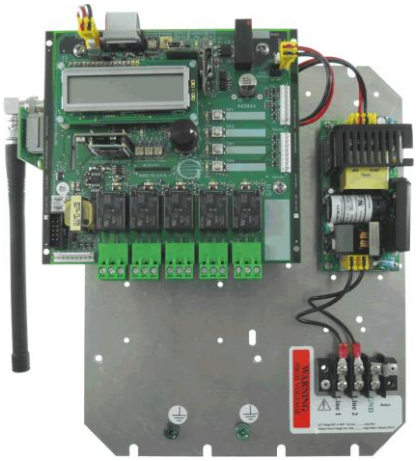
RXC-3000

USB / Twist-n-Touch™

Receiver Decoder Controller

Programming Guide



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Warning

If incorrectly used, this equipment can cause severe injury. Those who use and maintain the equipment should be trained in its proper use, warned of its dangers, and should read the manuals before attempting to set up, operate, adjust or service the equipment. Keep this manual for future reference.

Important Safety Information

System Planning

Proper planning is the cornerstone to an effective warning system. The Federal Emergency Management Agency (FEMA) publishes the "Outdoor Warning Guide" CPG 1-17, which should be used in planning your system. In addition, you should recognize and understand the following items:

•Outdoor warnings sirens and equipment are not intended to be heard indoors. Conversely indoor devices are not intended to cover outdoor environments. All devices have specific purposes and distances that they can be considered effective. Proper placement and selection of the correct equipment is necessary to cover a desired area. Refer to the FEMA guide for placement guidelines.

•Training is necessary to ensure those responsible can correctly activate the system. It is also necessary that everyone understand the purpose of the warning system and the protective actions they need to take when the system is activated. Periodic tests can serve to accomplish the training for the operators, in addition to demonstrating the various signals to the public.

•All warning systems must have contingency plans in case equipment problems or operator errors interfere with its performance. Just as with the primary warning system, the contingency plans should be periodically tested to make sure those responsible know how to implement them and the necessary response from the public is achieved.

Important Safety Information

Installation & Service Precautions

• Electrocution, severe personal injury and damage to equipment can occur during installation or servicing this equipment. All electrical work should be performed by, or under the supervision of an experienced electrician and in accordance with all applicable electrical, fire, building and safety codes.

•This equipment can start at any time from local controls, automatic timers, radio remote, commands from a computer and many other sources. The sound output can cause hearing damage, while other attached equipment can cause personal injury when they engage. Whenever working in or around the equipment you must assume it could activate at any moment, and take appropriate precautions to protect yourself and others. You should completely disable the equipment before working on or in close proximity to any part of it.

•You must test the system and equipment to insure it is operating correctly after the installation, as well as after any work has been performed.

System Operation

•Training is necessary to ensure those responsible can correctly activate the system. It is also necessary that everyone understand the purpose of the siren and the protective actions they need to take when the system is activated. Periodic tests can serve to accomplish the training for the operators, in addition to demonstrating the various signals to the public.

•You must carefully read and completely understand all the information about the system including its abilities and its limitations. Since no warning system is infallible, you must have contingency plans for warning, in the event the primary systems do not perform as expected, for any reason.

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RXC-3000™ Programming

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Overview

The RXC-3000 is a standalone Receiver – Decoder – Controller (RXC) device that is fully programmable from either a computer or via the new Genave Twist-n-Touch™ rotary input switch. The unit is equipped with a transceiver, signal decoders, programmable logic controller, power supply, up to 5 relay outputs, optional LCD screen, board mounted activation switches and USB computer interface, all contained in a NEMA 4 weatherproof enclosure.

Since the RXC-3000 is programmable, it is not dependent upon any manufacturers particular tone code scheme. It can, of course, detect and generate Motorola, GE, Bramco, RCA and many other standard codes. But it can just as easily be programmed to use custom tone codes already in use, or to develop your own code schemes for a particular application.

Purpose of this Guide

This manual focuses on delivering instructions about using the Twist-n-Touch™ controls to change settings of the RXC-3000.

It is not intended as a guide to radio communications, signaling formats or industrial logic controls.

It's focus is as an easy to use guide which steps the reader through the adjustment process.

Twist-n-Touch Controls

The controls are comprised of two parts, the LCD screen and the rotary switch.

LCD Screen

The screen is an Liquid Crystal Display (LCD) which can display 32 characters on two lines. To make it easier to view in low light conditions, the display is back-lit with a solid-state, led light source. To conserve power, the back-light is turned off after 15 minutes of inactivity. It will turn back on when it sees any movement of the Twist-n-Touch control knob.

Multi-Function Knob

The control knob can continuously rotate in either direction. In addition, it has a switch which activates when the knob is pressed down.

You will use the knob three different ways.

- Twisting without pressing it down.
- Twisting the knob while pressing and holding it down the entire time it's being turned.
- Tapping the knob

Twisting Knob Without Pressing

The knob can rotate continuously in either direction. Most functions in the RXC use the button in this manner to move the cursor on the LCD screen to a new position.

Twisting Knob While Pressing and Holding Down

To change options, menus, settings or values, you normally press and hold the knob down while you rotate it.

Tapping the Knob

By quickly pressing and releasing the knob, you send instructions to the RXC on how to move through the menu structure. The touches are normally one or two taps in quick sequence. While the number of knob presses can mean different things, their normal meaning are the following.

One Knob Press

Enter into a Menu, move down to a lower sub-menu.
Move down from line 1 to line 2 of the LCD.

Two Knob Presses

Leave a Menu, move up to the next higher menu level.
Move from line 1 to line 2 of the LCD.

Forced Reset

Anytime, and in any menu, a forced reset can be performed. Press and Hold the knob for ten seconds. The RXC will reboot to the main menu. The button can be released as soon as the reboot process begins.

If data in a menu was currently being edited, the un-saved changes will be lost during the Forced Reset.

ComStarG3 - Programming Software

The Twist-n-Touch programming is intended to quickly add and change the most common parameters such as the receiver frequency, bandwidth, two-tone paging signals, DTMF codes and relay timing. Due to the vast feature set of the RXC-3000, it is sometimes necessary to use the ComStarG3 programming software for advanced applications.

ComStarG3 is an option available to customers who need the extra programming power and who are technically comfortable working with computer languages. Contact Genave for additional information on pricing and supported computer operating systems.

Menus And What They Mean

Displays the user program running in the RXC-3000.

Displays the unit's settings for System, Group and Unit.

Displays the current time and date when equipped with the Real Time Clock.

Displays the last decoded DTMF signal received.

