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## 9 MANUAL

**WX-80**

**Weather Monitor with SAME**

**User Instruction Manual**

# SPECIFICATIONS

Number of Channels ..... 7

## Receiver Frequencies (MHz)

Channel 1 .....	162.550
Channel 2 .....	162.400
Channel 3 .....	162.475
Channel 4 .....	162.425
Channel 5 .....	162.450
Channel 6 .....	162.500
Channel 7 .....	162.525

Receiving Sensitivity (at 12 dB SINAD)..... 0.3uV

## FIPS Code Sensitivity

@ +/- 3KHz Deviation / 90% Success Rate..... 0.3uV

Signal to Noise Ratio ..... 40dB

Dual Tone Detection Range..... 1.2 to 2.4 KHz

Channel Selectivity ..... +/- 25 KHz, 60dB

Power Output (Maximum) ..... 250mW

Battery Back-up ..... One 9-Volt Battery

Antenna ..... Telescoping Rod Antenna

Dimensions(HWD) .....

Weight .....

# POWERING THE WEATHER RADIO

Your Weather radio uses standard 12VDC power for normal operation and one 9V battery (not supplied) for backup power when standard power fails or is temporarily disconnected. For the best performance and longest life, we recommend an alkaline battery.

## Cautions:

- Use only a fresh battery of the required size and recommended type.
- Do not use a rechargeable battery in your Weather radio.

## Notes:

- A fresh backup battery will power the Weather radio for up to 1 hour with the weather broadcast turned on or up to 8 hours in alert standby mode. However, we recommend you always connect the Weather radio to AC power for normal use.
- If the backup battery becomes weak, your Weather radio might not sound a tone when an emergency or test alert is broadcast. When your radio's reception periodically, and replace the battery if the tone does not sound.

## Connecting the Weather radio to AC Power

1. If the Weather radio's display is on, shift the power switch to the right side until it clicks to turn off the Weather radio.
2. Connect the DC 12V Out of the power ADAPTOR to Weather radio's DC IN Power

Jack.

3. Plug the Weather radio's DC power ADAPTOR into a standard AC outlet.

## **Installing the Backup Battery**

1. If the Weather radio's display is on, shift power switch to the right side until it clicks to turn off the Weather radio.
2. Press the tab on the battery compartment cover then lift up the cover to remove it.
3. Snap a 9V battery onto the battery terminals inside the compartment, then place the battery inside the compartment.
4. Replace the cover.

When REPLACE then BATTERY appears or the Weather radio stops operating when it is unplugged from AC power, replace the battery.

Note: REPLACE then BATTERY also appears if no backup battery is installed and the Weather radio is connected to AC power and then turned on.

Caution:

- Dispose of an old battery promptly and properly.  
Do not burn or bury it.
- Always remove an old or weak battery. Batteries can leak chemicals that can destroy electronic parts.

# USING THE BUIL-IN ANTENNA

The Weather radio's built-in telescoping antenna lets you receive strong local signals. To use the built-in antenna, lift it up so it is vertical then fully extend it.

To improve reception in remote areas, you can connect an external antenna to your Weather radio using an optional adapter cable with a phone plug to the Weather radio's EXT ANT jack. Your local TOPAZ store sells a wide variety of antennas. To connect an external antenna to the Weather radio, connect one end of the adapter cable to EXT ANT on the back of the Weather radio then connect the other end to the antenna.

# PROGRAMMING THE WEATHER RADIO

The first time you use your Weather radio, it is automatically set to use the NOAA weather broadcast frequency 162.550 MHz (Channel 1) and receive all SAME alert signals broadcast within a 50-mile radius of where you installed it.

Your Weather radio is preprogrammed to receive broadcast for the FIPS code stored in first memory location (called single mode), and is preprogrammed with the seven national NOAA broadcast frequencies ( Channels 1-7). Depending on your location, you might need to set it to its multiple mode and select a different channel.

Follow these steps to select a different broadcast frequency and set the Weather radio to its single or multiple mode (if necessary), and store or change FIPS codes in the Weather radio's memory (to narrow the area for which you receive SAME alerts).

1. To turn on the Weather radio, shift the power switch to the left side until it clicks.
2. Push the "Off" key for 2 second to Set MODE to PROFRAM. The Weather radio

displays the last selected weather broadcast channel and frequency number.

3. Press WEATHER if necessary to turn on the weather broadcast, then push the VOLUME Up or Down Key so you can hear the broadcast as you make your selection.

