GDL 30/ GDL 30A *(audio)*

marine weather satellite receiver

owner's manual

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Garmin International, Inc.
1200 East 151st Street, Olathe, Kansas 66062, U.S.A.
Tel. 913/397.8200 or 800/800.1020
Fax 913/397.8282

Garmin (Europe) Ltd.
Unit 5, The Quadrangle, Abbey Park Industrial Estate,
Romsey, SO51 9DL, U.K.
Tel. 44/1794.519944
Fax 44/1794.519222

Garmin Corporation
No. 68, Jangshu 2nd Road, Shijr, Taipei
County, Taiwan
Tel. 886/2.2642.9199
Fax 886/2.2642.9099

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XM Satellite Radio Inc.
Hardware and required monthly subscription sold separately. Subscription fee is consumer only. Subscription subject to Customer Agreement included with the XM Welcome Kit and available at www.xmradio.com. Other fees and taxes, including a one-time activation fee may apply. All fees and weather data subject to change. XM WX weather data displays and individual product availability vary by hardware equipment. Service available only in the 48 contiguous United States. Reception of the XM Signal may vary depending on location. XM WX Satellite Weather is a trademark of XM Satellite Radio. XM WX is a trademark of XM Satellite Radio Inc.
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Preface

Congratulations on choosing one of the most advanced marine weather systems available! The GDL 30 Marine Weather Satellite Receiver and the GDL 30A Marine Weather/Audio Satellite Receiver provide both graphical and textual marine XM WX weather information that can be viewed through your Garmin Marine Network Chartplotters (such as the GPSMAP 3006C/3010C) once you subscribe to the XM WX Satellite Weather service. Additionally, the GDL 30A offers music, news, and talk programming capability when you subscribe to the XM Radio service.

This manual covers the XM weather and audio features of the GDL 30/30A when viewed on the Garmin Marine Network Chartplotters. To get the most out of your new system, take the time to go through this manual to learn the operating procedures for your GDL 30/30A. This manual discusses in detail how to install your GDL 30/30A as well as how to subscribe to XM WX Weather (and XM Radio if you own a GDL 30A). It also describes weather features that are included in both the GDL 30 and 30A as well as the audio features that are included in the GDL 30A. **For all other unit operating instructions,** refer to your Garmin Chartplotter's Owner's Manual and Quick Reference Guide.

Product terminology used throughout this manual:

- This manual refers to the GDL 30 Marine Weather Satellite Receiver as **GDL 30** and the GDL 30A Marine Weather/Audio Satellite Receiver as **GDL 30A**. It covers instructions for both units (GDL 30/30A). Unless otherwise specified, unit operations are the same on both models.
- Garmin Marine Network Chartplotters are Multi-Function Display units such as the GPSMAP 3006C/3010C. They are referred to as **Chartplotters** throughout this manual.

Garmin Customer Service Product Registration

Help us better support your equipment purchase by completing our online registration today! Have the serial number of your GDL 30/30A handy and connect to our Web site (www.garmin.com). Look for the Product Registration link on the Home page. Also, be sure to record your serial number in the right-hand column for a quick reference.

Product Registration

Serial Number for GDL 30/30A

Use this area to record the serial number (8-digit number located on the bottom of your unit) in case it is lost, stolen, or needs service. Be sure to keep your original sales receipt in a safe place or attach a photocopy inside the manual.

Serial Number:

www.garmin.com

XM WX Weather and XM Radio IDs

Use this area to record the ID numbers (8-digit number located on the Information submenu tab of your unit--see page 6 of this manual) in case your unit is lost or stolen. XM Satellite Radio can deactivate these radio codes when you call.

XM WX Weather ID Number:

XM Radio ID Number (GDL 30A only):

www.xmwxweather.com

800-985-9200

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To subscribe to XM WX Weather and XM Radio, see pages 6-7.

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Unit Overview

Packing List and Accessories

Before installing your unit, please check to see that your package includes the following items. If any parts are missing, contact your Garmin dealer immediately.

Standard Package

- GLD 30 or 30A unit
- 7-pin power cable
- Garmin marine network cable (6 ft)
- Owner's Manual
- GA 31 Antenna with cable
- Audio cable (GDL 30A only)
- Grommet

Optional Accessories

- GMS 10 Network Port Expander
- Garmin marine network cables (20 ft and 40 ft)

UNIT CARE

Cleaning - *The unit's case is constructed of high quality material and does not require user maintenance other than cleaning. Clean the unit housing using a lightly-dampened cloth with a mild detergent solution and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components. Do not apply cleaner to the electrical contacts on the front of the unit.*

Storage - *Do not store the unit where exposure to temperature extremes may occur, as permanent damage may result.*

SERVICING YOUR UNIT

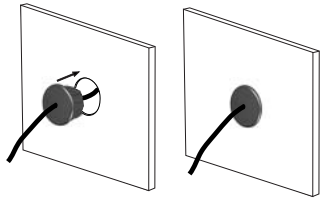
The Garmin GDL 30/30A has no user-serviceable parts. Should you ever encounter a problem with your unit, take it to an authorized Garmin dealer for repairs.

The GDL 30/30A is fastened shut with screws. Any attempt to open the case to change or modify the unit in any way voids your warranty and may result in permanent damage to the equipment.

Use a Network Port Expander to Connect the GDL 30/30A to a Chartplotter

If you plan to connect your GDL 30/30A to more than one Chartplotter, consider purchasing a Garmin GMS 10 Network Port Expander (not included). At this time, one Port Expander allows you to connect your GDL 30/30A to two Chartplotters. You can also use the Port Expander to connect multiple Chartplotters and multiple sensors, as shown above. Units are connected to the Chartplotters by Garmin marine network cables (not shown).

Using the Grommet



Use the included grommet to cover holes you may drill in your boat for the Garmin marine network cable.

Installing the GDL 30/30A

To obtain the best possible performance, install the GDL 30/30A according to the following instructions. When in doubt, seek professional technical assistance.

Step 1: Mount the GDL 30/30A

Mount the GDL 30/30A in a low-traffic location that is preferably dry and well-ventilated. Avoid mounting the unit where it will be submerged in liquids or exposed to extreme temperatures. If you wish to view the blink codes (see Appendix A), be sure to mount the GDL 30/30A so that the LED is visible.

Once the location is chosen, place the unit in the desired position. Be sure to allow enough clearance for attaching the cables. Using the unit as a template, mark the location of the four mounting holes. If needed, additional mounting holes may be drilled in the side mounting flanges of the unit. Secure the GDL 30/30A to the mounting location using the appropriate fasteners.

Step 2: Connect the 7-pin power cable to your boat's battery or fuse block

Connect the 7-pin power cable (included) to the 7-pin power cable connector located on the GDL 30/30A (it is labelled POWER). Then, connect the Red wire to the positive (+) terminal on your battery or fuse block and the Black wire to the negative (-) terminal. Do not remove the AGC/3AG 2.0 amp fuse holder located on the Red wire.

Step 3: Connect the GDL 30/30A to your Chartplotter(s)

Connect the GDL 30/30A to one Chartplotter by using the Garmin marine network cable (included). Simply align the cable heads with the opening of the network port on both the GDL 30/30A and the Chartplotter. **Do not cut the Garmin marine network cable** if you need to drill a hole in your boat; use the included grommet that is specially designed to cover holes that are drilled for the Garmin marine network cable.

Connect the GDL 30/30A to more than one Chartplotter using the Garmin GMS 10 Network Port Expander (not included). See instructions in the GMS 10 Port Expander manual for more information.

To ensure safety, use the appropriate tie-wraps, fasteners, and sealant to secure the cable along a route and through any bulkhead or deck.

Step 4: Connect the GA 31 Antenna to the GDL 30/30A

Since antenna mounting locations and methods vary, you will need to obtain an antenna mount to install the antenna. The antenna base fits a standard 1-inch, 14 threads-per-inch marine mount. Check with your Garmin dealer or a marine supply retailer for this item.

Temporarily place the antenna at your desired installation location. Then, check its operation with potential interfering equipment turned on and off. (For example, other electronic equipment, fan motors, engine ignition, alternators, generators, radars, and VHF radio transmissions can be sources of interference.)

Position the antenna so that it obtains the clearest possible view of the sky and horizon in all directions. Avoid mounting the antenna next to large areas of conductive material (such as metal and aluminum) as this may cause poor signal reception. The GA 31 antenna is supplied with a 30-foot cable. When routing the cable, avoid routing it near the vessel's alternator or ignition system components or parallel to other power lines. Do not cut or shorten the cable; doing so can harm the weather and radio reception.

After you have found a suitable location, permanently install the antenna. Then, connect the antenna cable to the GDL 30/30A connector that is labelled ANTENNA.

If you have a GDL 30A: Connect the Audio cable (included) to the GDL 30/30A connector that is labelled AUDIO and to the audio inputs on your stereo receiver.

Step 5: Turn on the GDL 30/30A

Once you connect the GDL 30/30A to your boat's power supply and to a Chartplotter (either directly or via a Garmin GMS 10 Network Port Expander), the GDL 30/30A automatically turns on or off whenever you turn on/off a Chartplotter.

Turn on your Chartplotter. Check the blinking lights on the front of the GDL 30/30A to ensure that it is on (see Appendix A to view the blink codes).

You are now ready to subscribe to XM WX Weather (and XM Radio if you have a GDL 30A). Subscription instructions begin on the following page.

GA 31 Antenna with cable

Need More Cable?

Your GDL 30/30A ships with a 6-foot Garmin marine network cable so that you can connect the unit to a Chartplotter or Network Port Expander (not included). Contact Garmin or your Garmin dealer if you need to purchase 20- or 40-foot cables.

Do not cut the GA 31 cable under any circumstance.

NOTE:

The GDL 30 Marine Weather Satellite Receiver enables you to receive XM WX Weather.

The GDL 30A Marine Weather/Audio Satellite Receiver enables you to receive both XM WX Weather and XM Radio.

*Use the **ARROW KEYPAD** on your Chartplotter to move the cursor UP, DOWN, LEFT, or RIGHT.*

Subscribing to XM WX Weather and XM Radio

After you have completed installing the GDL 30/30A, you are ready to notify XM Satellite Radio to activate your XM WX weather subscription service. If you own a GDL 30A, you also can activate the XM Radio subscription service.

Follow the instructions below. Complete Steps 1-3 **BEFORE** you call XM Satellite Radio:

Step 1: Check the System Setup

Make certain the GDL 30/30A is fully wired and is connected either directly to a Chartplotter or to a Garmin GMS 10 Network Port Expander. Verify that the GA 31 antenna has been properly installed. If you own a GDL 30A, verify that the audio cable is connected to your GDL 30A and to your stereo receiver.

Step 2: Turn on your System

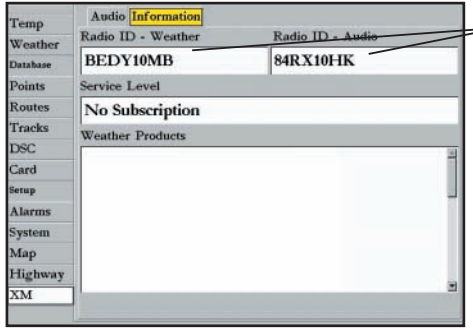
Turn on your Chartplotter. This turns on the GDL 30/30A automatically.