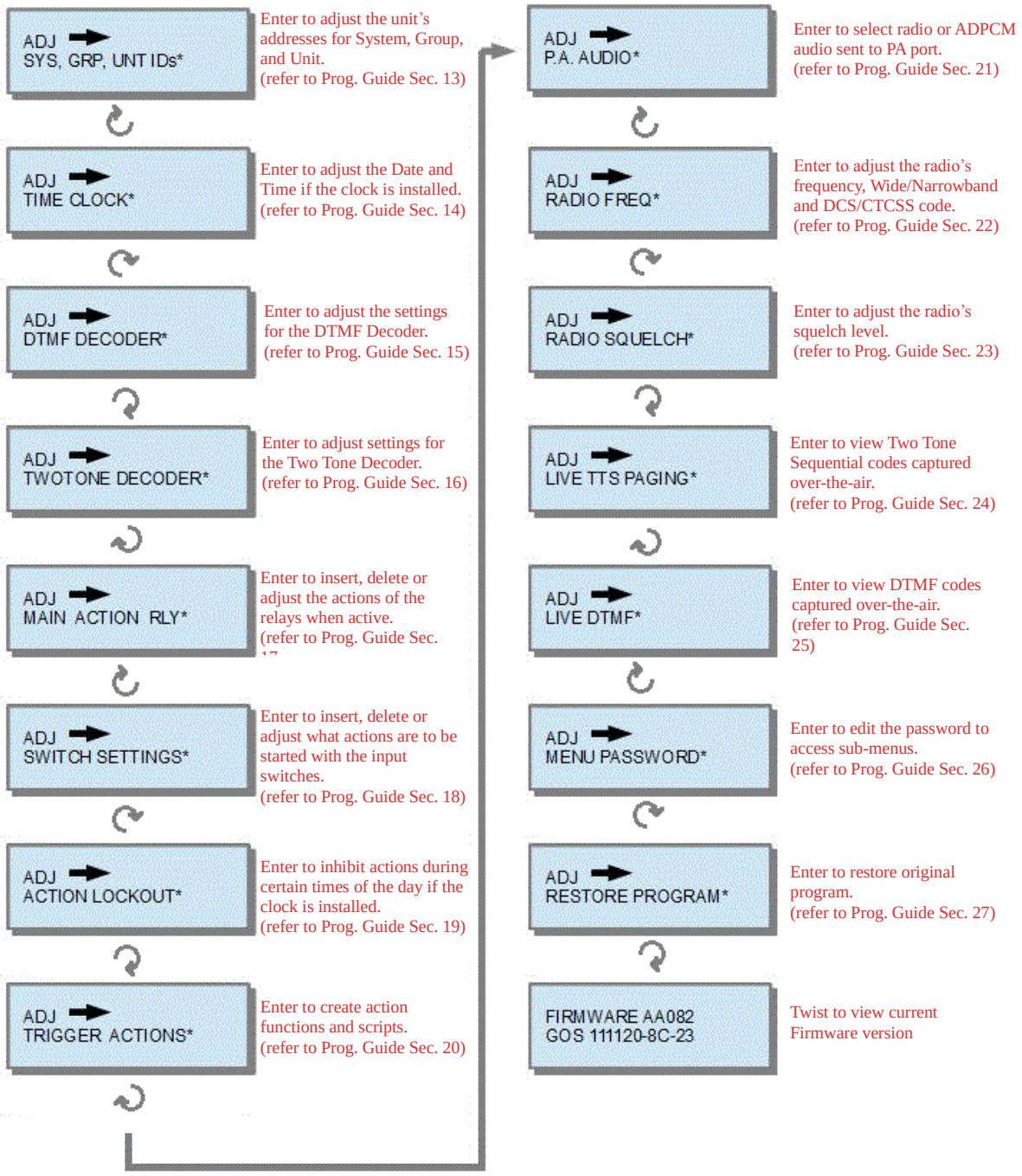
Displays the number of log entries in the action history. (Max is 512)
A double click of the "twist-n-touch" knob will allow you to go through the logs. (refer to Prog. Guide Sec. 10)

Displays the receiver's frequency, Wide/Narrow band, and DCS/CTCSS code.

A double click of the "twist-n-touch" knob will allow entry into the settings menus.

Note: Sub-menu screen will time out in 3 minutes and return the RXC-3000 to normal operation without Twist-n-Touch knob movement.
Live DTMF* and LIVE TTS PAGING* do not time out.

Sub-Menu Screens



Menu Timer - Reset

To prevent leaving the RXC in a sub-menu where some features are disabled, there must be some knob movement every three minutes while in a sub-menu, otherwise the RXC will reset. The Timer Reset does not apply to the LIVE DTMF* and LIVE TTS PAGING* sub-menus.

Program Name

Displays the current program.

System Group and Unit

Each RXC in a system can be setup with an address sequence to identify and individually control it. The SGU numbers are normally used in DTMF and FSK systems.

These values can be changed from within the Adjust Settings menu.

Current Time

RXCs equipped with the optional Real Time Clock (RTC) module have the added ability of using the time and date supplied by the module to enhance the RXC's features.

If the RXC has the module installed, this screen will show the current time and date.

If the module is not installed, the screen will indicate "No Time/Date".

Last DTMF Decode

All DTMF codes received, which meet the minimum code length settings, are shown on this screen. Even over-the-air codes which are not programmed into the RXC will still be presented on this screen.

Action History*

Action History contains RXC-3000 activity such as switch/input actions, DTMF activations, TTS activations, etc.

Double-tap to enter the menu.

Line one shows the time and date the action occurred. If the RXC does not have the RTC option, line one will show "No Time/Date"

Line two shows details such as how the action was activated (switch, DTMF, etc). If the action was in response to DTMF or TTS signals from the radio, the History log will include details

about the signal such as codes, and in the instance of TTS signals it includes the tone timing.

Rotating the knob on line one will display all History entries. Newest entries are shown first. Rotating the knob CW will step down to older entries. History entries are read-only. The information cannot be changed.

Double-Tap to get to line two.

With the cursor on line two, you rotate the knob to view additional details of a particular history activity which may extend beyond the LCD screen.

Single-Tap to return to line one.
Rotate the knob to view other entries.
Single-Tap to return to the main menu.

Receiver Frequency

When the RXC is equipped with an internal radio, this screen presents operating information about the receiver.

- Frequency
- Bandwidth
- Selective Signaling

The first group of data is the receiver frequency in MHz.

The second group of data is a single character, either "N" or "W", which denotes the current receiver bandwidth.

- N indicates "NarrowBand" at 12.5 KHz channel spacing.
- W indicates "WideBand" at 25.0 KHz channel spacing.

