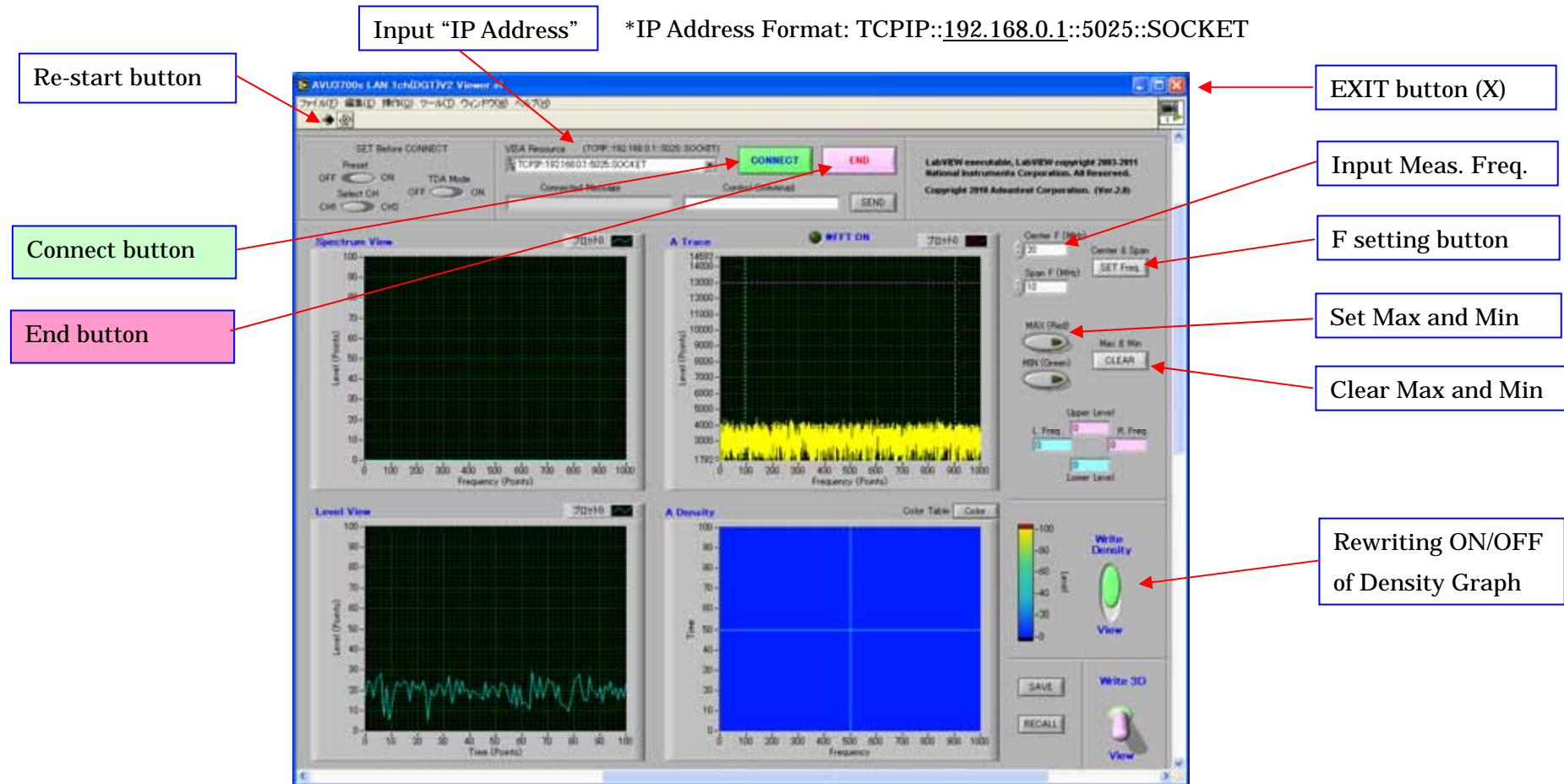The installation: Setup.exe in directory Installer is executed. (Operating conditions: Windows XP and Microsoft network, etc.)

The Start: All Program → U3700 1ch(DGT) Graph Viewer → 1ch(DGT) Graph Viewer → execute.

IP address of SA is confirmed, and it inputs it to the IP address column of the menu. And push the CONNECT button.

