I.D.A.

TRX-200 Wide Band Receiver

Operation manual

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I.D.A.

Thank you for purchasing the TRX-200 all modes wide band monitoring receiver.

Please read this operating manual carefully to avoid miss operation of the receiver. The TRX-200 is carefully designed but like all receivers the radio can suffer from a degree of self-oscillation known as 'birdies'. These are from the nature of super heterodyne circuit and do not represent a fault.

NOTE: Where the text is described in **[SQUARE BRACKETS]** the keys are to be pressed exactly as shown.

For example: **[8] [0] [0] [ENT]**

This means press the numeric key 8, followed by the 0, key followed by the 0 key, followed by the **[ENT]** key.

The arrow keys to the lower left of the keypad are referred to as **[UP] [DOWN]** keys.

The function key **[FUNC]** provides access to additional facilities via the numeric keypads. This key should be momentarily pressed only before another numeric key is pressed. Do not hold the key in while pressing other keys.

TURN ON TRX-200

To turn on TRX-200, press and hold the **[PWR]** key for more than 2.0 second and you see starting message which can be edited to the way you like. Similarly to turn the radio off, press and hold the power key for more than 2 second.

Power requirement: TRX-200 can be operated from either three AA size Ni-Cad. batteries, three AA size dry cell batteries or external DC supply of 9 to 14V DC, 300mA minimum.
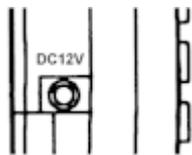
Always use the supplied charger or regulated DC power supply of 9 to 14VDC, 300mA or by using the provided DC connecting lead. The DC input socket is 1.3mm centre positive.

CAUTION: Do not attempt to connect the TRX-200 directly to the main supply.

Very carefully note the polarity of the battery cells. Also never attempt to charge the receiver or connect to an external power source when dry batteries are installed. Always remove dry batteries when they have run down. Do not leave batteries in the battery compartment when the TRX-200 is not being used for a long period of time, remove the batteries to avoid leakage.

All memory channel data is stored into internal EEPROM which does not require batteries or connection to external supply for backup. However always turn off the TRX-200 whenever radio is not in use. Particularly turn it off while charging.

HOW TO PUT BATTERIES INTO THE BATTERY COMPARTMENT

1. While pressing the round shaped point as illustrated slide the cover downward to open the compartment.

2. Put AA size batteries (3pcs) into the compartment according to the [+] and [-] markings engraved inside each battery cradle.
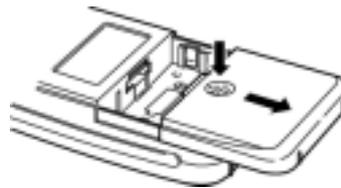
3. Slide the cover back until it closes firmly with "click".

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CONTROLS, CONNECTORS AND FUNCTIONS

FRONT PANEL

Strap hanger: Put the hand strap through this hanger.

Keyboards: Enter frequencies or initiate various functions through the keyboards.

Power ON/OFF switch: Press the key for more than 1 second to turn the radio on or off. The radio resumes the last status when turned on.

Speaker   .
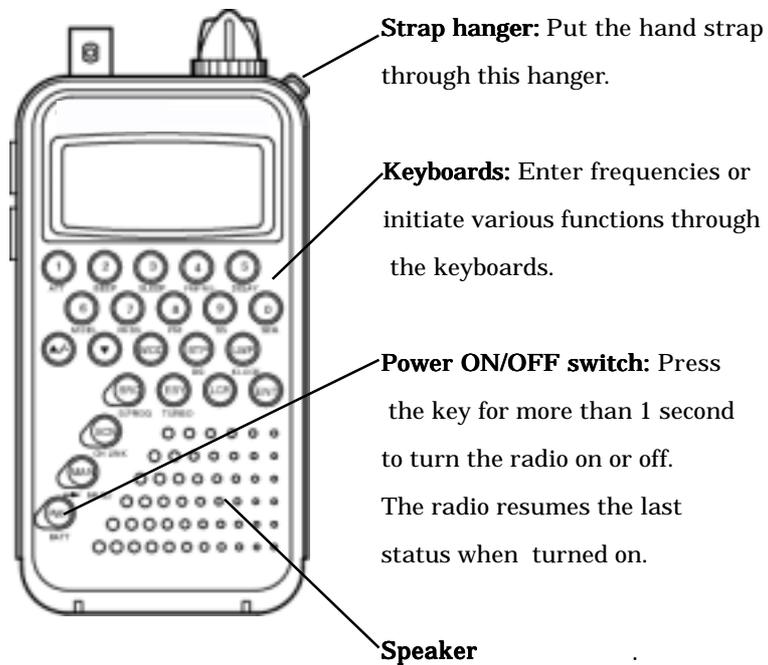
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SIDE VIEW OF TRX-200

Function [FUNC] key: To initiate second function of various keys. When this key is pressed, TRX-200 goes into function mode and [**F**] is displayed on LCD and you are ready to press a 2nd function key while this [**F**] is displayed.