Selective Signaling is the last group and indicates the CTCSS code or DCS code if selective signaling is being employed. A CTCSS code will have a decimal point in the value, while a DCS code is three digits long and will not have a decimal point. If the word CSQ (carrier squelch) is seen, then neither CTCSS nor DCS are being used. Instead CSQ shows the receiver is set to monitor all traffic.

Adjust Settings*

There are several sub-menus which can adjust operation of the RXC-3000. These menus are accessed through Adjust Settings*.

Double-tap to enter the menu.

Use the knob to scroll through these sub-menus.

- SYS,GRP,UNT ID*
- TIME CLOCK*
- DTMF DECODER*
- TWOTONE DECODER*
- MAIN ACTION RLY*
- SWITCH SETTINGS*
- ACTION LOCKOUT*
- TRIGGER ACTIONS*
- P.A. AUDIO*
- RADIO FREQ*
- RADIO SQUELCH*
- LIVE TTS PAGING*
- LIVE DTMF*
- MENU PASSWORD*
- RESTORE PROGRAM*

Double-tap to enter the menu selection.

Single-Tap to exit Adjust and return to the main menu.

When you enter the Adjust Settings* menu, any running timers will be stopped, all audio will cease and the relays will drop. The decoders, switches, lockouts and triggers are also inhibited during this time.

SAFETY WARNING: Even with all these automatic precautions, you still must manually disable any inputs, outputs or other connections to the RXC while in any of the menus.

Password

Access to all the sub-menus via the “Twist-n-Touch” knob can be restricted by using a unique password.

If the Password option is enabled, the user is asked to enter their five character password when they try to enter the sub-menus by double-tapping the knob, when they are on the top menu item “ADJUST SETTINGS*”.

If the password option is disabled, or if a valid password has been entered within the last ten minutes, a pw is not requested.

Password Structure

A password must contain five characters. Numbers 0 to 9 and characters A to Z are all valid. The characters must be uppercase.

Default

The factory default password is 00000, five zeros. This code disables the password feature. See additional information below.

Disable Password

If no password is needed, set the password code to 00000, five zeros. This will disable the password feature and no pw will be requested when using the “Twist-n-Touch” knob to enter the sub-menus to view and make adjustments.

Complete Sub-Menu Lockout

To completely lock access to the sub-menus, set the password code to ZZZZZ, five Z characters. This will lock-out the ability for anyone to use the “Twist-n-Touch” knob to view or make changes on any of the sub-menus.

Once locked in this manner, it can not be unlocked locally. It can however be reset, and access via the knob restored, by using the ComStarG3 software.

Logging Unauthorized Attempts

An entry is made to the History file for any password attempt which fails. If the RXC-3000 is equipped with the clock option, the entry will include the time and date of the attempt.

Scope of Password

The password is only intended to limit unauthorized access to the sub menus by someone

using the “Twist-n-Touch” knob, in an effort to keep people out of the area where changes in the program's operation are made.

The password does not prevent changes or viewing of data being made via the USB link.

The password can be recovered using software, so it is advisable to use a different password from other pw you may use for other purposes.

Other measures such as locking the RXC or removing the “Twist-n-Touch” control, should also be considered if necessary.

Viewing / Editing the Password

The password can be viewed and changed by the MENU PASSWORD sub-menu, or by the ComStarG3 software. See the section on MENU PASSWORD* for additional information.

SYS,GRP,UNT ID*

System, Group, Unit (SGU) codes can be quickly inserted into DTMF strings.

Double-Tap to get to line two.

Rotate knob to position cursor at the point you want to edit.

Press and rotate the knob to change the value of the SGU.

After releasing the knob you can rotate the knob to the next value to be changed.

After all editing has been completed, Single-Tap the knob to return to line one.

Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

TIME CLOCK*

When equipped with the RTC "Time Clock" option, you use this menu to change the current time and date.

The cursor will initially be located under the Hours.

Rotate knob to position cursor at the point you want to edit.
Press and rotate the knob to change the time.
After releasing the knob you can rotate the knob to the next value to be changed.

Double-Tap to get to the DATE on line two.

Rotate knob to position cursor at the point you want to edit.
Press and rotate the knob to change the date.
After releasing the knob you can rotate the knob to the next value to be changed.

After all the date editing has been completed, Single-Tap the knob to return to line one.

Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

DTMF DECODER*

There can be up to sixteen different DTMF codes.

There are several option menus in this selection.

- CODE
- ACTION
- PLAY
- SAVE
- LEARN
- CLEAR
- COPY TO
- RATE
- LENGTH

The cursor is initially under the DTMF location number.
Press and rotate the knob to change the selection from any of the locations, one to sixteen.

With the cursor on line zero, rotate the knob to move between the location number and the options. The cursor will move between the location and an arrow pointing to the current option.

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

Code

The DTMF code is entered or edited from this option.

Double-Tap to get to line two.

Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

Valid DTMF codes

0 to 9 - Normal DTMF Digits
X - Wildcard. Any DTMF character received in the X position is considered valid
A to D - Normal DTMF alpha characters.
[- Left bracket for assembling multiple digits for one position.
] - Right bracket for assembling multiple digits for one position.
S - System. This inserts the SYS code at the position. See SYS,GRP,UNT ID*
G - Group. This inserts the GRP code at the position. See SYS,GRP,UNT ID*
U - Unit. This inserts the UNIT code at the position. See SYS,GRP,UNT ID*
* - Normal DTMF "star" character.
# - Normal DTMF "pound" character.

Inserting Characters

It's not necessary to erase a complete string just to add a new character into an existing code.

Rotate the knob to position the cursor at the point to insert the new character.
Double-Tap the knob. This will insert a zero at the cursor position.

Deleting Characters

To remove a character from a DTMF code.

Rotate the knob to position the cursor at the point to delete the character.
Triple-Tap the knob. This will delete the DTMF character.

ACTION

Actions are the center of the RXC universe. They run scripts which control operations such as relays, screen messages, timers and other activity.

This option selects the Action to be run when the correct DTMF code is received.

Double-Tap to get to line two.
Press and rotate the knob to view and select the appropriate Action.
Single-Tap the knob to return to line one.

PLAY

This selects the audio file to run when the correct DTMF code is received.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.

After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

Quad-Tap. While on line two, four quick taps of the knob will start the selected audio. Use this feature with caution and wear hearing protection if necessary.

Audio file number 99 is reserved to turn on the radio PA.
Audio file number 100 turns off all audio.

Special feature: MP3/ADPCM audio followed by radio PA.
If 100 is added to the MP3/ADPCM audio file number, the audio is first played then the RXC-3000 switches to radio PA mode as soon as the audio file has finished.

