DISPLAYING TRAFFIC DATA

The Map - Traffic Map Page is the principal map page for viewing traffic information. Traffic information can also be displayed on the following other maps for additional reference on the MFD when the traffic TIS is operating:

- PFD Maps
- Navigation Map Page
- Traffic Map Page
- Trip Planning Page

- Nearest Pages
- Active Flight Plan Page
- Map - IFR/VFR Charts Page

Traffic information can also be displayed on the PFD when the Terrain-SVT option is installed and enabled. See the Additional Features Section for details.

Enabling/disabling traffic overlays (MFD navigation maps):

1) Select the **Map Opt** Softkey.

2) Select the **Traffic** Softkey. Traffic is now displayed on the navigation map.

When traffic is selected on maps other than the Traffic Map Page, an icon is shown to indicate the feature is enabled for display.
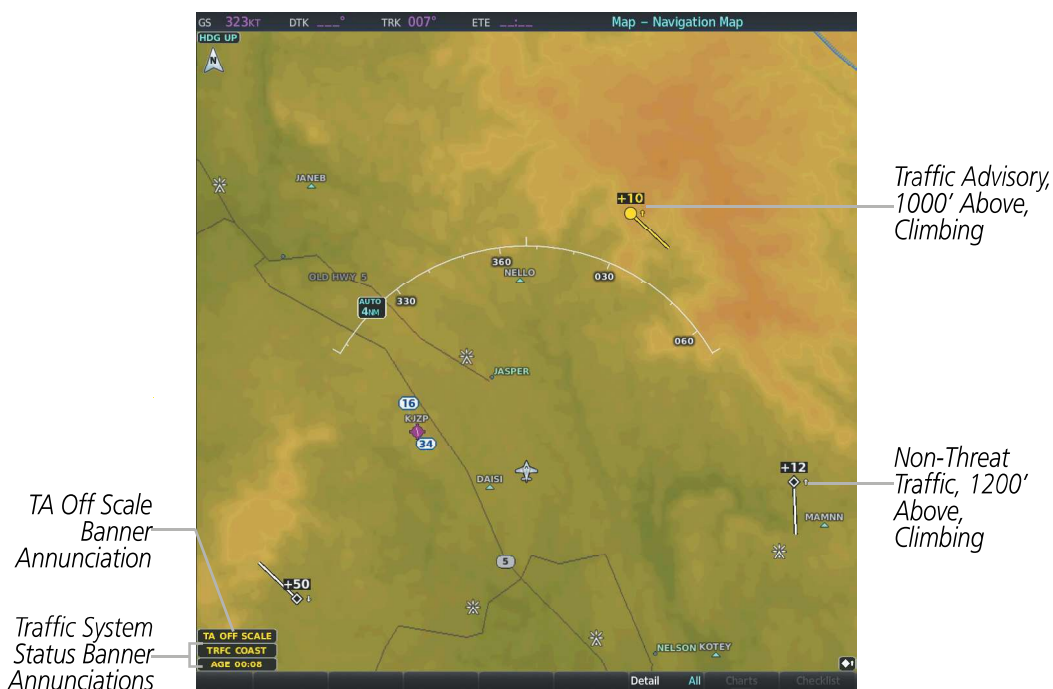

Figure 6-94 TIS Traffic on Navigation Map Page

The Navigation Map Page Setup Menu provides a means in addition to the softkey for enabling/disabling display of traffic. The setup menu also controls the map range settings above which traffic data (symbols and labels) are decluttered from the display. If a map range larger than the map range setting is selected, the data is removed from the map. Maps besides the Traffic Map Page use settings based on those selected for the Navigation Map Page.

Enabling/disabling traffic information on the PFD Inset Map or HSI Map:

1) On the PFD, press the **Map/HSI** Softkey.

2) Press the **Traffic** Softkey to enable/disable the display traffic information on the Inset Map or HSI Map.

Customizing traffic display on the Navigation Map Page:

1) Select the 'Map - Navigation Map' Page.

2) Press the **MENU** Key.

3) With 'Map Setup' highlighted, press the **ENT** Key.

4) Turn the small **FMS** Knob to select the 'Traffic' Group and press the **ENT** Key.

5) Turn the large **FMS** Knob or press the **ENT** Key to scroll through product selections.

- Traffic – Turns the display of traffic data on or off
- Traffic Mode – Selects the traffic mode for display; select from:
  - All Traffic - Displays all traffic
  - TA Only - Displays Traffic Alerts only
- Traffic Symbols – Selects the maximum range at which traffic symbols are shown
- Traffic Labels – Selects the maximum range at which traffic labels are shown (with the option to turn off)

6) Turn the small **FMS** Knob to scroll through options for each product (On/Off, range settings, etc.).

7) Press the **ENT** Key to select an option.

8) Press the **FMS** Knob or **CLR** Key to return to the 'Map - Navigation Map' Page with the changed settings.