Squelch monitor [SQL MONI] key: To initiate monitor function (receive a signal regardless of squelch level) press a second time to turn the function off. To adjust squelch level, press **[FUNC]** key and then press **[SQL MONI]** key while [**F**] is displayed on the LCD.
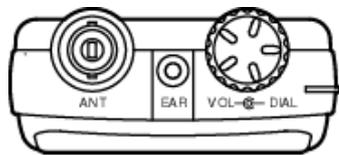
DC 12V socket: This is the socket for external DC power supply or to charge Ni-Cad. batteries when these are fitted inside of the battery compartment

TOP PANEL

Antenna Connector: This is a high quality BNC 50 ohm unbalanced input. The supplied telescopic antenna should be connected to this input.

Volume control: When rotated fully clockwise the volume is at its maximum and minimum level at fully counter-clockwise

Dial - tuning control/selector: This dial changes the receive frequency up and down in the selected frequency increment and also operates as a "selector" when entering certain data through the LCD menus. Being a mechanical data device, it is not uncommon for operations to be occasionally missed and this does not represent a fault.

Earphone socket/RS232C serial port: This 3.5mm stereo socket permits connection to an external earphone, headset or speaker of 8 ohm impedance or greater. When the earphone socket is used, the internal speaker will automatically be muted. This can also be used as RS232C serial data port, making the TRX-200 capable of being connected to the RS232C serial port of a personal computer.

The wiring diagram of cable and PC control software are available from our home page.
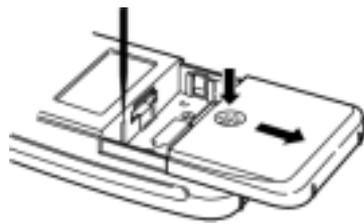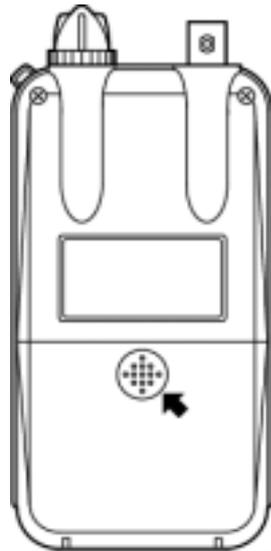
BACK PANEL

Reset Switch: To restore the TRX-200 to initial factory set status, press the switch using a needle or similar pointed object as illustrated

Battery compartment: This is for the AA size batteries (3), slide the cover downward to open the compartment

OPERATIONS

TURNING ON THE TRX-200: Keep pressing the **[PWR]** key for more than 2 second. The LCD displays opening message when you turn the radio on.
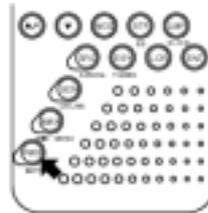
ADJUSTMENT OF AUDIO VOLUME

- When you are receiving a signal, rotate the volume control in a clockwise direction to increase the audio volume and rotate counter clockwise to decrease it.
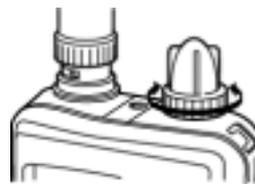
  With no signal.

  Press **[SQL MONI]** key to monitor noise, when no signal is received, to adjust audio volume to appropriate level.

ADJUSTMENT OF SQUELCH LEVEL

The squelch control is used to eliminate unwanted background noise when monitoring a normally inactive frequency.