Example: Play audio file 7 followed by switching to live PA. Play number would be 107.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with "DONE!" after the information has been saved.
The cursor will be positioned to the location and the option will change back to CODE.

LEARN

The RXC-3000 can learn, record and store DTMF codes sent over-the-air.

Double-Tap to start.

The RXC will flash "WAITING" and will instruct "SEND COMMAND NOW".

At this time, transmit the DTMF code.

The RXC will receive the new code and store it in the DTMF CODE screen for this location, where you can then confirm or edit the code before saving it.

Single-Tapping the knob will stop the learn mode at any time.

CLEAR

This option is used to quickly erase all settings of a DTMF location.

Double-Tap to clear.

It's still necessary to save the new (cleared) settings.

COPY TO

This option will copy all the information of the current DTMF location to another location.

Double-Tap to go to line two.
The screen will show "COPY to 02". The "to" location may vary on your unit.
Press and rotate the knob to change the value.

While still on line two, Double-Tap the knob to finish the Copy To command and copy the current data to the new location. The RXC will respond with "DONE!".

Single-Tap the knob to return to line one without finishing the Copy To command.

RATE

The RATE setting affects ALL DTMF codes. For this reason the location number changes to the word GLOBAL while this option is selected.

For the most flexibility, the RXC employs non-predictive DTMF decoding technology.

It receives all DTMF codes and examines them for matches. It finds the end of a string by looking for silence between DTMF codes. This silence period is normally 600 msec (6/10's of a second) but it can be adjusted for varying conditions. The most common reason to change is to accommodate DTMF codes manually entered from a DTMF keypad.

There are four menu selectable rates .

- Default - 600 msec
- Medium - 1 second
- Slow - 3 second (usually used for manual entry by the sender)
- Fast - 500 msec.

Double-Tap to go to line two.
Press and rotate the knob to scroll through and select the new value.
Single-Tap the knob to return to line one.

LENGTH

The LENGTH setting affects ALL DTMF codes. For this reason the location number changes to the word GLOBAL while this option is selected.

For the most flexibility, the RXC employs non-predictive DTMF decoding technology.

It receives all DTMF codes and examines them for matches. The Length setting is used to set the minimum code length of any DTMF string received. Any codes shorter than this number will be abandoned immediately without examining them at all.

Double-Tap to go to line two.
Press and rotate the knob to select the new value, from two to nine digits.
Single-Tap the knob to return to line one.

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

TWO TONE DECODER*

There can be up to 20 different TTS codes stored in memory.

There are several option menus in this selection.

- CODE
- ACTION
- PLAY
- SAVE
- LEARN
- CLEAR
- COPY TO

The cursor is initially under the TTS location number.
Press and rotate the knob to change the selection from any of the locations, one to twenty.

With the cursor on line zero, rotate the knob to move between the location number and the options. The cursor will move between the location and an arrow pointing to the current option.

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

Code

The TTS code is entered or edited from this option.

The code is comprised of four different values.

- Tone "A" frequency - in Hz
- Tone "A" time - 100 msec steps
- Tone "B" frequency - in Hz
- Tone "B" time - 100 msec steps

This information is displayed on line two of the LCD as "0000/00 0000/00".
The first group "0000/00" is A Freq/A Time, while the second group is B Freq/B Time.

Numbers after the decimal point for the tones are not entered. For example, 330.5 Hz is entered as 0330.

The times entered are the minimum time the tone must occur for it to be considered valid.

Times are entered in 100 msec steps. For example, 3.6 seconds is entered as 36.

Full example
1410/10 0330/30 - Tone A 1410 Hz for 1 second, followed by 330 Hz for 3 seconds.
0530/30 2850/20 - Tone A 530 Hz for 3 seconds, followed by 2850 Hz for 2 seconds.
0786/80 0000/00 - Tone A 786 Hz for 8 seconds. No B tone. Often referred to as Group Call.

To change the code
Double-Tap to get to line two.

Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

ACTION

Actions are the center of the RXC universe. They run scripts which control operations such as relays, screen messages, timers and other activity.

This option selects the Action to be run when the correct TTS signal is received.

Double-Tap to get to line two.
Press and rotate the knob to view and select the appropriate Action.
Single-Tap the knob to return to line one.

PLAY

This selects the audio file to run when the correct TTS signal is received.

Double-Tap to get to line two.

Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

Quad-Tap. While on line two, four quick taps of the knob will start the selected audio. Use this feature with caution and wear hearing protection if necessary.

Audio file number 99 is reserved to turn on the radio PA.
Audio file number 100 turns off all audio.

Special feature: MP3/ADPCM audio followed by radio PA.
If 100 is added to the MP3/ADPCM audio file number, the audio is first played then the RXC-3000 switches to radio PA mode as soon as the audio file has finished.

Example: Play audio file 7 followed by switching to live PA. Play number would be 107.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with "DONE!" after the information has been saved.
The cursor will be position to the location and the option will change back to CODE.

LEARN

The RXC-3000 can learn, record and store TTS signal sent over-the-air.

Double-Tap to start.

The RXC will flash "WAITING" and will instruct "SEND COMMAND NOW".

At this time, transmit the TTS code.

The RXC will receive the new code and store it in the TTS CODE screen for this location, where you can then confirm or edit the code before saving it.

Single-Tapping the knob will stop the learn mode at any time.

CLEAR

This option is used to quickly erase all settings of a TTS location.

Double-Tap to clear.

It's still necessary to save the new (cleared) settings.

COPY TO

This option will copy all the information of the current TTS location, to another location.

Double-Tap to go to line two.
The screen will show "COPY to 02". The "to" location may vary on your unit.
Press and rotate the knob to change the value.

While still on line two, Double-Tap the knob to finish the Copy To command and copy the current data to the new location. The RXC will respond with DONE!

Single-Tap the knob to return to line one without finishing the Copy To command.

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

MAIN ACTION RLY*

This sub-menu is used to adjust the relay timing and control of an Action.

There are several option menus in this selection.

- ACTION
- PLAY
- RELAYS
- SAVE
- CLEAR

The cursor is initially an arrow pointing to the Action.
Press and rotate the knob to select the Action name to work on.

With the cursor on line zero, rotate the knob to move between the Action name and the options. The cursor will change pointers between the Action and the current option.

Changing Options

With the cursor on line one and pointing to the right, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

ACTION

Actions are the center of the RXC universe. They run scripts which control operations such as relays, screen messages, timers and other activity.

This option selects the Action which you are currently working on.

Double-Tap does not select line two. To change the Action, rotate the knob without pressing it, while the cursor is on line one, until the arrow points to the left. Now press and rotate the knob to scroll through the various Actions.