TRAFFIC MAP PAGE

The Traffic Map Page is specialized to show surrounding TIS traffic data in relation to the aircraft's current position and altitude, without clutter from the basemap. Aircraft orientation on this map is always heading up unless there is no valid heading. Map range is adjustable with the **Joystick** from 2 to 12 nm, as indicated by the map range rings.

The traffic mode is annunciated in the upper left corner of the Traffic Map Page. When the aircraft is on the ground, TIS automatically enters Standby Mode. Once the aircraft is airborne, TIS switches from Standby to Operating Mode and the system begins to display traffic information. Refer to the System Status discussion for more information.

Displaying traffic on the Traffic Map Page:

1) Turn the large **FMS** Knob to select the Map Page Group.

2) Turn the small **FMS** Knob to select the 'Map - Traffic Map' Page.

3) Confirm TIS is in Operating Mode:

   a) Press the **TIS OPER** Softkey to begin displaying traffic.

   Or:

   a) Press the **MENU** Key.

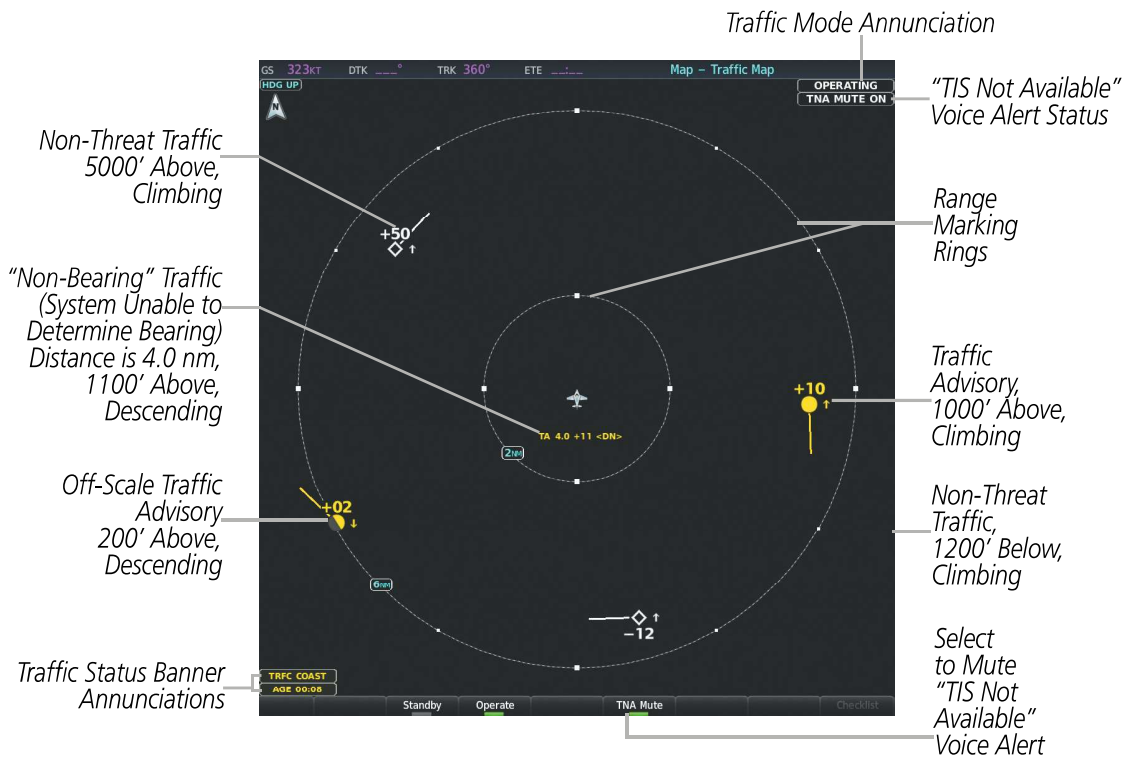   b) Select 'Operate Mode' (shown if TIS is in Standby Mode) and press the **ENT** Key.

Traffic Mode Annunciation

Non-Threat Traffic 5000' Above, Climbing

"Non-Bearing" Traffic (System Unable to Determine Bearing) Distance is 4.0 nm, 1100' Above, Descending

Off-Scale Traffic Advisory 200' Above, Descending

Traffic Status Banner Annunciations

"TIS Not Available" Voice Alert Status

Range Marking Rings

Traffic Advisory, 1000' Above, Climbing

Non-Threat Traffic, 1200' Below, Climbing

Select to Mute "TIS Not Available" Voice Alert

Figure 6-95 Traffic Map Page

TIS ALERTS

When the number of TAs on the Traffic Map Page increases from one scan to the next, the following occur:

• A single **"Traffic"** voice alert is generated.

• A 'TRAFFIC' Annunciation appears to the right of the airspeed tape, flashes for five seconds, and remains displayed until no TAs are detected in the area.

• The PFD Inset Map or HSI Map is automatically displayed with traffic.

