



SL30 NAV / COM Radio



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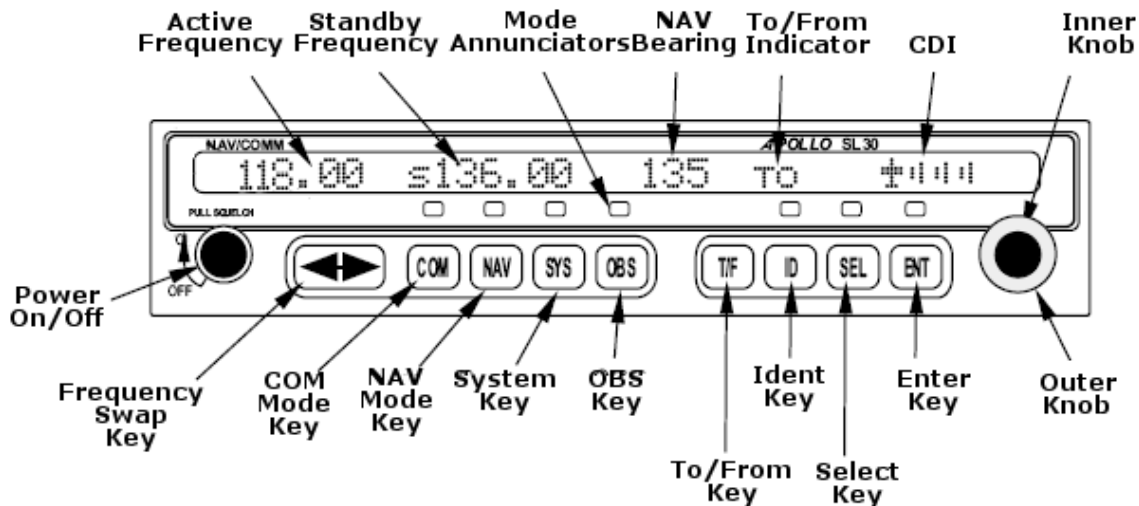
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Introduction

The SL30 is a VHF Navigation/Communications Transceiver for use by the aviation pilot. It is designed in a slim form to enable installation and use a limited amount of panel space. The SL30 Digital Signal Processing (DSP) filter design allows it to track low gain VOR signals with more accuracy than conventional analog receivers. Additional features include Morse code Station Identification, multiple display and menu modes, and storage of recently used frequencies. You may also save your own frequencies in memory.

Getting Started

The SL 30 is a powerful VHF COM 2 transceiver combined with a NAV 2 receiver. The SL30 is a simple to operate communications solution in a small footprint, saving valuable panel space. Besides traditional NAV/COM features, the SL30 also incorporates workload-reducing functions such as automatic decoding of the Morse code station identifier for VOR signals, a most-used frequency storage in memory, a custom frequency storage memory, and a built-in course deviation indicator.



DISPLAY

The SL30 uses a single line dot matrix alphanumeric display. The display may be dimmed at night if you prefer. Just use the Avionics Dimmer Switch.

CONTROLS

**Power on/Off switch**

Inner and Outer Knobs - The dual concentric knobs on the right side of the SL30 are used to select frequencies, to view the features available within a function, or make changes. Details are provided in the appropriate sections.



Frequency Swap Key - Press this key to switch between the active (left-most) and standby (right-most) frequency.



COM Key - Press COM to select the COM radio mode. The annunciator will light above the button when you are in COM mode. This will also clear any COM display mode you are using to the default display.



NAV Key - Press NAV to select the NAV radio mode. The annunciator above the button will illuminate. This will also clear any NAV display mode you are using to the default display.



SYS Key - Press SYS to reach the System mode. The annunciator above the button will light when you are in the System mode. Information on the software/version is displayed in this mode.



OBS Key - Press this key to see the graphic CDI. If the NAV frequency you are on is not receiving the display will remain flagged.



To/From Key - Press T/F to toggle between the bearing TO or radial FROM the active VOR. The T/F button does not operate for Localizer frequencies.



ID Key - Press ID to select the NAV IDENT mode.



Select Key - Press SEL to choose from a list of channel types or to change values. In COM or NAV modes, press SEL to choose frequencies from the available lists. Press SEL again if you want to cancel the selection process.



Enter Key - Press this key to save selected values, to confirm a prompt, or to save frequencies into memory.

OPERATION SUMMARY

Power On

Turn the SL30 on by clicking the Power On/Off switch. Make sure the aircraft's Master Avionics power switch is also on. The SL30 will go through a short initialization routine and then briefly display the last database update.