PLAY

This selects the audio file to run when the Action is run.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

Quad-Tap. While on line two, four quick taps of the knob will start the selected audio. Use this

feature with caution and wear hearing protection if necessary.

Audio file number 99 is reserved to turn on the radio PA.
Audio file number 100 turns off all audio.

Special feature: MP3/ADPCM audio followed by radio PA.
If 100 is added to the MP3/ADPCM audio file number, the audio is first played then the RXC-3000 switches to radio PA mode as soon as the audio file has finished.

Example: Play audio file 7 followed by switching to live PA. Play number would be 107.

*RELAYS - ADJ RELAY TIMES**

There are eight outputs on an RXC-3000. Each relay is selected individually with this option, and can be enabled, disabled and have it's performance changed.

Available relay options.

- NONE - NOT CHANGED
- ON - SET RELAY ON
- OFF - SET RELAY OFF
- RUN - TOTAL TIME=xxxx
- CYCLE
  - TIME - TOTAL TIME=xxxx
  - LOOP - ON=xxxx OFF=xxxx
  - DELAY - INIT DELAY=xxxx
  - STATE - INIT STATE=[off/on]
- REVRS - REVERSE STATE

Relay Number

The cursor is initially under the relay number.
Press and rotate the knob to change the selection between any of the eight relay outputs.

With the cursor on line zero, rotate the knob to move between the relay number and the options. The cursor will move between the location and an arrow pointing to the current option.

Relay Operation

With the cursor on line zero, rotate the knob to move between the relay number and the options. The cursor will move between the location and an arrow pointing to the current option.
When the arrow is pointing to the right, press and rotate the knob to change the relay's operation.

NONE

No change in the relay state will occur when this Action runs. The relay is not touched.

ON

The relay is turned on. If the relay had been running in a timed or cycle mode, those timers are disabled.

The relay will stay engaged until another action or activity changes it.

OFF

The relay is turned off. If the relay had been running in a timed or cycle mode, those timers are disabled.

The relay will remain off until another action or activity changes it.

RUN

The relay is turned on for the specified time. If the relay had been running in a timed or cycle mode, the timers are disabled then reset to the new time specified by the RUN command.

The relay will stay engaged until the end of the specified time, or until another action or activity changes it.

The time is in seconds with a maximum value of 9999 seconds.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

CYCLE

The relay is turned on and off for the specified time. If the relay had been running in a timed or cycle mode, the timers are disabled then reset to the new time specified by the CYCLE command.

The relay will keep cycling on/off until the end of the specified time, or until another action or activity changes it.

To make it completely flexible, the Cycle command has four sub-options.

- TIME
- LOOP
- DELAY
- STATE

TIME

This is the total run time for the entire Cycle of this relay. At the end of this time, the relay will disengage.

The time is in seconds with a maximum value of 9999 seconds.

Double-Tap to get to line two where the LCD indicates TOTAL TIME=.
Rotate the knob to move the cursor to the value you want to change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

LOOP

The output cycles on and off for the duration of its run. Loop settings specify how long each on and off cycle lasts.

The time is in seconds with a maximum value of 9999 seconds.

Double-Tap to get to line two.
ON=0001 OFF=0001
Rotate the knob to move the cursor to the ON or OFF fields and edit the value.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

DELAY

In some circumstances it may be necessary to delay the start of the cycling.

The time is in seconds with a maximum value of 9999 seconds.

The Delay command instructs the RXC to delay the start of cycling.

The Cycle Total Timer is running when the delay is active, so the Delay time will subtract from the overall time the relay has to cycle once the initial Delay is done.

Double-Tap to get to line two.

INIT DELAY=0000
Rotate the knob to move the cursor to the value you want to change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

STATE

During a delayed start, the output can initially be turned on or off. That selection is made from this sub-option.

The time is in seconds with a maximum value of 9999 seconds.

State has no effect if Delay=0000;

Double-Tap to get to line two.
INIT STATE=OFF
Press and Rotate the knob to switch between ON and OFF.
Single-Tap the knob to return to line one.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with "DONE!" after the information has been saved.
The cursor will reposition to the initial location and the option will change back to CODE.

CLEAR

This option is used to quickly erase all settings of a relay.

Double-Tap to clear.

It's still necessary to save the new (cleared) settings.

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

SWITCH SETTINGS*

There are eight different switch inputs on the RXC-3000. Four of the switch inputs have mechanical switches already on the RXC. All eight switch inputs are available for attachment to other switches and devices via J14 - "Remote Inputs" header.

The Switch menu allows the action of each switch input to be changed.

The cursor is initially under the switch location number.
Press and rotate the knob to change the selection from any of the switches, one to eight.

With the cursor on line zero, rotate the knob to move between the location number and the options. The cursor will move between the location and an arrow pointing to the current option.

There are several option menus in this selection.

- ACTION
- PLAY
- SAVE

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

ACTION

Actions are the center of the RXC universe. They run scripts which control operations such as relays, screen messages, timers and other activity.

This option selects the Action to be run when the switch input is activated.

Double-Tap to get to line two.
Press and rotate the knob to view and select the appropriate Action.
Single-Tap the knob to return to line one.

PLAY

This selects the audio file to run when the switch input is activated.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

Quad-Tap. While on line two, four quick taps of the knob will start the selected audio. Use this feature with caution and wear hearing protection if necessary.

Audio file number 99 is reserved to turn on the radio PA.
Audio file number 100 turns off all audio.

Special feature: MP3/ADPCM audio followed by radio PA.
If 100 is added to the MP3/ADPCM audio file number, the audio is first played then the RXC-3000 switches to radio PA mode as soon as the audio file has finished.

Example: Play audio file 7 followed by switching to live PA. Play number would be 107.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with "DONE!" after the information has been saved.
The cursor will reposition to the initial location and the option will change back to CODE.

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

ACTION LOCKOUT*

When the RXC-3000 is equipped with the time clock option, called the RTC (Real Time Clock), it can be programmed to ignore particular Actions depending on the time of day.

There can be up to 10 different Lockouts.

There are several option menus in this selection.

- TIME
- ACTION
- STATUS
- SAVE
- CLEAR
- COPY TO

The cursor is initially under the Lockout location number.
Press and rotate the knob to change the selection from any of the locations, one to ten.

With the cursor on line zero, rotate the knob to move between the location number and the options. The cursor will move between the location and an arrow pointing to the current option.

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

TIME

The begin and end times of the lockout are entered or edited from this option.

The Time is comprised of two different values.

- Lockout begin time.
- Lockout end time.

This information is displayed on line two of the LCD as "00:00 to 00:00".
The first group "0000 to" is the begin Time, while the second group is the end Time.

