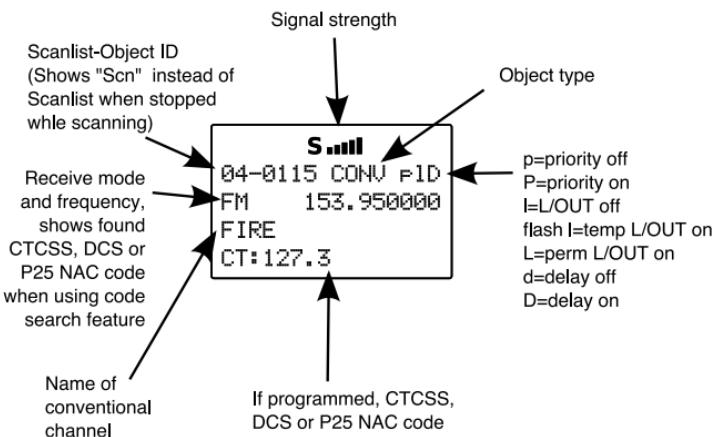
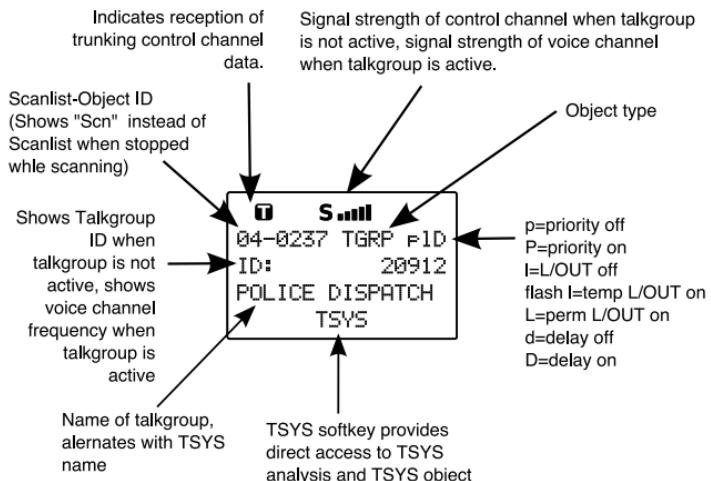


Scanning

The following screen appears when the scanner is stopped on a conventional channel while scanning.



The following screen appears when the scanner is stopped on a talkgroup channel while scanning.

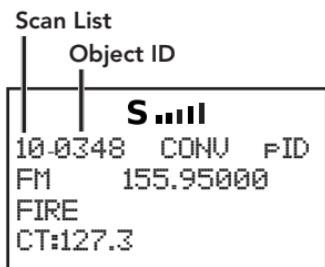


Organizing Objects

Object Numbering

Your PRO-651 is different from other types of scanners in how it stores your Scannable Objects in memory. Instead of fixed channels and banks, objects are stored in the first available block of free memory and an Object ID is assigned. The Object ID is the "address" where the object is stored in memory.

- The Object ID and the current Scan List number are displayed whenever an object is selected in Manual Mode and Program Mode. The Object ID is also displayed when the scanner stops on an active object while scanning.



For example: **10-0348** means Object ID **0348** is mapped to Scan List **10**.

To directly access an object using Object ID:

1. Press **MAN** or **PGM** to enter Manual Mode or Program Mode.
2. Use the number keys to enter the Object ID, then press **ENT**.

Note: Objects are not really "in" a Scan List. Objects are "mapped" to Scan Lists, meaning that an object can be a member of one or more Scan Lists. Using the **▲** or **▼** keys to scroll up or down while viewing a Scan List, will show all the other objects mapped to that list.

Organizing Objects

Grouping Objects with Scan Lists

By default, new objects are automatically assigned to Scan List 01. You can divide these objects into separate Scan Lists so that you can easily enable or disable groups of objects depending on what you want to scan.

The number of objects that can be grouped in a Scan List is limited only by the scanner's memory, and single objects can be members of multiple Scan Lists.

There are 20 regular Scan Lists available, a special "FAV" Scan List for one-button access to your favorite Scannable Objects, and a Skywarn Scan List.

You can also mix and match different object types in Scan Lists as you see fit. There are no limitations as to the type of objects that can exist together in the same Scan List.

How you group objects in Scan Lists is entirely up to you. Here are some examples of how objects can be grouped:

Geographically: You may wish to group your Scannable Objects according to the areas where they are used. This may be useful if you use your scanner while traveling.

By trunking system: It is possible to assign any combination of object types to any Scan List. However, you may wish to assign TGRP objects associated with specific trunked radio systems to specific Scan Lists, so you can easily enable or disable monitoring of each system by enabling or disabling the associated Scan List.

By object type: It may be desirable to segregate object types by assigning them to specific Scan

Organizing Objects

Lists. For example, if you assign a group of LMIT or SRVC searches to a single Scan List, you can easily activate or deactivate searching on those objects by enabling or disabling the associated Scan List.

By application: You can group objects by their application. For example, you may wish to place law enforcement related objects for your area in one Scan List, fire and rescue objects in another, and business related objects in yet another Scan List.