1. Press **[FUNC]** key located on the left hand side of the TRX-200 and then press **[SQL MONI]** key just beneath the function key to put the TRX-200 in squelch adjustment mode and rotate the dial clockwise until background noise just disappears (threshold point), this is the most sensitive setting of the control.
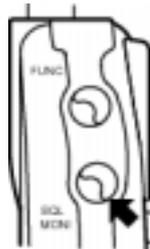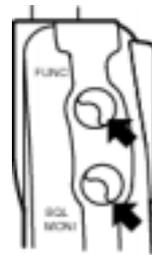
In practice the control is usually rotated a little further clockwise beyond the threshold point to prevent the receiver from stopping on noise or very weak signals. Squelch level selected is displayed on the LCD from **0** to **32** level. 08 is factory set squelch level. Press **[ENT]** key to save the squelch level setting.

MONITORING FUNCTION

You can monitor weaker signal levels than squelch setting by using **[SQL MONI]** key.

1. Press **[SQL MONI]** key to put TRX-200 into monitoring mode. **Speaker icon** is displayed on the LCD.

In monitoring mode, the squelch level is virtually **0** and therefore the weakest signal can be monitored. If there is no signal coming in, white noise can be heard.

2. Press **[SQL MONI]** key again to disable monitoring function

BACK ILLUMINATION FOR NIGHT USE
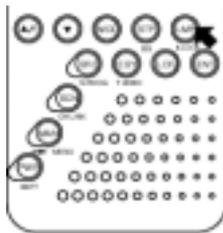
This key is to toggle the LCD and keypad lamp on and off. If the **[LMP]** is pressed, LCD lamp and the keypad illumination will be turned on for about 5 seconds.

INITIAL SETTING OF VARIOUS PARAMETERS: Following parameters can be configured. To display configuration mode and its selection menu , press [F] followed by **[ENT/CONFIG]** key.

Lamp:	MANUAL or AUTO
Beep:	ON or OFF
Contrast of LCD:	0 through 31
Power Save:	OFF, 1:5, 1:10 or 1:15
Opening message:	3 lines of opening message can be edited
Cloning:	Send, receive, setup of data speed of 19200bps or 9600bps
Version	To display firmware version

CONFIGURATION

In configuration mode, various parameters can be selected by pressing **[UP][DOWN]** key or by rotating multifunction dial.

An arrow mark on LCD indicates your current selection Your choices on currently selected parameter can be displayed by pressing **[ENT]** key. Select your preference by pressing **[UP][DOWN]** key or by rotating multifunction dial and press **[ENT]** key to confirm your selection.

+Lamp: Choices are MANUAL and AUTO.
This parameter is to set the way you turn on the back light of LCD and keys. When MANUAL is selected, you have to turn on the backlight by pressing LMP key. When AUTO is selected, the backlight automatically turns on whenever you press any of the keys. In both modes, the backlight is to be turned off automatically 5 seconds after turning on.

+Beep: Choices are ON or OFF.
Beep tone for key entry can be turned ON or OFF.

+Contrast of LCD: 0 through 31
The display contrast can be adjusted by pressing [UP][DOWN] key or by rotating multifunction dial and press ENT key to confirm your selection.

+Power Save: OFF, 1:5, 1:10 or 1:15

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+**Opening message:** 3 lines of opening message can be edited. The opening message at turning on the radio can be edited. Select **OPENING MG** by pressing **[UP][DOWN]** key or by rotating multifunction dial and press**[ENT]** key.

+**Cloning:** Set up Sending data and Receiving data, selecting data speed of 19200bps or 9600bps. To connect PC, Select +**RECEIVE** and display RECEIVE menu. Select **ON**.

+**Version:** To display firmware version. Select Version and press **[ENT]** key to display firmware version. You are only able to clone 2 TRX-200 when both radios are same
 firmware version.

Keys: Most of these keys have 2nd function when the key is pressed after **[FUNC]** key located at the left top of the unit.

1. **[PWR/BATT]** key: Keep pressing the key more than 1 second to turn on TRX-200. To turn off the radio, keep pressing the key more than 1 second. Last status is to be save and the radio is to resume it when the radio is turned on again.

Second function: To display battery status, press **[FUNC] + [PWR/BATT]** key. To clear battery status bar, press **[CLR/P. CLR]**.

2. **[MAN/- >MANU]** key: Press the key to place TRX-200 in manual mode. Press the key again in the mode to start manual scan to find active signal. Arrow mark next to receiving mode display indicates up or downward sweeping direction. Press the key again to stop manual scan. You can change the direction of sweeping using **[UP][DOWN]** key.

