



860 DSPi Tilt Compensated Scan Mode

Overview

The Tilt Compensated Scan feature allows the user to remove the tilt associated with a Channel Plan Scan. Currently, this is disabled by default every time you enter the Scan Mode. The reason for this is that the Scan Mode would show values that are not consistent with Level Mode while the tilt is being compensated out. This could cause confusion for users that accidentally enable this mode, but have no use for the mode.

The Tilt Compensated Scan feature is now available to 860 DSP or 860 DSPi owners with the latest firmware update (version 11.1.1.1 or higher).

How does my 860 DSPi utilize Tilt Compensated Scan Mode?

Currently, the 860 DSPi can utilize the Tilt Compensated Scan feature in the Scan Mode and Scan Macro Steps only. We have implemented this feature across the Scan Mode, Scan Menu Limits (Drop, Set, Tap, User), Macro Limits, Workbench, and TDM in order to provide consistency and ease of use.

In order for this feature to work properly, the user must enable tilt channels in their channel plan by using either Workbench, TDM, or direct setup on the 860 DSPi. The Tilt Mode (similar to the Forward Sweep Mode) uses the first and last tilt markers as the key measurement channels for all mathematical calculations.

Upon Activation

This feature measures the Tilt by subtracting the level of the lowest marked tilt channel from the level of the highest marked tilt channel. This is now consider the system tilt and is exactly the same as what is displayed in the Tilt Mode. This number is displayed in the lower right corner where the Digital Signal Processor Status is usually shown. If the DSP is encountering an error, the error will be shown instead of the Tilt value.

This feature then adjusts every channel in the channel plan by a linear interpolated amount of tilt pivoting around the lowest tilt channel. So, in theory, the lowest marked tilt channel should not change in value and the upper marked tilt channel should now be measuring the same as the lowest marked tilt channel since these two were used in the calculations. All other channels are scaled accordingly.

For Additional Help Contact
Trilithic Applications Engineering
1-800-344-2412 or 317-895-3600
support@trilithic.com or
www.trilithic.com

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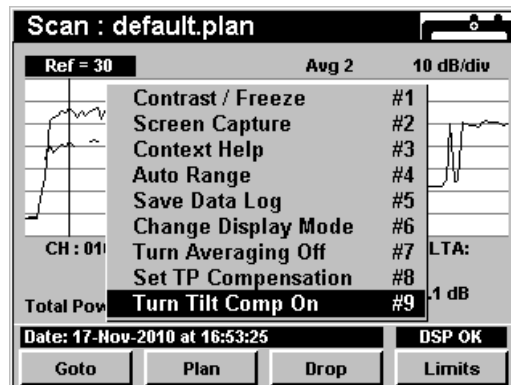
The markers, the limits, and all available software will now just assume these are “Real” levels and all functions behave normally. A similar way of looking at this would be the case if the user just entered a test point compensation value. All data is now considered “Real”

Note: The Scan Macro now has a single parameter which states “Tilt Comp Mode” “On” or “Off” and defaults to “Off”.

Note: The Total Power is not effected by this and uses the original measured values for computations.

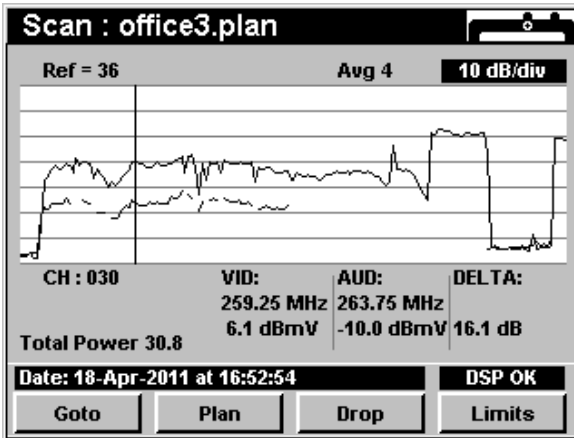
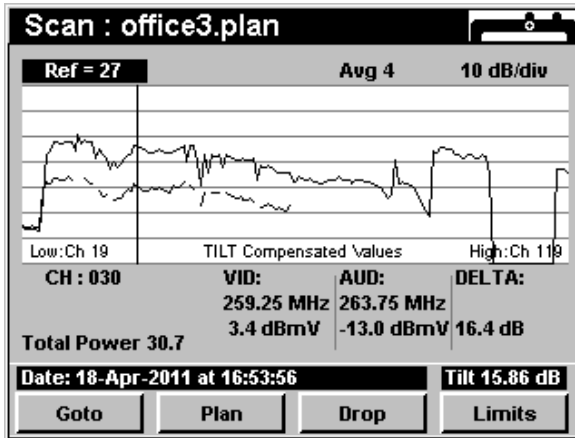
How can I see if my 860 DSPi supports Tilt Compensated Scan Mode?

The easiest method to see if your 860 DSPi supports Tilt Compensated Scan Mode is to go to the Scan Menu (the Power Pack Option (PP-1) is required for the Scan Mode) and press the function key to see if the enable / disable option is Function #9.



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Example of Tilt Compensation in Action

Scan Menu with Tilt Comp OFF

Scan Menu with Tilt Comp ON

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