27
Intercept Tone	27
Clear-To-Talk	27
Key Press Tone	28
Reorder Tone	28
Return Time Warning Tone	28
Conversation Time-Out Tone	28
System Ringback Tone	29
Display Messages	30
Battery Charging and Care	31
Extended Operations	33
FCC Licensing	34
Transceiver Service	35
TP-4800 Series Product Warranty	36

Safety Information

The Federal Communications Commission (FCC), with its action in General Docket 79-144, March 13, 1985, has adopted a safety standard for the human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act and Federal Communication Commission limits.

DO NOT hold the radio in such a manner that the antenna is close to, or touching, exposed parts of the body -- especially the eyes or face -- while the radio is transmitting.

DO NOT operate the radio near unshielded electrical blasting caps or in an explosive atmosphere, unless it is a type specifically designed and qualified for such use.

DO NOT operate the radio unless the antenna connector is secure and any open connectors are properly terminated.

DO NOT allow children to operate transmitter-equipped radio equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

TP-4800 Series Features

- Choice of Model TP-4800 with DTMF keypad or Model TP-4801 without DTMF keypad
- Up to 10 Systems selectable
- Up to 10 Groups selectable per System
- System scan
- System lockout when scanning
- Group Scan automatically or manually
- First Available System Scan when out of range of Systems
- 7-character alpha-numeric LCD display with backlight for System and Group identification and other status information
- Operation in both Trunked and Conventional (non-Trunked) modes
- Repeater talkaround in Conventional and Trunked modes
- Standard telephone keypad for placing telephone interconnect calls (Model TP-4800 only)
- Call indicator
- User-programmable storage of up to 8 telephone numbers of up to 14 digits in length (Model TP-4800 only)
- Automatic System ringback if System is busy
- Transmit inhibit with busy tone
- Clear-to-Talk beep tone signal indicates when speaking can begin

NOTE: System setup determines the specific operation of some of the above features. Refer to the descriptions in this manual for more information.

Quick Reference Guide

Controls and Buttons



Turns transceiver on and adjusts audio listening level



Lights up LCD display

Monitors channel activity (Conventional Mode only)



Press-To-Talk places transceiver in transmit mode

Keypad



Change **SY**Stem number



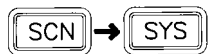
Change **GR**ouP number



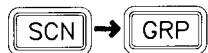
Talk **A**round bypasses System when out of range of System



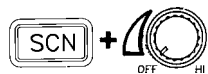
Enable or disable "key press" tone



Turn **SY**Stem **SC**aNning On/Off



Turn **GR**ouP **SC**aNning On/Off



Enters First Available System Scan (FASS) mode



LoCK Keypad or displayed System out of scan sequence



Enable or disable "**Phone**" mode (Model TP-4800 only)

NOTE: In "**Phone**" mode, the **T/A**, **MUTE**, **SCN** and **LCK** keys have the following functions; (**SND**) **SeND**, (**STR**) **SToRe**, (**REC**) **RECall** and (**CLR**) **CLeaR** respectively. The functions are indicated in the red letters next to the primary function indicated on the keypad. (Model TP-4800 only)

DTMF Keypad

Enter telephone number to be called (Model TP-4800 only)



SeND key automatically interconnects with System and transmits displayed telephone number (Model TP-4800 only)



SToRes displayed telephone number in memory location **1** through **8**



RECalls stored telephone number from memory location **1** through **8**



CLeaRs one digit at a time from display

Description of Radio Components

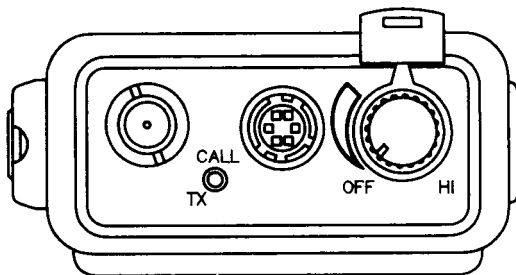
Controls and Connectors

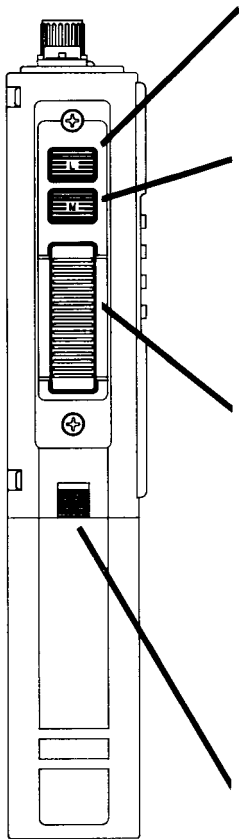
Antenna Connector - SMA type connector for Maxon TA-801BK antenna or equivalent.

