

**Model:****TZT9F/12F/16F/19F****Model:****TZT2BB**

# Overview of Changes to Software

**V3.70 for TZT9F/12F/16F/19F****V9.70 for TZT2BB**

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# 1. Improved Fish Finder

## 1.1. Consistently Optimized View in Auto Mode

*(TZT9F/12F/16F/19F Built-in Fish Finder only)*

The improvement in Auto Gain used with the FCV-600 and FCV-800 software version 2.05 is also available with the built-in Fish Finder of TZT9F/12F/16F/19F v3.70.

With previous Auto Gain, a specific gain value was set and applied to each transducer type. Although it was effective to show fish targets and the seabed, echoes could look too strong at shallow water and too light at deep in some cases. With new software version 3.70, **gain is continuously adjusted, i.e., values increased or decreased, according to underwater conditions.** The improved Auto Gain process offers a variety of benefits compared to the previous software as shown in the following table.

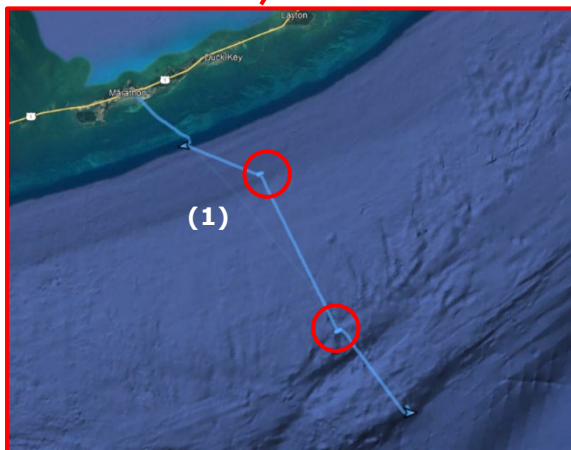
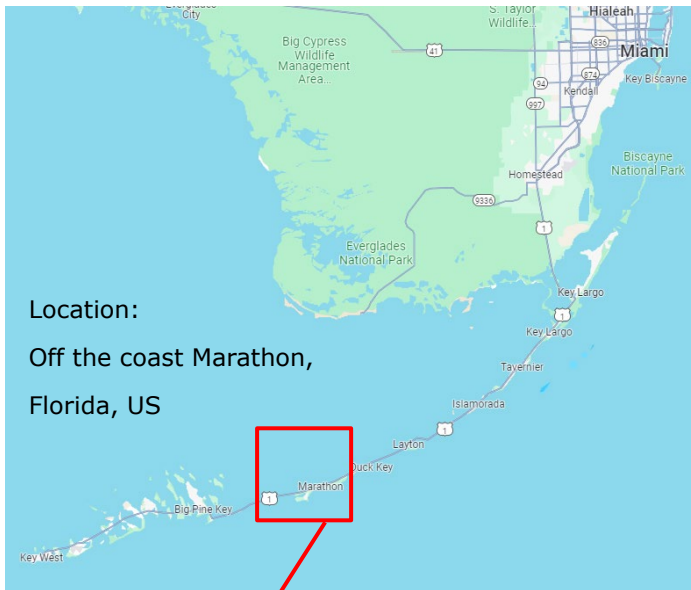
Characteristics by Scenes	NEW – V3.70	Previous – V3.56 or earlier
<b>Shallow spots:</b> An overall noise level from return echoes can be stronger than deep water.	<b>Gain will <u>NOT</u> be exaggerated.</b>	While an overall return echo is strong, the screen could look noisy.
<b>Deep spots:</b> An overall noise level from return echoes can be weaker than shallow water.	<b>Gain will <u>NOT</u> be suppressed.</b>	While an overall return echo is weak, the screen could look light.
<b>Running:</b> While a boat runs especially at speed, the surface layer can be saturated by bubbles.	<b>Gain will <u>NOT</u> be exaggerated.</b>	The screen could look noisy due to highlighted echoes from the saturated sea surface.
<b>Variable water quality:</b> Water quality varies depending on locations, weather, and other conditions. For example, in sea areas near river mouths after rain, the reflection is strong due to fine sand particles. The reflection intensity also changes depending on the amount of plankton.	<b>Gain will be <u>continuously adjusted</u> according to these changes in water quality environments.</b>	The screen could look noisy or light according to changes in water quality environments.