Second function: If you wish to use a active frequency found during scan or search in manual mode, press **[FUNC] +[MAN/- >MANU]** key. The frequency can be transferred to manual mode.

3. **[SCN/MW]** key: To start sweeping programmed channels, press **[SCN/ MW]** key. Press the key again to read programmed channel information. To change channel, press **[UP]** or **[DOWN]** key or rotate the dial. Arrow mark next to receiving mode display indicates upward or downward scanning channel direction.

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Second function: Program frequency with name tag to scan memory channel 000 to 999. When the keys are pressed TRX-200 initially displays youngest bank and channel number combination which is not yet used. You can enter bank and channel number directly from numeric keys or select such by the dial or pressing **[UP][DOWN]** keys.

Current frequency is displayed and this can be changed from numeric keys. Letters, marks and numbers for the name tag can be selected by the dial and **[DOWN]** key can be used to confirm the selection. **[UP]** key can be used to step back to prior letters. Press **[ENT]** key to confirm the input.

4. **[SRC/S. PRG]**: To start search sweeping, press **[SRC/S. PRG]** key. Press **[SCN/MW]** key again to stop search function. To select search bank, press numeric key 0 through 9 for the number of the bank you wish.

Second function: To program a search pair, press **[FUNC]+[SRC/S. PRG]**. Select program search bank number by pressing numeric key and **[ENT]** key. Program **START** frequency from numeric keys and press **[ENT]** and program **END** frequency from numeric keys and press **[ENT]** . Select receiving mode by pressing **[UP] [DOWN]** keys or rotating the dial followed by **[ENT]** key. Select search step by pressing **[UP] [DOWN]** keys or rotating the dial followed by **[ENT]** key. Then name tag menu is to be prompted. To put name tag to the search pair, rotate multifunction dial to select letters, marks or numbers for the name tag.

[DOWN] key can be used to confirm the selection. **[UP]** key can be used to step back to prior letters. Press **[ENT]** key to confirm the input.

5. **[ESY/PASS]**: To start factory pre-programmed 20 search pairs including various FM broad castings, TV audio, Airband and many more other interesting frequency ranges. **[UP][DOWN]** keys can be used to select one of the pairs among P0 through P20. Press key again to stop automatic search. Frequencies can be manually tuned by using the dial.

Second function: Press **[ESY/PASS]** to lock out displayed frequency to exclude the frequency from search or scanning schedule. PASS is displayed on LCD to indicate that frequency is lock out. In scan mode, press **[ESY/PASS]** key again to unlock the memory channel. In search mode, press **[FUNC]+[CLR/P. CLR]** to display the list of locked out frequencies. Select the frequency to be unlocked by using the rotary dial or **[UP][DOWN]** keys and press numeric key **[0]** to unlock the frequency.

6. **[CLR/P. CLR]**: To clear key entry or step back to previous status.

Second function: See above to clear locked out memory channels or frequencies in search mode.

7. **[ENT/CONFIG]**: To confirm key entry.

Second function: To setup initial parameters of TRX-200. See page 13 for the detailed explanation.

8. **[UP/.]**: To make selection over the displayed menu or to change scanning or searching direction to upward. This key is also used for decimal point entry during frequency input from numeric keys.

Second function: The key combination can make faster frequency tuning in 1MHz, 10MHz or 100MHz in manual mode only. Press **[FUNC]** key to display a cursor at beneath 100MHz, 10MHz or 1MHz digit frequency display.

This cursor may goes away after 3 second due to the specification of the function key. While you see the cursor, select 100MHz or 10MHz or 1MHz digit by pressing **[UP/.][DOWN.]** key and rotate the dial to tune the selected digit in such increment. As long as you use **[UP] [DOWN]** key or the dial, the cursor stays on.

9. **[DOWN/EDIT]**: To make selection over the displayed menu or to change scanning or searching direction to downward.

Second function in manual mode: See above **[UP/.]** key.

Second function in search mode, **[FUNC]+[DOWN/EDIT]** can be used for copy, move or delete of search banks. In scan mode, the key combination can be used for copy, move or delete of its banks and channels.

11. **[MOD/PMS]**: Press the key to display receiving mode selection menu. Make selection by using the dial or **[UP][DOWN]** key followed by **[ENT]** key to confirm the selection. When you select AUTO, TRX-200 automatically makes mode selection according to the current frequency range. Or select AM, NFM, WFM, USB, LSB or CW at your preference.