Step 3: Identify Radio ID(s)

Press and hold down the **ADJ/MENU** key on your Chartplotter. The Main Menu page appears. A list of tabs appear down the left-hand side of the Menu page. Using the **ARROW KEYPAD** on the Chartplotter, **ARROW DOWN** the tabs to the **XM** tab. (**Note:** With some Chartplotters, you may have to continue to **ARROW DOWN** the list until the XM tab becomes visible.) Then, **ARROW RIGHT** to display the **Information** submenu tab.

If you have a GDL 30 (Weather Satellite Receiver) or a GDL 30A (Weather/Audio Satellite Receiver):

From the Information submenu tab, verify that you have an XM Weather Radio ID. Have this information handy, as well as your billing address and other billing information, when you contact XM Satellite Radio.



Verify that you have an XM Weather Radio ID. If you have a Weather/Audio Satellite Receiver (GDL 30A), verify that you also have an XM Audio Radio ID.

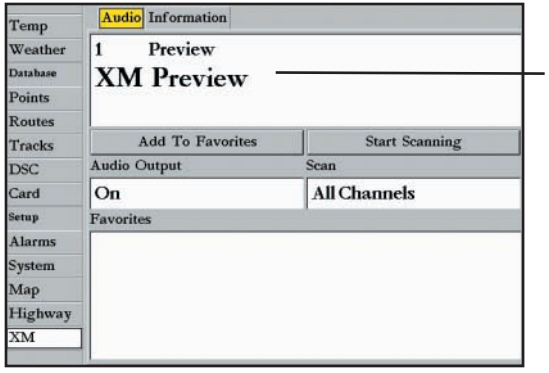
***Note:** If you have a Weather Satellite Receiver (GDL 30), you will not see an Audio submenu tab.*

For future reference, record your Radio ID(s) in the space provided on page 1 of this manual.

If you have a GDL 30A (Weather/Audio Satellite Receiver):

In addition to an XM Weather Radio ID, verify that you also have an XM Audio Radio ID and have this information handy when you contact XM Satellite Radio.

Then, select the **Audio** submenu tab (it is next to the Information submenu tab). Verify that **XM Preview** appears in the Radio Tuning box. You should hear the Preview channel playing over the audio system, indicating that your system is set up correctly.



If you have a Weather/Audio Satellite Receiver (GDL 30A), verify that XM Preview appears in the Radio Tuning box on the Audio submenu tab.

***Note:** If you have a Weather Satellite Receiver (GDL 30), you will not see an Audio submenu tab.*

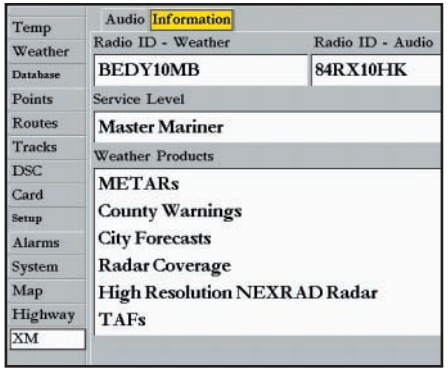
Step 4: Set up your XM Account

Contact XM Satellite Radio by phone at **800-985-9200**. When you call, an XM representative will ask you to provide your address, billing, and other information to set up your XM account. For answers to other questions you may have, call this same number or visit www.xmwxweather.com.

Step 5: Activate your XM Service and Confirm that you have Received all Components of your Service Package

Once you have provided complete subscription information to XM Satellite Radio, the XM customer care representative will send out an XM signal to activate your radio(s).

XM WX Weather: Keep your Chartplotter powered on to ensure you receive the XM signal. You will know the signal has been received once you see each service component displayed in the "Weather Products" box and, finally, the name of the service package you have selected (Master Mariner, Fisherman, or Sailor) displayed in the "Service Level" box. Do not turn off your Chartplotter until you see the name of the service package you have selected displayed in the "Service Level" box (see Step 6).



You will know that the XM signal has been received when you see service components displayed in the "Weather Products" box and the name of your service package (Master Mariner, Fisherman, Sailor) displayed in the "Service Level" box.

Note: The service components displayed in the "Weather Products" box above are data sources used by the Chartplotter to generate weather features (such as Storm Cells, Lightning, and Wind) and to generate current weather/forecast summaries.

Problems with your System Activation?

If your system has not activated the XM WX Weather and/or the XM Radio service, call XM customer care at **800-985-9200** to refresh your signal.

XM Radio: Highlight the Audio submenu tab and verify you have received Channels 7, 9, 47, and 122 (see page 24 for more information). This indicates you have received all channels on XM's basic radio service.

If within an hour your system has not activated the XM WX Weather and/or the XM Radio service, call XM customer care at **800-985-9200** to refresh your signal.

Step 6: SAVE the Service Package to your Receiver

Only after you see the service name displayed in the "Service Level" box should you **fully power down your entire system** using the Chartplotter's power key. This means turning off all Chartplotters to which your weather/audio receiver is connected. **Do not shut down the system by using the breaker.**

Step 7: Add Features to your Chartplotter

When you turn on the GDL 30/30A after completing Step 6 (above), you are ready to add weather features to your Chartplotter's Map page (see page 9). If you have a GDL 30A, you are ready to customize your new radio stations (see page 24).

Adding Weather and Sea Surface Features to your Map displays

When you add weather and sea surface features, they will appear on the Map function on your Chartplotter. You can add these features through the Map function's Adjustment menu. Access this menu by pressing the **ADJ/MENU** key on your Chartplotter (see your Chartplotter's Owner's Manual for more information).

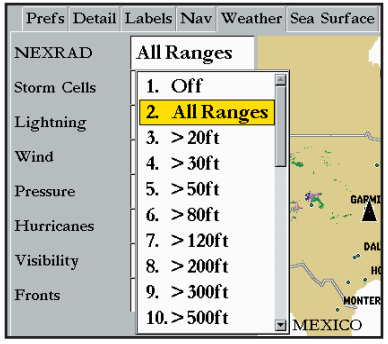
From the Adjustment menu, highlight "Setup" and press **ENTER**. The Main Menu page appears and the **Map** tab (visible in the lower left-hand column) is highlighted. **ARROW RIGHT** to the **Weather** submenu tab to view a list of weather feature options such as NEXRAD, Storm Cells, and Wind.

As is shown in the image at right, all features except NEXRAD are initially disabled.

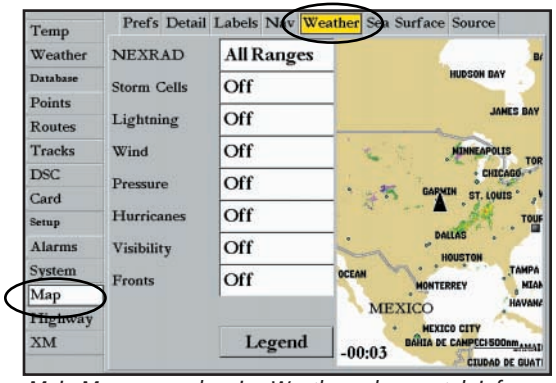
To add the features you wish to display on a map:

1. **ARROW DOWN** to the weather feature you wish to add. Then, press the **ENTER/MARK** key. A numbered column indicating field ranges appears (Off, All Ranges, > 20 ft, > 30 ft). Selecting a range activates the feature.
2. Highlight the appropriate range at which you wish the weather feature's data to appear on a map and then press the **ENTER/MARK** key. If your Chartplotter displays a numbered list, press the number associated with the range (such as 4. > 30 ft). The selected range appears in the box next to the weather feature.

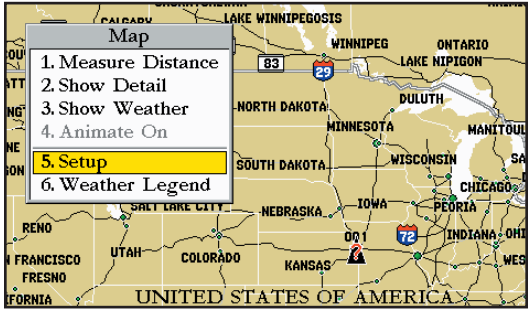
   Note: Depending on the weather feature, field ranges may be defined as "greater than" (>) or "less than" (<) a particular distance.
3. Once you have added your preferred weather features under the Weather submenu tab, add weather features under the Sea Surface submenu tab such as Temperature and Wave Height. Follow the instructions in Step 3 for setting ranges for each feature.
4. Press the **QUIT** key to exit the Main Menu page.



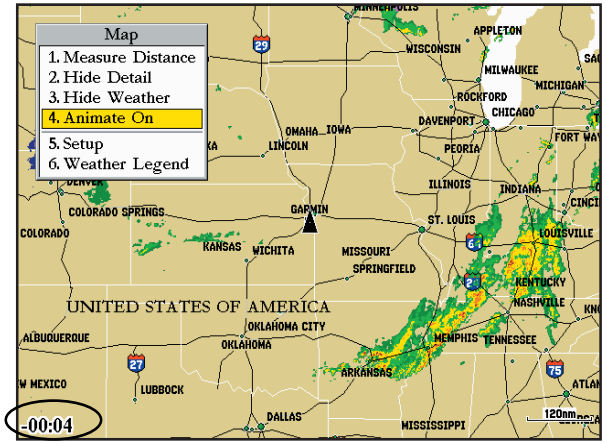
Selecting a range for a weather feature activates it. Once added, weather data specific to this feature is broadcast to your GDL 30/30A.



Main Menu page showing Weather submenu tab information. Use this tab to add weather features.



Use the Adjustment menu to access the Main Menu (highlight Setup, as shown above) and activate weather-specific functions.



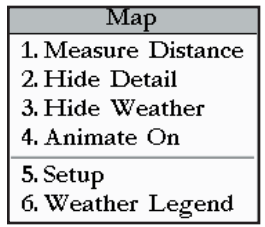
The NEXRAD weather data on this map is four minutes old, as is indicated by -00:04.

Initially Loading Weather-Related Information

When you add a weather feature to a map for the first time, data for that feature is sent to your GDL 30/30A via XM WX Satellite Radio. The speed by which this feature appears on a map depends on how often the data is transmitted from XM WX Satellite Radio to your unit; this is the broadcast rate. (See Appendix B for all weather-related broadcast rates). If you add the NEXRAD feature, for example, your wait time for the **initial** data to transmit to your unit will be no more than five minutes. If you power down your unit, the features must be loaded again so you may experience a wait period. After the initial transmission, information for each feature will be updated as data for each becomes available (update rate).

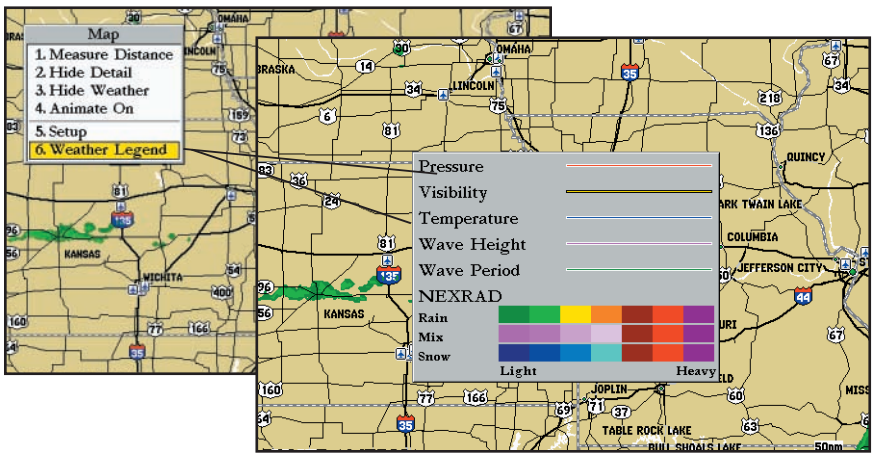
Adjusting Weather Features on a Map

As was stated earlier, the Adjustment menu for the Map function can be used to access the Setup tabs on the Main Menu page. Additionally, you can use options from the Adjustment menu to activate other weather-related functions.