TX/CALL Indicator - Two color LED glows red when radio is transmitting (TX) and green when radio is receiving a call (CALL).

Accessory Connector - Interface for Maxon SA-1420 Speaker/microphone and programming cable.

On-Off/Volume Control - Turning this knob clockwise supplies power to the radio and increases volume level. A counter-clockwise rotation decreases volume level. To turn transceiver power off, rotate knob counter-clockwise to detent.





L-Backlight Button - Press the **L** button once to illuminate the display for low light conditions. After pressing the **L** button, the light will stay on for approximately 10 seconds.

M-Monitor Button - Press and hold the **M** button to monitor channel activity. This disables any squelch system so that all traffic is heard. The monitor function is available only when Conventional Systems are programmed into the radio.

Push-To-Talk Button - Press and hold the Push-To-Talk (**P-T-T**) Button to place the radio in transmit mode. When transmitting, the TX indicator located near the antenna will glow red. In Trunked Systems, the radio must first "handshake" with the System to access an available channel. This initial access may cause the TX indicator to flash momentarily.

Battery Latch - Lifting this latch allows battery to be removed from the radio. Place thumb under latch

and lift upward while sliding battery away from thumb. To reinstall battery, slide toward latch until securely locked.

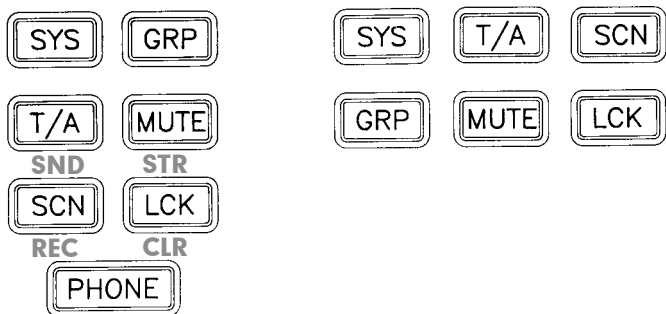
Keypad

SYS "System" - Pressing this key selects the next programmed System. Only those Systems programmed will be displayed. System number selected is located in upper left corner of display.

GRP "Group" - Pressing this key changes the selected group. Only those groups programmed will be displayed. Group number selected is located in lower left corner of display. Group name or identifier is shown in main body of display.

T/A "Talk Around" - Places the TP-4800 Series into the Talk Around mode on Trunked and Conventional Systems (Dealer programmable option). Allows direct radio-to-radio communication when out of range of System.

MUTE "Silent" - Pressing the mute function key places the radio into the "Silent" mode (none of the "key press" tones will be heard through the speaker.) To enable "key press" tone mode, press **MUTE** again.

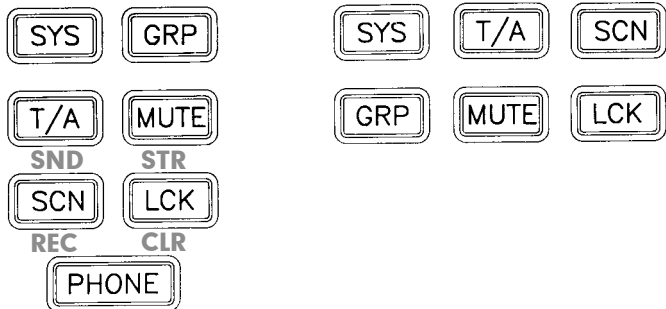


NOTE: The TP-4800 Series will return to the "key press" tone mode automatically when the unit is turned off and on. (This is the power up default setting).

SCN "Scan" - Pressing this key initiates the scan feature. When the **SCN** key is pressed followed by pressing either the **SYS** (System) or **GRP** (Group) key, System scan or Group scan is enabled. (See "Scan Modes").

LCK "Lock" - Disables keypad or used to lock System or Systems out of the scan sequence so that they are not scanned. This function is retained in memory and does not need to be re-entered each time the radio is turned on. (Refer to "Keypad Lock" or "System Lockout" for more information).

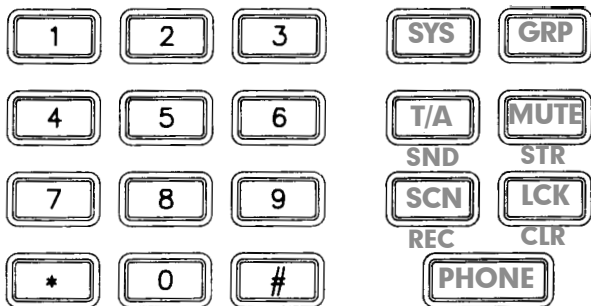
PHONE "Phone" Mode (Model TP-4800 only) - Places radio in or out of "Phone" mode. In "Phone" mode, activates second function of dual function keys indicated by red lettering on the radio and in parenthesis () starting on next page.