The Stop and the Re-start: It stops with the END button. Re-start: push an upper right "=>" button and push the CONNECT button.

It explains the operating button in the following drawing.

Input "IP Address" *IP Address Format: TCPIP::192.168.0.1::5025::SOCKET

Re-start button

EXIT button (X)

Input Meas. Freq.

Connect button

F setting button

End button

Set Max and Min

Clear Max and Min

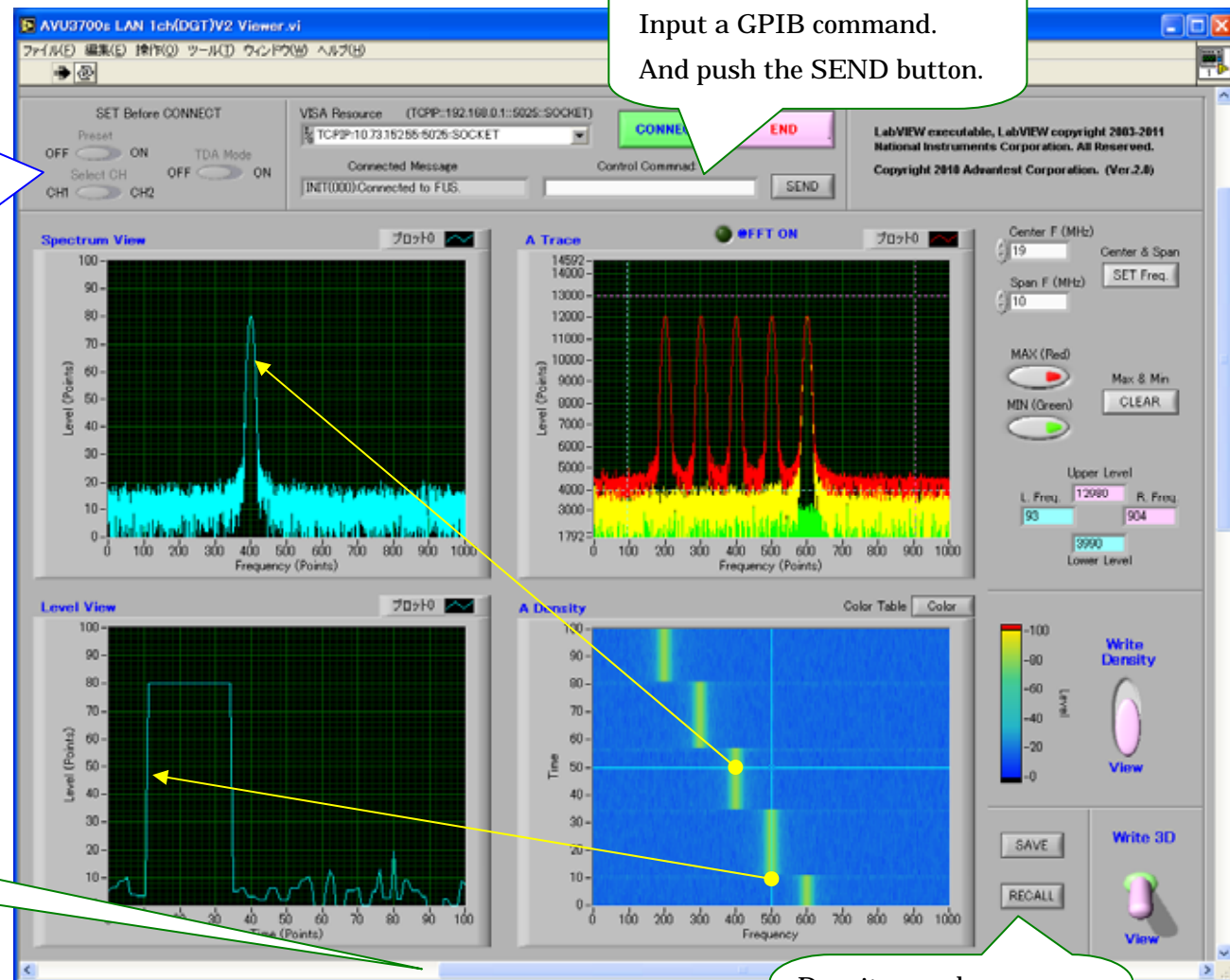Rewriting ON/OFF of Density Graph

1

Set them before pushing the CONNECT button.
(*After connected, it is not possible to set it.)