By Favorites: The Favorites (FAV) Scan List is a powerful tool that can be used to quickly narrow (or expand) your scanning profile. When you press the **FAV** key, the radio suspends scanning of all objects in the radio except for those that are mapped to the FAV Scan List.

Changing Scan List Membership

New Objects

1. Press **PGM** to put scanner in Program Mode.
2. Press **NEW** softkey to create new object.
3. Press the softkey for the object you want to create.
4. Press **▲** or **▼** to scroll to **Scan Lists:**.
5. Press **◀** or **▶** to scroll the Scan Lists until you find the one you want to enable or disable.
6. Press **SEL** to select between **On** or **Off**. The asterisk (*) next to the Scan List number indicates that the object is a member of that Scan List.
7. Press **Save** softkey to save the new object.

Organizing Objects

Existing Objects

1. Press **PGM** to put scanner in Program Mode.
2. Press **▲**, **▼**, **◀** or **▶** to scroll to the object you want to change.
3. Press **EDIT** softkey.
4. Press **CURR** softkey to edit the current object.
5. Scroll down to **Scan Lists:**
6. Press **▶** to scroll through the Scan Lists.
7. Press **SEL** to select **On** or **Off** for the desired scan list item. The asterisk (*) next to the Scan List number indicates that the object is a member of that Scan List.
8. Press **Save** softkey to save change.

Naming Scan Lists

1. Press **PGM** to put scanner in Program Mode.
2. Press **GLOB** softkey.
3. Press **▲** or **▼** to scroll to **Scan Lists:**.
4. Press **SEL**.
5. Press **▶** to edit the settings for the selected Scan List.
6. Press **▲** or **▼** to scroll to **Tags:**, then press **▶**.
7. Use the number keys to enter a name. See **“Appendix C: Text Entry and QuickText”** on page 125 for information on entering text.
8. Press **Done** softkey when finished.
9. Press **Save** softkey to save changes to the Global menu.

Organizing Objects

Enabling or Disabling Scan Lists

While Scanning

Scan List 1-10

Press the number keys that corresponds with the Scan List you want to select.

For example, pressing **4** while scanning will toggle the state of Scan List 04 from enabled to disabled, or vice versa if the Scan List is already disabled.

Scan List 11-20

Press **FUNC**, then press a number key, i.e., press **FUNC 3** to toggle the status of Scan List 13.

Note: If you enable a Scan List that has no assigned objects, the number for that Scan List will flash in the display while the scanner is scanning.

From Global Settings Menu

1. Press **PGM** to enter Program Mode.
2. Press **GLOB** softkey.
3. Press **▲** or **▼** to scroll to **Scan Lists:** and press **SEL**.
4. Press **▲** or **▼** to scroll to the Scan List you wish to change then press **SEL**.
5. Press **►** to scroll to **Enabled:** and press **◀** or **►** to select On or Off.

The asterisk (*) indicates Scan List enabled.

6. Press the **Save** softkey to save settings.
7. Press **Save** softkey again to confirm global changes and exit GLOB menu.

Organizing Objects

NS (Not Scanned) Scan List

If you accidentally store an object with no Scan List mappings, the object will be placed in a special "NS" Scan List.

To access NS scan List:

1. Press **PGM** to enter Program Mode or press **MAN** to enter Manual Mode.
2. Press **◀** or **▶** to scroll to the NS Scan List.
3. Press **▲** or **▼** to scroll through the NS objects.
4. Press **PGM**.
5. Press **EDIT** softkey.
6. Press **CURR** softkey to view object menu.
7. Scroll down to **Scan Lists:**.
8. Press **▶** to scroll through the Scan Lists.
9. Press **SEL** to select **On** or **Off** the desired scan list item. The asterisk (*) next to the Scan List number indicates that the object is a member of that Scan List.

Favorite List

To add an object to Favorites:

In scan mode, Manual mode or Program mode, press **FUNC**, then **FAV**.

Each scannable object menu also has a **FAV** option. Select **YES** to add to Favorites.

When **FAV** is set to **YES**, the object is a member of the Favorites Scan List in addition to any other Scan Lists that it is mapped to.

Organizing Objects

To activate FAV scan:

Press **FAV** and the radio suspends scanning of all objects in the radio except for those that are in your Favorites list.

To clear FAV scan list:

1. Press **PGM** to enter Program Mode.
2. Press the **GLOB** softkey.
3. Press **▲** or **▼** to scroll to **Clear FAV**.
4. Press **SEL** to set **FAV = NO** for all objects.
5. Press **YES** softkey to confirm.
6. Press **Save** softkey.

Setting the Default Scan List

By default, your scanner will store all new objects, and objects found during Search, Tune, and Stalker as mapped to Scan List 01.

You can easily change the default Scan List to any Scan List you specify, including the special FAV and Skywarn Scan Lists.

1. Press **PGM**.
2. Press **GLOB** softkey.
3. Press **▼** to scroll down to **Dflt ScanList**.
4. Enter new Scan List number to use as default scan list.
0: The “not scanned” (ns) Scan List. Objects with no Scan List mapping.
1 - 20: Normal Scan Lists.
21: FAV Scan List.
22: Skywarn Scan List.