Adjustment Menu for the Map function

Hide Weather: This function removes weather images from a map. This is useful if you wish to view map detail that is free from weather graphics. If you choose to view two Map functions on your Chartplotter, you can view the weather detail on one map and hide weather on the other map (see page 21).



Animate On: This function animates NEXRAD weather. When activated, a series of NEXRAD frames appear, each displaying a different time in the lower left-hand corner of the map. The map shown at top left displays -00:04, indicating that the NEXRAD information in this frame is four minutes old. In animation mode, a total of six map frames appear, beginning with the oldest to the most current weather data. On average, the frames reveal data that are about five minutes apart.

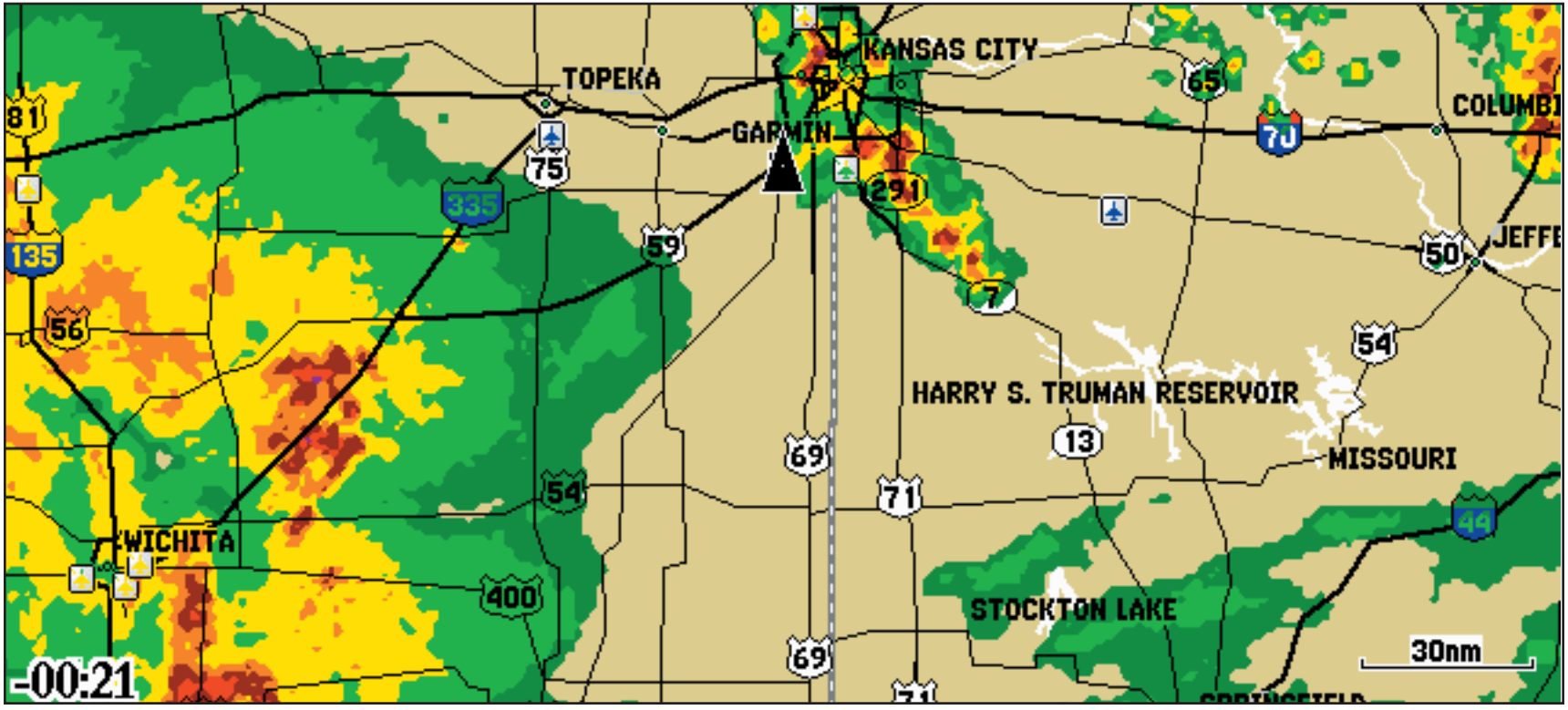
Weather Legend: This function displays the color legend for the Pressure, Visibility, Temperature, Wave Height, Wave Period, and NEXRAD features. (**Note:** You can also view the NEXRAD legend from the Weather submenu tab on the Main Menu page.)

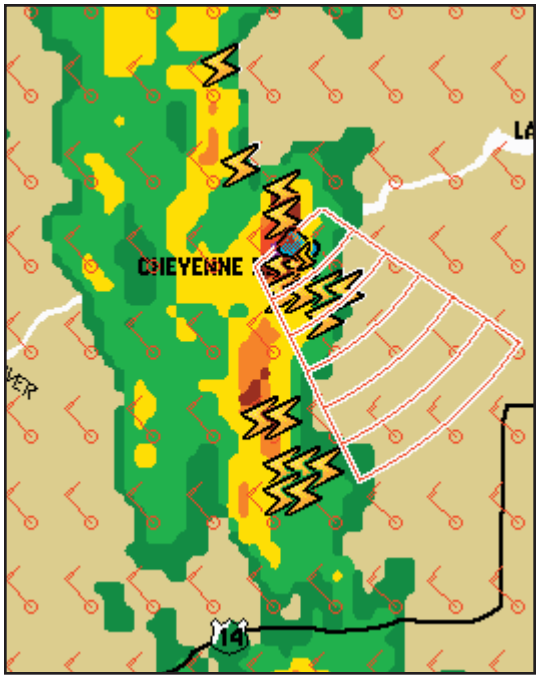
Weather Features

The following weather features are available along with a brief description of each. Note that the GDL 30/30A merely reports weather; it does not interpret weather data. Weather data that appears for each feature comes from reputable weather data centers such as the National Weather Service and the Hydrometerological Prediction Center. (See the XM WX Satellite Weather Web site at http://weather.xmradio.com/weather/specifications.html for more information.) Any weather feature can change in appearance or interpretation if the source that provides the information changes.

NEXRAD

NEXRAD is an acronym for NEXt Generation Weather RADar. The NEXRAD feature displays precipitation from very light rain and snow up to strong thunderstorms.

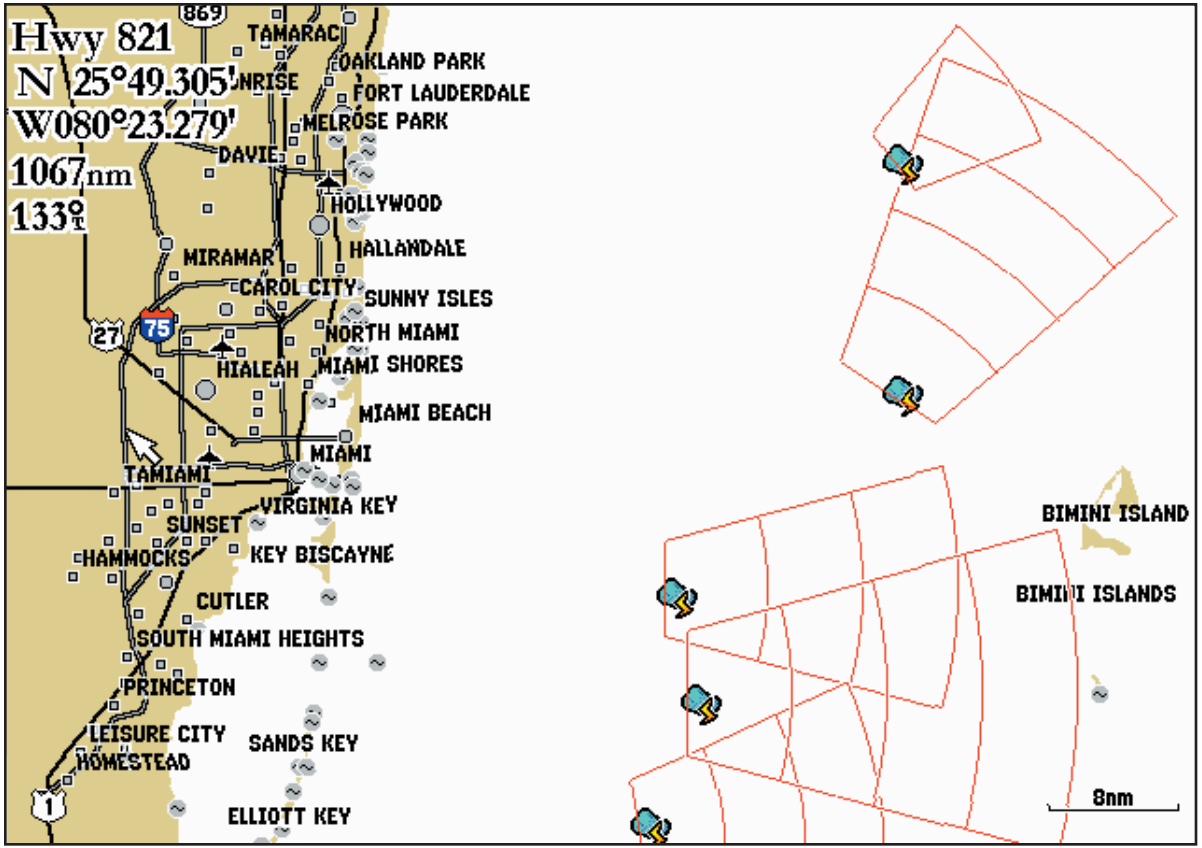




The red bars that appear in the middle of the cone in this Cheyenne, Wyoming storm indicate where the storm will be for the next 1 1/2 hours.

