GE Healthcare
VividClub

Application News

How to use the AUTO functionality on Vivid i/q

GE imagination at work

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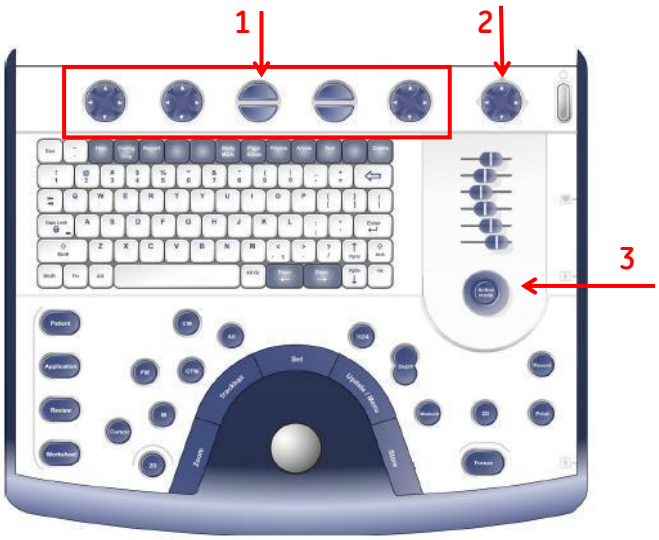
NOTE
This hand out is additional training material.
For more information please refer to the user manual and/or reference manual.

How to use the AUTO functionality on Vivid i/q

Words marked in red are Hard keys on the Control Panel



1 Assignable keys
2 Soft menu Rocker
3 Gain rotary / Active mode button

General information AUTO functionality

While in 2D it activates: ATO (Automatic Tissue Optimization) or
CTO (Continues Tissue Optimization) or
CTO + ATO
CTO available with BT 11 Software or higher versions

While in CW or PW Doppler it activates ASO (Automatic Spectrum Optimization)

Automatic Spectrum Optimization (ASO)

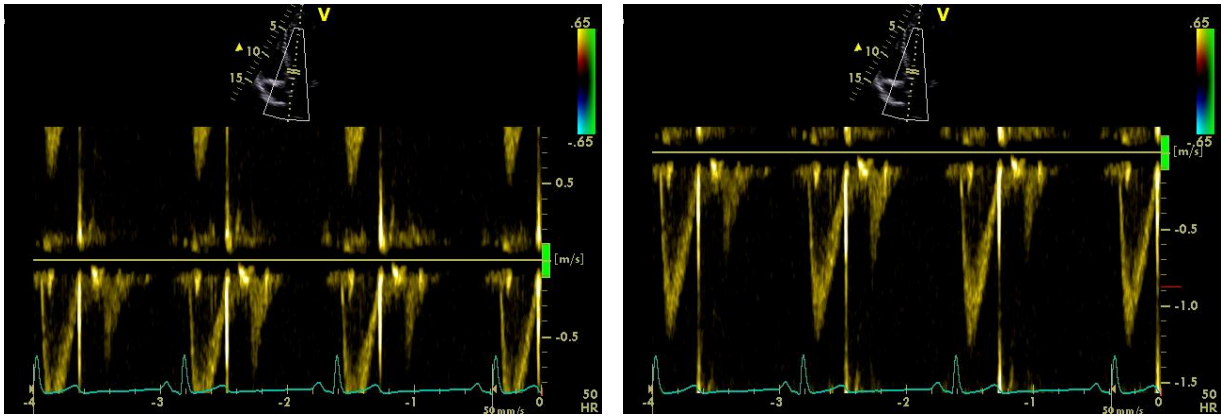
ASO is used to automatically adjust Baseline and Scale of current PW/CW spectrum to optimize the spectral display. It will avoid the display of a folded spectrum and stretch the spectrum vertically as large as possible.

Important Notice Configuration

It is **mandatory**, that the **Baseline** and **Scale** is on the **default factory setting**. If any changes are done in the Preset, the ASO function will not work properly.

During PW and CW Doppler press the **ASO** related button **(1)** on the Assignable keys or use the Trackball to navigate to the ASO button at the screen and press **Set**.

ASO is not continuous performed, but each time the Active mode button is pressed.



ASO on

Depending on the flow direction and velocities, e.g. AV Stenosis + AV Regurgitation, you may have to press the **ASO** related button **(1)** on the Assignable keys **several** times, to give the Software the possibility to make the proper changes in both directions.