Organizing Objects

5. Press **ENT** or the **Done** softkey to store your new default Scan List value.
6. Press **SAVE** softkey to save your changes.

Deleting Objects

To delete an object:

1. Press **PGM** to enter Program Mode.
2. Press **▲**, **▼**, **◀** or **▶** to navigate to the object you wish to delete.
3. Press **FUNC CL** to delete the object.

The scanner will ask you to confirm the delete command before removing the object from the scanner's memory. Deletions cannot be un-done.

To delete a TSYS using the FIND feature:

1. See "**Searching for Objects using FIND**" on page 49.
2. Once the TSYS has been located, press the **PGM** key, then press **FUNC CL**.
3. Press the **YES** softkey at both warnings to delete the TSYS.

WARNING: *All TGRPs associated with the deleted TSYS will be lost.*

To delete a TSYS using the TSYS filter.

1. Press **PGM** to enter Program Mode.
2. Press the **EDIT** softkey.
3. Press **▶▶▶**, and press the **TSYS** softkey.
4. Press **▲** or **▼** to scroll to the desired TSYS, then press **FUNC CL**.
5. Press the **YES** softkey at both delete warnings to delete the TSYS.

Organizing Objects

WARNING: All TGRPs associated with the deleted TSYS will be lost.

Searching for Objects using FIND

The FIND feature allows you to search for locked out objects, or for objects containing a text string that you specify. FIND searches for your specified text in the following places:

- TGRP objects: ID and Tag fields.
- CONV objects: Frequency and Tag fields.
- TSYS, LMIT, SRVC and STLK objects: Tag field.

To find locked out objects:

1. Press **PGM** to enter Program Mode.
2. Press **EDIT** softkey.
3. Press **FIND** softkey.
4. Press **L/Out** softkey. The scanner finds the first locked out object.
5. Press **L/Out** to toggle lockout status.
6. Press **EXIT** softkey when finished.

or Press **EDIT** softkey to edit object menu for the selected object.

or Press **NEXT** softkey to find the next locked out object.

or Press **MAN** to begin monitoring the object in Manual Mode.

or Press **PGM** to exit FIND and execute programming tasks at the selected object position.

Organizing Objects

To find objects with a specified text string:

1. Press **PGM** to enter Program Mode.
2. Press **EDIT** softkey.
3. Press **FIND** softkey.
4. Press **Text** softkey.
5. Use the number keys to enter the text string you wish to search for. Or press the **Qtxt** softkey to use QuickText in your find text screen. See “**Appendix C: Text Entry and QuickText**” on page 125 for information on entering text.
6. Press **OK** softkey to begin searching.

The radio will stop on any object where your text string is found in the frequency, tag, or ID fields as described above.

7. Press the **Exit** softkey to cancel the FIND operation.

or Press **EDIT** softkey to edit object menu for the selected object.

or Press **NEXT** softkey to find the next object.

or Press **MAN** to begin monitoring the object in Manual Mode.

or Press **PGM** to exit FIND and execute programming tasks at the selected object position.

Note: FIND keeps the last search text you specified stored for subsequent FIND operations.

Filtering by Object Type

When browsing objects in Program Mode, you can filter the objects that are displayed by their type.

1. Press the **PGM** to enter Program Mode.
2. Press **EDIT** softkey.

Organizing Objects

3. Press **◀** or **▶** to scroll to display the filter softkeys. The filter softkeys are as follows:
CONU
TGRP
TSYS
SRCH
STLK
4. Press the softkey that corresponds with that object type to filter.
5. Press **▲**, **▼**, **◀** or **▶** to browse filtered objects.

Object Lockout

When an object is locked out, traffic is not received on that object until it is unlocked, even if the object is mapped to more than one Scan List. Locking out an object locks it out “radio-wide” until it is enabled by toggling the lockout setting.

Four types of lockout functions are available: temporary lockout, permanent lockout, search lockout, and talkgroup lockout.

Temporary Lockout

Temporary lockout locks out an object until the scanner is turned off. When the scanner is powered on again, all objects that have been temporarily locked out are restored.

To temporarily lockout an object:

1. When the scanner stops on an object, press **L/OUT**.
or
1. In Manual Mode or Program Mode, press **▲**, **▼**, **◀** or **▶** to select an object.
2. Press **L/OUT**.

The lowercase “l” in the display flashes to indicate the object is temporary lockout.

Organizing Objects

To unlock a temporary lockout object:

1. In Manual Mode or Program Mode, press ▲, ▼, ◀ or ▶ to select an object.
2. Press **L/OUT**.

HINT: You can also toggle lockout anytime you are viewing an object menu in Program Mode by pressing **L/OUT**.

Permanent Lockout

Permanent lockout locks out an object until you explicitly unlock it. No traffic will be received on the locked out object while permanent lockout is active.