### Notes:

- (1) The new auto gain is available with both [Fishing] and [Cruising] modes.
- (2) The new auto gain is available with both CHIRP and CW transducers.

## Proven Performance

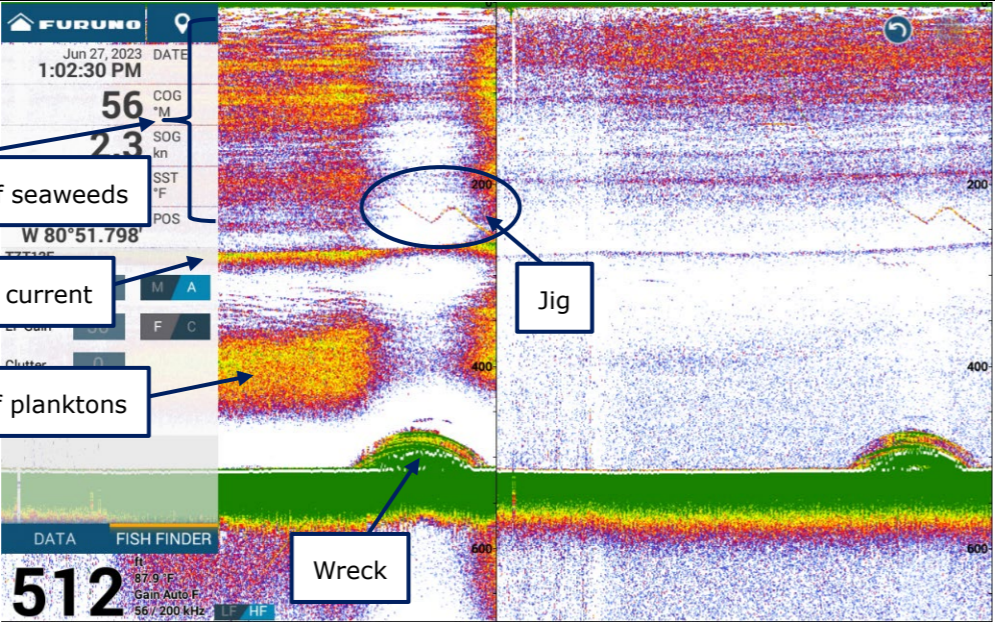