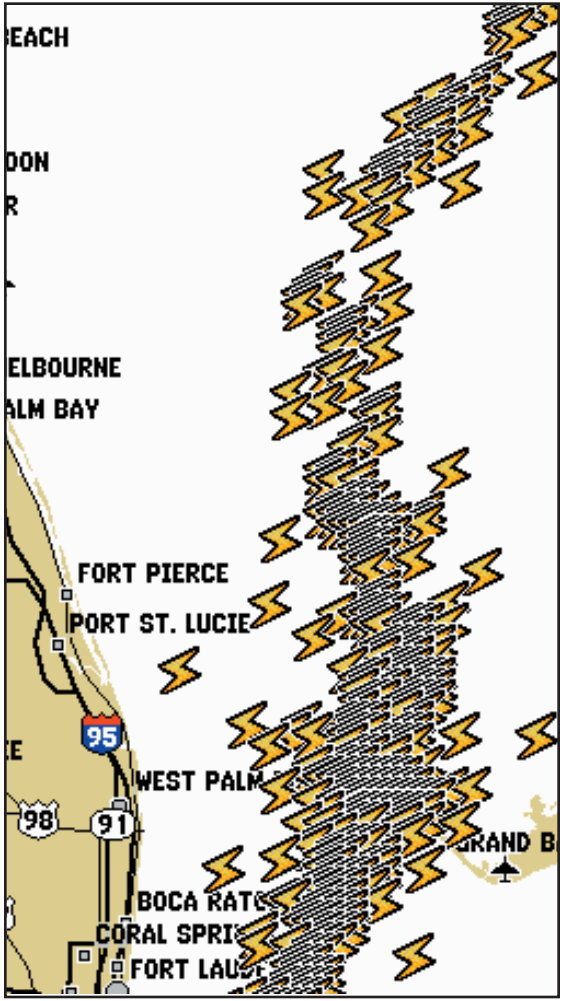
Storm Cells

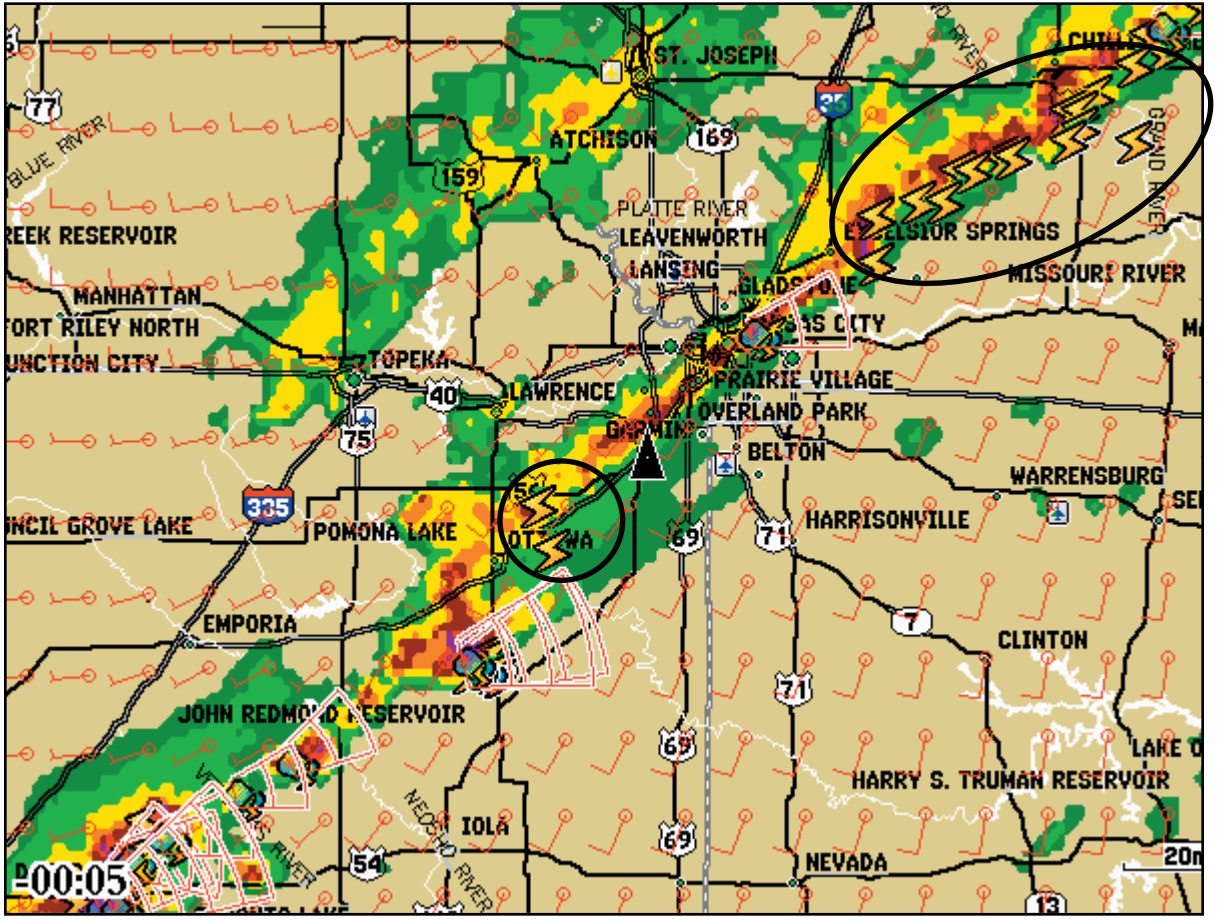
The Storm Cells feature displays storms as well as the storm's projected path in the immediate future. It also shows the size of the storm cell. The direction of the red cone indicates the projected path of the storm cell. The red bars that appear in the middle of the cone indicate where the storm will be in the future. Each bar represents 15 minutes.



Lightning

Lightning strikes are represented by lightning bolt icons, as shown in the images below. Lightning appears on the map if strikes have been detected within the last seven minutes.

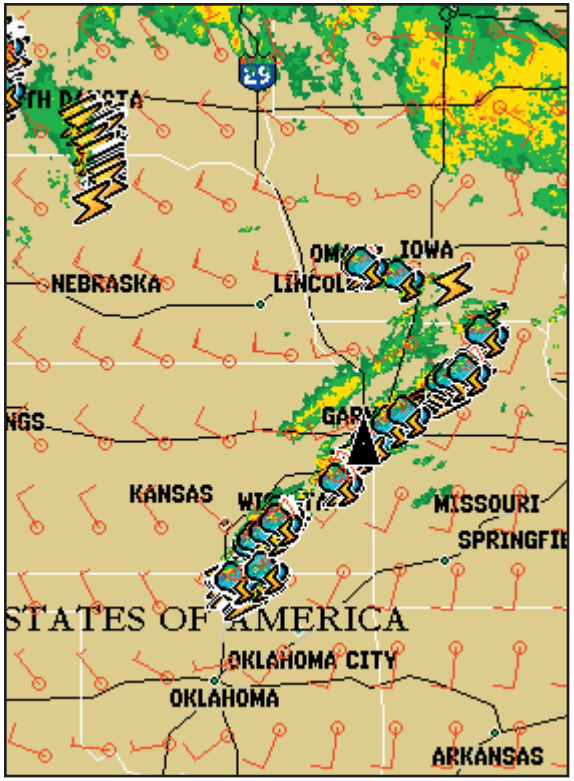




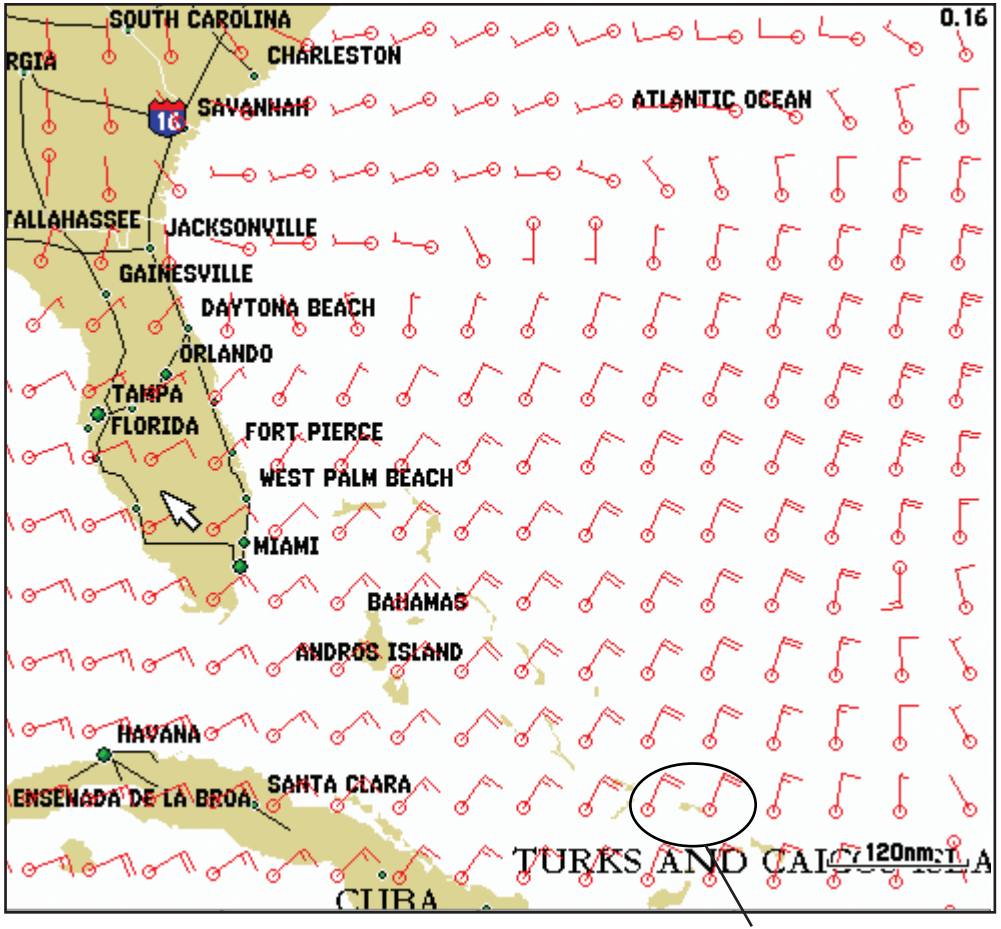
This image displays lightning strikes on a map that also displays NEXRAD, storm cells, and wind.

Wind

The Wind feature shown below displays wind speeds and direction. Wind speed is represented by flags on a wind arrow, where one big flag equals 10 knots and one small flag equals 5 knots. A darkened pennant equals 50 knots. Wind direction is represented by the direction of the circle.



In this example, NEXRAD data, storm cells, and lightning are displayed in addition to wind. Note how the wind shifts direction around this Midwestern storm mass.

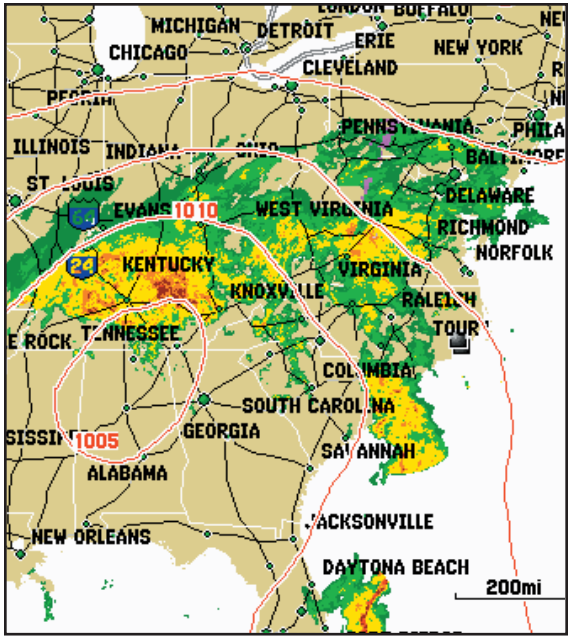


20-knot winds blowing to the Southwest.

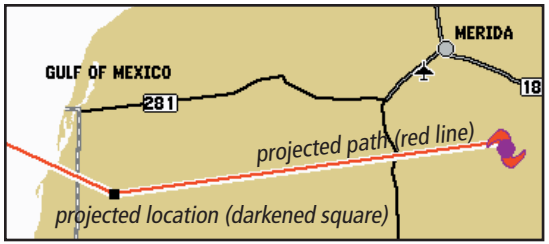
Pressure

The Pressure feature below displays pressure readings in millibars. Isobars on the map show changes in pressure. The closer the isobars are to each other, the faster the change in pressure.

Pressure units can be configured from the Main Menu page (go to the System tab and then to the Units submenu tab). See your Chartplotter's Owner's Manual for more information.