Preset: SA is initialized.
FFT ON: Set FFT Mode
              (OPT is necessary.)
Select CH: Select CH1 or 2
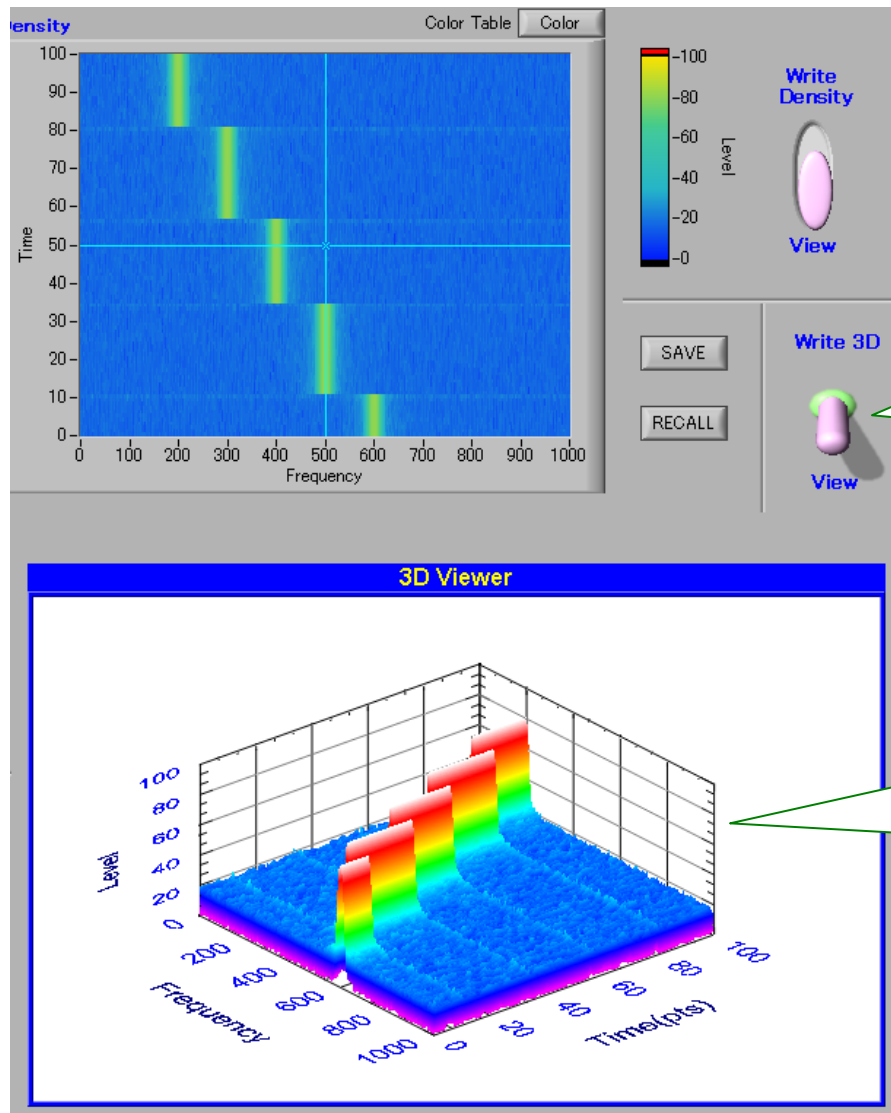   (@in 2ch SA)

SA direct control:
Input a GPIB command.
And push the SEND button.

The display position is adjusted by the scroll.

