

# GPSMAP 700 Series XM WX Satellite Weather® and XM® Satellite Radio

# supplement



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# Introduction

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See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

In order to use XM WX Satellite Weather<sup>®</sup>, you must have a Garmin XM<sup>®</sup> satellite weather receiver and an activated XM WX Satellite Weather subscription. To use XM Satellite Radio, you must have a Garmin XM satellite radio receiver and an XM Satellite Radio subscription. Visit www.garmin.com/xm for more information. To connect the XM antenna and receiver, and for subscription instructions, refer to the owner's manual for your XM equipment.

If you do not have a receiver and a subscription to XM WX Satellite Weather, the weather features described in this manual work only when a chartplotter is in simulator mode. Simulator mode does not supply live weather data.

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# XM WX Satellite Weather and XM Satellite Radio

# XM WX Satellite Weather

A Garmin XM satellite weather receiver and antenna receives XM WX Satellite Weather data and shows it on various Garmin devices, including the Navigation chart on a chartplotter. The weather data for each feature comes from reputable weather data centers such as the National Weather Service and the Hydrometeorological Prediction Center. For more information, see the XM WX Satellite Weather Web site at www.xmwxweather.com.

**NOTE**: To view XM WX Satellite Weather information, you must have a subscription to XM WX Satellite Weather, and you must have a Garmin XM satellite weather receiver connected to a chartplotter.

# XM WX Satellite Weather Data Broadcasts

XM WX Satellite Weather data is broadcast at set rates. For example, **NEX**t Generation Weather **RAD**ar (NEXRAD) data is broadcast at five-minute intervals. When the Garmin receiver is turned on, or when a new feature is selected, the receiver has to receive new data before it can be shown. You might experience a delay before weather data or a new feature appears on the map.

**NOTE**: Any weather feature can change in appearance or interpretation if the source that provides the information changes.

# **Viewing NEXRAD Precipitation Information**

The precipitation screen shows NEXRAD radar, storm cells, lighting strikes, and hurricane warnings. NEXRAD shows precipitation ranging from very light rain and snow, up to strong thunderstorms, in varying shades and colors. The time stamp in the upper-left corner of the screen indicates the elapsed time since the National Weather Service last updated the information. NEXRAD is shown either independently or with a variety of other weather information.

From the Home screen, select **Weather** > **Precipitation**.

#### Showing an Animated NEXRAD Loop

You can view NEXRAD information as an image of the latest update or as an animated loop of the latest updates.

From the Home screen, select Weather > Precipitation > Menu > NEXRAD Loop > On.

#### Showing Cloud Cover

From the Home screen, select Weather > Precipitation > Menu > Cloud Cover > Show.

# **Changing from One Weather Chart to a Different Weather Chart**

- 1. From the Home screen, select Weather.
- 2. Select a weather chart.
- 3. Select Menu > Change Weather.
- 4. Select a different weather chart.

#### Storm Cell Information

Storm cell icons on the precipitation screen indicate both the present position of a storm and the projected path of that storm in the immediate future.

Red cones appear with a storm cell icon, and the widest part of each cone points in the direction of the projected path of the storm cell. The red bars in each cone indicate where the storm will most likely be in the near future. Each bar represents 15 minutes.



#### **Lightning Information**

Lightning strikes are represented by lightning bolt icons. Lightning appears on the precipitation screen if strikes were detected within the last seven minutes. The ground-based lightning detection network detects cloud-to-ground lightning only.

#### **Hurricane Information**

The precipitation screen can show the present position of a hurricane, a tropical storm, or a tropical depression. A red line originating from a hurricane icon indicates the projected path of the hurricane. Darkened dots on the red line indicate the projected locations through which the hurricane will pass, as received from the National Hurricane Center. The center provides four forecasts at 12-hour intervals (12 hours, 24 hours, 36 hours, and 48 hours), as well as the present conditions (Now).