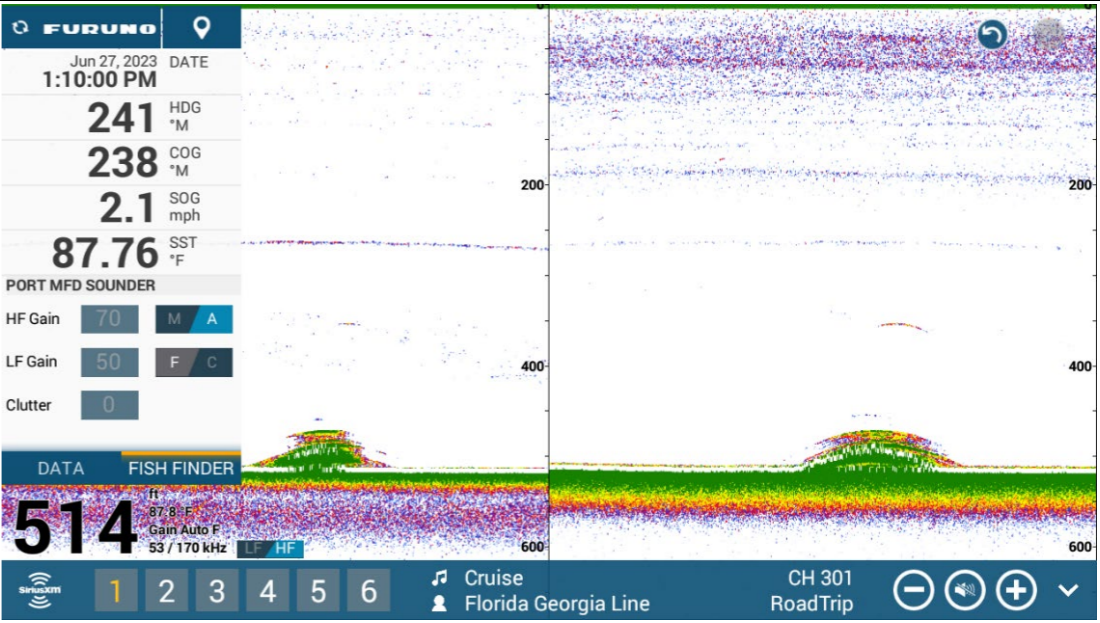
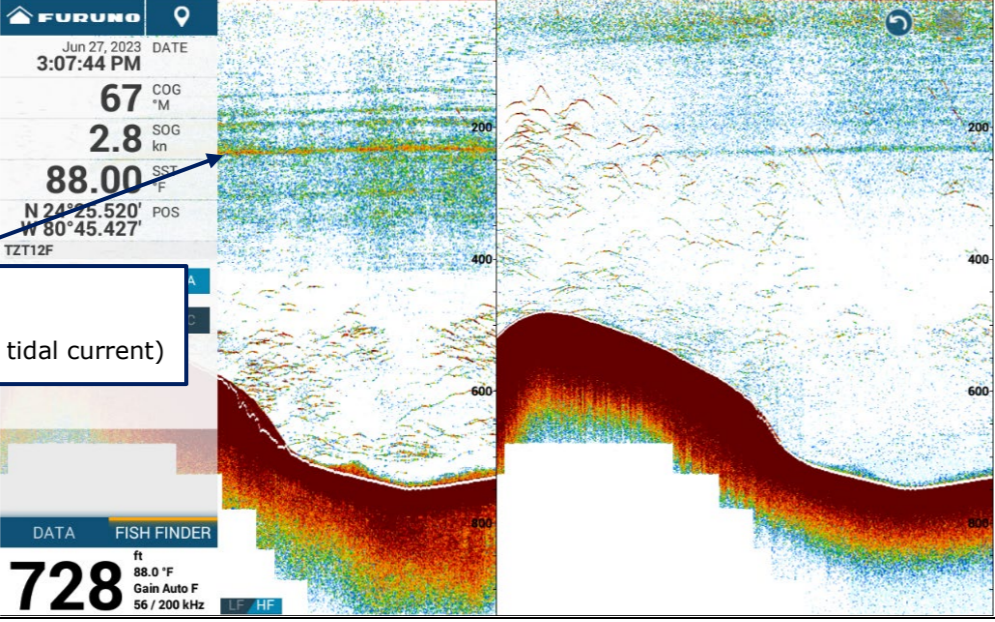
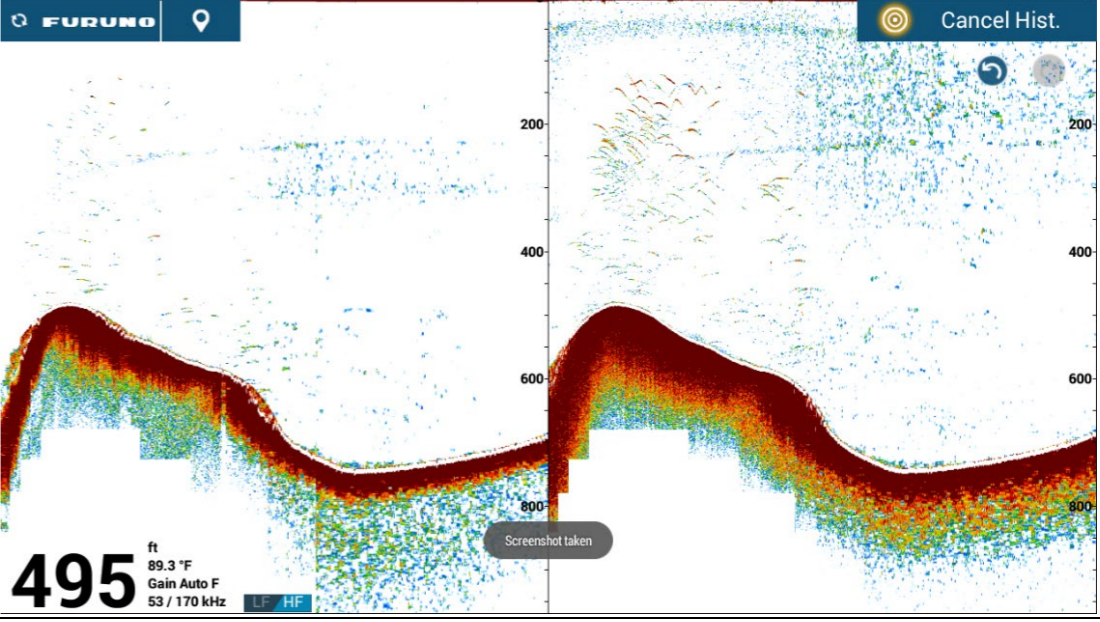
The following screenshots compare between the improved process by v3.70 and conventional v3.50.