Selecting a COM Frequency

New frequencies are first selected as a Standby frequency and then toggled to the Active side when desired. While viewing the Standby frequency display, use the LARGE and SMALL knobs on the right side of the SL30 to select the desired frequency. The outer knob controls the whole number digits, and the inner knob the decimal digits.

1. Make sure you are in COM display mode. The annunciator above the COM key will illuminate when you are in COM mode. Otherwise, press COM.
2. Turn the LARGE knob to change the values in one MHz increments. The MHz selection range is between 118 and 136 in one MHz steps.
3. Turn the SMALL knob to change the values in 25 kHz increments. The kHz selection range is between 000 and 975 kHz in 25 kHz steps. Note that only two digits are displayed to the right of the decimal point.
4. Turn the LARGE and SMALL knobs clockwise to increase and counterclockwise to decrease the frequency values. Standby frequency selection is not inhibited during transmit.
5. Press the Frequency Swap key to toggle the Standby frequency to the Active frequency.

Selecting a NAV Frequency

The selection of NAV frequencies is the same as for the COM frequencies. The annunciator above the NAV button will illuminate.

1. Press NAV to reach the NAV radio function.
2. Turn the LARGE knob to change the values in one MHz increments. The MHz selection range is between 108 and 117 in one MHz steps.
3. Turn the SMALL knob to change the values in 50 kHz increments.
4. Press the Frequency Swap key to toggle the Standby frequency to the Active frequency.

Note

You cannot display both NAV and COM frequencies at the same time.

System Mode

Access to SYS mode is obtained by pressing the SYS key. In the System mode you can view software versions and database timestamp.

Recalling Frequencies

In the COM or NAV modes, press the Select Key (SEL) to gain access to the available frequency lists of each mode. Turn the LARGE and SMALL knobs to view the available channels.

1. Press COM or NAV to go to the desired mode.
2. Press SEL to go to the frequency database.
3. Turn the outer knob to page through the different data memories. Autolist provides the last 10 frequencies you have used. Recall provides a list of 10 frequencies you have stored.
4. Press the Enter Key (ENT).
5. Turn the outer knob to display the available channels in the selected type.
6. Press the ENT key to put the displayed channel into the active frequency.

This space left intentionally blank.

Advanced Operation

COM RADIO MODE

119.10 s 124.55 TOWER

Standard Display Mode

In standard display mode the readout will show the active frequency, the standby frequency, and the encoded type of signal if available.

119.10 s 124.55 ---

If the signal encoding type cannot be read, or if the selected frequency is not receiving a signal, the display will read "---". If the unit is receiving a signal, but the signal is too weak to decipher the encoded type this display will also be shown.

COM Menus

Access to the menus is obtained by pressing the Select Key (SEL). The display will show the following data for each of the four modes:

Weather

132.50 s 128.50 Weather 133.25

Autolist

132.50 s 128.50 Autolist 131.40

Recall

132.50 s 128.50 Recall 131.25

Store

132.50 s 128.50 Store 129.25

Use the Outer Knob to scroll between these menus.

Saving a COM channel to stored memory

You can save the active frequency at any time. A total of up to 10 COM frequencies may be saved. After 10 COM frequencies are saved, the last item on the list will be dropped and the new saved frequency will be stored at the top of the list.

1. Make sure you are in COM mode. If so the annunciator above the COM key will be illuminated. Otherwise press the COM key to enter COM mode.
2. Press the Select Key (SEL) key. The COM menu will be displayed on the right.
3. Turn the Outer Knob until the menu display reads "Store".
4. Press the Enter Key (ENT) and the active COM frequency will be stored in the database, at the top of the list.

Recalling a COM channel from stored memory

You can recall a frequency saved to stored memory using the Recall Menu. A total of up to 10 COM frequencies may be stored in this memory for use at any time. To recall a frequency:

1. Make sure you are in COM mode. If so the annunciator above the COM key will be illuminated. Otherwise press the COM key to enter COM mode.
2. Press the Select Key (SEL) key. The COM menu will be displayed on the right.
3. Turn the Outer Knob until the menu display reads "Recall".
4. Press the Enter Key (ENT) and the stored COM frequency will be set as the active frequency.

Recalling a COM channel from the Autolist

The Autolist automatically saves every active frequency that receives a decodable signal. The last 10 frequencies you have used are available for recall from the Autolist, with the most recent at the top. Duplicate frequencies, or frequencies that are already stored in user memory are not saved on the Autolist. You can recall a frequency from this list at any time. To recall an Autolist frequency:

1. Make sure you are in COM mode. If so the annunciator above the COM key will be illuminated. Otherwise press the COM key to enter COM mode.
2. Press the Select Key (SEL) key. The COM menu will be displayed on the right.
3. Turn the Outer Knob until the menu display reads "Autolist".
4. Press the Enter Key (ENT) and the stored COM frequency will be set as the active frequency.

