CROONLINE documentation

The On-Line Analysis tool displays the data stream coming from the CRO tool, computes linear regression values and the current precision and stores the data in a binary file for later evaluation.
Part of the On-Line tool is the file named CRO.INI which contains basic setup of the program. It is used by the CROONLINE and CROOFFLINE tool.

Basic setup after start of CROONL.EXE

Serial Interface:

Selection of COM port 1 or 2 (speed is automatically selected)

UTC Bias:

Time difference to UTC. (optional, not important, only for correlation)

OCXO Frequency (MHz):

OCXO frequency input in MHz. Must be precise up to 1 Hz). You may use a dot "." for MHz separation.

p-Factor:

Enter the same value as in the p-factor setup menue of the CRO hardware. This is important for the calculation of the precision.

Update:

Press the button after you finished all entries. That causes an udate of the INI-file.

CRONLINE:

This button calls the On-Line Anlysis window.

Exit:

Terminate CROONL.EXE

Online Analysis Window:

COM1/COM2 active:

Shows which COM port is activated.

Header line: C:\XYZ\..... RO_2001151319.bin is an example for the path and the file name of the recorded data. It contains the date and the time stamp of the start. The time stamp of the first most record is shown below.

Below header line: Every second one can find the current data set from the CRO board.

Display Timeframe: Horizontal resolution of the visable range in seconds. One can choose between 900,1800,3600 n 7200 seconds. If the right border is reached, the graph displayed moves to the middle of the screen automatically.

Recording Running: Indicates that the recording is running.

AbsDiff:

This is a graph of the current absolute phase counter value in relation to its start value. Every minute a white small line will be drawn. Red lines indicate a new start of the evaluation. Blue lines mark interferences.
Any mouse click in the area of the minute marks (white lines) turns the display of 5 values on or off. The cursor position is the value in the middle of the 5 lines.

Diff:

Shows normally the total course of the phase counter values without jumps caused by a new start. Depending on the settings of the CRO board, other values (diagnostic values) can be displayed. Refer to LCDTAST-E.DOC.

dDiff:

The difference of abdDiff from second to second can be seen here. That's is the jitter of the phase counter from one count to the next one. As less jitter is visibale, as less noise can be ssen.

Markers: On the right hand side a position of two horizontal read lines can be selected for each area. ENTER executes the selection. The absolute value in ns can be seen at right.

Dynamic area: For each of the three windows , the vertical dynamic range can be selected separately. The value multiplied by 10ns is the maximum visible devition.

Comment: Below the dDiff window a comment can be entered. After the Enter key has been pressed, the text will be written into the binary data set file. Only the last entered text will be displayed in the OFF-Line analysis tool.

Regression calculation: G*p is the inclination of the regression line which is directly depending on the difference between the reference and the OCXO fequency. G is the inclination, p is the p-factor entered in the CRO setup.

Frequency : The frequency computed (not measured) depending upon the accuracy evaluated is shown in MHz.

EXIT:

Exits on-line analysis and closes the data set file.