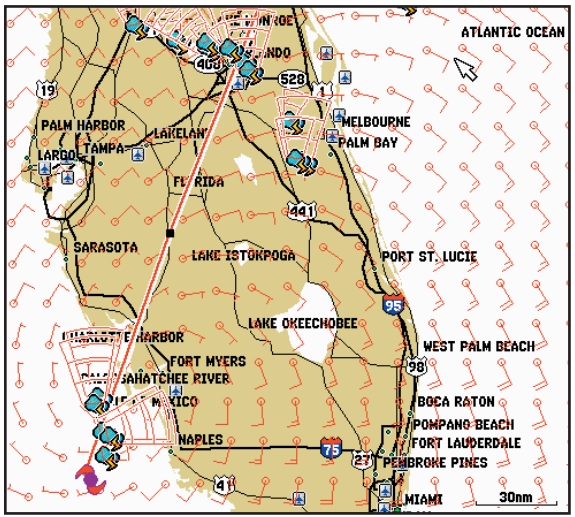


NEXRAD data is displayed in addition to pressure.



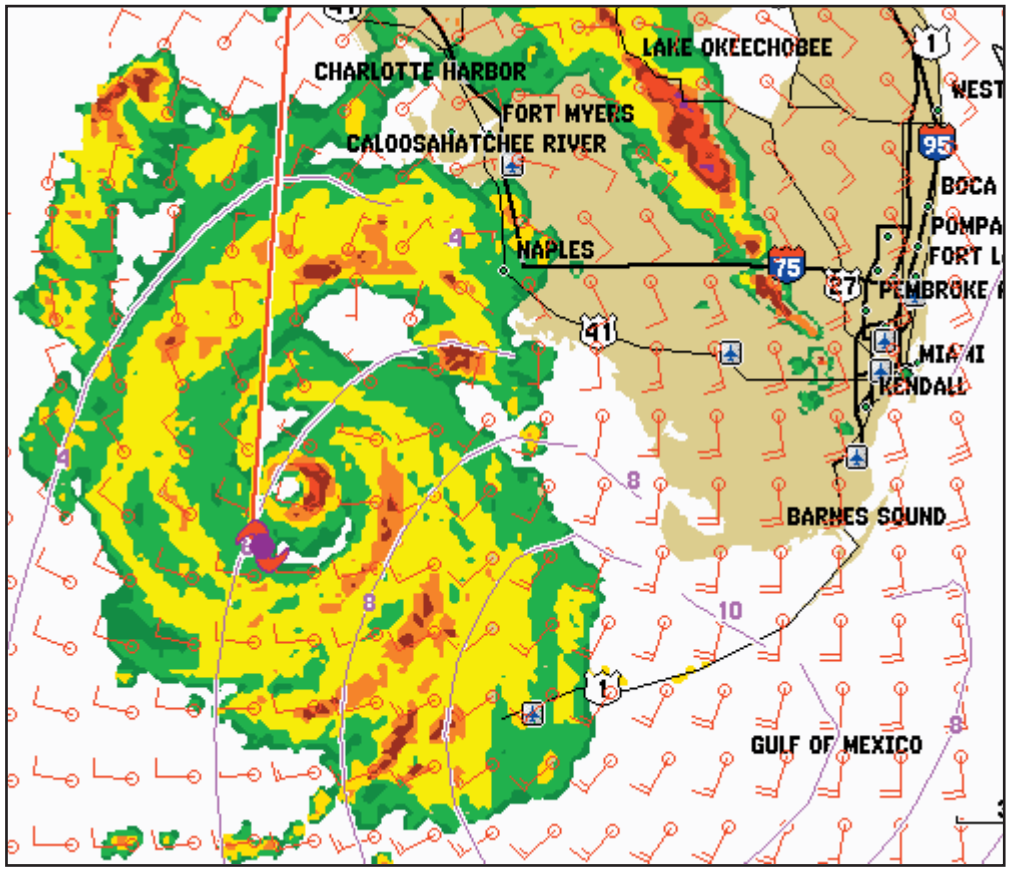
In the example above, this hurricane is projected to travel West-Southwest before moving in a Northwesterly direction.

The example below shows Hurricane Charley's projected path through Florida in August 2004. Wind and storm cells are also visible.



Hurricanes

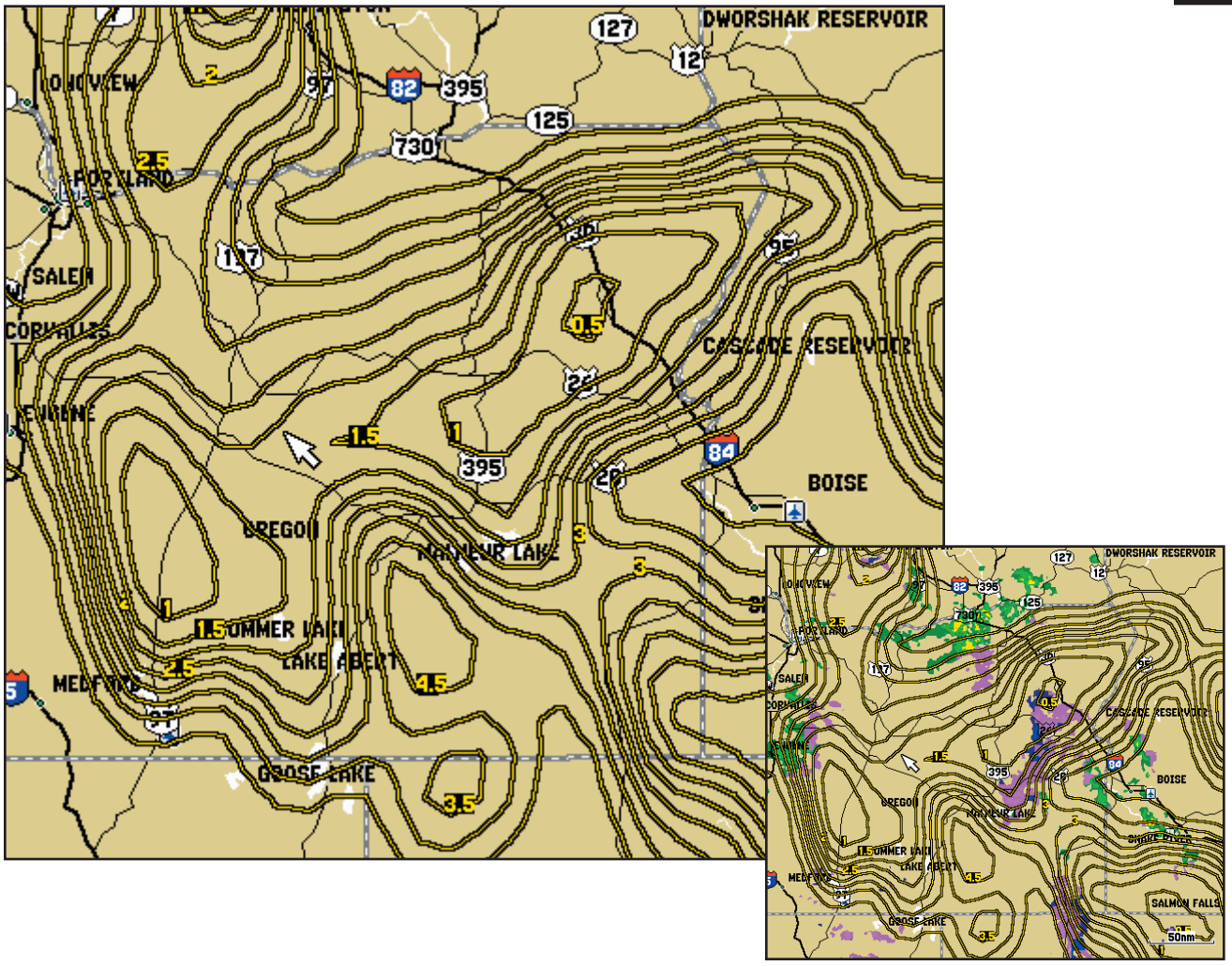
The Hurricanes feature shows the current position of a hurricane as well as its projected path (indicated by a red line). The darkened squares that appear (as in the examples in the left-hand column below) along the red line display the projected locations received from the National Hurricane Center. The Center provides four forecasts at 12-hour intervals as well as a fifth forecast at a 24-hour interval.

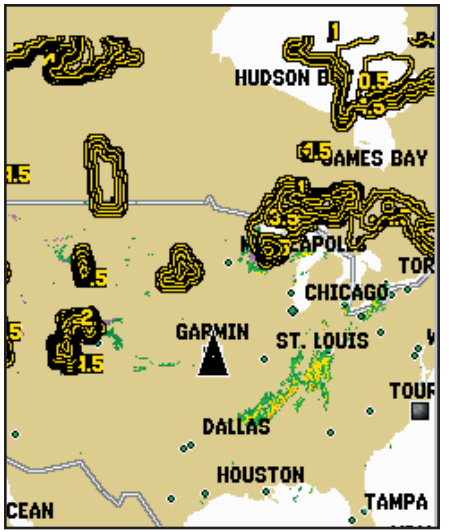


In this example, NEXRAD data, wave height, and wind are displayed in addition to Hurricane Charley in August, 2004.

Visibility

Visibility is the maximum horizontal distance that can be seen. Isobars on the Visibility feature show a change in visibility. In the example below, visibility ranges from .5 miles to 3 miles.





You can get a general idea of reduced visibility across a wide area when the map view is significantly zoomed out, as shown in the image above.

The inset displays NEXRAD weather data in addition to visibility. This provides a clearer picture of the true weather conditions in this area.

Alternating red and blue fronts are stationary fronts.

Blue fronts indicate cold fronts.

Fronts

The map below shows fronts positions as well as areas of high (H) and low (L) pressure for the United States. Blue fronts indicate cold fronts, red fronts indicate warm fronts, and alternating red and blue fronts indicate stationary fronts. Dashed orange lines indicate dry lines.

Sea Surface Features

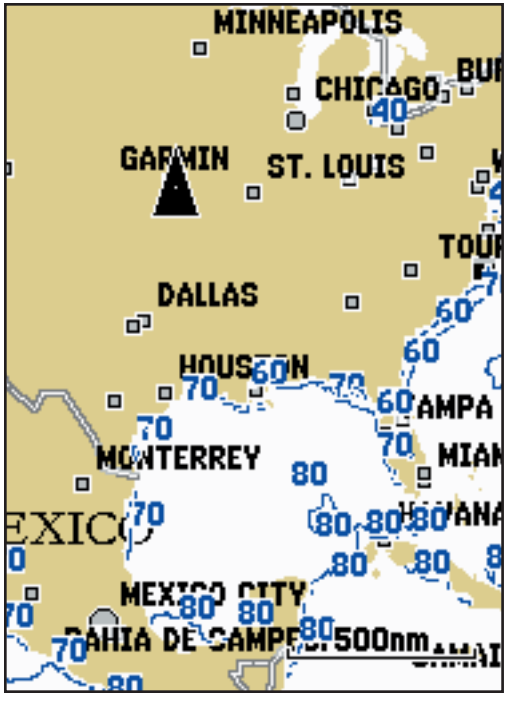
Sea Surface features include sea surface temperatures as well as the height, period, and direction of waves. Information provided on these pages come from satellite and buoy data, and ship reports combined with computer models. See the XM WX Satellite Weather Web site at http://weather.xmradio.com/weather/specifications.html for more information.