Note: If you do not press a key for about 45 seconds during Steps 4-8, the Weather radio exits the programming made and saves only those changes stored before the last key press. To continue, start over at Step2.

4. Press a number key (1-7) to listen to the broadcast on that channel. The Weather radio displays the selected channel and its corresponding frequency. Repeat this step until you find the channel broadcasting in your area.

Note: If you receive a NOAA broadcast on more than one channel, the one with the Best reception might not be the one broadcasting information for your location. Contact your local TOPAZ store or the NWS to find out which frequency NOAA is using to broadcast from the station nearest your location, then select that channel.

Channel	Frequency(MHz)
1	162.550
2	162.400
3	162.475
4	162.425
5	162.450
6	162.500
7	162.525

5. Press “Yes” key three times. The currently selected mode (SINGLE or MULTIPLE) appears.

6. To select the other setting (SINGLE or MULTIPLE), press “No”. The setting you

selected appears.

7. Press “Yes”. The FIPS code stored in the first memory location appears.

8. To change the code in the first memory location, press “No” key. ----- appears. Or, to add or change a code in a different position, repeatedly press “Yes” key Until you see the first unused memory location or the code you want to change, then press “No” key. ----- appears.

9. Use the number keys (0-9) to enter the 6-digit FIPS code you want to store.

Note:

- If you make a mistake while entering the code press “No” to clear all digits ( -- ---- reappears ), then enter the correct digit.
- To reset the Weather radio to receive all SAME signals within a 50-mile radius, simply enter 99 in the first memory location.
- For easy reference, use a pencil to write down each FIPS code you store in memory on the supplied label. Then affix the label behind the Weather radio’s back cover.

10. Press “Yes” key to store the code in the Weather radio’s memory.

If you set the Weather radio to its multiple mode the code (if any) stored in the next memory position appears. Repeat Steps 7-9 for each code (up to 15) you want to change or add.

Note: when you press “Yes” key to store a code in the last (15th) memory position, weather alert descriptions appear



11. When you finish, Push the “Off” key for 2 second to Set MODE to OPERATE. The current alert status appears .

## **TESTING THE WEATHER RADIO**

For your Weather radio to be effective, you must place it where it can receive an emergency alert broadcast and where you can hear its alert tone.

In the United State, the NWS broadcast a test alert every week on Wednesday between 11 AM and 1 PM . To find out the specific test schedule in your area, contact your local NOAA or NWS office. These offices are usually listed in the telephone book under “US Government, Department of Commerce.”

Important: The fact that you get clear reception of a weather broadcast signal does not guarantee that an emergency alert broadcast will trigger your Weather radio’s alert function. Be sure you choose the proper location for the Weather radio and regularly check the Weather radio to be sure it is operating properly.

### **Manually Testing the Alert Tone**

To manually test the Weather radio’s alert tone, turn on the Weather radio, hold down OFF, turn on the Weather radio by shift the power switch to the left until it clicks then press ALERT. The Weather radio sounds the alert tone. Then, as the tone sounds, walk around the area where you keep the Weather radio to make sure you can hear the tone.

Important Notes:

- To make sure your Weather radio will sound the alert tone when it receives an emergency signal always keep the built-in antenna fully extended.

- Testing the alert tone only ensures that the Weather radio's alert tone can be heard. It does not test the Weather radio's receiver or guarantee you will receive an emergency alert.
- If the Weather radio does not sound an alert tone you are either out of range of the broadcast or the backup battery is weak.
- An emergency alert broadcast might not trigger your Weather radio's alert tone, even if it receives voice transmission clearly or if the alert tone sounds when you manually test it. Also, if you are in a fringe area, your Weather radio might be triggered by a broadcast when it is placed in one area, but not be triggered if you place it somewhere else (even close by).

To turn on the Weather radio, shift the power switch to the left until it clicks. WEATHER then ALRT (alert) ON appears.

Note: VOLUME also controls the Weather radio's audio broadcast volume. To set, the alert volume, see "Setting the Alert volume" Section.

To listen to a Weather broadcast, see "Listening to a Weather Broadcast."

To have a weather radio sound an alert, see "Using the Alert Function"

To turn off the Weather radio, shift the power switch to the right until clicks and the display clears.

## **LISTENING TO A WEATHER BROADCAST**

Your Weather radio is preprogrammed with the seven NOAA weather broadcast

frequencies (Channels 1-7). To select a frequency broadcast in your area, follow Steps 2-4 and 9 in “Programming the Weather radio”

To listen to a weather broadcast, make sure MODE is set to OPERATE, press WEATHER, then adjust VOLUME to the desired listening level. To turn off the weather broadcast, press WEATHER again.