1. When the scanner stops on an object, press **FUNC**, then **L/OUT**.

or

1. In Manual Mode or Program Mode, press ▲, ▼, ◀ or ▶ to select an object.
2. Press **FUNC**, then **L/OUT**.

To unlock a permanent lockout:

1. In Manual Mode or Program Mode, press ▲, ▼, ◀ or ▶ to select an object.
2. Press **FUNC**, then **L/OUT**.

Change L/OUT Key Function

By default, the **L/OUT** key activates temporary lockout when pressed. To change the **L/OUT** key to activate a permanent lockout when pressed:

1. Press **PGM** to enter Program Mode.
2. Press **GLOB** softkey.
3. Press ▲ or ▼ to scroll to **TLO=FUNC L/OUT**.

Organizing Objects

4. Press ► and select YES to change the L/OUT button to be a permanent lockout instead of a temporary lockout.

Search Lockout

Search lockout works with certain search objects, including LMIT searches, some SRVC searches, and STLK objects. Frequency lockout is used to lock out undesired frequencies that are found during searches.

To apply search lockout during a search:

When scanner stops on the undesired frequency, press the FrL/O softkey.

To edit or clear the search lockout list:

1. Press **PGM**.
2. Press **GLOB** softkey.
3. Scroll down to **SRCH L/Outs:** and press **SEL**.
4. Scroll to the frequencies you wish to remove from the lockout list and press **Del** softkey to remove them from the list.
5. Scroll to an empty spot and enter any frequency you wish to manually add to the list.
6. To clear the entire list, press **FUNC**, then the **Del** softkey.

Talkgroup Lockout

Talkgroup lockout is similar to search lockout, as it allows you to lockout undesired talkgroups while searching for new talkgroup activity with wildcard TGRP objects.

When you lock out an undesired talkgroup that is found by a Wildcard TGRP object, the radio

Organizing Objects

creates a new TGRP object in the radio's memory, then locks that TGRP object out, so that the next time it appears on the system, the radio will ignore any traffic on that TGRP.

To lockout an undesired wildcard hit:

When the scanner stops on an undesired talkgroup, press the **TGL/O** softkey.

To unlock or edit talkgroups locked out using the wildcard lockout feature:

1. Press **PGM** to enter Program Mode.
2. Press **▲, ▼, ◀ or ▶** to select a locked out talkgroup.
3. Press **FUNC**, then **L/OUT** to remove permanent lockout from the talkgroup.
or Press **FUNC**, then **CL** to delete the TGRP object from the scanner.
or Press the **EDIT**, then the **CURR** softkey to edit and save the TGRP object.

Object Searches

A powerful feature of your PRO-651 is the ability to define different types of frequency searches and process them while scanning. Frequency searches are just another type of Scannable Object in the hierarchy of the radio's memory organization, so they can be manipulated and scanned in the same manner as conventional channels and trunking talkgroups.

Limit Search Object (LMIT)

A Limit Search Object (LMIT) is a search object that stores the parameters necessary for the radio to search each frequency within a lower and an upper limit for activity. A LMIT object can be used for standalone searching—the radio just searches and stops when activity is detected on a frequency, or for searching that is performed while the radio is scanning. The radio treats LMIT objects just like any other Scannable Object when in Scan Mode.

When used in Scan Mode, this capability is best suited for small ranges of frequencies that contain more frequencies than practical to program as individual channels. Any size range can be used, but larger ranges that take more time to search will increase the chances of missed activity on other object types.

Essential Parameters

FrLo: Lower frequency limits to begin search.

FrHi: Upper frequency limits to end search.

Mode: By default the scanner will automatically choose the receive mode that most likely applies to the active frequency as the search proceeds.

Tag: (Recommended) Name your LMIT so you can easily find or identify it later.

Object Searches

See “**Appendix B: Detailed Menu Reference: LMIT Menu**” on page 116 for detailed menu information.

To create a new LMIT object:

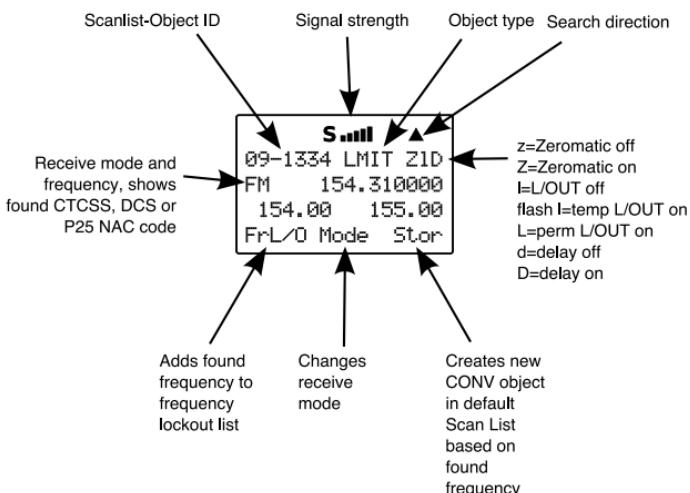
1. Press **PGM** for Program Mode.
2. Press **NEW** softkey.
3. Press **SRCH** softkey to view available Search types.
4. Press **LMIT** softkey.
5. Press **▲** or **▼** to select **FrLo:** and **FrHi:** then press **SEL.** to select the field.
6. Use the number keys and **•** to enter lower and upper search units and press **ENT** or the **DONE** softkey to save.
7. Press **▲** or **▼** to select **Tag:**.
8. Use the number keys to enter a name for the LMIT object. See “**Appendix C: Text Entry and QuickText**” on page 125 for information on entering text.
9. Press **ENT** or the **DONE** softkey to save.
10. Press **Save** softkey to store your LMIT search as an object.