Temperature

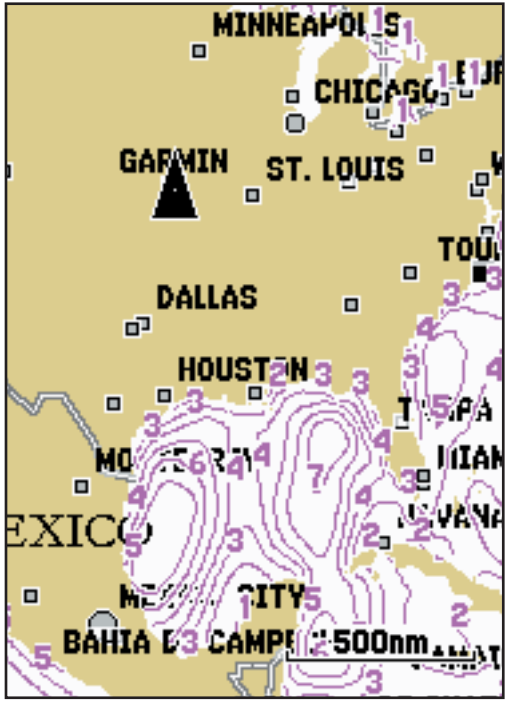
The Temperature feature displays the temperature of the water at the sea's surface.

Wave Height

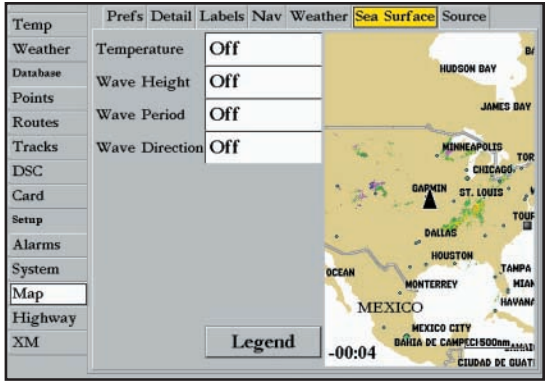
The Wave Height feature provides the height of waves.



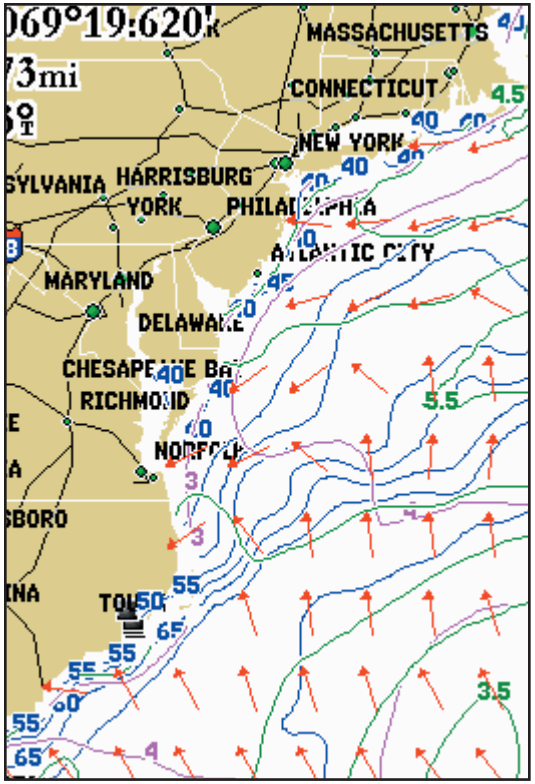
Temperature feature



Wave Height feature



*To select which Sea Surface features you'd like to appear on various map displays on your Chartplotter, select the Map tab from the Main Menu page and **ARROW RIGHT** to the Sea Surface submenu tab.*



This map displays all four sea surface features. To avoid a cluttered look, try zooming in to a specific area so that the weather data will display farther apart. Or, consider displaying fewer features at the same time.

Wave Period

The Wave Period feature provides the time (in seconds) between successive waves.

Wave Direction

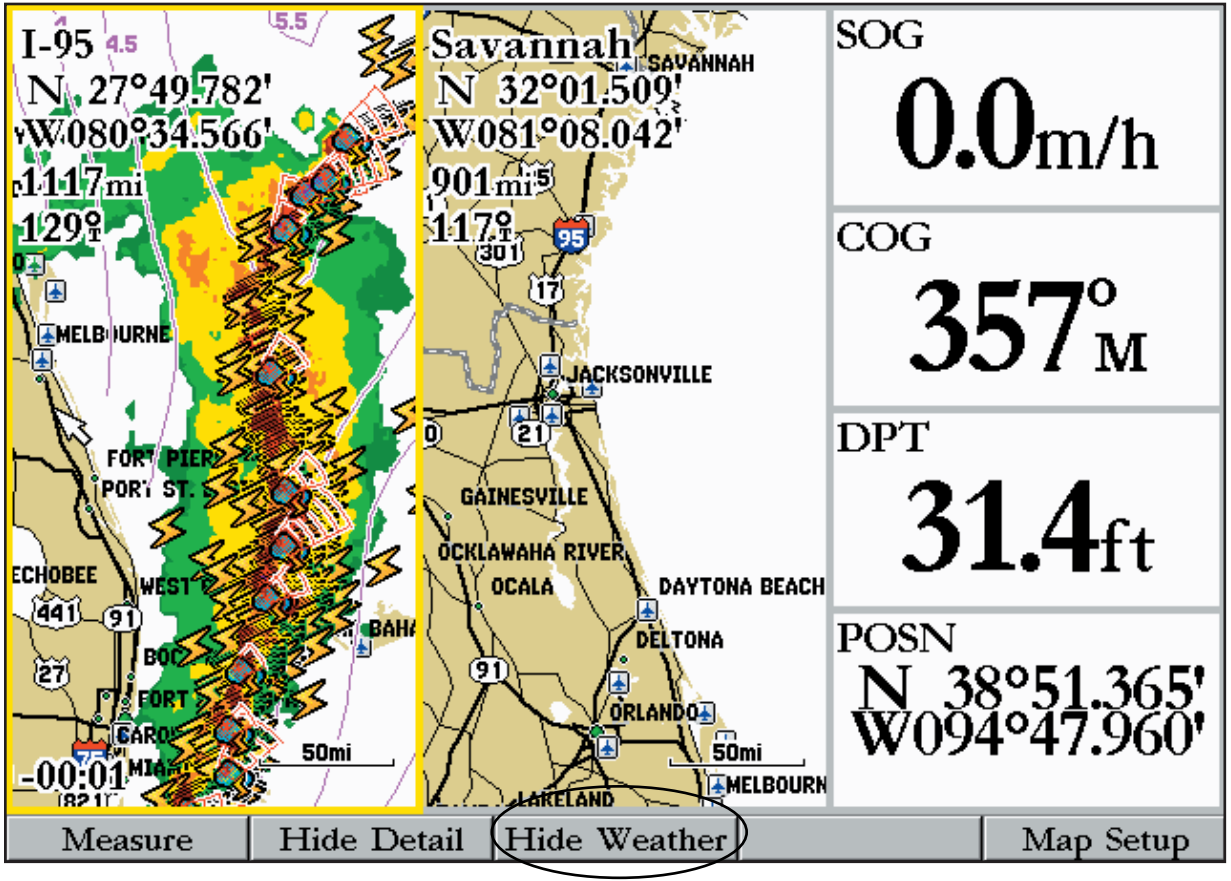
The Wave Direction feature shows the direction in which a wave is moving, as indicated by the direction of the red arrow.

Wave Period feature

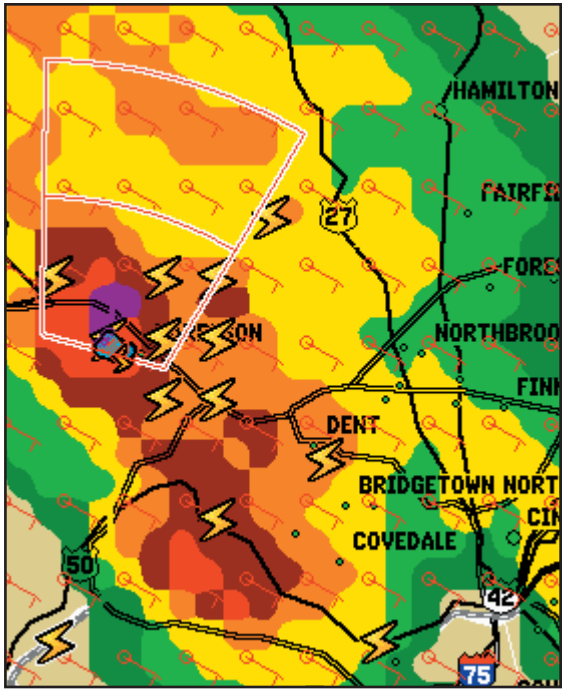
Wave Direction feature

Viewing Multiple Maps

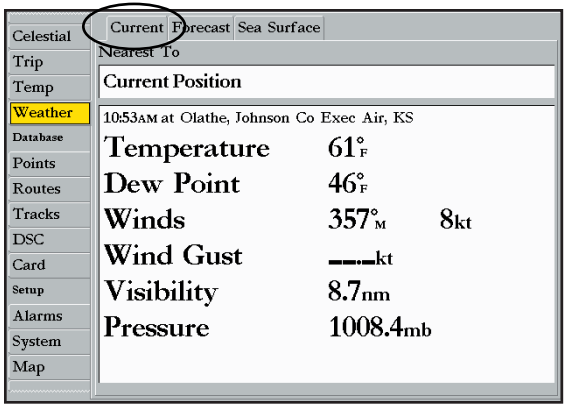
Some Chartplotters can show two map displays simultaneously (see your Chartplotter's Owner's Manual for configuration information). This allows you to view weather data on one map display and non-weather-related information on the other.



Chartplotters such as the 3006C/3010C also feature a "Soft Key" that enables you to easily hide or display weather. See your Chartplotter's Owner's Manual.



Consider zooming in to a specific area to display clearer weather data, as shown in the example above.



From the Weather tab, you can access current weather conditions, forecast information, and sea surface information. In the example above, information from the Current submenu tab is displayed.

Note: If you do not see information in a particular field, then data for that field is not available at this time.

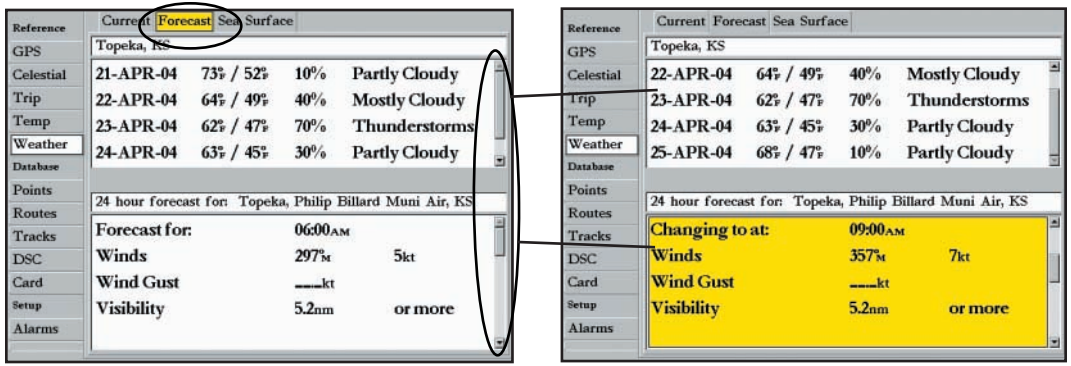
Finding Current Weather, Forecast, and Sea Surface Conditions

While you are on the water, check your GDL 30/30A to find current weather conditions, forecast information, and sea surface information from the weather center that is nearest to your present location or other places you seek. To access this information, press and hold down the **ADJ/MENU** key to display the Menu page. Use the **ARROW KEYPAD** to **ARROW DOWN** to the **Weather** tab. Three submenu tabs appear: Current, Forecast, and Sea Surface.