## **USING THE ALERT FUNCTION**

To set the Weather radio to sound an alert when the NWS broadcasts a warning, watch, or statement, hold down ALERT for 2 seconds until WEATHER then ALERT ON appears. The Weather radio beeps once.

Note:

- If you programmed more than one FIPS code into memory, be sure the Weather radio is set to its multiple mode (see Steps 5 and 6 under “Programming the Weather radio”). Otherwise, the Weather radio will only receive broadcast for the FIPS code you stored in the first memory position.
- If severe weather threatens, do not wait for an alert tone; turn on the weather broadcast and monitor the weather information.

To set the Weather radio so it does not sound an alert, hold down ALERT for 2 seconds until WEATHER ALERT OFF appears. The weather radio beeps twice.

## **Setting the Alert Volume**

To Control alert or tone volume, Press “ Yes Key” for 2 seconds. In this case the “volume Up/Down” will be used for tone volume control and tone volume level will be displayed on LCD with beep tone on speaker.

## Changing/Checking the Alert Pattern

You can set the Weather radio to respond to an NWS alert broadcast in one of two ways.

**VOICE** – the Weather radio sounds an alert for about 8 seconds, then automatically turns on the weather (voice) broadcast for 5 minutes. Then it returns to standby mode. It also displays the alert description (such as **TORNADO WARNING**) until the alert's effective time received as part of the NWS broadcast code expires. An alert could be in effect for several hours.

**(Continuous) ALERT** – the Weather radio sounds an alert and displays an alert description until the alert's effective time expires. To turn off the alert sooner, press OFF. To turn on the NWS voice broadcast, press WEATHER.

Note : When the Weather radio's alert ends or you turn it off, you hear the NWS alert tone(which sounds different than the Weather radio's tone) for a few seconds before you hear the voice broadcast.

The Weather radio automatically selects the ALERT setting the first time you turn it on. To change the alert pattern setting (or check which setting is currently selected), follow these steps.

1. Push the “OFF” key for 2 seconds to set MODE to PROGRAM

Note : If you do not press a key for about 45 seconds during Step 2 ~ 4, the Weather radio exits the programming mode without storing any change. To continue, start over at Step 1.

2. Press “Yes” Key once. The currently selected alert pattern (VOICE or ALERT) appears.
3. To select the other setting (VOICE or ALERT), press “No” Key. The setting you selected appears.

4. Press “ Yes” key again to store your selection, then Push the “OFF” key for 2 seconds to set MODE to OPERATE. The current alert status (WEATHER ALRT ON or WEATHER ALRT OFF) appears.

## Enabling/Disabling Alert Tones

You can turn on or off some types of alert tones received by your Weather radio. For example, you can turn off the alert tone for avalanche watch if you do not live near an avalanche.

Notes :