The following Keys are activated in "Phone" mode (Model TP-4800 only) :

DTMF Keypad - Keys 0-9, and symbol keys "*" and "#" for entering telephone numbers to send or store in memory.

NOTE: If more than 7 digits are entered or stored in a memory location, a left facing arrow ◀ will appear at the bottom of the LCD display. This represents there are more digits entered than can be displayed. Only the last seven digits entered are displayed. To display any digits not shown, first (**STR**) "Store" the entire number into a memory location and then use (**REC**) "Recall" to bring back the number. The first digits will be displayed for 1 second and the remaining 7 digits will be displayed and remain shown until the function is changed or the (**REC**) "Recall" key is again pressed.



T/A (SND) "Send" - Transmits the telephone number entered or recalled from memory on the LCD display.

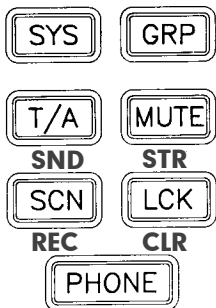
MUTE (STR) "Store" - Stores a telephone number into memory. To store a number shown in the LCD display, press **STR** (Store) and a memory location number **1** through **8**.

NOTE: Storing a displayed number will overwrite any previously stored phone number!

SCN (REC) "Recall" - Used to recall a telephone number from memory locations **1** through **8**.

LCK (CLR) "Clear" - Deletes the last digit shown in the display. To erase the display entirely, press "RECall" and the "0" (zero) memory location. It is a dedicated "blank" display.

NOTE: The telephone number entered in the display will be erased when the power is turned off.



Display Information

Alpha-numeric Display - In the **standard** mode, this 7-character display identifies the selected System/Group and those operating modes or error conditions as described in "Display Messages". In the "Phone" mode, it indicates the telephone number as well as the functions activated in "Phone" mode (Model TP-4800 only).



- SYS (System)** -Displays above the System number
- GRP (Group)** -Displays above the Group number
- LOCK** -Indicates that the Keypad is disabled or that System (or Systems) are locked out of the scan sequence
- MONITOR** -Indicates that the "Monitor" mode has been enabled by pressing the **M** Monitor button in a Conventional System
- PHONE** -Indicates that the "Phone" mode has been selected (Model TP-4800 only)
- FASS** -Indicates First Available System Scan has been enabled
- SCAN** -Indicates that the "Scan" mode has been selected by the **SCN** key
- CALL** -Indicates that a call has been received
- BUSY** -Indicates that the channel (Conventional) or the System/Group (Trunked) you have selected is busy



-Indicates that the displayed group is programmed for telephone interconnect (Model TP-4800 only)



-Indicates that the "key press" tones are heard (Model TP-4800 only)



-Indicates that the battery is weak and needs recharging



-Indicates that there are overflow digits (the telephone number is longer than 7 digits) (Model TP-4800 only)

SYS



LOCK MONITOR PHONE FASS



GRP



SCAN

CALL

BUSY



TP-4800 Series Operation

NOTE: Fully charge your battery prior to operation.

Trunked and Conventional Mode

Your Maxon TP-4800 Series may be programmed to operate with both Trunked and Conventional modes. Each System can be individually programmed to operate in either the Trunked or Conventional Systems. There are only a few differences in their operation and these are detailed as follows.

Channel Monitoring

While on a Trunked System, channel monitoring is performed automatically by the radio transceiver. In accordance with the FCC Rules, while operating on a Conventional System the channel must be monitored prior to transmitting. In both Trunked and Conventional Systems, operation may vary from System to System. Your Maxon Dealer will be able to assist with particular operational parameters and procedures for the various Systems and functions.

System "Handshaking"

In a Trunked System, when the P-T-T button is pressed, the red TX indicator flashes momentarily to allow the transceiver and System to connect properly. When the red TX indicator glows steadily, voice transmission may begin. If your Maxon Dealer has enabled the "Clear to Talk" tone option, the radio will emit a short tone signalling voice transmission may occur. In Conventional Systems, there is no System "handshaking" and voice transmission may start immediately.