Step 1: Flow below the Baseline
Step 2: Flow above the Baseline
Step 3: Adjust the Scale to show maximum flow in both directions

Automatic 2D image optimizations

Important Notice Configuration

Please check first the Configuration of the **Active mode** button located inside the **Gain rotary (3)** for the 2D image.
The Auto function will be switched on / off with the **Active mode** button.

3 available **optimizations** in 2D live: **ATO**, **CTO** or **CTO+ATO** can be selected by the Soft menu.

1. Press any part of the **4 way Rocker (2)** to display the Soft menu
2. Press the vertical arrows to navigate up or down
3. Press one of the horizontal arrows to adjust the setting

Functions are:

- **ATO**: **CTO disabled**, pushing the **Active mode** button activates/deactivates **ATO**
- **CTO**: **ATO disabled**, pushing the **Active mode** activates/deactivates **CTO**
- **CTO+ATO**: **CTO on by default**, pushing the **Active mode** activates/deactivates **ATO**

Soft menu selection can be stored with the preset.

How to store Presets:

Push **Application** at the Control panel, **Set**, scroll down with the Trackball to the field Presets, **Set**, enter a Name for the Preset and confirm with Save by pressing **Set**.

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Automatic Tissue Optimization (ATO)

ATO provides an automatic optimization of the 2D image by improving the contrast resolution. ATO optimizes the 2D image when the **Active mode** button located inside the **Gain rotary (3)** is pushed. This setting remains until the **Active mode** button is pushed again. ATO is now turned off; to activate ATO, press the **Active mode** button.

Other Image quality optimization remains available, such as 2D Gain, TGC, Frequency etc.

Important Notice

ATO is available with all Imaging Probes in:

- **2D Live scan mode**
- **Freeze**
- **Image recall mode**

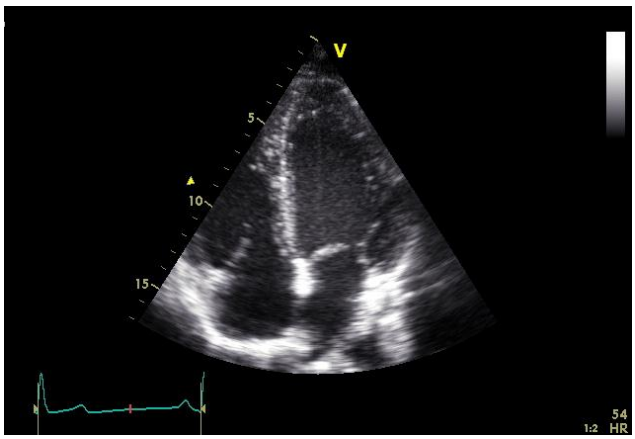
It is recommended to deactivate and activate ATO when changing the scan plane.

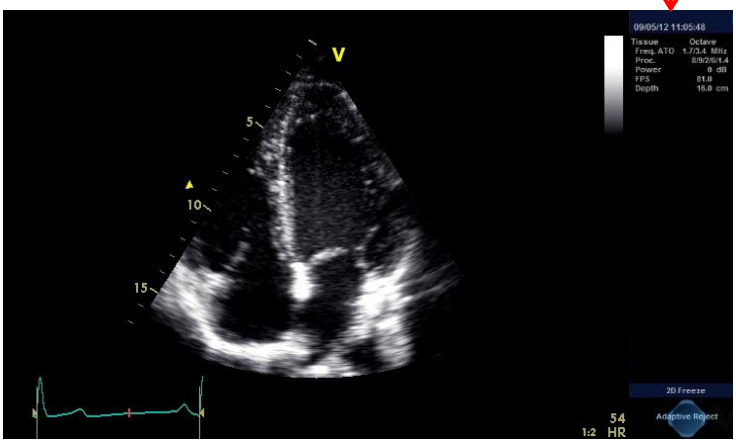
While scanning on different positions during examinations or on different organs, please deactivate ATO and activate it again on the new scanning position. The system will provide an automatic optimization of the current Region of Interest.

ATO can be turned on and off by pressing the **Active mode** button **(3)**. To check the status find the ATO sign on the monitor.