#### Marine Warnings

When a marine warning is issued, red shading indicates the area to which the warning applies. To view information about the warning, touch the warning area. The cyan lines on the chart indicate the boundaries of marine weather warning zones.



#### **County Warnings**

When the National Weather Service issues a weather warning for a county, the county is highlighted with the color corresponding to the warning type. To view information about the warning, select the highlighted county.

Color	Description
	Tornado warning
	Severe thunderstorm warning
	Flood warning
	Flash flood warning

## **Forecast Information**

The forecast screen shows weather conditions, including fronts, pressure centers, and city forecasts.

#### **Viewing Present Forecast Information**

From the Home screen, select Weather > Forecast.

#### Viewing Forecast Information for Another Time Period

- 1. From the Home screen, select **Weather** > **Forecast**.
- 2. Touch a location on the chart.
- 3. Complete an action:
  - Select Next Forecast to view the forecast weather for the next 12 hours. Select Next Forecast again to view forecasts for the next 24, 36, and 48 hours, in 12-hour increments.
  - Select **Previous Forecast** to view the forecast weather for the previous 12 hours. Select **Previous Forecast** again to view forecasts for the previous 24, 36, and 48 hours, in 12-hour increments.

# Viewing a Marine Forecast or an Offshore Forecast

- 1. From the Home screen, select **Weather** > **Forecast**.
- 2. Pan the map to an offshore location.
- 3. Touch a location on the chart.

The Marine Forecast or Offshore Forecast options appear when forecast information is available.

# 4. Select Marine Forecast or Offshore Forecast.

# Weather Fronts and Pressure Centers

Weather fronts appear as lines that indicate the leading edge of an air mass.

Front Symbol	Description	
	Cold front	
	Warm front	
	Stationary front	
	Occluded front	
	Trough	

Pressure-center symbols often appear near weather fronts.

Pressure Center Symbol	Description
L	Indicates a low-pressure center. A low-pressure center is an area where the measured pressure is lowest relative to the surrounding area. Moving away from a low-pressure center in any horizontal direction results in increased pressure. Winds flow counterclockwise around low-pressure centers in North America.
Η	Indicates a high-pressure center. A high-pressure center is an area where the measured pressure is highest relative to the surrounding area. Moving away from a high-pressure center in any horizontal direction results in decreased pressure. Winds flow clockwise around high-pressure centers in North America.

# City Forecasts

City forecasts appear as standard weather symbols. The forecast is viewed in 12-hour increments for the next 48 hours.



## **Viewing Sea Conditions**

The sea-conditions screen shows information about surface conditions, including winds, wave height, wave period, and wave direction.

From the Home screen, select **Weather** > **Sea Conditions**.

#### Surface Winds

Surface winds appear on the sea-conditions screen using wind barbs that indicate the direction from which the wind is blowing. A wind barb is a circle with a tail. The flag attached to the tail of the wind barb indicates the wind speed.

Wind Barb	Wind Speed	Wind Direction	Wind Barb	Wind Speed	Wind Direction
0	Calm	+	Θ-η	15 knots	+
Θт	5 knots	-	Θ-П	20 knots	-
Θ	10 knots	-	Ο-Ţ	50 knots	+

## Wave Height, Wave Period, and Wave Direction

Wave heights for an area appear as variations in color. Different colors indicate different wave heights, as shown in the legend on the left of the screen. Wave height lines indicate areas that have the same wave height.

The wave period indicates the time (in seconds) between successive waves.

Wave directions appear on the map using red arrows. The direction of each arrow pointer indicates the direction in which a wave is moving.



# Viewing Fishing Information

The fishing screen shows present water temperature, present surface-pressure conditions, and fishing forecasts.

From the Home screen, select **Weather** > **Fishing**.

#### Surface Pressure

Surface-pressure information appears using pressure isobars and pressure centers. Isobars connect points of equal pressure. Pressure readings can help to determine weather and wind conditions in an area. High-pressure areas are generally associated with fair weather. Low-pressure areas are generally associated with fair space closely together show a strong pressure gradient. Strong pressure gradients are associated with areas of stronger winds.