To activate LMIT search:

1. Press **MAN** during scanning to enter Manual Mode.
2. Press **▲** or **▼** to scroll through the LMIT objects.
3. Press the **SRCH** softkey. LMIT search will stop on an active frequency.

Note: Be sure to press the **SRCH** softkey, and not the **SRCH** key on the keypad.

Object Searches



3. Press **PSE** to hold on the active frequency.
Press **PSE** again to resume.

Note: It can take some time to process all of the frequencies in a LMIT search. You can experiment with different size frequency ranges to find a LMIT search setup that does not interfere excessively with scanning of other object types.

Service Search Object (SRVC)

A Service Search Object (SRVC) is similar to a LMIT search but is optimized for a specific radio service, and can search for activity associated with a type of service across multiple frequency bands. See “**Dedicated SRVC Search**” on page 62 or “**Appendix A: Search Bands**” on page 100 for sub-band frequency information.

Essential Parameters

Service type is the critical parameter needed for a Service Search to function. See “**Appendix B: Detailed Menu Reference: SRVC Menu**” on page 119 for detailed menu information.

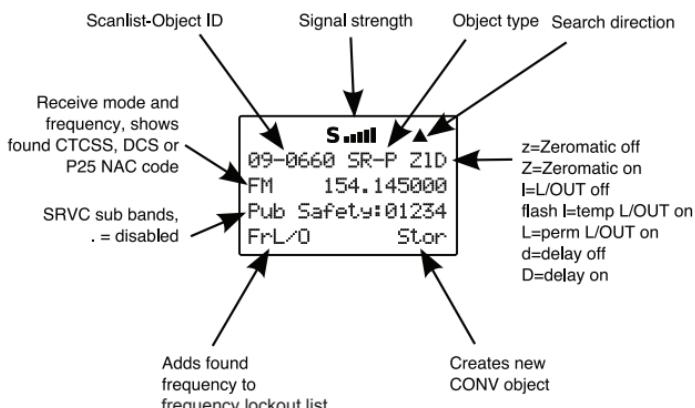
Object Searches

To create a new SRVC object

1. Press **PGM** for Program Mode.
2. Press **NEW** softkey, then press **SRCH** softkey to view the available Search types.
3. Press the **SRVC** softkey.
4. Press **▼** to scroll to the **Srvcs:** field.
5. Press **◀** or **▶** to select the type of search you want to define. Service types include Public Safety, Aircraft, Amateur, CB, Marine, FRS/GMRS/MURS/DOT and Railroad.
6. Press **Save** softkey to store your SRVC search as an object.

To activate SRVC search:

1. Press **MAN** during scanning to enter Manual Mode.
2. Press **▲** or **▼** to scroll through the objects to **SRVC**.
3. Press the **SRCH** softkey to activate the SRVC search. SRVC search stops when an active frequency is found.



4. To resume searching, press **▲**.

Signal Stalker II Object (STLK)

A Signal Stalker Object (STLK) stores the parameters necessary for the radio to rapidly sweep a range of frequencies for strong signals from nearby transmitters. A STLK object can be used for standalone operation—the radio just sweeps and stops when activity is detected, or for stalking that is performed while the radio is scanning. During scanning, the radio will check for activity on all the enabled Scannable Objects: TGRP objects, CONV objects, LMIT objects and STLK objects.

Essential Parameters

By default, a newly created STLK object is ready to go without any changes. In its default configuration, the STLK object will sweep through all of the important land mobile radio bands and look for strong signal activity from nearby transmitters. You may wish to include or exclude some bands in your sweeps in order to check other frequency ranges or to limit the amount of time the scanner spends sweeping frequency ranges where local transmitter activity is less likely. See “**Appendix B: Detailed Menu Reference: STLK Menu**” on page 122 for detailed menu information.

To create a new STLK object:

1. Press **PGM** to place your scanner into Program Mode.
2. Press **NEW** softkey, then press **SRCH** softkey to view the available Search types.
3. Press **STLK** softkey.
4. Scroll down to **TYPE:** and press **►** if you want to change between **All Bands** and **Public Safety**.

Refer to “**Dedicated Signal Stalker II**” on page 64 or “**Appendix A: Search Bands**” on page 100 for sub-band frequency information.