<u>ATO is an on / off function.</u>

ATO is displayed in the information window





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Continues Tissue Optimization (CTO)

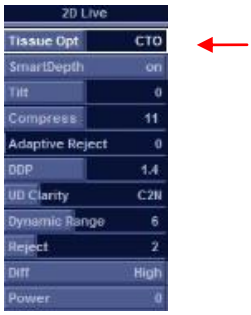
CTO continuously adjusts the Gain to achieve a uniform brightness across the entire 2D image in 2D live scan mode. Continues optimization: gain adjustment every 200ms, while it is active.

Other Image quality optimization remains available, such as 2D Gain, TGC, Frequency etc.

Important Notice

CTO is available with all Imaging Probes in

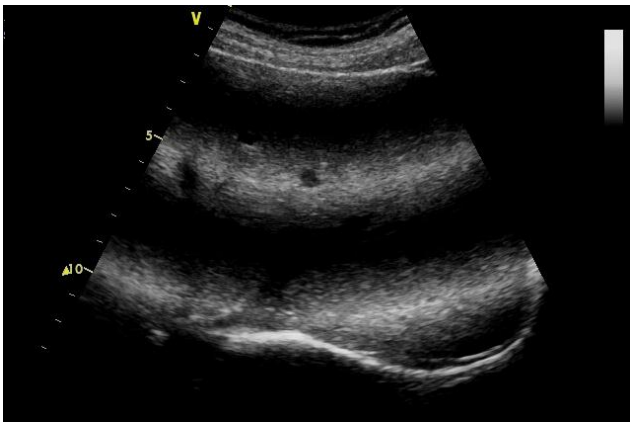
- **2 D live scan mode**

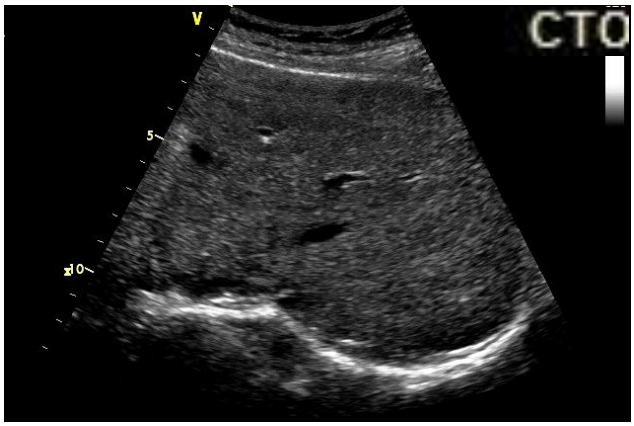


Push the **Active mode** button and CTO is activated. To deactivate CTO press the **Active mode** button once more. To check the status find the CTO sign on the monitor.

Continues optimization: gain adjustment every 200ms

CTO is displayed at the top of the Grey scale bar





When CTO is activated, you'll now have the Possibility to decide about the gain level of CTO by changing the Gain with the **4 way Rocker (2)** on the Control panel.

Soft menu selection can be stored with the preset.

CTO + ATO

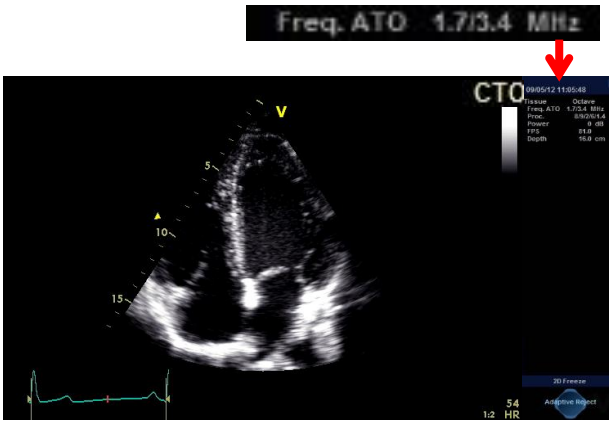
CTO (Continues Tissue Optimization) +
ATO (Automatic Tissue Optimization)

If CTO + ATO were stored in the Preset, CTO is automatically on by default during live scanning in 2D.

By pressing the **Active mode** button, the Automatic Tissue Optimization (ATO) can be activated in addition to CTO.

ATO can be turned on and off by pressing the **Active mode** button. To check the status find the ATO sign on the monitor.

Remember CTO keeps turned on, all the time.



It is recommended to deactivate and activate ATO when changing the scan plane.