Boat: Yellowfin 39 ft

✚ Fish Finder: TZT12F + DI-FFAMP

✚ Transducer: R109LHW

Locations	New – Improved Auto Gain & Auto CHIRP	Previous
<p><b>Location (1)</b> Bottom Wreck at 500 ft (≈170 m)</p> <p>Depth: Approx. 510 ft (170 m) Range Scale: 630 ft (210 m)</p>	 <p>Layer of seaweeds</p> <p>Layer of tidal current</p> <p>Thick layer of planktons</p> <p>Wreck</p> <p>Jig</p> <p>512</p> <p>At deep water, gain is automatically increased, so that the layers of seaweeds, tidal current, and planktons are detected with strong echoes.</p> <p>On the other hand, at the areas around the wreck, the water condition suddenly changes with stronger reflection from the wreck, so that gain is automatically suppressed. A metal jig located at the middle layer is also highlighted while other layers are suppressed.</p> <p><b>Gain is flexibly adjusted in accordance with changes in underwater conditions!</b></p>	 <p>514</p> <p>At deep water, an overall echo is weak because a specific gain value is set and applied to the connected transducer.</p>
<p><b>Location (2)</b> Marathon Hump at 800 to 1100 ft (≈240 to 340 m)</p> <p>Depth 720 to 800 ft (220 to 240 m) Range Scale: 900 ft (300 m)</p>	 <p>Layer of tidal current (Layers of plankton above and below the tidal current)</p> <p>728</p> <p>At deep water, gain is automatically increased, so that the layers of seaweeds and planktons, as well as individual fish targets above the seabed are clearly detected with strong echoes.</p> <p>The difference between the middle layer, i.e., tidal current and planktons, and the bottom layer, i.e., fish targets, are intuitively observed at a glance.</p>	 <p>495</p> <p>At deep water, an overall echo is weak because a specific gain value is set and applied to the connected transducer.</p> <p>While both the middle layer and bottom fish targets show weak echoes, echoes at the middle layer could be interpreted as a group of fish.</p>

## 1.2. Updated Transducer List

*(TZT9F/12F/16F/19F Built-in Fish Finder only)*

The TZT9F/12F/16F/19F built-in Fish Finder supports the following middle-frequency, wide type CHIRP transducers.

Transducer	Power Rating	Frequency	Mounting	ACCU-FISH™ Bottom Discrimination RezBoost™
B175MW *(1)	1 kW	600-100 kHz	Thru-Hull	Not supported
SS175MW			Thru-Hull, Stainless	Not supported
TM185MW			Transom	Not supported

### Note:

(1) With previous software versions, this transducer was listed as [B175MUW]. With new version 3.70, it is indicated as [B175MW].

## 2. Network with NavNet TZtouchXL Series MFDs

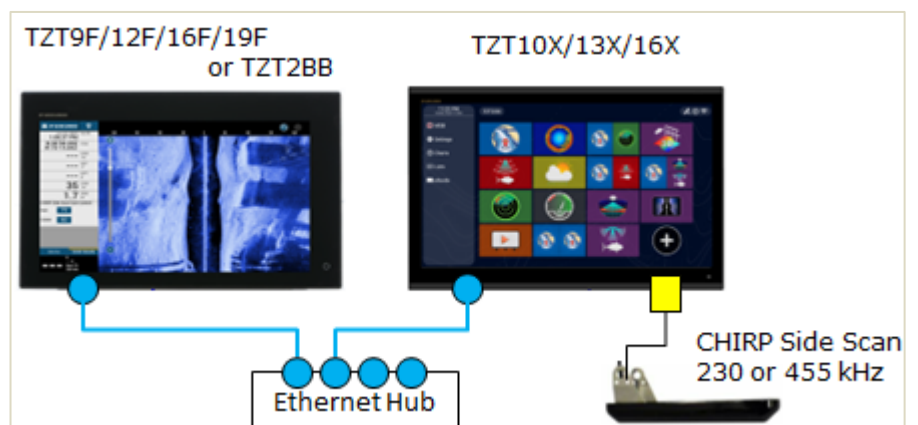
### 2.1. NavNet TZtouchXL Series – TZT10X/13X/16X/22X/24X