Second function: To start Programmable Memory Scan. You can select certain programmed channels and group such to Programmable Memory Scan list where you can sort 20 programmed channel per bank. There are total 10 banks of programmable memory scan for 200 programmed channels all together. The key combination along with function key, you are able to scan the list.

12. [STEP/S. PMS] : Press **[STP]** key to display available increments. Following is the list of available increments. Select appropriate step by rotating multifunction dial or pressing **[UP] [DOWN]** keys and confirm the selection by pressing **[ENT]** key

AUTO STEP: TRX-200 automatically set frequency increment according to selected frequency range when AUTO STEP is selected.

PRE-PROGRAMMED STEPs are:

50Hz, 100H, 200Hz, 500Hz, 1KHz, 2KHz, 6.25KHz, 8.33KHz, 9KHz, 10KHz, 12.5KHz, 15KHz, 20KH, 25KHz, 30KHz, 50KHz, 100KHz, 125KHz, 150KHz, 200KHz, 250KHz, 500KHz

+**USER STEP**: Customs frequency steps can also be programmed in 50Hz to 499.950KHz range in minimum of 50Hz increment. Select +**USER STEP** and press **[ENT]** key and program appropriate step frequency from numeric keys and press **[ENT]** key to confirm the increment.

Second function: TRX-200 has 10 banks for memory channels and 100 channels can be programmed per bank for total 1,000 memory channels. Besides this conventional feature, you can sort 20 channels per bank times 10 banks for total 200 channels out of these programmed 1,000 channels to special banks, **Programmable Memory Banks**. You have to be in scan mode to use Programmable Memory Scan function.

Press **[FUNC] + [STP/S. PMS]** to place TRX-200 in programmable memory bank entry display. Select one particular bank where you want to sort pre-programmed memory channels out of 10 banks such as **BANK 0** through **BANK 9** by rotating multifunction dial or by pressing **[UP]** **[DOWN]** keys.

Press **[ENT]** key to display the contents of the selected bank. The bank number is displayed at top of the LCD. You can scroll PG00 through PG19 (total 20 PG channels).

Select one of these **PG** channel by rotating multifunction dial or pressing **[UP][DOWN]** keys press **[ENT]** key to display memory channels where you can select a channel to the selected **PG** channel.

There are 2 ways to recall certain memory channel from memory storage.

A) If you remember exact bank number and channel number, you can recall the channel directly by pressing numeric keys for the 3 digits bank number and channel number combination.

B) Or press numeric key for the 1st digit which is bank number and scroll through 00 - 99 channel number in the bank by rotating the dial.

Please note that you can only scroll through channel numbers and if you want to scroll through another bank, you have to select another bank number from numeric key. To store the selected channels to selected PG channel, press **[ENT]** key. To save all listed channels, you have to select **END** and press **[ENT]** key. By pressing **[CLR]** key twice, you can go back to scanning mode without saving the new channels.

13. **[LMP/K.LOCK]** : This is to turn on back light of LCD and keys. When **MANUAL** is selected using configuration menu (press **[FUNC]+[ENT]**), you have to turn on the back light by pressing **[LMP]** key. When **AUTO** is selected, the backlight automatically turns on whenever you press any of the keys. In both modes, the backlight turns off automatically 5 seconds after turning on.

Second function: Press the key combination to lock out key function. Key icon is to be displayed on LCD. To unlock it, press **[FUNC]+ [LMP/K.LOCK]** again.

Numeric keys 1 through 0 can be used for frequency or band and or channel entry. These numeric keys can initiate other functions by pressing after **[FUNC]** key.

14. **[1/ATT]**: To use built in 10dB attenuator, press **[FUNC] + [1/ATT]**. ATT is to be displayed on LCD. To turn off the attenuator, press same key combination again.

15. **[2/LP]**: To use built in low pass filter(2.3KHz notch filter), press **[FUNC]+[2/LP]**. LP is to be displayed on LCD. To turn off the filter, press same key combination again.

16. **[2/SS]**: TRX-200 has built in Scramble decoding System. To use the feature press **[FUNC]+[2/SS]** and SS on or off menu is to be displayed. Select ON by pressing **[UP] [DOWN]** key and tune 0 through 125 levels of decoding by using the dial. Press **[ENT]** key to fix the selected decoding level. If you do not need to fix the decoding level (as decoding level may vary depending on receiving active signal) press **[CLR/P.CLR]** key to go back to normal mode. While SS is selected, SS is to be displayed on LCD. To turn off SS, press **[FUNC]+[2/SS]** and select OFF by pressing **[UP]** or **[DOWN]** key followed by [ENT] key.