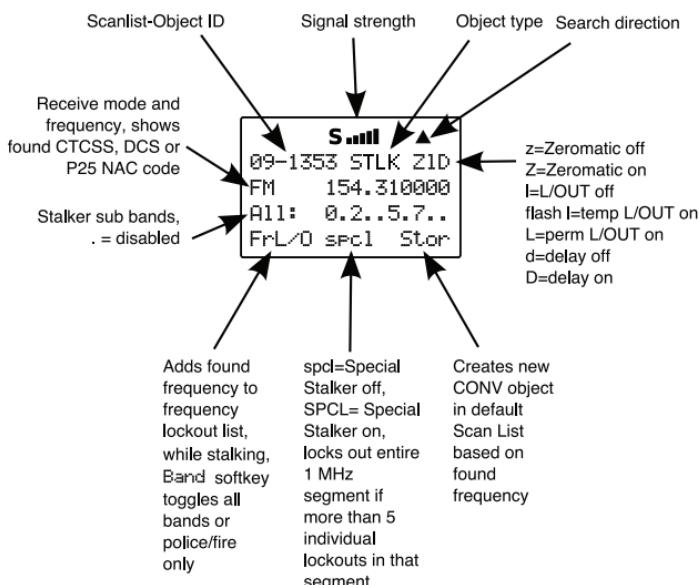
Object Searches

If you want to include or exclude sub bands:

1. Scroll down to **Sub-bands:** and press **◀** or **▶** to scroll through the sub-bands.
2. Press **SEL** to select **On** or **Off**. An asterisk (*) indicates the sub band is enabled.
3. Press **▲** or **▼** to select **Tag:** to name your STLK object.
4. Use the number keys to enter a name. See **"Appendix C: Text Entry and QuickText"** on page 125 for information on entering text.
5. Press **Save** softkey to store your STLK search as an object.

To activate STLK search:

1. Press **MAN** during scanning to enter Manual Mode.
2. Press **▲** or **▼** to scroll through the objects to **STLK**.
3. Press the **STLK** softkey.



Dedicated Searches

Your scanner provides fast access to dedicated frequency search modes that allow you to execute searches or run Signal Stalker II without having to go through the process of setting up and saving a search object. This is handy for those times where you need to run a search quickly. Dedicated search modes do not create new search objects or use previously created search objects.

The **SRCH** key provides immediate access to the dedicated search modes. Pressing the **SRCH** key cycles through each search mode in this order: Limit, Railroad, Public Safety, Aircraft, Ham, CB, Marine, and FRS/GMRS/MURS/DOT.

Dedicated LMIT Search

Your scanner's dedicated LMIT search mode provides you with the ability to create a limit search with a search frequency range between upper and lower limit frequencies that you specify and perform the limit search directly without creating a new LMIT object. You can then monitor that frequency range for transmissions.

To enter LMIT mode:

1. Press **SRCH** repeatedly until the display indicates LMIT search.
2. Press the **Lmts** softkey to set the lower and upper frequency limits for your limit search.

Note: When a signal is being received, the **Lmts** softkey (F1) changes to **FrL/O**. You can access the **Lmts** softkey by pressing **FUNC F1** when the **F1** key function is **FrL/O**.

3. Press **▲** or **▼** to change the search direction.

Dedicated Searches

4. Press the **MODE** softkey to change the receive mode (AM, FM, NFM) from the default for the current frequency range (auto).
5. Press the **FrL/O** softkey to add a found frequency to the lockout list.
6. Press the **STOR** softkey to create a new CONV object using the found frequency.

Dedicated SRVC Search

Your scanner's dedicated SRVC search modes provide you with the ability to instantly access each of the scanner's service search ranges without creating a new SRVC object.

To activate dedicated SRVC search mode:

1. Press **SRCH** repeatedly until the desired service search is indicated on the display. The following service searches are available:
 - **Railroad**: Searches the Association of American Railroads (AAR) VHF railroad frequencies used in the US and Canada.
 - **Public Safety (PubSafety)**: Searches commonly used public safety frequencies.

	Freq. (MHz)	Band
0	30.8 - 47.6	VHF Low Band
1	151-173	VHF High Band
2	453-468	UHF Band
3	764-797	700 MHz Band
4	851-869	800 MHz Band

Dedicated Searches

- **Aircraft** - Searches civilian and military air frequencies.

	Freq. (MHz)	Band
0	108-118	Navigation
1	118-137	Civilian Voice
2	138-150	Military Voice (excludes 2m Amateur)
3	225-400	Military Voice

- **Ham** - Searches amateur radio frequencies.

	Freq. (MHz)	Band
0	28.0-29.7	10m Band
1	50-54	6m Band
2	144-148	2m Band
3	222-225	1.25cm Band
4	420-450	70cm Band
5	902-928	33cm Band
6	1240-1300	23cm Band

- **CB** - Searches the citizen's band radio frequencies.
- **Marine** - Searches the VHF-FM marine radio band.
- **FRS/GMRS/MURS/DOT/STAR (F/G/MURS)**
Searches the FRS, GMRS, MURS, DOT and STAR radio frequencies.

2. Use the numeric keypad to toggle the sub bands on and off while searching.
3. Press ▲ or ▼ to change the search direction.
4. Press the FrL/O softkey to add a found frequency to the lockout list.
5. Press the STOR softkey to create a new CONV object using the found frequency.

Dedicated Searches

Dedicated Signal Stalker II

Dedicated STKL mode lets you access and run Signal Stalker II easily and quickly.