The **Current** submenu tab displays current weather conditions observed at a weather data location closest to your current position or any other city, waypoint, or position you might search. It also displays the time the observation was made. To learn how to find current conditions at other locations, see the following page.

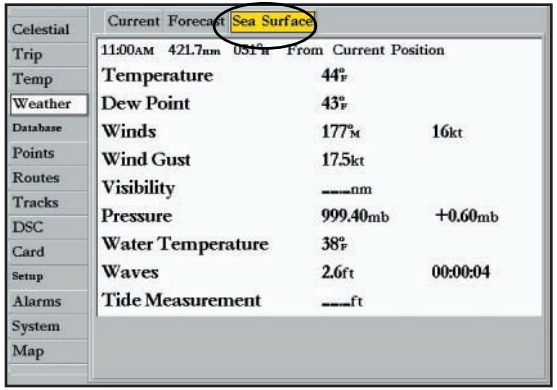
The **Forecast** submenu tab includes two panels that display forecast information for a city, waypoint, or position that you have selected in the Current submenu tab. The top panel displays the high/low temperature, precipitation, and weather conditions for the next few days' forecast. The number of days that appear in this panel depend on the data available from the responding weather service center. If more than four days of forecasts appear, use the **ARROW KEYPAD** to move down the list.

The bottom panel on the Forecast submenu tab features a detailed 24-hour forecast for winds, wind gust, and visibility. In order to see all of this information, use the **ARROW KEYPAD** to move down the list. To learn how to find forecast conditions at other locations, see the following page.



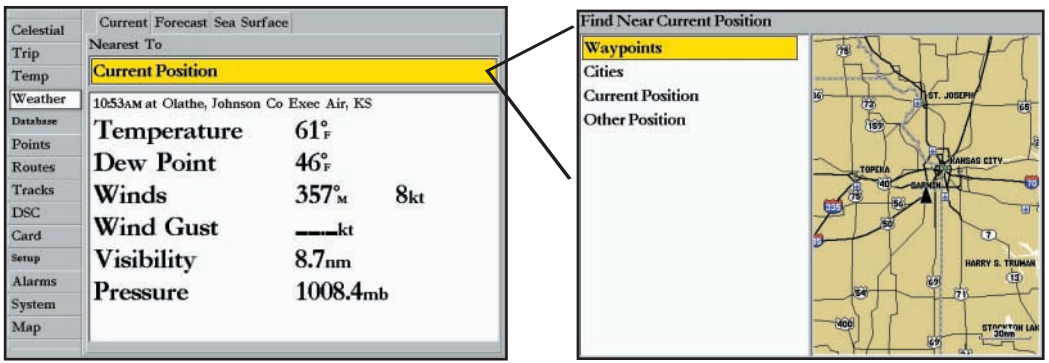
*The scroll bar indicates that additional information is provided in the Forecast submenu tab. Use your **ARROW KEYPAD** to scroll down the list.*

The **Sea Surface** submenu tab provides weather data of specific importance to mariners. This data comes from buoys that are nearest to your current location or other locations you specify.

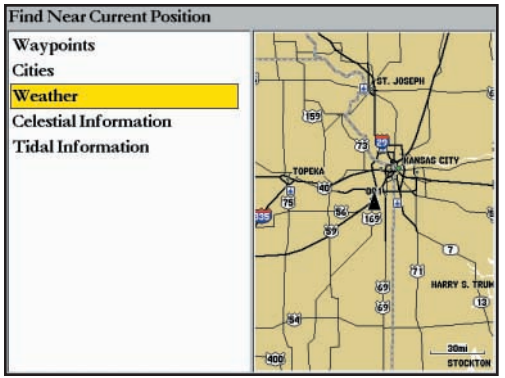


Finding Weather Conditions at other Locations

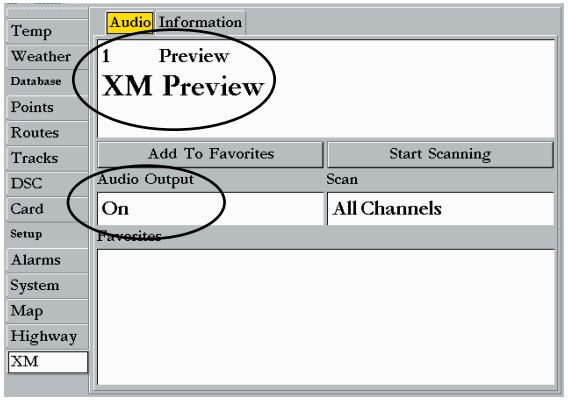
When you visit the Current, Forecast, and Sea Surface submenu tabs for the first time, the information on these tabs is based on data received from weather centers closest to your current physical location. To find information at other places, highlight the "Nearest To" box on the Current submenu tab. Then, press **ENTER**. A "Find" page appears. Follow the instructions for finding places as are described in your Chartplotter's Owner's Manual.



From the Current submenu tab (above, left), highlight the Nearest To box. A Find page (above, right) appears.



Another way to find other places is to press the FIND key on your Chartplotter. A Find page (shown above) appears. Follow the instructions for finding places as described in your Chartplotter's Owner's Manual.



If your GDL 30A is properly connected, you will see "On" in the Audio Output box and "XM Preview" in the Radio Tuning box.

Customizing Radio Stations (for GDL 30A only)

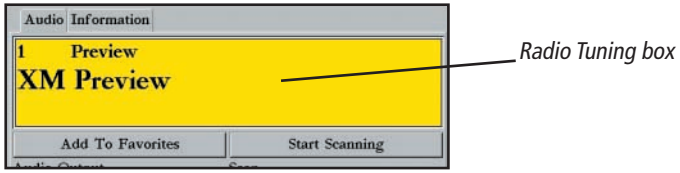
From the Audio submenu tab, you can enjoy music from a variety of stations provided by XM radio. The mix includes music, weather stations, news stations, and more. Add your preferred stations to a Favorites list.

Access the Audio submenu tab by pressing and holding down the **ADJ/MENU** key. A Main Menu page appears. **ARROW DOWN** the Main Menu page tabs to the XM tab. (**Note**: With some Chartplotters, you may have to continue to **ARROW DOWN** the list until the XM tab becomes visible.) From the XM tab, **ARROW RIGHT** to the Audio submenu tab.

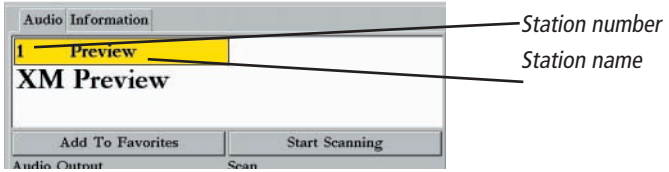
If your GDL 30A is properly connected, you will see **On** in the "Audio Output" box. You will also see a station as well as the current song from that station in the Radio Tuning box. If **CHECK ANTENNA** appears in the Radio Tuning box, double-check to make certain the GA 31 antenna has been properly installed and that the audio cable is securely connected to your GDL 30A and to your stereo receiver.

Viewing and Selecting Channels

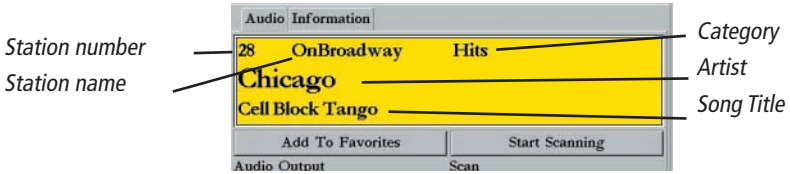
From the Audio submenu tab, **ARROW DOWN** to the Radio Tuning box. The entire box is highlighted:



To view the other stations, press **ENTER** while the Radio Tuning box is still highlighted. The station (channel) number and station name is highlighted:



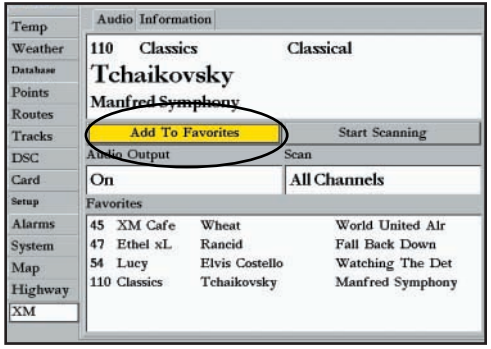
ARROW DOWN to view the variety of stations. The station name and number, category, current song, and artist appears. When you see a song you'd like to hear, press the **ENTER** key again. The Radio Tuning box highlights, indicating that the song has been selected:



Once you are familiar with station numbers, you can type in the station number (if your Chartplotter has a number keypad) while the Radio Tuning box is highlighted and then press **ENTER**. Note that if you direct-dial a nonexistent number, you will be taken back to the last existing channel you selected.

Adding Favorites

As a song is playing, you can add it and the station to your Favorites list. Simply **ARROW DOWN** to the "Add to Favorites" button. Press **ENTER**. The station is added to your Favorites list.

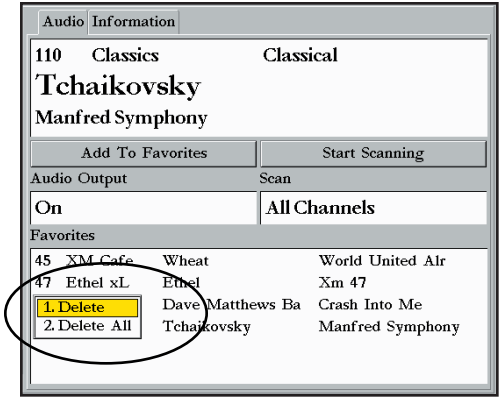


Your Favorites lists displays the station number, station name, and the current artist and song playing. As you look at the list, you will see the names change periodically. At any time you want to select a song, **ARROW DOWN** to it in the Favorites list, highlight it, and press **ENTER**. Or, type in the station number while the Radio Tuning box is highlighted and then press **ENTER**.

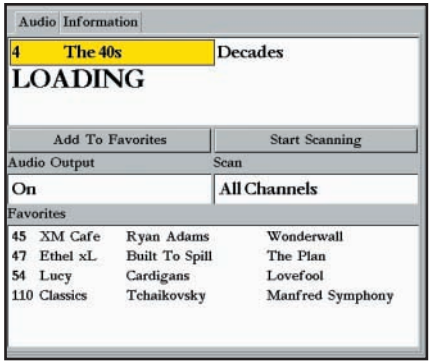
The maximum number of favorites you can list is 16. You will not be able to add more until you delete a few current favorites.

Deleting Favorites

ARROW DOWN to the Favorites list. Select the station you wish to delete by highlighting it and pressing the **ADJ/MENU** key. A Delete box displays. Use the **ARROW KEYPAD** to select **Delete** (deletes the current station) or **Delete All** (deletes all stations in your Favorites list). A verification box appears. To delete the station, select **OK** and press **ENTER**. Highlight **Cancel** and press **ENTER** if you do not want to delete the station.



