How to edit reference curves in the setup-Edit mode.

The concepts to make a measurement and test the data against reference curves it is need to modify and edit reference curves.

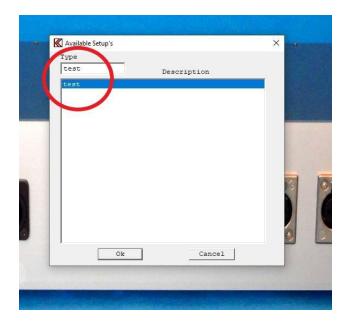
In the following a short description made to edit and change reference curves.

The examples are using the offline demo program.

Start the program and select the setup:



Select the setup with the name "test" and enter select the Ok.



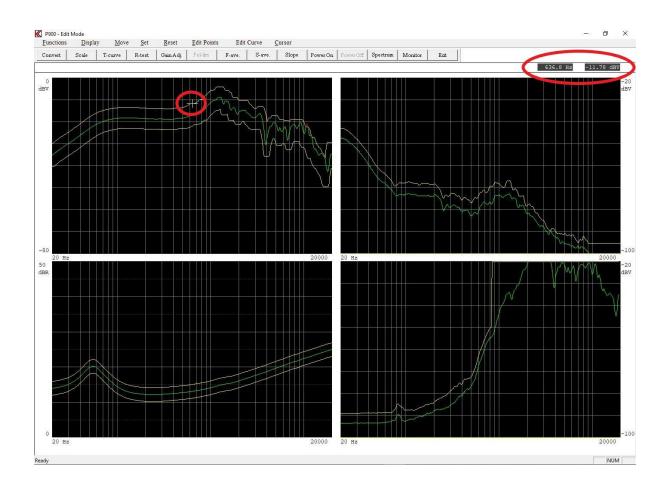
## Select the Reference:

Type Name Chain Status	Sweep Reverse Reference	
Description	Start 20 Hz	
	Stop 20000 Hz Delete & exit	
Help File > 34	Limit Delay mSec Save & exit	
	Points 500 No	
-Sensitivity Test Move 1000 Hz	Output	
	- Auto Save-	
Polarity Test 3.0000 V □ On □ Negative □ After	I Data App.   Data Rej.   Results	
Pulse Time	dB Data Path	
mSec. Sync Burst 0 dB = 14.0	Volt Result Path	
Compress Range Off dB Ref. Ch	Filter	-
10	Status 🔽 Ch B 🗌 Ch C 🔽 Ch D	
-Input Status I⊽ ChA I⊽ ChB I⊽ ChC I⊽ Ch	Type TRKHP C	
	Freq/Bw 00 ↓ 2000 2000	-
	Gain +20 dB 🗘 +20 dB	
Smoothing 1/12 0 1/2 0 1/6 0 1/2	Y PARAMA AND A PARAMA	
0ff \$50.2 pt	t/oct Limit 45 KHz ↔ 32 KHz ↔ 32 KHz ↔	

## Then enter the Edit menu from the Reference Mode:



When enter the Edit Mode a cross cursor is seen on the Upper Reference as default. On the right readout of the cursor point is displayed with frequency and value.



If more than one graph channel are showing it is possible to zoom in on the channel where the cursor is showing.

To do this select "Zoom in" from Display menu or use the keyboard key "Page Up".

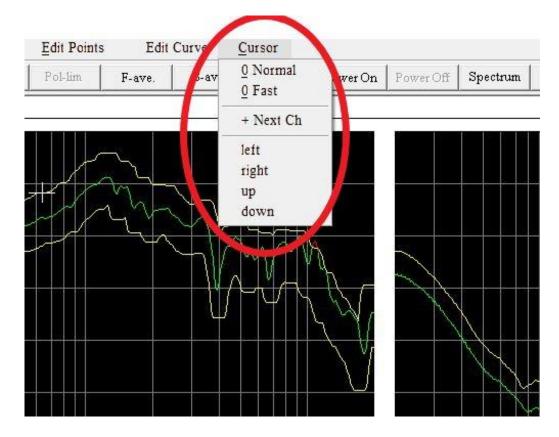
On the same way it is possible to "Zoom out" from Display menu or use the Keyboard key "Page Down".

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Convert	Select Dis	play	R-test	Gain Adj.	Pol-lim	F-av
Ch A Upp r 0 dBV	Zoom in Zoom out					

To move the cross cursor on a curve, change selected curve or change selected channel can be done from the "Cursor menu.

Fast cursor is 10 time normal mode. The same function can be used by keyboard key "0". The 0" toggle the fast mode on / off.

With mouse place the mouse in the graph area and clock with the mouse middle button. This toggles the fast cursor on / off too.



Move the cursor to left or right, use the cursor menu left or the keyboard key "arrow left" or "arrow right".

Move the cursor to next curve, use the menu "up" or "down" the keyboard key "arrow up" or the key "arrow down".

By using the mouse using scroll up or down do the same as "up" or "down".

The "up" and "down" are a ring counter.

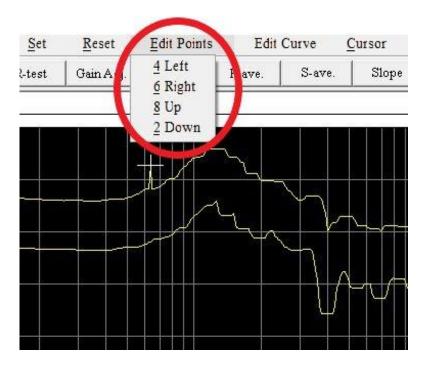
To select next channel use the Cursor menu "+ Next Ch" or use the keyboard key "+".