Transmitting

- A. Rotate the On-Off/Volume control clockwise to turn the power on.
- B. Adjust On-Off/Volume control further clockwise to desired volume level. (Pressing any of the function keys will provide a "key press" tone. Use this tone to set desired audio level).
- C. Press the "SYS~~tem~~" and "GR~~ou~~P" keys until the desired System and Group are displayed.
- D. If a Conventional System is selected, the channel must be monitored before transmitting. Press and hold the **M** Monitor button. This disables all squelch systems and allows you to hear any transmissions on this channel.
- E. Press and hold the **P-T-T** button on the side of the transceiver. (If a "Busy", "Intercept" or "Ringback" tone is heard, refer to "Supervisory Tones" descriptions for more information).
- F. Listen for the "Clear to Talk" tone (or wait for the TX indicator to glow steady) and begin talking. Hold the transceiver 1 or 2 inches from your mouth, speak clearly and distinctly into the microphone area of the front grille.
- G. Release the **P-T-T** button as soon as the message is complete and listen for a response. The **P-T-T** button must be pressed continuously while talking and released to listen.

Receiving

- A. Turn power on and set the volume level as previously described.
- B. Select the desired System and Group.
- C. When a message is received, the TX/Call indicator will glow green.
- D. Respond to message by pressing the **P-T-T** button on the side of the transceiver. This switch must be pressed continuously while talking and released to listen.

If scanning, be sure to respond before scanning resumes, if you do not, another call may be received and the selected System and Group may have to be changed. Refer to "System Scan" description for more information.

T/A - Talk Around

Talk Around mode, if enabled by your Maxon Dealer, allows you to talk directly from radio to radio. This is useful when your radios are out of range of any System. If the radio can receive the System transmissions, then Talk Around may be disabled.

- A. Press the **T/A** key. The LCD display will indicate the word "SIMPLEX" in place of the unique System / Group identifier.
- B. Transmit and receive as described in "Transmitting".

Transpond Mode

If Transpond has been enabled by your Dealer, your radio will automatically send (transpond) an acknowledgment to the System indicating that your radio has received a transmission. Transpond is a Dealer programmable option.

Keypad Lock

LCK "Keypad Lock" - While your radio is on, this function prevents inadvertent setting changes due to accidental key presses.

- A. To "Lock" Keypad - Press and hold the **LCK** key for 3 seconds and wait for 2 long beeps. The word "LOCK" will blink in the upper left hand corner of the LCD display to verify activation.
- B. To "Unlock" Keypad - Hold the **LCK** key down for 3 seconds and wait for 3 short beeps. The word "LOCK" will then disappear from the LCD display.

NOTE: The "**LCK**" key will not work under two conditions: 1) Editing phone numbers (while in the "Phone" mode)(Model TP-4800 only) or 2) While in Manual System or Group Scan mode.

Telephone Calls (Model TP-4800 only)

Telephone calls may be placed and received, provided that your Dealer has programmed this feature into your Maxon TP-4800 transceiver. The following instructions pertain to placing telephone calls which are made in the Trunked mode

only. Calls made in Conventional modes may vary depending on the System setup. Consult your Maxon Dealer for specific information.

Placing a Telephone Call (Model TP-4800 only)

Auto Interconnect Operation

- A.** Turn power on and set the volume as desired.
- B.** Select a System that contains an interconnect group.
The "telephone" icon will appear in the LCD display. You may enter the phone mode from a non-interconnected group but the System selected must have at least one telephone interconnect Group. (When the SND key is pressed the unit will automatically select the first available interconnect Group and transmit the displayed telephone number).
- C.** Select the "Phone" mode by pressing the **PHONE** key. The word "PHONE" will appear in the upper right portion of the display.
- D.** Enter the number to be dialed, or recall a number from memory locations 1-8, by pressing **REC 1-8**. (Information on storing and recalling a number from memory is detailed in the following sections).
- E.** Press the **SND** key. The Maxon TP-4800 will access the Trunked Group, send the phone number and return to the receive mode.

NOTE: In some Systems or with a very weak signal, it may be necessary to press the **P-T-T** button to access the dial tone and then press the **SND** key.

- F.** When the called party answers, press the **P-T-T** button to talk and release to listen.
- G.** To release the call (to hang up), press the **P-T-T** button and press the pound sign (#) key for 1 to 2 seconds. Release the **P-T-T** button.

NOTE: This step is important as well as good operating practice. Pressing the pound sign (#) key instructs the System that your call is completed. Additional inter-connected billing time may be incurred before the System automatically terminates the call. In most Systems this is 30 seconds, however it may vary. Consult your Maxon Dealer for specific details.

Manual or Direct Dialing

- A.** Turn power on and set the volume as desired.
- B.** Select the System and Group that has been programmed for telephone calls. The "telephone" icon will appear in the LCD display.
- C.** Press and hold the **P-T-T** button to obtain the System "Handshake". The red "TX" LED will glow continuously and the Clear-To-Talk tone will sound (if programmed).
- D.** Momentarily release the **P-T-T** button and listen for the dial tone.
- E.** Press and hold the **P-T-T** button while "keying" the telephone number using the DTMF keypad.