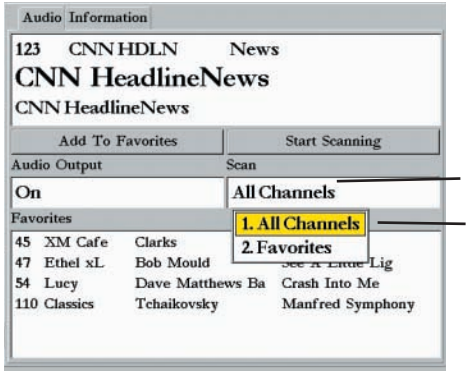
*Delete an item in the Favorites list by highlighting it and then pressing the **ADJ/MENU** key. Select "Delete" (deletes the current station) or "Delete ALL" (deletes all station favorites).*



Periodically, stations may take a few moments to load. In this case, "LOADING" will appear in the Radio Tuning box.

Scanning Stations

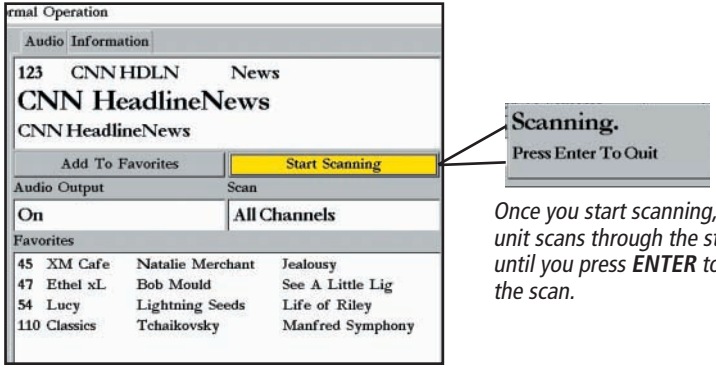
You can scan through the list of stations just as you would a car radio or home stereo. Scan through all XM channels or through your Favorites list. Make sure your scanning preference (All Channels, Favorites) is set before you scan by highlighting the "Scan" box and pressing **ENTER**. Select your preference and then press **ENTER**. Your scanning preference is set.



Scan box

*Highlight your scanning preference and then press **ENTER**.*

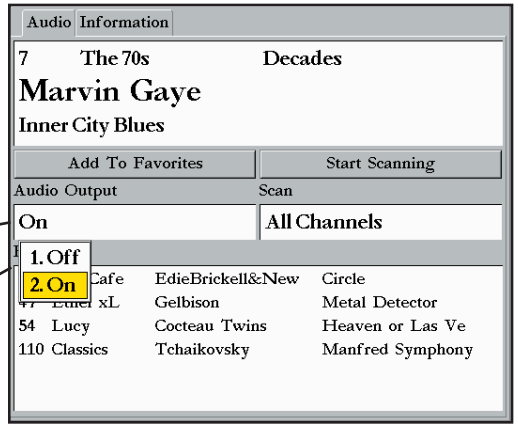
Next, highlight the "Start Scanning" button and press **ENTER**. The GDL 30A scans stations according to your preference. When you settle on a selection, press **ENTER** to quit the scan and play the currently-displayed song.

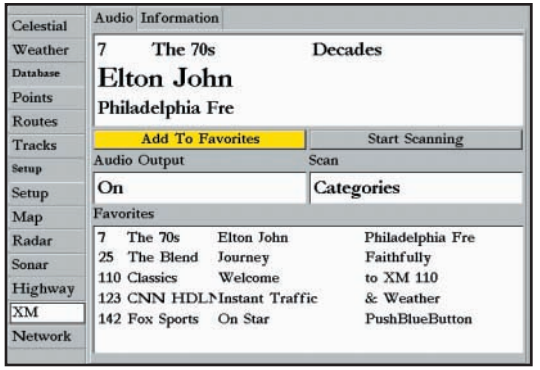


*Once you start scanning, your unit scans through the stations until you press **ENTER** to stop the scan.*

Disabling the Audio Output

You can disable the audio output without having to turn off your GDL 30A or disconnect cables. Highlight the "Audio Output" box and press **ENTER**. Highlight **Off** and then press **ENTER**. Your sound remains disabled until you repeat the above steps and select **On**.





While you are listening to one station, you can view what songs are currently playing on stations in your Favorites list.

Appendix A: Blink Codes

Blink Codes

The GDL 30/30A turns on and off when a Chartplotter to which it is connected is turned on or off. The two-color (Green/Red) LED on the GDL 30/30A indicates the current operational status of the module. Codes are:

Green blinking, on for 1 second, off for 1/2 second (slow blink)
Status: GDL 30/30A is on and is receiving an XM signal.

Solid Red (no blink)
Status: Software failure - Call Garmin Customer Support.

Red blinking, on for 1/10 second, off for 1/10 second (very fast blink)
Status: System alarm. The display device gives a message indicating the type of failure.

Appendix B: Broadcast Rates

Weather-Related Broadcast Rates

Feature	Broadcast Rates (minutes)
NEXRAD	5
Storm Cells	1.25
Lightning	5
Wind	12
Pressure	12
Hurricanes	12
Visibility	12
Fronts	12
Sea Surface Temperature	12
Wave Height	12
Wave Period	12
Wave Direction	12
Current Conditions	12
Forecasts	12
Sea Surface Conditions	12

Appendix C: Specifications

Note: When using the Chartplotter and GDL 30/30A on battery power only (engines off) for extended periods of time, be sure there are enough available amperage to run the units for the time period. Running other onboard devices at the same time may lower the available amperage, causing the Chartplotter and/or GDL 30/30A to shut off. Check with your local marine dealer/installer if problems persist.

GDL 30/30A Physical Specifications

Physical

Size:	6.75" L x 4.75" W x 2.00" H (17.2cm x 12.1cm x 5.1cm)
Weight:	1.5 lbs. (.680Kg)
Case:	Fully gasketed, high-impact plastic and aluminum alloy, waterproof to IEC 60529 IPX7
Temp Range:	5°F to 158°F (-15°C to 70°C)

Power

Source:	10-35 Vdc
Usage:	18 watts max
Fuse:	AGC/3AG - 2.0 Amp

Data Output

Source:	Proprietary Garmin data format.

GA 31 Antenna Physical Specifications

Physical

Size:	3.58"D x 4.25"H (91mm x 108 mm)
Weight:	1.0 lbs. (0.373 kg)
Operating Range:	-40°F to +176°F (-40°C to +80°C)
Waterproof:	-1 meter submersion for 30 minutes IEC 60529 IPX7
Mount Thread Size:	1" diameter at 14 threads/inch
Cable:	Foil-shielded center conductor 18 AWG
Dynamics:	999 knots, 40g

Appendix D: Software

Software

Software Versions

The GDL 30/30A is designed to work with software version 2.0 and higher on the GPSMAP 3006C/3010C. See your Owner's Manual for instructions on determining the unit's software version. Visit our Web site at www.garmin.com/support/download.jsp for software updates (excluding map data).

Software License Agreement

BY USING THE GDL 30/30A, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

Garmin grants you a limited license to use the software embedded in this device (the "Software") in binary executable form in the normal operation of the product. Title, ownership rights and intellectual property rights in and to the Software remain in Garmin.

You acknowledge that the Software is the property of Garmin and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization and code of the Software are valuable trade secrets of Garmin and that the Software in source code form remains a valuable trade secret of Garmin. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer or reduce to human readable form the Software or any part thereof or create any derivative works based on the Software. You agree not to export or re-export the Software to any country in violation of the export control laws of the United States of America.

Appendix E: Product Safety and Regulatory Information

Product Safety and Regulatory Information

The GPS system is operated by the United States government, which is solely responsible for its accuracy and maintenance. The system is subject to changes which could affect the accuracy and performance of all GPS equipment. Although the Garmin GDL 30/30A is a precision electronic NAVigation AID (NAVAID), any NAVAID can be misused or misinterpreted and, therefore, become unsafe.

The electronic chart is an aid to navigation and is designed to facilitate the use of authorized government charts, not replace them. Only official government charts and notices to mariners contain all information needed for safe navigation. As always, the user is responsible for prudent use of this information.

Use the GDL 30/30A at your own risk. To reduce the risk of unsafe operation, carefully review and understand all aspects of this Owner's Manual. If necessary, thoroughly practice operation using the simulator mode prior to actual use. When in actual use, carefully compare indications from the unit to all available navigation sources, including the information from other NAVAIDs, visual sightings, and charts. For safety, always resolve any discrepancies before continuing navigation.

FCC Compliance

The GDL 30/30A complies with Part 15 of the FCC interference limits for Class B digital devices FOR HOME OR OFFICE USE. These limits are designed to provide more reasonable protection against harmful interference in a residential installation, and are more stringent than "outdoor" requirements.

Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one of the following measures: Reorient or relocate the receiving antenna; increase the separation between the equipment and the receiver; connect the equipment into an outlet on a circuit different from that to which the receiver is connected; consult your Garmin dealer or an experienced radio/TV technician for help.

The GDL 30/30A does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.

This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our Web site at www.garmin.com/prop65.

Map Data Information

One of the goals of Garmin is to provide customers with the most complete and accurate cartography that is available to us at a reasonable cost. We use a combination of governmental and private data sources, which we identify as required in product literature and copyright messages displayed to the consumer. Virtually all data sources contain inaccurate or incomplete data to some degree. This is particularly true outside the United States, where complete and accurate digital data is either not available or prohibitively expensive.

Caution

IT IS THE USER'S RESPONSIBILITY TO USE THIS PRODUCT PRUDENTLY. THIS PRODUCT IS INTENDED TO BE USED ONLY AS A NAVIGATIONAL AID AND MUST NOT BE USED FOR ANY PURPOSE REQUIRING PRECISE MEASUREMENT OF DIRECTION, DISTANCE, LOCATION, OR TOPOGRAPHY.

Appendix

Warranty

GARMIN ADDRESSES

Garmin International, Inc.
1200 E. 151st Street
Olathe, KS 66062, U.S.A.
Phone: 800/800.1020
FAX: 913/397.0836

Garmin (Europe) Ltd.
Unit 5, The Quadrangle,
Abbey Park Industrial Estate
Romsey, SO51 9DL, U.K.
Phone: 44/1794.519944
FAX: 44/1794.519222

Garmin Corporation
No. 68, Jangshu 2nd Road,
Shijr, Taipei County, Taiwan
Tel. 886/2.2642.9199
Fax 886/2.2642.9099

www.garmin.com

Limited Warranty

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you.

Garmin retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY. To obtain warranty service, call your local Garmin-authorized dealer. Or call Garmin Customer Service at one of the numbers listed on the right for shipping instructions and for an RMA tracking number. The unit should be securely packed with the tracking number clearly written on the outside of the package. The unit should be sent, freight charges prepaid, to any Garmin warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs.

Products sold through online auctions are not eligible for rebates or other special offers from Garmin. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

This device has no service-usable parts and is fastened shut with screws. Any attempt to open the case to change or modify the unit in any way will void your warranty and may result in permanent damage to the equipment.

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XM Weather/Radio
  800 number 7
  Subscribing 6
  Weather Radio ID 6
  XM Audio Radio ID 7

For the latest free software updates (excluding map data) throughout the life of your Garmin products, visit the Garmin Web site at www.garmin.com.

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Garmin International, Inc.
1200 East 151st Street, Olathe, Kansas 66062, U.S.A.

Garmin (Europe) Ltd.
Unit 5, The Quadrangle, Abbey Park Industrial Estate, Romsey, SO51 9DL, U.K.

Garmin Corporation
No. 68, Jangshu 2nd Road, Shijr, Taipei County, Taiwan

www.garmin.com

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