17. **[7/CS]**: TRX-200 equips 40 channels band scope to monitor signal activities of near by channels (near by frequencies in search mode and manual mode). As soon as you select different sweep mode, the band scope setting is turned off and you have to turn it on when you need to.

To turn on the function, press **[FUNC]+[7/CS]** key and Channel Scope menu is displayed. Current status (ON or OFF) is displayed and this can be toggled by pressing **[ENT]** key. If ON is displayed left side, the function is ON and when you press **[ENT]** key, the function is to be turned off. If OFF is displayed left side, the function is OFF and you can turn it on by pressing **[ENT]** key.

IMPORTANT: As soon as the sweeping mode is changed, for example from SCAN to Search, the band scope function is turned off and you need to turn it on in the new sweep mode.

There are 3 different sweep modes such as **SINGLE**, **INTERVAL** and **CONTINUE**.

SINGLE is to sweep channels or frequencies until radio detects active signal. Once TRX-200 detects active signal, the squelch is opened and the signal level is to be displayed at the center of band scope with a maker associated with 19 below and 19 above of, channels in scan mode or frequencies in search and manual mode. TRX-200 keep staying at the marked signal even after active signal goes away. If you would like to start another sweeping, rotate the dial or press [UP] or [DOWN] key.

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INTERVAL is to sweep channels or frequencies until radio detects active signal. Once TRX-200 detects active signal, the squelch is opened and the signal level is to be displayed at the center of band scope with a maker associated with 19 below and 19 above of, channels in scan mode or frequencies in search and manual mode. TRX-200 keeps staying at the marked signal for the time duration selected by B.S. Timer (Band Scope Timer) and resume sweeping again to find next active signal.

CONTINUE is a band scope sweep mode to monitor certain channel or frequency continuously without opening squelch. You have to select one center channel or one center frequency to monitor it along with near by signals. You need to stop sweeping before starting CONTINUE sweep by pressing **[SCN/MW]** key in scan mode, **[SRC/S.PROG]** key in search mode, **[MAN]** key in manual mode. If you see arrow mark next to receiving mode display, the radio is in sweeping. TRX-200 keeps sweeping 40 channels or frequencies and detects active signal to display its signal strength. But the radio does not open squelch even if it detects active signals.

To select interval time, display Channel Scope mode, select +Timer by pressing **[UP] [DOWN]** key and press **[ENT]** key and select appropriate interval time by rotating the dial followed by **[ENT]** key.

IMPORTANT: To save all the parameters, exit the menu by selecting **END** and press **[ENT]** key.

18. **[FUNC] + [5/dB]**: The key sequence can toggle signal strength display between signal strength bar and dBuV reading of incoming signal strength.

19. **[FUNC] + [6/DELAY]**: There are 3 different delay functions. DELAY, HOLD and POSE. The DELAY is to stop sweeping when the radio detects active incoming signal and stay there as long as the signal is received and resume sweeping again after certain time duration selected by DELAY TIMER.

The HOLD is to stop sweeping when the radio detects active incoming signal and stay there for good even after the active signal goes away. You can resume sweeping the radio by rotating multifunction key or pressing **[UP] or [DOWN]** key.

The POSE is to stop sweeping when the radio detects active incoming signal and stay there for the time duration selected by POSE TIMER and resume sweeping regardless if the signal goes away or not.

Press **[FUNC] + [6/DELAY]** key to display SET DELAY menu display. Select + SCAN MODE by rotating multifunction dial followed by **[ENT]** key. Select one of 3 delay mode by using multifunction dial followed by **[ENT]** key. When DELAY is selected, select Delay Timer by rotating multifunction dial followed by **[ENT]** key and select the time 1 second through 12 second. Confirm the selection by pressing **[ENT]** key.

When POSE is selected, select **+PoseTimer** by rotating multifunction dial followed by **[ENT]** key and select the time 1 second through 12 second. Confirm the selection by pressing **[ENT]** key. IMPORTANT: To save all the parameter, exit the menu by selecting **END** and press **[ENT]** key.