F. Release the **P-T-T** button.

G. When the called party answers, press the **P-T-T** button to talk and release to listen.

H. To release the call (to hang up), press the **P-T-T** button and press the pound sign (#) key for 1 to 2 seconds. Release the **P-T-T** button.

Receiving a Telephone Call

A. Turn power on and set the volume as desired.

B. Select or scan the System and Group programmed for telephone calls. (When a Group programmed for telephone calls is selected, the "telephone" icon appears in the display).

C. When a telephone ringing sound is heard from the speaker, answer the call in the normal manner (press the **P-T-T** button to talk and release it to listen). It is not necessary to select the "Phone" mode to receive a call.

D. When the call is finished, release the System by pressing the **P-T-T** button and the pound sign (#) key for 1 to 2 seconds.

NOTE: This step is important as well as good operating practice. Pressing the pound sign (#) key instructs the System that your call is completed. Additional interconnected billing time may be incurred before the System automatically terminates the call. In most Systems this is 30 seconds, however it may vary. Consult your Maxon Dealer for specific details.

Additional Telephone Calling Information

Entering Telephone Numbers (Model TP-4800 only)

A. Press the **PHONE** key to enter the "Phone" mode. The word "**PHONE**" will appear in the upper right portion of the display. The numeric DTMF telephone keypad is now enabled.

B. Enter the desired telephone number by pressing the corresponding number keys.

The Maxon TP-4800 allows you to enter the telephone number at any desired rate. Errors can be corrected before sending the telephone number to be dialed. Numbers up to 14 digits in length can be entered. When there are more than 7 digits entered, the overflow icon ◀ will appear in the lower left portion of the LCD display, next to the Group number. Numbers which have been stored into memory locations 1 through 8 and recalled will momentarily display the first overflow digits, and then the last 7 digits entered.

Clearing Telephone Numbers (Model TP-4800 only)

When a phone number has been entered, it will remain in the display whenever you enter "Phone" mode. To erase the last digit entered depress the **CLR** key. To erase the entire number, press **CLR** until no information is displayed (**CLR**, **CLR**, **CLR**, etc.).

Tip: To quickly erase an entire number from the display, press "RECall" and the "0" (zero) memory location. It is a dedicated "blank" display.

To Store a Number In Memory (Model TP-4800 only)

A. Press **PHONE** key to place the unit into the "Phone" mode.

B. Enter the desired number. Example:

1 8 1 6 8 9 1 6 3 2 0

C. Press **STR**.

D. Press memory location **1** through **8** (for example, "2").
The number 1 816 891 6320 is now stored in memory location 2.

E. Clear the existing digits by pressing **CLR** until no information remains in the display.

F. Repeat above steps for other desired memory locations.

To Recall a Number Stored In Memory (Model TP-4800 only)

The stored numbers can now be recalled and sent by selecting the **PHONE** mode, pressing **REC**, the desired memory number **1** through **8**, and then **SND**.

Scan Modes

General

Both System Scan and Group Scan are available in Maxon's TP-4800 Series radio. Although your Maxon Dealer will explain which option(s) he has programmed for you, the following is a description of each.

System Scan

System Scan is initiated by pressing **SCN SYS**. To exit Scan mode, press **SCN** and hold for 2 seconds. Scan mode is indicated by the word "**SCAN**" displayed in the lower left portion of the display. When scanning is actually occurring, the words "IN SCAN" appear in the display in place of the unique group identifier. In addition, the System numbers are incremented. Scanning is sequential through all Systems, Trunked and Conventional, unless they are locked out of scan as described under "System Lockout". When an incoming call is detected, scanning stops and the call is received. The display will indicate the System and Group identifier from which the call was received and the word "**SCAN**" in the lower left portion of the display. When the incoming call is complete, scanning resumes after a pre-determined pause. (See "Scan Resume Delay" for additional information regarding the pause).

System Lockout

All Systems, Trunked and Conventional, are scanned in System Scan Mode. If you desire not to scan a particular System, select that System with the **SYS** key and press the **LCK** key. The word "**LOCK**" appears in the upper left

portion of the display and that System will be deleted from the scan list. When System Scan is initiated, the word "**LOCK**" will be shown in the upper left portion of the display along with the words "**IN SCAN**" denoting a System or Systems have been locked out of scan. To restore a System to the scan list manually select the "LOCKed" System and press the **LCK** key. The word "**LOCK**" will disappear and the System will now be scanned while in the System Scan Mode. The "LOCK" information is stored in memory and will not be affected by turning the power switch off.