Density graph:
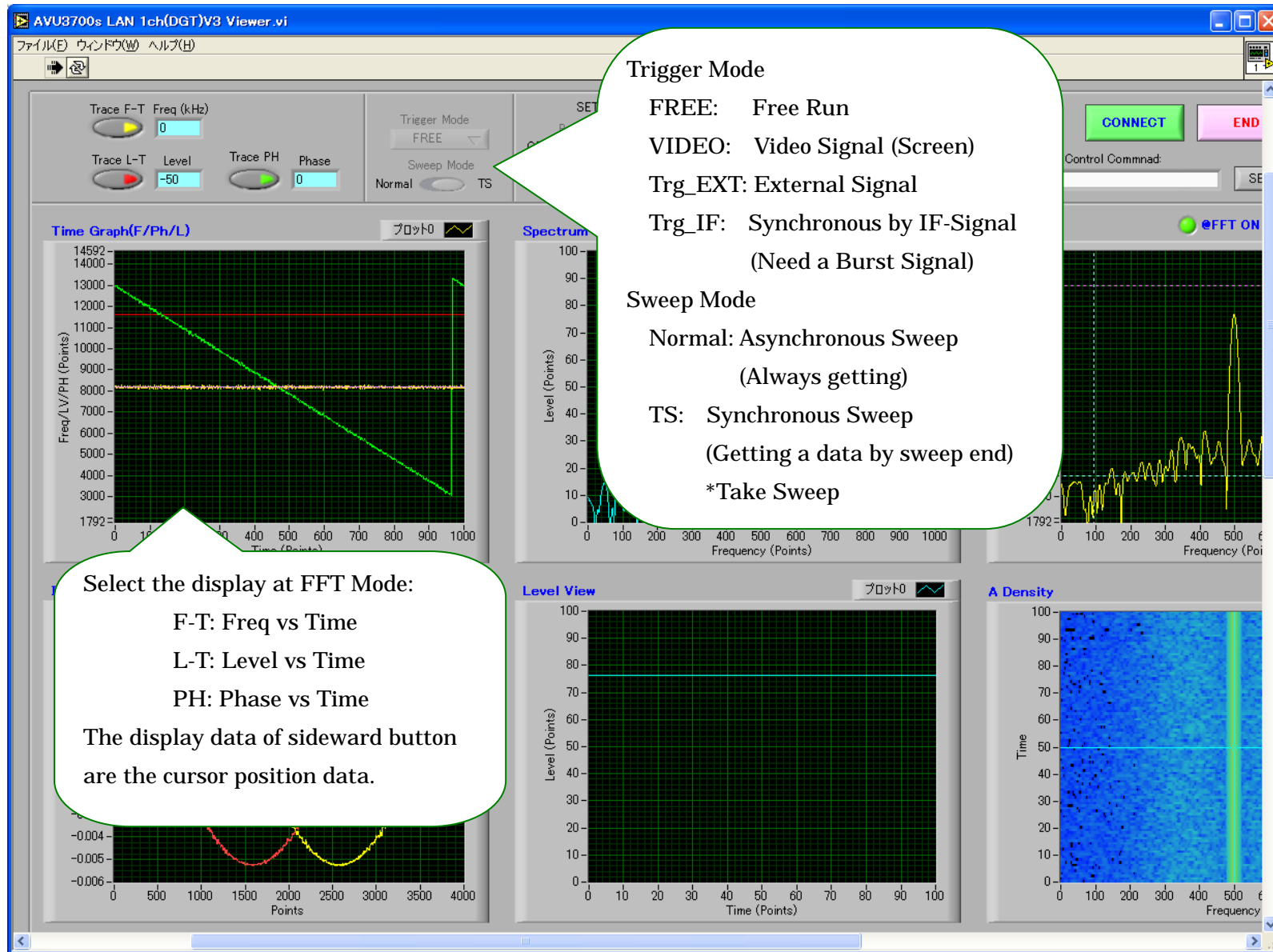It can save for data file.
The recall can be done