Weather Mode

The SL30 actively seeks the nearest signal that is decoded as an Automated Surface Observing System (ASOS) station. To monitor the nearest ASOS frequency:

1. Make sure you are in COM mode. If so the annunciator above the COM key will be illuminated. Otherwise press the COM key to enter COM mode.
2. Press the Select Key (SEL) key. The COM menu will be displayed on the right.
3. Turn the Outer Knob until the menu display reads "Weather".
4. Press the Enter Key (ENT) and the SL30 will monitor the ASOS frequency.

The SL30 still maintains the selected active frequency. To discontinue monitoring the ASOS frequency simply press the COM key again.

If a signal is decoded as an ASOS station it's frequency will be displayed.



132.50 s 128.50 Weather 133.25

If no station is available this will be indicated on the display



132.50 s 128.50 Weather* No Station

NAV Radio Mode

Press the NAV key to engage NAV mode. If an active signal is decoded on the selected frequency the display will show the station ID, decoded type if available, and bearing to signal:

113.25 s109.80 KIXD VOR From 125°

If no signal is received the display will show as flagged:

113.25 s109.80 ---FLAGGED---

NAV Menus

Access to the menus is obtained by pressing the Select Key (SEL). The display will show the following data for each of the four modes:

DME Mode

113.25 s109.80 Menu DME Mode

Autolist

113.25 s109.80 Menu Autolist

Recall

113.25 s109.80 Menu Recall

Store

113.25 s109.80 Menu Store

Saving a NAV channel to stored memory

You can save the active frequency at any time. A total of up to 10 NAV frequencies may be saved. After 10 NAV frequencies are saved, the last item on the list will be dropped and the new saved frequency will be stored at the top of the list.

5. Make sure you are in NAV mode. If so the annunciator above the NAV key will be illuminated. Otherwise press the NAV key to enter NAV mode.
6. Press the Select Key (SEL) key. The NAV menu will be displayed on the right.
7. Turn the Outer Knob until the menu display reads "Store".
8. Press the Enter Key (ENT) and the active NAV frequency will be stored in the database, at the top of the list.

Recalling a NAV channel from stored memory

You can recall a frequency saved to stored memory using the Recall Menu. A total of up to 10 NAV frequencies may be stored in this memory for use at any time. To recall a frequency:

5. Make sure you are in NAV mode. If so the annunciator above the NAV key will be illuminated. Otherwise press the NAV key to enter NAV mode.
6. Press the Select Key (SEL) key. The NAV menu will be displayed on the right.
7. Turn the Outer Knob until the menu display reads "Recall".
8. Press the Enter Key (ENT) and the stored NAV frequency will be set as the active frequency.

Recalling a NAV channel from the Autolist

The Autolist automatically saves every active frequency that receives a decodable signal. The last 10 frequencies you have used are available for recall from the Autolist, with the most recent at the top. Duplicate frequencies, or frequencies that are already stored in user memory are not saved on the Autolist. You can recall a frequency from this list at any time. To recall an Autolist frequency:

5. Make sure you are in NAV mode. If so the annunciator above the NAV key will be illuminated. Otherwise press the NAV key to enter NAV mode.
6. Press the Select Key (SEL) key. The NAV menu will be displayed on the right.
7. Turn the Outer Knob until the menu display reads "Autolist".
8. Press the Enter Key (ENT) and the stored NAV frequency will be set as the active frequency.

DME Mode

DME mode displays the active and standby frequencies along with distance to signal (DME), speed to signal, and ETE. If a signal with DME data encoded is available at the selected frequency DME mode will be available. Otherwise the display will show as flagged.

```
113.25 s109.80 OJC 21.3nm 123kt ETE:0:14
```

To set the SL30 to DME mode:

1. Make sure you are in NAV mode. If so the annunciator above the NAV key will be illuminated. Otherwise press the NAV key to enter NAV mode.
2. Press the Select Key (SEL) key. The NAV menu will be displayed on the right.
3. Turn the Outer Knob until the menu display reads "Menu DME".
4. Press the Enter Key (ENT) and the stored display will switch to DME mode.

To/From - Bearing/Radial

The VOR radial display shows the To/From radial computed by the active channel's signal as well as the Morse code channel identifier decoded from the received audio. If no signal is received, the display will show as flagged.

```
113.25 s109.80 KIXD VOR From 125°
```

The T/F key will toggle between the Bearing **To** and Radial **From** the VOR. This key is not functional if a localizer frequency is selected on the active channel. If the signal is reversed, for example, when a bearing **To** signal is switched to a radial **From** reciprocal display the annunciator above the T/F key will illuminate.