GroupScan

There are two different ways the TP-4800 Series does Group Scanning. Your Maxon Dealer programs these functions into the radio during initial setup. Only those Groups your Dealer has "enabled" for Group Scan can be scanned. Group scan is not available in Conventional Systems.

AutoGroupScan

There is no action required to initiate Auto Group Scan. Whenever a System is selected that is programmed for Auto Group Scan, those Groups "enabled" will automatically be scanned. When an incoming call on any "enabled" Group is detected, the radio will switch to this Group, display the Group number, and unique identifier. The radio will remain on this Group until a message comes from another "enabled" group, the **SYSTEM** key, and / or the **GRouP** key is pressed.

Manual Group Scan

To initiate Manual Group Scan press **SCN GRP**. To exit Group Scan mode, press **SCN** and hold for 2 seconds. Scan mode is indicated by the word "**SCAN**" displayed in the lower left portion of the display. When Group Scan is actually occurring, the words "**IN SCAN**" appear in the display in place of the unique group identifier. Group Scan occurs only on those Groups "enabled" by your Maxon Dealer for the selected System. When an incoming call is detected, scanning stops and the incoming call is received. The display changes to indicate the Group identifier on which the call was received and the word "**SCAN**" in the lower left portion of the display remains. When the incoming call is complete, after a brief pause, scanning resumes. (See "Scan Resume Delay" for additional information regarding the pause).

Transmitting While Scanning

When a message is transmitted while scanning (i.e. the words "**IN SCAN**" show in display), Dealer programming determines if it is transmitted on the "Last Active (floating)" or on a pre-set "Home" System and Group. The following describes operation for each configuration.

Last Active (Floating) System and Group

During Scan (i.e. the words "**IN SCAN**" show in the display) when you press the **P-T-T** button, you will transmit on the System and Group that were selected prior to entering Scan mode. If scanning stops for an incoming call, and you press the **P-T-T** button during the pause prior to scanning resuming, you will transmit on the System and Group displayed.

Last active (floating) programming allows you to respond (transmit) to an incoming call during Scan mode without having to press the **SYStem** or **GRouP** keys.

"Home" System and Group

The "Home" System and Group are the System and Group in which you require priority to transmit on. This is usually the System and Group on which you will receive and transmit most of your calls.

When you press the **P-T-T** button during scanning (i.e. "**IN SCAN**" appears in the display) your TP-4800 Series radio will always transmit on the "Home" System and Group. This applies whether scanning has stopped for an incoming call or not.

Scan Resume Delay

After a message is received or transmitted in the "Scan" mode, there is a delay period of 1-7 seconds before scanning resumes. The exact length of this delay is programmed by your Dealer. When a message is received, this delay allows you to respond without having to change the selected System and Group. If you do not respond until after scanning resumes (the words "**IN SCAN**" reappear in display), another call may be received and the response may not occur on the desired System or Group.

NOTE: If a "Home" System and Group is programmed for scanning, then the above Scan Resume Delay does not allow you to respond to the incoming call . Your transmission will always be on your programmed "Home" System and Group.

RX Priority

Your Maxon Dealer may have programmed a Group ID as an **RX PRIORITY** (Receive Priority) ID. Whenever your radio receives this ID, the LCD display will show the words **"RX PRI"** in place of the normal alphanumeric System / Group identifier. **"RX PRI"** will remain in the display until you press any button or key on the radio. An RX priority message takes priority over any other message, other than a telephone interconnect message.

First Available System Scan

When you are Out of Range of any System when trying to transmit, First Available System Scan (FASS) will scan all Systems programmed and look for the first System that is in range of the radio.

To enter First Available System Scan (FASS), rotate the On-Off/Volume control counter clockwise to detent, shutting off power to radio. Press and hold the **SCN** key while turning the radio power back on. The word **"FASS"** will show in the upper right portion of the display. When you attempt to transmit and the selected System is out of range, the radio will emit a short tone indicating the System is out of range and "FASS" mode has started. When the radio detects a System in range, scanning will stop and the radio will emit a short series of tones (auto ringback tone) to indicate a System is in range. Normal operation may resume. To exit "FASS" mode, press **SCN**.

Trunked Supervisory Tones

Busy Tone

This tone is similar to the standard telephone busy tone and it indicates that the radio System is currently "busy". The tone sounds for as long as the **P-T-T** button is pressed, and the word "**BUSY**" appears in the lower right portion of the display while this tone is sounding. If the Clear-to-Talk tone is programmed, the "Busy" tone does not sound except when making a telephone call. If "**TX INHIB**" is displayed while this tone is sounding, the selected group is temporarily busy.