20. **[FUNC]+[7/PRI]**: One priority channel can be programmed. When the priority channel is turned on, TRX-200 keeps overriding to the priority channel in any receiving modes **except ESY mode** every certain duration period selected by priority timer. You can program current active signal or frequency stored in memory channel as priority channel. Following is the structure of priority menu.

        ON > OFF

        + PRI FREQ   CURRNT FREQ
                          +MEMO
                          NOW PRI (?)
                          END

        +PRI MODE   DELAY
                          HOLD
                          POSE

        +PRI TIMER
        END

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To display priority menu, press **[FUNC] + [7/PRI]** .

Program all parameters and at last toggle ON or OFF followed by **[ENT]** key to complete program. Or toggle ON or OFF followed by **[ENT]** key first and press **[FUNC] + [7/PRI]** sequence again to display the menu . Program all parameters and in order to confirm all of them, select **END** followed by **[ENT]** key to exit the menu.

To select priority frequency, select **+ PRI FREQ** by rotary dial and press **[ENT]** key to display several choices such as **CURRNT FREQ, +MEMO, CURRNT PRI** and **END**.

CURRENT FREQ: Make active signal currently receiving as priority frequency. Select this choice by rotary dial followed by **[ENT]** key.

+MEMO: Select a programmed frequency from memory channel to make it as priority frequency. Select this choice by rotary dial followed by **[ENT]** key. Rotate the dial to display memory channel number to display its frequency or enter bank and channel number combination directly from numeric keys. Press **[ENT]** key.

CURRNT PRI: Select this and press **[ENT]** key to display current priority frequency.

To select monitoring pattern when TRX-200 receives active signal at programmed priority frequency, select **+ PRI MODE** by rotary dial and press **[ENT]** to display 3 different monitoring pattern such as **DELAY**, **HOLD** and **POSE**.

The **DELAY** is to stop sweeping when the radio detects active incoming signal at priority frequency and stay there as long as the signal is existed and resume sweeping again after certain time duration selected by PRI Timer.

The **HOLD** is to stop sweeping when the radio detects active incoming signal at priority frequency and stay there for good even after the active signal goes away. To resume sweeping, press **[CLR/P.CLR]** .

The **POSE** is to stop sweeping when the radio detects active incoming signal at priority frequency and stay there for the time duration selected by **POSE TIMER** and resume sweeping after the duration regardless if he signal goes away or not.

Select one of the above 3 patterns by rotary dial and press **[ENT]**.

Select **+ PRI Timer** by rotary dial and select 1 to 20 second duration time. Press **[ENT]** key to exit the menu and select **[END]** and press **[ENT]**.

21. **[FUNC] + [AMW]**: TRX-200 has automatic memory write function
to store active frequencies detects while searching to designated
memory bank. **You have to be in search mode to use this function.**
Also the bank selected for this function will be completely over written.

Press **[FUNC] + [AMW]** to display automatic memory write menu.
To start the function select **START** by **[UP] [DOWN]** key and select
the memory bank number shown in [ ] by rotating the dial and
press [ENT] key to start sweeping.

22. **[FUNC] + [9/TIMER]**: TRX-200 has 2 timer function such as ON
timer and OFF timer. Menu structure is as follows.

    + ON Timer   OFF
                        ON   12:00

    + OFF Timer   OFF
                        30 minute
                        60 minute
                        90 minute
    END

Select **+ON Timer** by **[UP][DOWN]** key and select OFF or ON by
[UP][DOWN] key again. To set ON timer, select ON and set the timer
using rotary dial for 30 minutes to 24 hours in 30 minutes increment.

To set OFF time, select **+OFF Timer** and press **[ENT]** key. Set OFF to turn OFF time or select one of these duration such as 30, 60 or 90 minutes by using **[UP][DOWN]** key or rotary dial and press **[ENT]**. To save parameters select **END** and press **[ENT]** to exit the menu.

23. **[FUNC] [0/B LINK]**: To link banks is very easy on TRX-200. Select Search or scan mode by pressing designated key and press **[FUNC]** +
 [0/B LINK] to display bank link menu. There are 10 horizontal bar displayed on LCD. These bars indicate bank link status of each bank and these bars can be toggled between a bar and a number by pressing bank number from numeric keys.

A bar indicates the bank is not linked together with others. Press more than 2 bank number from numeric keys to toggle a bar to actual bank number. Banks with bank number displayed are linked together. Press **[ENT]** key to confirm the link status programmed.