To select a "channel" and cursor on a frequency point uses the Mouse point on a channel and click with left mouse button.

To write pixel of a selected curve up, down use the "Edit menu" Up or Down. The picture show pixel changed upward. The same function can be used by the keyboard key "8" or "2". Note if fast cursor is on be aware that the changes is 10 time faster.

To write pixel of selected curve to left or right on a straight line use the "Edit menu" Left or Right.

The same function can be used by the keyboard key "4" or "6".



To move the whole selected curve up, down use the "Move menu" Move Up or Move Down.

The same function can be used by the keyboard key "9" or "3". Note if fast cursor is on be aware that the changes is 10 time faster.

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Display	Move	Set	Reset	Edit Points	Edit	Curve
Scale T	<u>9</u> Move <u>3</u> Move	: Up : Down	hAdj.	Pol-lim	F-ave.	S-ave
Fast	Freq. J	itter				
		oart Left oart Right				
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To move a part of a curve do following. First move pixels up or down and then use the "Move menu" to move a part if the change "Move part Left" or "Move part right".

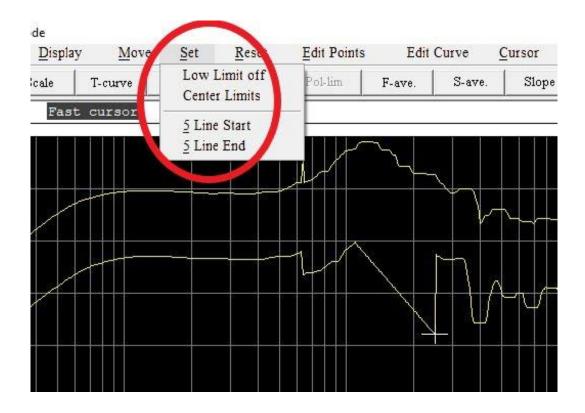
The same can be done by the keyboard keys "Clrl left arrow" or "Ctrl right arrow".

Mode							
Display	Move	Set	Reset	Edit Points	Edit	Curve	Cursor
Scale T Fast c	<u>9</u> Move <u>3</u> Move		1Adj.	Pol-lim	F-ave.	S-ave.	Slope
	Alternative     Altern	art Left art Right					
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It is possible to write a straight line from a selected point on a curve to another point.

To do this selects the "Set menu". First use the "Line start" at the cursor poison. Then move the cursor to the frequency point where the straight line has to be. Note the part of the curve is highlighted. Then move the pixels up or down. The picture below the pixel is moved down.

Then select the "Line End". A straight line from the start to end pixel is drawn. The same can be done with the keyboard key "5".



For rub & buzz measurements the lower limit curve is not needed. To disable the lower limit use the "Set menu" and select "Low Limit off". The same function can be used by the keyboard "Ctrl Page Down" keys.



The upper and lower limits can be reset to the middle of a channel range at -40 db below of screen top (normally this is middle of the screen.

This can be useful if the frequency curve use the benefit if a compensations curve. Here the references are the differences between the compensations curve and the measured data.



The Frequency Jitter widen can used if there is a resonance and this make is difficult to edit reference points. The Jitter moves the reference points +/- 1 frequency points every this function are called. The function is called from the "Move menu"



## Move whole curve.

To move the whole selected curve up, down the dot cursor must be active. If so use the mouse wheel forward or backward to move the whole curve up or down. To select the dot cursor place the mouse in the graph area, select curve and double click with left mouse button.

The picture show the upper limit curve mowed up.

To leave the dotted cross. Double click with left mouse button then cross get red. The double click left mouse again or right click on mouse button one time.



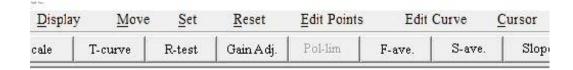
Move part of curve.

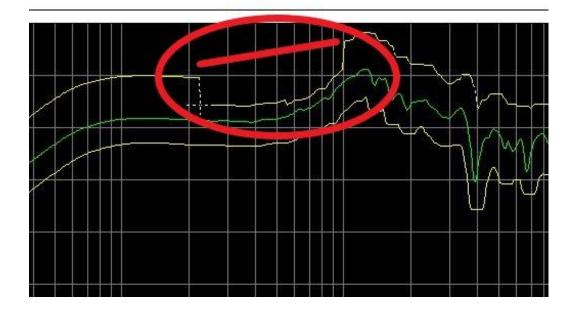
The part of a curve do following. Place the dotted cursor at start move point move the mouse to the end frequency point and click with the right mouse button.

The part curve part outside the move will be dotted.

The picture show the upper limit curve mowed up.

Use the mouse wheel forward or backward to move the part of curve up or down.





Write pixel up or down.

Select the Red Cross by double click the left mouse button two times. Write pixel up or down by using the mouse wheel forward or backward.



Write straight line from point to point.

With the Red Cross selected. Select with the mouse a start point showing with a red cross.

Then hold the left mouse button down and move the mouse to an end frequency and level point.

When the left mouse button is released a straight line is drawn.