Intercept Tone

This is a siren-like tone (alternating high and low tones) which indicates the following error conditions:

- 1) If this tone sounds after the transmit indicator flashes several times and "**RANGE**" appears in the display, an out-of-range condition is indicated. To complete a call, you may need to get closer to your radio System. Once this tone sounds, no more access attempts are made until the **P-T-T** button is released and then pressed again.
- 2) If this tone sounds after the transmitter has been on for an extended period and "**TX TIME**" also appears in the display, the transmitter has been disabled by the Time-Out-Timer feature.

Clear-To-Talk

When the Clear-To-Talk feature is programmed, it emits a short tone which indicates when speaking can begin. (Refer

to "Clear-To-Talk" description for more information).

Key Press Tone

This is a short tone that sounds to indicate when a key is pressed. This tone can be enabled and disabled by pressing the **MUTE** key.

NOTE: The following tones are heard only when making telephone calls .

Reorder Tone (Model TP-4800 only)

Three beeps which indicate that the call has been terminated by the System.

Return Time Warning Tone (Model TP-4800 only)

Two beeps which indicate that you have not transmitted recently. If you do not transmit within 5 seconds, the call will be terminated. The time between transmissions is one of the parameters used by the System to determine when a call is finished (if the pound sign (#) key has not been detected).

Conversation Time-Out Tone (Model TP-4800 only)

Calls are limited to a certain length by the System. Thirty seconds before this time is reached, a "tick" begins sounding each second. When the thirty-second period expires, the call is automatically terminated.

System Ringback Tone (Model TP-4800 only)

If in First Available System Scan mode or after receiving a "Busy" indication when attempting to access a System (Trunked or Conventional), the TP-4800 will emit a one second "ring" to indicate a System is now available.

Display Messages

RANGE: This message accompanied by an intercept tone (a "warbling" siren-type tone) indicates that the TP-4800 Series radio is Out Of Range, or too far from System site to provide communications.

BUSY: Indicates that the channel is busy. This message is accompanied by the intercept tone.

TX Time: This message indicates that the transmit Time-Out-Time has been exceeded. This message is accompanied by the intercept tone.

TX DSBL: Transmit is disabled, allowing only reception of signals. This message will be displayed and the warbling intercept tone will sound. (Dealer programmed).

TX INHIB: Indicates that the frequency or Group selected is temporarily busy. This message is accompanied by the intercept tone. Try your transmission again in 15 to 30 seconds.

UNLOCK: This message indicates that the synthesizer has become "unlocked". If this message should be displayed, take the radio to your Maxon Dealer for service.

RX PRI: Indicates that a call has been received on a programmed priority channel. (Dealer programmed).

IN SCAN: Indicates that the Scan function has been enabled.

Battery Charging and Care



Do not dispose of the battery pack in fire - it may explode, causing injury or death.

Do not replace the battery in hazardous atmosphere locations.

Your Maxon TP-4800 Series radio comes supplied with one 7.2 volt 1100 mAh Ni-Cad battery pack, which can be recharged from 500 to 1000 times before requiring replacement. The actual number of charge / recharge cycles vary depending upon usage.

We recommend that the battery be charged from 14 to 16 hours on the first charge cycle and then in accordance with the charger model instructions thereafter. Although many battery manufacturers no longer specify that the battery be discharged completely (to a point where the unit no longer operates) and recharged once per month, Maxon recommends that this procedure be carried out, thus ensuring maximum battery life.

To remove the battery pack, push up on the battery latch and slide the battery pack to the right. To replace the battery, align the battery on the track and slide to the left until a click is heard, indicating the battery is correctly installed.

If the battery is to be charged while attached to radio, ensure that the power switch is in the "Off" position before starting to charge. Failing to turn the power switch "Off" during the charge cycle will result in a less-than-full-charge condition, which will noticeably reduce the operating time between charges!

Normal battery operation time is 8 hours. This may vary depending upon how much the receiver audio is present and how much you transmit. The actual time may vary from day to day depending upon operational requirements.

Recycling/Disposal of Batteries

The U.S. Environmental Protection Agency (EPA) classifies used Ni-Cd batteries as hazardous waste, unless certain exemptions apply.

The battery should be recycled at the end of its useful life. Under various state or local laws, such batteries must be recycled or disposed of properly and cannot be dumped in landfills or incinerators.

Maxon America, Inc. fully endorses and encourages the recycling of Ni-Cd batteries. A national program to collect and recycle used Ni-Cd batteries is being implemented by the Rechargeable Battery Recycling Corporation (RBRC™). This program is being funded through the use of license fees paid by the battery and product manufacturers to place the RBRC Seal on the batteries.