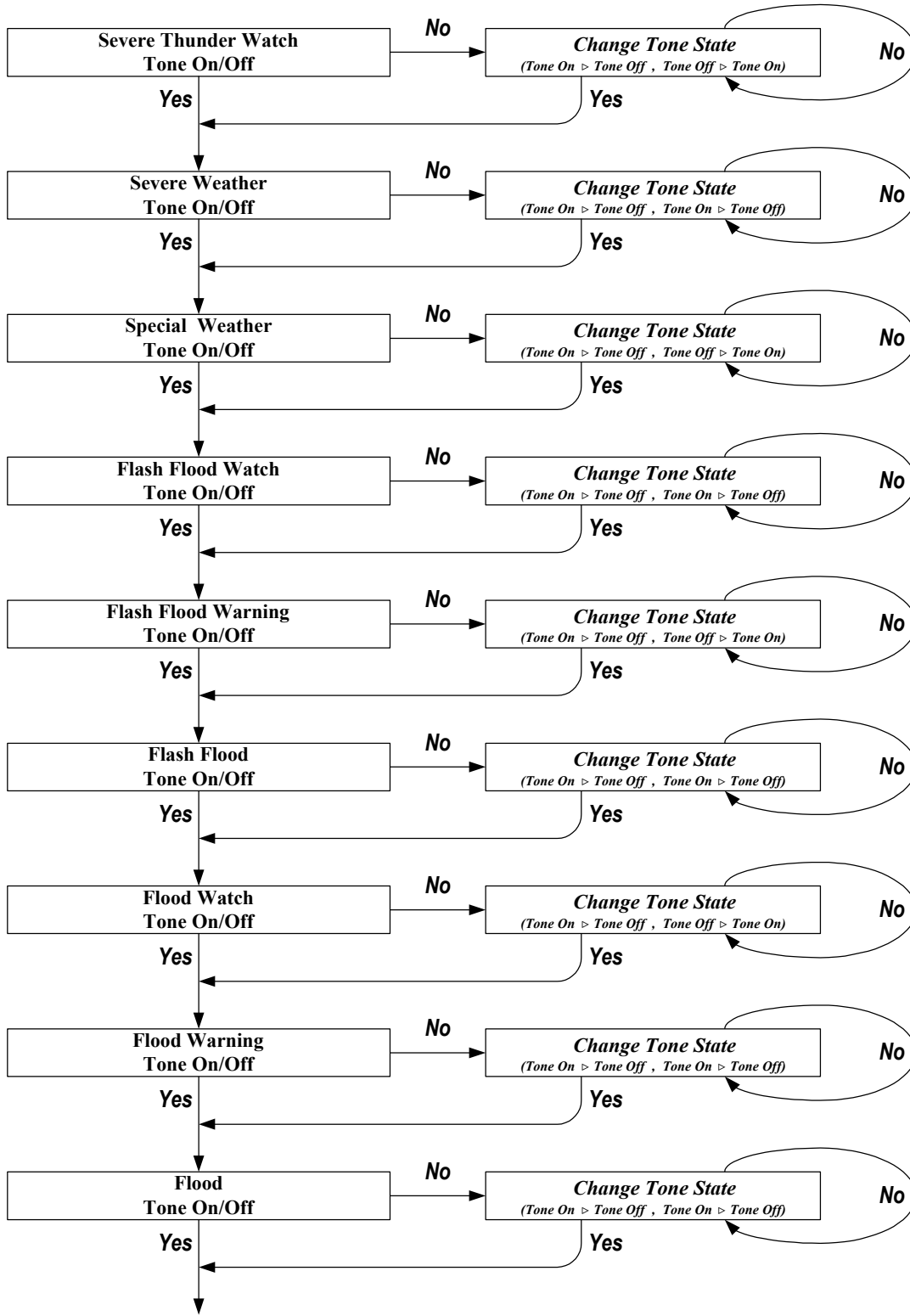
- The Weather radio still detects and displays information about alerts even after you disable the tone for those alerts.
- If you set the Weather radio so it turns itself on when it receives a specific warning, disabling the