The times entered are the minimum time the tone must occur for it to be considered valid.

Times are entered in 24 hour format. For example, 9:45 PM is entered as 21:45.
Midnight is 00:00.

Full example
21:00 to 06:00 - From 9:00 PM to 6:00 AM the next day.
11:00 to 18:15 - From 11:00 AM to 6:15 PM on the same day.

To change the code
Double-Tap to get to line two.

Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

ACTION

Actions are the center of the RXC universe. They run scripts which control operations such as relays, screen messages, timers and other activity.

This option selects the Action which the lockout should affect.

Double-Tap to get to line two.
Press and rotate the knob to view and select the appropriate Action.
Single-Tap the knob to return to line one.

STATUS

A lockout can be turned on and off, without losing any of its settings, by using the Status option.

There are two Status settings, DISABLED and ENABLED.

When Disabled, the lockout is inactive and will not affect the action from running.

When Enabled, the lockout is active and will prevent the Action from running when it's started from sources such as DTMF codes, TTS codes and switches.

Double-Tap to change between ENABLED and DISABLED.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with "DONE!" after the information has been saved.
The cursor will reposition to the initial location and the option will change back to CODE.

CLEAR

This option is used to quickly erase all settings of the current Lockout.

Double-Tap to clear.

It's still necessary to save the new (cleared) settings.

COPY TO

This option will copy all the information of the current Lockout location, to another location.

Double-Tap to go to line two.
The screen will show "COPY to 02". The "to" location may vary on your unit.
Press and rotate the knob to change the value.

While still on line two, Double-Tap the knob to finish the Copy To command and copy the current data to the new location. The RXC will respond with DONE!

Single-Tap the knob to return to line one without finishing the Copy To command.

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask "SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

TRIGGER ACTIONS*

When the RXC-3000 is equipped with the time clock option, called the RTC (Real Time Clock) it can be programmed to automatically trigger Actions based upon the time and date.

There can be up to 30 different general action Triggers.
Triggers 31 and 32 are reserved for adjusting Daylight Savings Time (DST) for units equipped with the RTC optional clock.

There are several option menus in this selection.

- ACTION
- PLAY
- STATUS
- TIME
- DAY
- D/O/W (day of the week)
- MONTH
- WEEKS (week of the month)
- SAVE
- CLEAR
- COPY TO

The cursor is initially under the Trigger number.
Press and rotate the knob to change the selection from any of the triggers, one to thirty.

With the cursor on line zero, rotate the knob to move between the Trigger number and the options. The cursor will move between the location and an arrow pointing to the current option.

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

"@" - Special Purpose Wildcard

In any of the Trigger menus, the character "@" has a special meaning.

When used in any Trigger field, it satisfies all possible values for that field.

Examples
Hr=12 Min=00 Trigger once a day at Noon.
Hr=@@ Min=00 Trigger every hour.

DAY=24 Allow trigger to operate only on the 24th of each month.

DAY=@@ Trigger can function every day.

MONTH=12 Allow this trigger to occur only during December.
MONTH=@@ Trigger can function every month.

A trigger wildcard in any position is considered valid for the entire field.

Example
HR=1@ Min=45 The wildcard "@" character covers entire Hours field. This trigger would occur 45 minutes past every hour. It would not trigger only for the afternoon hours.

ACTION

Actions are the center of the RXC universe. They run scripts which control operations such as relays, screen messages, timers and other activity.

This option selects the Action which the Trigger should start.

Double-Tap to get to line two.
Press and rotate the knob to view and select the appropriate Action.
Single-Tap the knob to return to line one.

STATUS

A Trigger can be turned on and off without losing any of its settings, by using the Status option.

There are two Status settings, DISABLED and ENABLED.

- Disabled, the Trigger is inactive and will not start the action.
- Enabled, the Trigger is active and will start the Action running when it's the right time and date.

Double-Tap the knob to change between ENABLED and DISABLED.

TIME

Enter the time when the Trigger should occur.

This information is displayed on line two of the LCD as "Hr=xx Min=xx".

If an attempt is made to enter an invalid time, the RXC-3000 displays the word INVALID on line one. If the time is still invalid when exiting the Time editing process, the RXC will ignore the incorrect Time and restore the original time to the display.

Times are entered in 24 hour format. For example, 9:45 PM is entered as 21:45.

Midnight is 00:00.

Full example
Hr=14 Min=22 is 2:22 PM
Hr=10 Min=49 is 10:49 AM
Hr=@@ Min=30 trigger 30 minutes past every hour.
Hr=@@ Min=@@ trigger every minute of every hour.
Hr=16 Min=@@ trigger every minute beginning at 4:00 PM and ending at 4:59 inclusive.

To change the time
Double-Tap to get to line two.

Rotate the knob to move the cursor to the value you want to change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

DAY

Enter the calendar day of the month when the trigger is valid.

This information is displayed on line two of the LCD as "DATE=xx".

If an attempt is made to enter an invalid date, the RXC-3000 displays the word INVALID on line one. If the date is still invalid when exiting the Date editing process on line two, the RXC will ignore the incorrect date and restore the original date to the display.

Example
DAY=24 Trigger will only work if the calendar date is the 24th.
DAY=@@ Trigger will work on all calendar dates.

To change the Day.

Double-Tap to get to line two.
Press and rotate the knob to change the value.
Single-Tap the knob to return to line one.

D/O/W

Enter the Days Of the Week (DOW) when the trigger is valid.

DOW begins on Monday and ends on Sunday.
Each Day is shown as an individual character. M T W T F S S

When the DOW character for a particular day is shown on the LCD screen, it is then considered a valid day for the trigger to operate.

Examples
M T W T F S S Trigger will work on all days.
M T W T F - - Only during Monday to Friday.
- - - - - S S Trigger only active on the weekend.

To change the D/O/W.

Double-Tap to get to line two.
Rotate the knob to position the cursor at the DOW to be changed.
Press and rotate the knob to change the value between the day character and the hyphen.
Rotate the knob to position the cursor at any other DOW to be changed.
When finished, Single-Tap the knob to return to line one.

MONTH

Enter a specific month when the trigger is valid, or allow all months.

This information is displayed on line two of the LCD as "MONTH=xx".

If an attempt is made to enter an invalid Month, the RXC-3000 displays the word INVALID on line one. If the month is still invalid when exiting the Month editing process on line two, the RXC will ignore the incorrect value and restore the original month to the display.

Example
MONTH=12 Trigger only work if the calendar month is the December.
Month=@@ Trigger will work during all the months.

To change the Month.

Double-Tap to get to line two.
Press and rotate the knob to change the value.
Single-Tap the knob to return to line one.