Pressure units are shown in millibars (mb), inches of Mercury (inHg), and hectopascals (hPa).

## Water Temperature Data

Colored shading indicates the surface temperature of the water.



## **Forecasting Fish Location**

You can show areas that contain optimal weather conditions for specific species of fish.

- 1. From the Home screen, select Weather > Fishing > Menu > Fish Species.
- 2. Select a species of fish.

Shaded areas indicate optimal fishing areas.

3. Repeat step 2 to show areas with optimal weather conditions for additional species of fish.

# **Visibility Information**

Visibility is the forecast maximum horizontal distance that can be seen at the surface, as shown in the legend on the left of the screen. Variations in the visibility shading show the forecast change in surface visibility.



#### Viewing Visibility Information

From the Home screen, select Weather > Visibility.

#### Viewing Forecast Visibility Information for Another Time Period

- 1. From the Home screen, select Weather > Visibility.
- 2. Touch a location on the chart.
- 3. Complete an action:
  - Select Next Forecast to view the forecast visibility for the next 12 hours. Select Next Forecast again to view forecasts for the next 24 and 36 hours, in 12-hour increments.
  - Select **Previous Forecast** to view the forecast visibility for the previous 12 hours. Select **Next Forecast** again to view forecasts for the previous 24 and 36 hours, in 12-hour increments.

#### **Viewing Buoy Reports**

Report readings are taken from buoys and coastal observation stations. These readings are used to determine air temperature, dew point, water temperature, tide, wave height and period, wind direction and speed, visibility, and barometric pressure.

- 1. From the Home screen, select Weather > Forecast.
- 2. Select a buoy (
- 3. Select **Buoy**.



#### Viewing Local Weather Information

- 1. From the Home screen, select Weather.
- 2. Select a weather chart.
- 3. Touch a location on the chart.
- 4. Select Local Weather.
- 5. Complete an action:
  - Select Current Cond. to view present weather conditions from a local weather service.
  - Select Forecast to view a local weather forecast.
  - Select Sea Surface to view surface wind and barometric pressure information.
  - Select Marine Bulletin to view wind and wave information.

# About the Weather Overlay

The Weather Overlay superimposes weather and weather-related information on the Navigation chart or the Fishing chart on a chartplotter. Weather Overlay settings configured for use on one chart are not applied to another chart. The Weather Overlay settings for each chart must be configured separately.

#### Turning On the Weather Overlay on a Chart

- 1. From the Home screen, select Charts.
- 2. Complete an action:
  - Select Navigation Chart > Menu > Navigation Chart Setup > Weather > Weather > On.
  - Select Fishing Chart > Menu > Fishing Chart Setup > Weather > On.

#### Showing NEXRAD Precipitation Data on a Chart

Before you can show NEXRAD information on a chart, you must turn on the Weather Overlay (page 8).

NEXRAD shows very light rain and snow up to strong thunderstorms in varying shades and colors.

- 1. From the Home screen, select Charts.
- 2. Complete an action:
  - Select Navigation Chart > Menu > Navigation Chart Setup > Weather > NEXRAD > On.
  - Select Fishing Chart > Menu > Fishing Chart Setup > Weather > NEXRAD > On.

#### Showing Weather Buoys on a Chart

Before you can show weather buoys on a chart, you must turn on the Weather Overlay (page 8).

- 1. From the Home screen, select Charts.
- 2. Complete an action:
  - Select Navigation Chart > Menu > Navigation Chart Setup > Weather > WX Buoys > On.
  - Select Fishing Chart > Menu > Fishing Chart Setup > Weather > WX Buoys > On.

#### Showing a Weather Legend on a Chart

Before you can show a weather legend on a chart, you must turn on the Weather Overlay (page 8).

- 1. From the Home screen, select Charts.
- 2. Complete an action:
  - Select Navigation Chart > Menu > Navigation Chart Setup > Weather > Legend > Show.
  - Select Fishing Chart > Menu > Fishing Chart Setup > Weather > Legend > Show.