alert tone for that warning also means that the Weather radio will not turn itself on when it receives that warning.

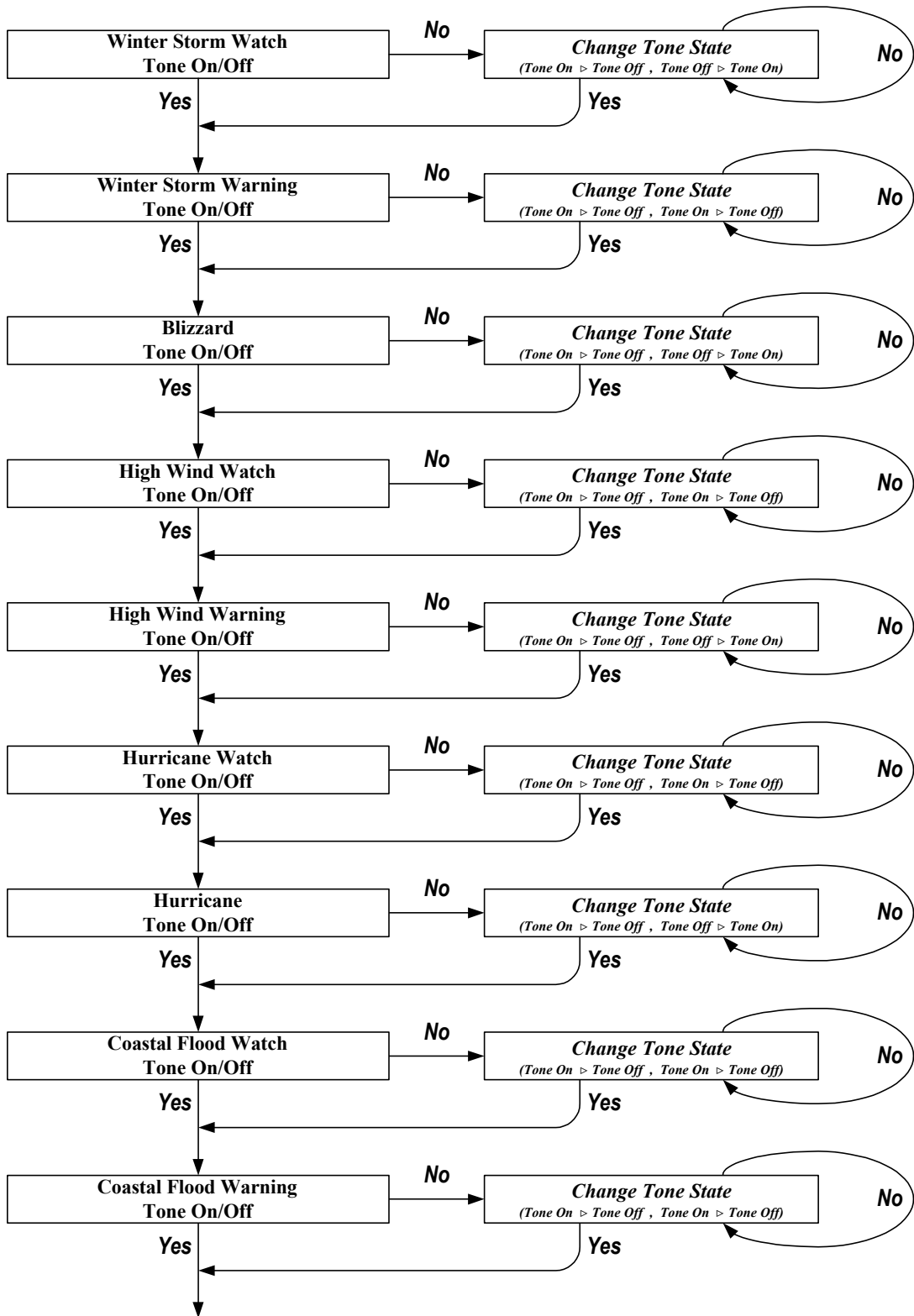
You can set the Weather radio so it does not sound an alert tone during only the following types of alerts:

Avalanche Warning	Hurricane Watch
Avalanche Watch	Practice/Demo
Blizzard Warning	Required Monthly Test
Coastal Flood Warning	Severe Thunderstorm Watch
Coastal Flood Watch	Severe Weather Statement
Flash Flood Statement	Special Marine Warning
Flash Flood Warning	Special Weather Statement
Flash Flood Watch	Test Message
Flood Statement	Unknown Statement
Flood Warning	Unrecognized code ending in <b>S</b>
Flood Watch	Volcano Warning
High Wind Warning	Volcano Watch
High Wind Watch	Winter Storm Warning
Hurricane Statement	Winter Storm Watch

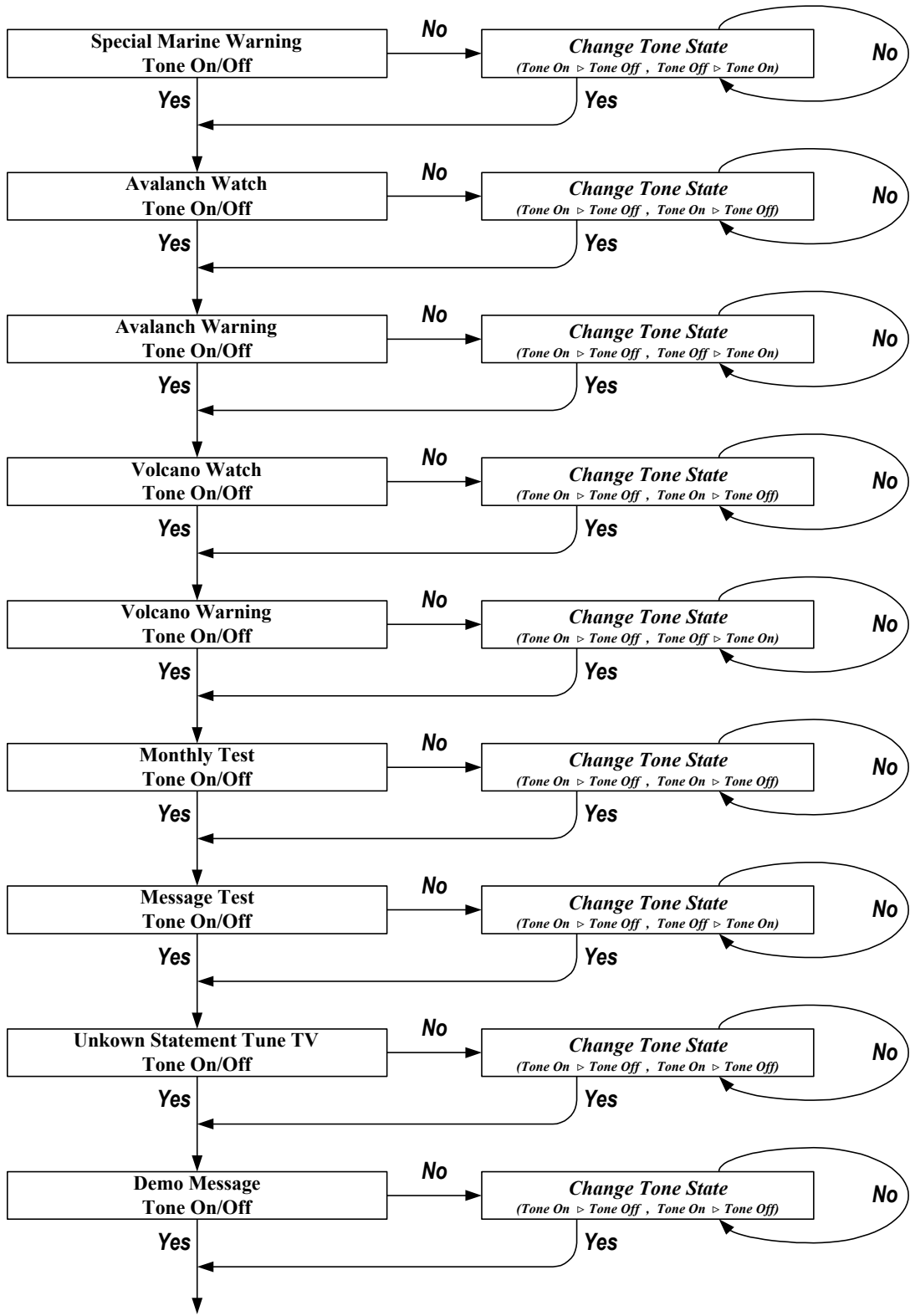
When you decide if the alert tone will be on or off toward each of weather situation, current status for alert tone will be showing so as to adjust necessary type of alert only. In other words, you can turn on or off some type of alert tone by pressing “NO” Key, after checking current status for alert tone to specific warnings. To save your selection for current status for alert tone (ON or OFF), you should press “YES” Key and then you can check other alert tone status for weather after storing your selection.

(Example) Alert Tone for Winter Storm Warning  
Owing to the space on LCD, LCD will show as follow,









## Using the Weather radio's 'All Signals' Code

Your Weather radio is preset to use a default “all signals” code of 99, which lets it receive any weather alert broadcast within its reception range (about a 50-mile radius in most locations). This code is preset in the Weather radio's first memory location.

To set the Weather radio to respond only to specific NWS FIPS codes you select, choose the codes (as many as 15) you want to program, program those codes into memory locations 2 ~ 15, and set the Weather radio to its multiple mode.

To reset the Weather radio to use the “all signals” code again, follow the steps under “Programming the Weather Radio” section, setting the Weather radio to its single mode in Steps 5 and 6 and storing 99 in the first memory position in Step 9.

## Reviewing Overlapping Alerts

Your Weather radio can store up to three different alerts (with overlapping effective times) in its memory. If the Weather radio receives a new alert while a previous alert is still in effect, it automatically displays the alert description and sounds an alert for the new alert.

To scroll forward or backward through the Weather radio's memory and review all effective alerts, press “Yes” (to scroll backward).

Notes:

- The Weather radio sounds a high-pitched tone if you try to scroll past the first or last alert in memory. To continue, press “Yes” key to begin scrolling in the opposite direction
- If the Weather radio receives a new alert while three previous alerts are still in effect, it stores the newest alert and clears the oldest alert from memory.

## When a Test or Demo Alert Occurs

The NWS sends out weekly test signals, you can use to confirm that your Weather radio is working properly. To find out the specific test schedule in your area, contact your local NOAA or NWS office. Those offices are usually listed in the telephone book under *US Government, Department of Commerce*.

When the Weather radio's alert function is turned on and the Weather radio receives a test broadcast for a FIPS code you programmed into its memory, it responds in one of these ways:

NWS Alert Type	You See	You Hear
Demo Message (sent at random times)	Demo Message	No sound
Required Weekly SAME Test	Weekly Test	Beeps
Required Monthly SAME Test	Monthly Test	Beeps

Note : The Weather radio does not turn on an indicator during a test/demo broadcast.