WEEKS

Enter the Weeks when the trigger is valid.

A week ends on Sunday after 23:59. (11:59 PM).
The RXC displays weeks as 1st 2 3 4 5th

When the week number is shown on the LCD screen, it is then considered a valid week for the trigger to operate.

Examples
1st 2 3 4 5th Trigger will work on all weeks.
1st - 3 - -th Only during the first and third weeks.
-st - - - 5th Only during the 5th week. Note, since some months only have four weeks, there would be some months where this trigger would not activate at all.

To change the WEEKS.

Double-Tap to get to line two.
Rotate the knob to position the cursor at the WEEK to be changed.
Press and rotate the knob to change the value between the week number and the hyphen.
Rotate the knob to position the cursor at any other Week to be changed.
When finished, Single-Tap the knob to return to line one.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with DONE! after the information has been saved.
The cursor will be position to the location and the option will change back to CODE.

CLEAR

This option is used to quickly erase all settings of the current Lockout.

Double-Tap to clear.

It's still necessary to save the new (cleared) settings.

COPY TO

This option will copy all the information of the current Lockout location, to another location.

Double-Tap to go to line two.
The screen will show "COPY to 02". The "to" location may vary on your unit.
Press and rotate the knob to change the value.

While still on line two, Double-Tap the knob to finish the Copy To command and copy the current data to the new location. The RXC will respond with DONE!

Single-Tap the knob to return to line one without finishing the Copy To command.

Daylight Savings Time - START

Trigger 31 is equipped to handle Daylight Savings Time. It's purpose is to adjust the RTC time module ahead by one hour.

In the United States DST begins the second Sunday in March at 02:00. Trigger settings are: Hr=02, Min=00, DAY=@@, D/O/W= - - - - - - - S, MONTH=03, WEEKS= -st 2 - - -th

Daylight Savings Time - END

Trigger 31 is equipped to handle Daylight Savings Time. It's purpose is to adjust the RTC time module ahead by one hour.

In the United States DST begins the first Sunday in November at 02:00. Trigger settings are: Hr=02, Min=00, DAY=@@, D/O/W= - - - - - - - S, MONTH=11, WEEKS= 1st - - - -th

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

P.A. AUDIO*

This menu allows fine-tuning the P.A. audio settings.

With the cursor on line zero, rotate the knob to move between the location number and the options. The cursor will move between the location and an arrow pointing to the current option.

There are several option menus in this selection.

- MIN TIME
- MAX TIME
- DROP TIME
- TONES UP
- TONES DOWN
- MUTE RLY
- POWER RLY
- SAVE

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the option to be changed.

MIN TIME

This is the minimum time, in seconds, that the RXC will wait to see a carrier signal from the radio.

After activating the RXC in PA mode, the transmitter sending the signal may turn on and off as many times as it wants during the Min Time period. The PA will only remain on after the Min Time, if the transmitter is active.

The maximum value is 65535. This value has a special purpose and means "forever".

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

MAX TIME

This is the maximum time, in seconds, that the PA will remain engaged. The PA will turn off at the end of this time, even if the transmitter is still active.

The maximum value is 65535. This value has a special purpose and means "forever".

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.
Single-Tap the knob to return to line one.

DROP TIME

This is the maximum time in seconds, that the PA will remain engaged after the transmitter stops. The RXC-3000 allows minor transmitter drop-outs or signal fading without killing the PA. The Drop Time gives the transmitter a chance to re-establish itself.

The maximum value is 65535. This value has a special purpose and means "forever".

Double-Tap to get to line two.
Rotate the knob to move the cursor to the value you want to enter or change.
Press and rotate the knob to change the value.
After releasing the knob you can rotate to the next value to be changed.

Single-Tap the knob to return to line one.

MUTE RLY

In addition to the control provided by the External Amplifier Port - J11, one of the relays can also be programmed to engage when the audio amplifier is activated. This option selects the relay to engage and disengage when the amplifier Mute is activated and deactivated.

Double-Tap to get to line two.
Press and rotate the knob to change the relay number.
Single-Tap the knob to return to line one.

POWER RLY

In addition to the control provided by the External Amplifier Port - J11, one of the relays can also be programmed to engage when the audio amplifier is activated. This option selects the relay to engage and disengage when the amplifier Power line is activated and deactivated.

Double-Tap to get to line two.
Press and rotate the knob to change the relay number.
Single-Tap the knob to return to line one.

SAVE

While changes are normally saved when exiting, changes can be saved at any time using this option.

Double-Tap to save.
The RXC will respond with "DONE!" after the information has been saved.
The cursor will be position to the location and the option will change back to CODE.

Exit Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

RADIO FREQ*

When using approved internal radio receivers such as the full Genave series of radios as well as several other brands, you can adjust the receiver frequency using the Twist-n-Touch control.

The current frequency is shown when you enter this menu.

Change Frequency

The frequency is expressed in MHz.

If an attempt is made to enter an invalid frequency, the RXC-3000 displays the word INVALID on line one. If the frequency is still invalid when exiting the editing process of line two, the RXC will ignore the incorrect frequency and restore the original radio frequency to the display.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the receiver frequency.
Press and rotate the knob to change the frequency.
Single-Tap the knob to return to line one.

Bandwidth - Change between Wide-band and Narrow-band

Bandwidth is adjusted by switching between W or N on line two. W is Wide-band at 25 KHz channel spacing. N is Narrow-band at 12.5 KHz channel spacing.

During editing, when the cursor is placed at the correct position, the RXC will deliver a prompt of WIDE or NARROW to provide additional information about the selected bandwidth.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the character N or W.
Press and rotate the knob to change the frequency.
Single-Tap the knob to return to line one.

Selective Squelch - CTDCS™, PL™, DPL™

CTDCS is an acronym for selective squelch that includes both CTCSS (tone based squelch) and DCS (digital coded squelch). A common name for the two are PL - Private Line and DPL Digital Private Line. Both PL and DPL are trademarks of Motorola, Inc.

Tone based CTDCS range from 67.0 hz and 260.0 Hz and can be recognized as always containing a decimal point in the value.

Digital based CTDCS codes are always three digits, and do not have a decimal point in them.

CTDCS selections are made by scrolling through the available list.

To assist in selection, the RXC delivers an LCD screen prompt as you scroll, indicating if the code is CTCSS or DCS.

Select CSQ (carrier squelch) if no selective squelch is required. CSQ will allow the RXC to hear all radio traffic.

Double-Tap to get to line two.
Rotate the knob to move the cursor to the right group.
Press and rotate the knob to change the frequency.
Single-Tap the knob to return to line one.