The following is a list of recycling facilities where the batteries can be shipped to be recycled. Contact these facilities for proper packaging and shipping guidelines.

INMETCO

245 Portersville Road
Ellwood City, PA 16117
TEL: (412) 758-2802
FAX: (412) 758-9311

Within New Jersey,

Wade Environmental Industries, Battery Division

293-C Jackson Road
Atco, NJ 08004
TEL: (609) 767-2760
FAX: (609) 767-0698

Within Minnesota,

U.S. Filter Recovery Services, Inc.

2430 Rose Place
Roseville, MN 55113
TEL: (800) 732-3226
FAX: (612) 788-0312

Extended Operations

When operating in "Fringe Areas" at some distance from the System, the other party may not receive your transmission clearly. Also you may notice that the background noise will increase on received signals. Moving to higher ground or moving closer to the System will help alleviate these problems. If moving closer to the System is not practical, communication may be improved by moving away from shielding structures. If you are in a building interior, move closer to a window (preferably one generally in the direction of the System). At 800 MHz the wave length is very short, sometimes moving a few inches to a few feet can make significant signal strength changes. Finding the best location can also be done while listening to the background noise while moving about; attempt to find a spot where the background noise is reduced to a minimum or eliminated entirely. This may make the difference from not being heard, to being heard loud and clear when operating in the fringe areas of your System coverage.

The fringe distance will vary greatly from plains areas, hilly terrain and mountaintop sites.

Consult your Maxon Dealer regarding the specific operational range and coverage of the System(s) programmed into your TP-4800 Series radio.

FCC Licensing

This unit may or may not require a specific FCC license to operate. The FCC requires all transmitters in the conventional and some Trunked Systems to be licensed by the Federal Communications Commission. Some Trunked operations now are exempt from individual licensing requirements but must be operated in a licensed System.

Consult your Maxon Dealer regarding specific licensing information, or contact the Federal Communications Commission.

For more information regarding the FCC license application (Form 571), call 717-337-1212 for additional information or contact the FCC District Office nearest your location.

Transceiver Service

There are no user serviceable components inside the Maxon TP-4800 Series radio. Altering the internal components or adjustments may result in illegal emissions, including off-frequency operation, or damage to the radio.

Should an "UNLOCK" condition be shown in the LCD display, or the LCD fail to display information, or all icons and display segments are shown, turn the power switch "Off" then "On " to reset the microprocessor. Ensure that the battery is fully charged and check that the antenna is securely tightened.

If the radio still fails to operate properly, refer to an Authorized Maxon Dealer for servicing.

TP-4800 Series Product Warranty *

Maxon America, Inc. (herein "Maxon") warrants to the first end user only, each new radio product manufactured or supplied by it to be free from defects in material or workmanship under the conditions of normal use and service for two (2) years for parts and labor. The warranty period begins on the date of purchase from an Authorized Maxon Sales and Service Outlet.

In the event of a defect, malfunction or failure during the warranty period, Maxon will repair or replace, at its option, the radio product or part(s) therein which upon examination by Maxon shall appear to be defective or not up to factory specifications. Maxon will pay labor charges incurred in providing the warranty service, against its rate schedule.

To obtain in-warranty or out-of-warranty service, the defective product should be returned to the Authorized Maxon Sales and Service Outlet from where it was purchased. Any and all requests for warranty service must be accompanied by proof of purchase, such as a bill of sale or cancelled check. The user is responsible for the payment of any charges or expenses incurred for the removal of the product from the vehicle or other site of its use, for the installation of the repaired unit in such site, for the transportation of the product to the place of repair and for the return of the repaired product to its site of use.

The limited warranty does not extend to products which have been subject to misuse, neglect, accident, incorrect wiring, improper installation, catastrophe, the fault or negligence of the user, or the use of the product in a manner for which it was not designed. Nor does the warranty extend to units on which the serial number has been removed, defaced or changed. Maxon reserves the right to make changes or improvements in its products during subsequent production,

without incurring the obligation to install such changes or improvements on previously manufactured equipment.

Maxon's sole obligation hereunder shall be to repair or replace the product covered in the above warranty.

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 MAXON BE LIABLE TO THE BUYER OR ITS CUSTOMERS FOR ANY DAMAGES, INCLUDING ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, OR FOR THE LOSS OF PROFIT, REVENUE OR DATA ARISING OUT OF THE USE OF OR THE INABILITY TO USE THE PRODUCT, EVEN IF MAXON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE.

* This warranty is void for sales and deliveries outside of the U.S.A. For sales outside the U.S.A., contact Maxon America or your local Maxon Dealer.

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