In Manual, Program or Scan mode, press **FUNC SCAN** to access the Signal Stalker II dedicated mode.

Note: When a signal is being received, the **Band** softkey (F1) changes to **FrL/0**. You can access the **Band** softkey by pressing **FUNC F1** when the **F1** key function is **FrL/0**.

Operation of the dedicated Signal Stalker II mode is almost identical to that of the object mode, with one exception. When dedicated Signal Stalker II mode is used, you may press the numeric key on the keypad that corresponds with the sub-band you wish to enable or disable. Disabling a sub-band will cause the Signal Stalker II system to skip the frequencies within that sub-band as it performs its sweeps.

Signal Stalker II sub-bands:

	Freq. (MHz)	Band
0	25-54 MHz	VHF Low Band
1	108-137	VHF Aircraft Band
2	137-174 MHz	VHF High Band
3	216-300	220 MHz Commercial/Amateur Band
4	300-406	UHF Military Air Band
5	406-470	UHF Band
6	470-512	UHF-T Band
7	764-797	700 MHz Band
8	806-869	800 MHz Band
9	894-1300 MHz	900 MHz Band, 23 cm Amateur Band

Dedicated Searches

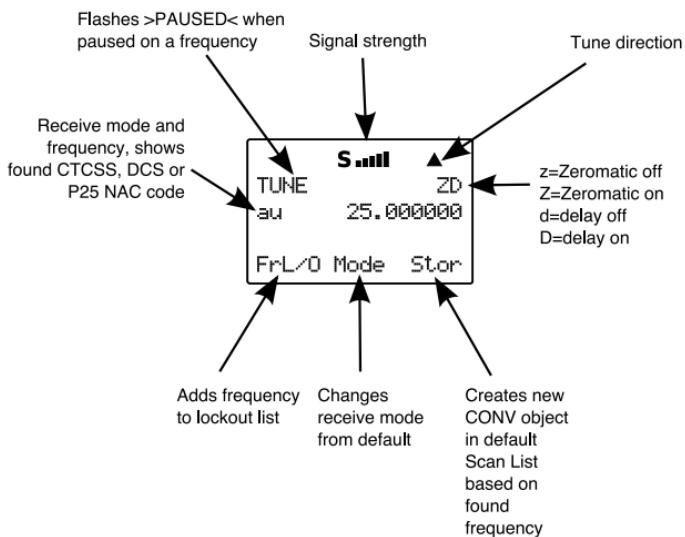
Public Safety sub bands:

	Freq. (MHz)	Band
0	30.8 - 47.6	VHF Low Band
1	151-173	VHF High Band
2	453-468	UHF Band
3	764-797	700 MHz Band
4	806-869	800 MHz Band

Dedicated TUNE Search

Your scanner's dedicated TUNE mode provides you with the ability to quickly enter any frequency and monitor that frequency for transmissions, or search up or down from that frequency for activity.

1. To enter TUNE mode, press **TUNE**. The scanner displays the TUNE screen.



By default, TUNE mode is paused when first activated.

Dedicated Searches

2. Press **PSE** to begin searching from the current frequency.
3. Press **▲** or **▼** to change the search direction.
 - or** Press **FrL/O** softkey to add a found frequency to the lockout list.
 - or** Press the **MODE** softkey to change the receive mode (AM, FM, NFM) from the default for the current frequency range (au).
 - or** Press **STOR** to create a new CONV object using the found frequency.
 - or** Use the keypad to enter a new frequency, and press **ENT** to make that the TUNE frequency.

Notes:

- Using **FUNC TUNE** from any other mode will load the last active frequency from the other mode into TUNE. For example, pressing **FUNC TUNE** while parked on a trunked radio TGRP will load the control channel frequency into the TUNE mode if the control channel frequency is the last frequency that the scanner checked while scanning.
- Dedicated TUNE mode will always check for the presence of encoded squelch and digital modulation each time it finds an active frequency. If a valid encoded squelch code is found, it will be shown on the display, and stored automatically when you press **STOR** to create a new CONV object.
- Dedicated TUNE mode also displays information about trunking control channels and trunked voice channels it finds while tuning through the RF spectrum.

The following information is displayed for each trunking mode:

Dedicated Searches

Trunked Mode	Analysis Display
Motorola 3600 baud control channel	qq% SID:ssss Sst qq = decoding quality of the control channel data, SID = System ID, and S = Site Number
P25 9600 BPS control channel	qq% Nnnn Wwwwww Sys:sss Rrr Sst qq = decoding quality of the control channel data, N = NAC, W = WACN, SYS = System ID, R = RFSS, and S = Site Number
EDACS control channel	qq% S:sss h/H s/S a/A qq = decoding quality of the control channel data, S = Site ID, h/H = not home site/is home site, s/S = not SCAT site/is SCAT site, a/A = not Aux CC/is Aux CC
LTR home repeater	HR:hh A-HH-GGG HR = the home repeater number of the tuned frequency, A-HH-GGG = the Area, Home Repeater and Group ID of the LTR talkgroup
Motorola analog voice channel	VC: ls TGID-nnnnn lsTGIN = the decoded talkgroup ID data from the lowspeed data stream Note that the analog lowspeed data protocol does not provide error correction, and some false "VC: lsTGIN" readings should be expected.