#### Showing Cloud-Cover Data on the Navigation Chart

Before you can show cloud cover data on the Navigation chart, you must turn on the Weather Overlay (page 8).

From the Home screen, select Charts > Navigation Chart > Menu > Navigation Chart Setup > Weather > Cloud Cover > On.

#### Showing Visibility Data on the Navigation Chart

Before you can show visibility data on the Navigation chart, you must turn on the Weather Overlay (page 8).

Visibility is the forecast maximum horizontal distance that can be seen at the surface.

From the Home screen, select Charts > Navigation Chart > Menu > Navigation Chart Setup > Weather > Visibility > On.

#### Showing Sea-Temperature Data on the Fishing Chart

Before you can show sea temperature data on the Fishing chart, you must turn on the Weather Overlay (page 8).

From the Home screen, select Charts > Fishing Chart > Menu > Fishing Chart Setup > Weather > Sea Temp > On.

#### Showing Fish-Forecasting Data on the Fishing Chart

Before you can show fish forecasting data on the Fishing chart, you must turn on the Weather Overlay (page 8).

You can show areas that contain optimal weather conditions for specific species of fish.

- From the Home screen, select Charts > Fishing Chart > Menu > Fishing Chart Setup > Weather > Fish Species > On.
- 2. Select a species of fish.

Shaded areas indicate optimal fishing areas.

3. Repeat step 2 to show areas with optimal weather conditions for additional species of fish.

# Weather Alarms

#### **Setting Weather Alarms**

You can set an alarm to sound when certain weather conditions occur at your current location.

- 1. From the Home screen, select **Configure** > **Alarms** > **Weather**.
- 2. Complete one or more actions:
  - Select Marine > On.
  - Select Tornado > On.
  - Select Severe Storm > On.
  - Select Flood > On.
  - Select Flash Flood > On.

# Viewing XM WX Satellite Weather Subscription Information

You can view information about the weather services you have subscribed to and how many minutes have passed since the data for each service was updated.

From the Home screen, select Weather > Weather Subscription.

# XM Satellite Radio

When a Garmin XM radio receiver is connected to the audio input of your boat, you can listen to XM radio channels.

**NOTE**: To use XM Satellite Radio features, you must have a subscription to XM Satellite Radio, and you must have a Garmin XM Satellite Radio receiver connected to a chartplotter.

# Selecting an XM Radio Channel

- 1. From the Home screen, select **Configure** > **XM Audio**.
- 2. Complete an action:
  - Select **Channel Guide** to select a specific XM channel within the selected category. Select a channel. Select **Back**.
  - Select **Channel** to enter an XM channel number manually. Enter a channel number. Select **Done**.



# Customizing the Channel Guide

XM Radio channels are grouped in categories. You can select the category of channels that appear in the channel guide.

- 1. From the Home screen, select **Configure** > **XM** Audio > Category.
- 2. Select a category.

#### **XM Presets**

The XM presets list is a customizable channel category. You can save your favorite channels to the presets list.

#### Saving an XM Channel to the Presets List

- 1. From the Home screen, select **Configure** > **XM Audio**.
- 2. Complete an action:
  - Select **Channel Guide** to select a specific XM channel within the selected category. Select a channel. Select **Back**.
  - Select **Channel** to enter an XM channel number manually. Enter a channel number. Select **Done**.
- 3. Select Save Preset.

#### Selecting an XM Channel from the Presets List

- 1. From the Home screen, select **Configure** > **XM Audio**.
- 2. Select Category > Presets.
- 3. Select a channel.

#### Adjusting XM Radio Volume

- 1. From the Home screen, select **Configure** > **XM Audio**.
- 2. Drag the slider bar.

NOTE: Touch Volume to mute the volume. Touch Volume again to take the volume off mute.

# Appendix

# Weather Data Warranty

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XM Satellite Radio Inc.

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