## LOCKING OUT UNDEFINED WEATHER DESCRIPTIONS

The NWS might occasionally broadcast several types of weather information intended for commercial or other non-private use. This information could include, for example, messages intended for automated weather services (such as those used by radio or TV stations). Your Weather radio's memory does not contain a specific, corresponding description for the signals related to these commercial weather types.

Additionally, your Weather radio is designed to recognize all common weather alert types currently used by the NWS. The NWS could, however, eventually create and broadcast new alert types (for which the Weather radio's memory does not contain a specific, corresponding description).

If your Weather radio receives a signal for a new alert type, it is preset (if the alert function is turned on) to display UNKNOWN, the alert description (EMERGENC, STATEMNT, WARNING, or WATCH), and TUNE TV, then sound a siren alert. It is not set to alert you when it receives a commercial alert type.

Depending on your preference, you can follow these steps to change the way the Weather radio responds to new weather alert broadcasts.

1. Turn off the Weather radio.
2. While holding down OFF, Shift power switch to the left side until it clicks to turn on the Weather radio. TESTMODE appears.
3. Press a number key to select the desired setting. The Weather radio tunes to the corresponding channel, and one of the following appears.

You Press :	The Weather radio Displays :
1	CH. 1
2	CH. 2
3	CH. 3
4	CH. 4
5	CH. 5
6	CH. 6
7	CH. 7
8	DEFAULT (reset to default)
9	DEMO ON or DEMO OFF (the Weather radio's demo mode)

Note : If you pressed 9 in this step, your Weather radio can also perform these test functions while TESTMODE appears:

- If you press ALERT, the Weather radio continuously sounds its alert siren. Press ALERT again to turn off the siren.
  - If you press YES, STATEMENT, WATCH, and WARNING light at the same time.
  - If you press NO, STATEMENT, WATCH, and WARNING turn off at the same time.
  - If you press WEATHER, all display characters appear at the same time.
4. Shift power switch to the right side until it clicks to turn off the weather radio and store your selection. Then turn it back on to begin using the new setting.

## USING THE BACKLIGHT

Your Weather radio's backlight automatically turns on while you listen to the weather broadcast and for about 10 seconds each time you press a key. For extended use in low light situations, you can set the backlight so it remains on until you turn it off.

Note : You can turn on your Weather radio's backlight so it stays on continuously only if the Weather radio is connected to AC power through DC Adapter.

Follow these steps to turn the backlight on or off.

1. Push the "OFF" key for 2 seconds to set MODE to PROGRAM.
2. Within 45 seconds, press "Yes" key twice so CONTINUO (continuous) and BACKLITE alternately flash on the display, then press "Yes" key to turn on continuous backlight or "No" key to turn it off.

Note : If you do not press a key for about 45 seconds, the Weather radio automatically exits the programming mode.

3. Push the “OFF” key for 2 seconds to set MODE to OPERATE.

# UNDERSTANDING FIPS CODES

For the purpose of broadcasting weather information, the NWS has divided the United States into regions by state and county (or parish, where applicable) then assigned a 6-digit FIPS code to identify each county or parish. For example, the code for Dallas County, Texas, is 048113.

The first digit in a FIPS code identifies the county subdivision, the next two digits identify the state, and the last three digits identify the county or parish.

Note: Most FIPS codes begin with 0, which means that FIPS code represents an entire county. The NWS, however, eventually plans to subdivide some large counties. When that happens, each subdivision will be assigned a digit from 1~9, resulting in codes such as 148113, 248113, and so on.

Your Weather radio can receive all SAME alert signals broadcast within about a 50-mile radius of where you installed it. To receive SAME alerts and broadcasts about weather occurring only in particular Counties, within that area, you can program up to 15 FIPS codes into the Weather radio's memory. For example, this lets you avoid hearing an alert that applies to an area within a 50-mile radius but not necessarily to your county or parish.

## Obtaining Your Area's FIPS Code(s)

To obtain the FIPS code for the location where you installed your Weather radio, contact your local TOPAZ store or call the NWS toll free at 1-888-NWR-SAME (1-888-697-7263). If you call the NWS, follow the instructions you hear.

Note: If you are close to a county or parish line, you might want to obtain the codes for the nearby counties or parishes.

Hint: Since you can program up to 15 FIPS codes into the Weather radio's memory, you might want to obtain the codes for other local areas that you frequently travel through (as long as those areas are within a 50 mile radius of your location and within an area

covered by your local NWS broadcast station). That way, you can program those codes into the Weather radio and receive broadcasts covering those locations, too.

## NWS WEATHER ALERT DESCRIPTION

Your Weather radio can display these NWS weather alert descriptions. For easy reference, this list also shows the type of alert (siren or beep) that sounds during each alert.