To reduce the number of nuisance alerts due to proximate aircraft, the **"Traffic"** voice alert is generated only when the number of TAs increases. For example, when the first TA is displayed, a voice and visual annunciation are generated. As long as a single TA remains on the display, no additional voice alerts are generated. If a second TA appears on the display or if the number of TAs initially decreases and then subsequently increases, another voice alert is generated.
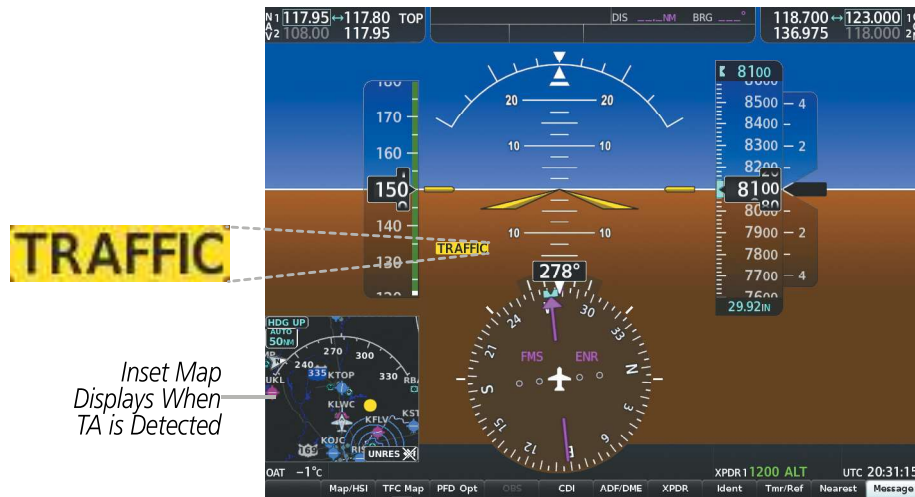
Figure 6-96 Traffic Annunciation (PFD)

A *"TIS Not Available"* (TNA) voice alert is generated when the TIS service becomes unavailable or is out of range. TIS may be unavailable in the radar coverage area due to the following:

• Radar site TIS Mode S sensor is not operational or is out of service

• Traffic or requesting aircraft is beyond the maximum range of the TIS-capable Mode S radar site.

• Traffic or requesting aircraft is above the radar site in the cone of silence and out of range of an adjacent site.

• Traffic or requesting aircraft is below radar coverage. In flat terrain, the coverage extends from about 3000 feet upward at 55 miles. Terrain and obstacles around the radar site can further decrease radar coverage in all directions.

• Traffic does not have an operating transponder.

The *"TIS Not Available"* (TNA) voice alert can be manually muted to reduce nuisance alerting. TNA muting status is shown in the upper right corner of the Traffic Map Page.

Muting the "TIS Not Available" voice alert:

1) Select the 'Map - Traffic Map' Page.

2) Press the **TNA Mute** Softkey. The status is displayed in the upper left corner of the Traffic Map Page.

Or:

a) Press the **MENU** Key.

b) Select "'Not Available" Mute On' (shown if TNA muting is currently off) and press the **ENT** Key.

SYSTEM STATUS

The system performs an automatic test of TIS during power-up. If TIS passes the test, TIS enters Standby Mode (on the ground) or Operating Mode (in the air). If TIS fails the power up test, an annunciation is shown in the center of the Traffic Map Page.

Traffic Map Page Center Banner Annunciation	Description
NO DATA	Data is not being received from the transponder*
DATA FAILED	Data is being received from the transponder, but a failure is detected in the data stream*
FAILED	The transponder has failed*
UNAVAILABLE	TIS is unavailable or out of range

* Contact a service center or Garmin dealer for corrective action

Table 6-23 TIS Failure Annunciations

The traffic mode is annunciated in the upper right corner of the Traffic Map Page. When the aircraft is on the ground, TIS automatically enters Standby Mode. If traffic is selected for display on another map while Standby Mode is selected, the traffic display enabled icon is crossed out (also the case whenever TIS has failed). Once the aircraft is airborne, TIS switches to Operating Mode and traffic information is displayed. The mode can be changed manually using softkeys or the page menu.

Traffic Map Mode Annunciation	Traffic Map Center Banner Annunciation	Traffic Overlay Status Icon (Navigation Maps)	Description
DATA FAILED	TRFC FAIL		Data is being received from the transponder, but a failure is detected in the data stream*
NO DATA	TRFC FAIL		Data is not being received from the transponder*
OPERATING	None		TIS is operating and is receiving traffic data from a data link.
OPERATING	UNAVAILABLE		TIS is operating, but the traffic service is currently unavailable or is out of reception range.
STANDBY	STANDBY		TIS is in Standby Mode.
UNIT FAILED	TRFC FAIL		The transponder has failed*

* Contact a service center or Garmin dealer for corrective action

Table 6-24 TIS Modes and Status Annunciations