Tune LED

Tune LED can provide visual indication of signal strength using the tri-color LED.

To activate the Tune LED:

1. Press **PGM** for Program Mode.
2. Press **GLOB** softkey.
3. Press **▼** to select **Tune LED:**.
4. Press **◀** or **▶** to select **Tune LED on or off**.
5. Press the **SAVE** softkey to save your changes to the radio's configuration memory.

Weather Scanning

Weather Scanning

Note: The weather alert feature is an extremely sensitive, high quality receiver of weather frequencies. However, the included flex antenna is optimized for general purpose scanning. If you use this scanner as your only means for receiving weather alerts, please check to be sure you are receiving a clear signal on the flex antenna or switch to an external antenna that gives you clear reception of a local NOAA weather broadcast.

Weather Radio Mode

Weather radio mode allows you to receive weather broadcasts from your local weather service.

To use weather radio mode:

1. Press **WX**.

The scanner will quickly scan and lock on to the first active weather radio frequency it receives.

2. Press **▲** or **▼** to look for other weather radio transmitters.

It is generally best to select the weather radio transmitter that provides you with the strongest signal. You can use the signal meter to help you chose the best weather radio transmitter for your area.

While operating in Weather Radio Mode, your scanner will alert on SAME messages that match the SAME location codes you have entered, or all SAME messages if you do not enter any SAME location codes.

Weather Priority Mode

Weather Priority mode samples the specified weather frequency periodically while scanning to see if the All Hazards 1050 Hz Warning Alert Tone (WAT) is present. If the WAT is present, the scanner will sound an alarm and tune to the specified weather frequency to monitor the nature of the alert.

To activate Weather Priority Mode:

1. Press **WX**.
2. Press **▲** or **▼** to look for other weather radio transmitters and find the strongest weather radio transmitter for your location.
3. Press **PRI**.

SAME Standby Mode

SAME Standby Mode monitors the specified weather frequency silently, waiting to receive a Specific Area Message Encoding (SAME) alert that corresponds with a SAME location code that you have previously entered. If there is a match, the scanner will sound an alarm, display the alert type, and monitor the nature of the alert.

To activate SAME Standby Mode, first you should provide at least one SAME location code for your city, county or state. By default, SAME mode will alert on any SAME message received if no SAME location codes are entered.

SAME alerts include FIPS codes to identify areas, established by the US Census bureau. You can set your scanner to alert for all areas or limit weather alerts to up to 10 specific areas by FIPS code. A list of SAME location codes can be found online at: www.weather.gov.

Weather Scanning

FIPS codes are formatted as follows:

Subdivisions	State Code	County Code
0-9 (0=entire area)	01-50 (00=all states)	XXX (000=all counties)

Example: 048439
(0=All; 48=Texas; 439=Tarrant County)

In addition to the code for your location, you may wish to enter additional codes for surrounding areas and any other areas of interest so that you can receive advance warning of adverse or dangerous weather that may be headed in your direction.

Your scanner also has a SAME wildcard feature, which allows you to set the radio to alarm on partial matches of the location code.

To enter SAME Location and Event Codes

1. Press **WX** to enter Weather mode.
2. Press the **SAME** softkey to add or edit SAME entries.
3. Press **▲** or **▼** to scroll to the desired SAME code entry.
4. Press **SEL** to edit the selected SAME entry.
5. With the **Entry:** field selected, press **►** to turn the entry on.

Note: When a SAME location/event code storage location is set for **Entry ON**, the radio will process the SAME location and event code that is stored there. When a storage location is set for **Entry OFF**, that SAME location and event code will be ignored.

6. Scroll to **Code:** and press **►** to enter a SAME location code.
7. Press the number keys to enter a SAME code.

Note: The PRO-651 supports entry of Extended SAME codes, which can include numbers and letters. The text entry mode is used to enter both numerical SAME codes and extended SAME codes. To enter a numerical SAME code, simply precede each number in the SAME code with "1." For example, to enter SAME code 048113, press 10 14 18 11 11 13.

8. Scroll to the **Event:** field. Note the current default of *******, which will allow all messages for the specified SAME location code. We recommend that you leave the event code with ******* to receive all alerts. A list of event codes can be found at www.weather.gov.
9. Scroll to **Tag:** and press ►.
10. Input a tag name that corresponds with the SAME location code that you have entered. See "**Appendix C: Text Entry and QuickText**" on page 125 for information on entering text.
11. Scroll to **Alarm:**. You can specify different alarm sounds for this SAME entry. We recommend that you use the default setting here for general purpose weather alerting.
12. Scroll to **Lockout:**. Default is off. Lockout is a special purpose parameter that can be used to lock out individual event or area codes. We recommend that you leave **Lockout** set to **off** for general purpose weather alerting.
13. When you have finished editing your SAME entry, press the **Save** softkey to store the data.
14. Press the **Save** softkey again to save all SAME changes and return to the Weather mode.