The TZT9F/12F/16F/19F v3.70 and TZT2BB v9.70 support network with the new NavNet TZtouchXL series MFDs – TZT10X/13X/16X/22X/24X. When these MFDs are present in the same network, make sure to update the TZT9F/12F/16F/19F to v3.70 and TZT2BB to v9.70.

### 2.2. NavNet TZtouchXL Series – TZT10X/13X/16X Built-in CHIRP Side Scan

While the new TZT10X/13X/16X has a built-in CHIRP Side Scan, compatible with both 230 kHz and 455 kHz, CHIRP Side Scan images can be shown and adjusted on the networked TZT9F/12F/16F/19F and TZT2BB.

As an example, the TZT12F/16F/19F can physically support 230 type CHIRP Side Scan transducers only, not 455 kHz. However, when the TZT10X/13X/16X with a 455 kHz type CHIRP Side Scan transducer is networked with the TZT9F/12F/16F/19F and TZT2BB, a CHIRP Side Scan screen is available for operation and menu settings.



### 3. Details of Software Versions

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The following table shows the detailed indications of updated items on the TZT9F/12F/16F/19F and TZT2BB.

Items	TZT9F/12F/16F/19F	TZT2BB
First Boot	1950210- <b>03.70</b> (Prev. 03.56)	1950176- <b>09.70</b> (Prev. 09.56)
Second Boot *(1)	1950211- <b>03.70</b> (Prev. 03.56)	1950177- <b>09.70</b> (Prev. 09.56)
System Version (OS)	1950212- <b>03.70</b> (Prev. 03.56)	1950178- <b>09.70</b> (Prev. 09.56)
Application	1950213- <b>03.70</b> (Prev. 03.56)	1950152- <b>09.70</b> (Prev. 09.56)
Self-Test Version *(1)	1950214- <b>03.70</b> (Prev. 03.56)	1950153- <b>01.28</b> (Prev. 01.27)
Built-in Fish Finder: Main	1950203- <b>03.70</b> (Prev. 03.50)	Not updated (1950175-01.05)
HTML Package	1950220- <b>03.70</b> (Prev. 03.56)	
eGuide	E42-01903- <b>I</b> (Prev. -H)	E42-02306- <b>B</b> (Prev. -A)

\*(1) The Second Boot and Self-Test versions can be checked on Service Menu only.

### 4. Others

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(1) **Improvement:** New partners are added for browser capability via HTML5.

**CMC Marine:** Added

**SeakeeperRide:** Added

**Lumishore:** Icon design changed

**SEA.AI:** Name and icon indications changed from OSCAR

(2) **Change:** Service Menu requires no password entry to comply with the latest UK PSTI regulation.

(3) **Change:** [Complete System Wipe] is removed from Reset Menu.

(4) **Change:** NMEA0183 **TTM** sentence is **NOT** output in the following configuration.

The TZT9F/12F/16F/19F v3.70 and TZT2BB v9.70 are networked with NavNet TZtouchXL series MFDs and DRS2D-/4D-/6A-/12A-/25A-NXT for AI Avoidance. The new AI Avoidance function on NavNet TZtouchXL series MFDs refers to very unique, proprietary Target Tracking (TT) data from the DRS2D-/4D-/6A-/12A-/25A-NXT. This TT data, i.e., TTM, is not output from the networked MFDs including the TZT9F/12F/16F/19F v3.70 and TZT2BB v9.70.

(5) **Change:** The priority order of NMEA2000 data input is properly processed: Devices with smaller device instances are prioritized. Among the devices with the same device instance, the one with a smaller Name Field is prioritized.

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