Weather/Alert Description	You See	You Hear
Avalanche warning	<b>AVALANCH WARNING</b>	Siren
Avalanche watch	<b>AVALANCH WATCH</b>	Siren
Blizzard warning	<b>BLIZZARD WARNING</b>	Siren
Civil danger warning	<b>CIVIL DANGER WARNING</b>	Siren
Civil danger watch	<b>CIVIL DANGER WATCH</b>	Siren
Civil emergency-turn on the TV for information is available on TV, call your local NWS office	<b>TUNE TV</b>	Siren
Note: TUNE TV might also indicate the Weather radio has received a signal for a condition not defined the Weather radio's memory (See "Locking Out Undefined Weather Descriptions")		
Coastal flood warning	<b>COASTAL FLOOD WARNING</b>	Siren
Coastal flood watch	<b>COASTAL FLOOD WATCH</b>	Siren
Emergency action warning	<b>EMERGENC ACTION WARNING</b>	Siren
Emergency action termination	<b>EMERGENC ACTION TERMINAT</b>	Siren
Evacuate immediately	<b>EVACUATE IMMEDIAT</b>	Siren
Fire warning	<b>FIRE WARNING</b>	Siren
Flash flood statement	<b>FLASH FLOOD</b>	Beeps
Flash flood warning	<b>FLASH FLOOD WARNING</b>	Siren
Flash flood watch	<b>FLASH FLOOD WATCH</b>	Siren
Flood statement	<b>FLOOD</b>	Beeps
Flood warning	<b>FLOOD WARNING</b>	Siren
Flood watch	<b>FLOOD WATCH</b>	Siren
Hazardous material warning	<b>HAZARD MATERIAL WARNING</b>	Siren
Hazardous material watch	<b>HAZARD MATERIAL WATCH</b>	Siren
High wind warning	<b>HIGH WIND WARNING</b>	Siren



High wind watch	<b>HIGH WIND WATCH</b>	Siren
Hurricane statement	<b>HURRICAN</b>	Beeps
Hurricane warning	<b>HURRICAN WARNING</b>	Siren
Hurricane watch	<b>HURRICAN WATCH</b>	Siren
Immediate evacuation warning	<b>IMMECIAT EVACUATE WARNING</b>	Siren
Law enforcement warning	<b>LOW ENFORCE WARNING</b>	Siren
Local area emergency	<b>LOCAL AREA EMERGENC</b>	Siren
National information Center	<b>NATIONAL INFO CENTER</b>	Siren
Periodic national test	<b>NATIONAL PERIODIC TEST</b>	Siren
Practice/Demo	<b>DEMO MESSAGE</b>	Nothing
Radiological hazard warning	<b>RADIOLOG HAZARD WARNING</b>	Siren
Radiological hazard watch	<b>RADIOLOG HAZARD WATCH</b>	Siren
Required monthly test	<b>MONTHLY TEST</b>	Beeps
Required weekly test	<b>WEEKLY TEST</b>	Beeps
Severe thunderstorm warning	<b>SEVERE THUNDER WARNING</b>	Siren
Severe thunderstorm watch	<b>SEVERE THUNDERWATCH</b>	Siren
Severe thunderstorm statement	<b>SEVERE WEATHER</b>	Beeps
Shelter in-place warning	<b>SHELTER IN-PLACE WARNING</b>	Siren
Special marine warning	<b>SPECIAL MARING WARNING</b>	Siren
Special weather statement	<b>SPECIAL WEATHER</b>	Beeps
Test message	<b>TEST MESSAGE</b>	Nothing
Tornado warning	<b>TORNADO WARNING</b>	Siren
Tornado watch	<b>TORNADO WATCH</b>	Siren
Tsunami warning	<b>TSUNAMI WARNING</b>	Siren
Unrecognized code ending in S	<b>UNKNOWN STATEMNT TV</b>	Siren
Unrecognized code ending in W	<b>UNKNOWN WARNING TUNE TV</b>	Siren
Unrecognized code ending in A	<b>UNKNOWN WATCH TUNE TV</b>	Siren
Unrecognized code ending in E	<b>UNKNOWN ENERGENC TUNE TV</b>	Siren
Volcano warning	<b>VOLCANO WARNING</b>	Siren
Volcano watch	<b>VOLCANO WATCH</b>	Siren
Winter storm warning	<b>WINTER STORM WARNING</b>	Siren
Winter storm watch	<b>WINTER STORM WATCH</b>	Siren