Exit the Menu & Save

With the cursor on line one.
Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

It requires up to 20 seconds to program some radio models. You should wait for the radio programing to complete before continuing with any RXC actions.

The RXC will display "UPDATING DATA" and include a progress bar on line two.

When the programming is finished, the RXC will display "DONE!".

RADIO SQUELCH*

Radios such as the Maxon SD series do not have an external adjustment for setting squelch levels.

The RXC-3000 has a menu for quickly adjusting the squelch on those radio models, to five preset levels. The ComStarG3 software can be used if finer squelch adjustments are necessary.

Adjusting

When entering the Squelch menu, SQUELCH LEVEL 1, BEST RANGE is always presented. Due to the method Maxon employs with their squelch circuit, exact squelch settings cannot be determined by reading the radio. The RXC-3000 therefore does not read the current squelch setting, but allows the user to select the optimum squelch "tightness" for their application.

There are five possible selections ranging from Level 1 (maximum) to Level 5 (least).

- MAXIMUM RANGE
- 2nd BEST RANGE
- MIDDLE RANGE
- LESS RANGE
- LEAST RANGE

Press and rotate the knob to change squelch level setting.

Exit the Menu & Save

With the cursor on line one Single-Tap to exit the menu. Even if no changes have been made to the level setting, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

It requires up to 20 seconds to program some radio models. You must wait for the radio programing to complete before continuing with any RXC actions.

The RXC will display "UPDATING DATA" and include a progress bar on line two.

When the programming is finished, the RXC will display "DONE!".

LIVE TTS PAGING*

When equipped with the TTS decoder option, the RXC-3000 can perform in "Live" mode where it monitors all radio traffic for tone paging codes, and captures the signals which fall within its range.

While in the Live TTS menu, the force timer is suspended. The force timer is intended to reset the RXC if it's in a menu and there has been no knob activity for several minutes. The timer is suspended to allow Live TTS to remain active beyond the force timer's normal setting.

While in Live TTS mode, all the other TTS codes and activitys are disabled, as are switches, triggers and many other features.

The Live TTS has four options which determine where the decoded data is sent.

- LCD ONLY
- USB Out
- USB + HIST
- +DTMF, USB

The initial option is LCD ONLY.
Press and rotate the knob to change the selection to any of the other options.

Only the options can be changed in this menu. Double-Tapping the knob will not perform any action.

With the cursor on line zero, rotate the knob to move between the Trigger number and the options. The cursor will move between the location and an arrow pointing to the current option.

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the correct option.

LCD ONLY

TTS signals will be presented on the LCD screen only. Each new TTS will erase the previous entry.

USB OUT

In addition to presenting the TTS signals to the LCD screen, each new TTS is sent out via the USB connection.

USB + HIST

In addition to presenting the TTS signals to the LCD screen, each new TTS is sent out via the USB connection and logged into the HISTORY file. If the RXC has the clock option installed, each new TTS signal is logged with a time and date stamp to indicate when it was received.

+DTMF, USB

In addition to presenting the TTS signals to the LCD screen, each new TTS is sent out via the USB connection.

This option also enables the Live DTMF feature and presents new DTMF codes on both the LCD screen and the USB connection.

Exit the menu

There are no options to save.

Single-Tap the knob to exit.

LIVE DTMF*

The RXC-3000 can perform in "Live" mode where it monitors all radio traffic for DTMF paging activity, and captures the signals which fall within its range.

While in the Live DTMF menu, the force timer is suspended. The force timer is intended to reset the RXC if it's in a menu and there has been no knob activity for several minutes. The timer is suspended to allow Live DTMF to remain active beyond the force timer's normal setting.

While in Live DTMF mode, all the other programmed DTMF codes and activitys are disabled, as are switches, triggers and many other features.

The Live DTMF has three options which determine where the decoded data is sent.

- LCD ONLY
- USB Out
- USB + HIST

The initial option is LCD ONLY.
Press and rotate the knob to change the selection to any of the other options.

Only the options can be changed in this menu. Double-Tapping the knob will not perform any action.

With the cursor on line zero, rotate the knob to move between the Trigger number and the options. The cursor will move between the location and an arrow pointing to the current option.

Changing Options

With the cursor on line one and under the arrow, press and hold the knob as you rotate it. This will scroll through all the options. Release the knob at the correct option.

LCD ONLY

DTMF signals will be presented on the LCD screen only. Each new DTMF code received will erase the previous entry.

USB OUT

In addition to presenting the DTMF codes to the LCD screen, each new code is sent out via the USB connection.

USB + HIST

In addition to presenting the DTMF codes to the LCD screen, each new code is also sent out via the USB connection and logged into the HISTORY file. If the RXC has the clock option installed, each new DTMF code is logged with a time and date stamp to indicate when it was received.

Exit the menu

There are no options to save.

Single-Tap the knob to exit.

MENU PASSWORD*

View or edit the password.

Upon entry to the menu, the cursor will be pointing to the EDIT option.

Double-Tap to get to line two.

Rotate knob to position cursor at the point you want to edit.

Press and rotate the knob to change the value of the Password. See 12.1.1 Password Structure on page 16 for additional information on acceptable password combinations.

After releasing the knob you can rotate the knob to the next value to be changed.

After all editing has been completed, Single-Tap the knob to return to line one.

Single-Tap to exit the menu. If any changes have been made, the RXC will ask
"SAVE CHG? NO YES"
To save the changes, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.

The RXC will ask “ARE REALLY SURE?”
To completely save the changes, you must again rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.

To exit the menu without saving any changes, position the cursor under the N in NO, then Single-Tap the knob.

To allow time to view the new password, a new password will no take effect until 10 minutes have passed without any knob movement. Power cycling the RXC will cause the new password to become effective immediately.

RESTORE PROGRAM*

The original program installed in the RXC-3000 can be restored using this function.

Warning: Changes made to the RXC-3000 after the original program was installed, will be lost. This can include radio frequency changes, radio bandwidth, new or edited TTS or DTMF codes, relay timing actions, and other changes made after the initial programming.

To underscore the gravity of using the Restore feature, two steps are required to restore. Both steps require moving the cursor to Yes before pressing the knob.

The LCD will display
RESTORE PGM→ NO
Press and rotate the knob to change the prompt to YES
Single-Tap the knob.
The LCD will the RXC will ask
"SAVE CHG? NO YES"
To start the Restore process, rotate the knob to position the cursor under the Y in YES, then Single-Tap the knob.
To exit the menu without restoring the current program, position the cursor under the N in NO, then Single-Tap the knob.

Time to complete the Restore process will vary from a few seconds to a full minute if the radio is also reprogrammed during the process. At the end of the Restore process the RXC-300 will restart.