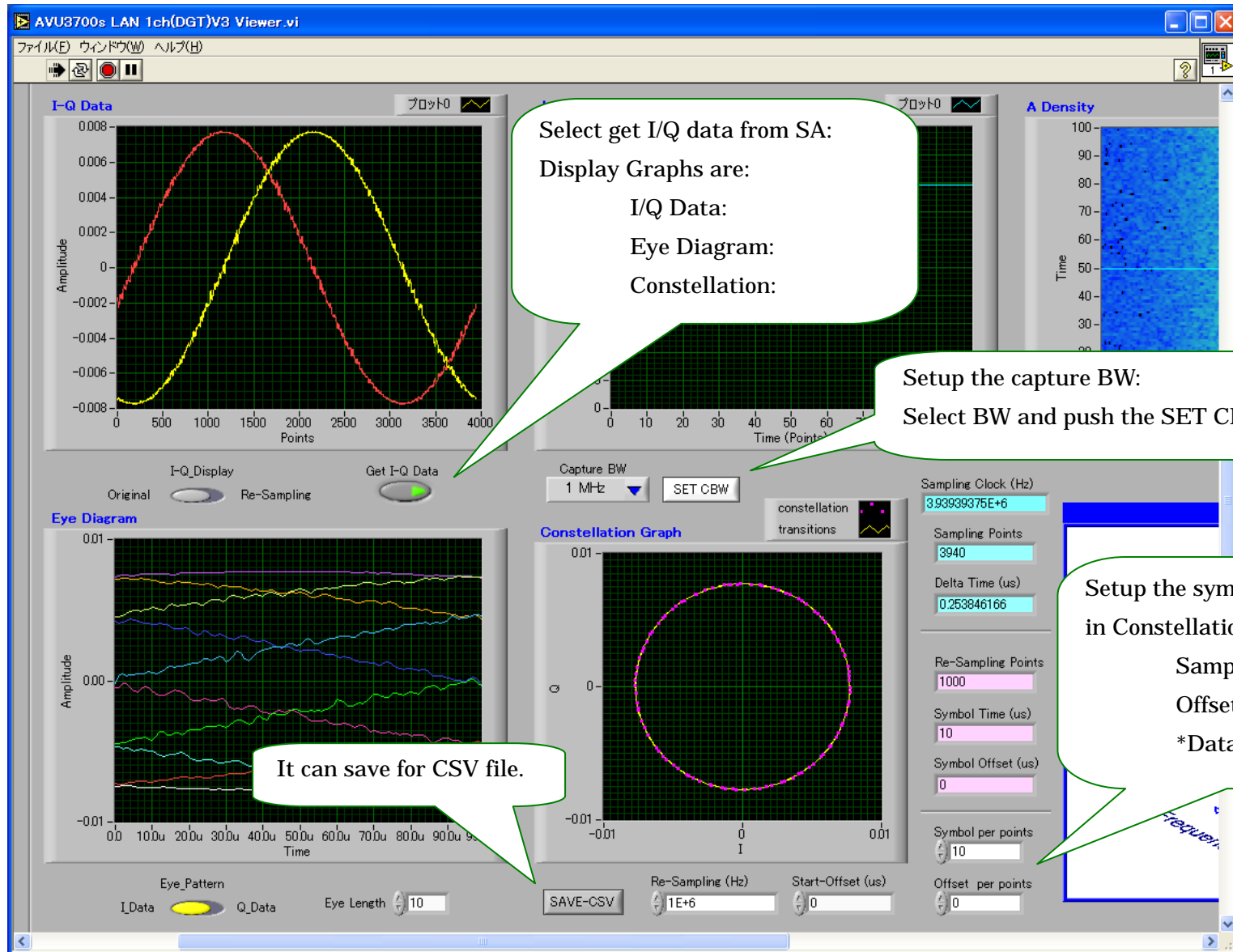The screen is moved by the scroll bar like seeing the lower half.

Rewriting ON/OFF of 3D graph
Because it takes the operation time,
it usually turns it off.
Turning on when it is necessary.
To turning off when the drawing ends
Please set it.

Aspect movement and expansion
After it draws, rewriting is turned off.
Move the mouse, and in the left-click
The dice mark is moved.
The scaling is possible by a central button.

The screen is moved by the scroll bar like seeing the left upper side.

Trigger Mode

    FREE: Free Run

    VIDEO: Video Signal (Screen)

    Trg_EXT: External Signal

    Trg_IF: Synchronous by IF-Signal

             (Need a Burst Signal)

Sweep Mode

    Normal: Asynchronous Sweep

           (Always getting)

    TS: Synchronous Sweep

       (Getting a data by sweep end)

      *Take Sweep

Select the display at FFT Mode:

    F-T: Freq vs Time

    L-T: Level vs Time

    PH: Phase vs Time

The display data of sideward button

are the cursor position data.

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The screen is moved by the scroll bar like seeing the left lower side.

Select get I/Q data from SA:

Display Graphs are:

 I/Q Data:

 Eye Diagram:

 Constellation:

Setup the capture BW:

Select BW and push the SET CBW

Setup the symbol point position in Constellation Graph.

 Sample per Symbol:

 Offset:

 *Data is point data.

It can save for CSV file.

Explanation of demonstration procedure and graph

Internet Protocol address of SA is input. (Default is 192.168.0.1 that local connects SA. The cross cable is necessary.)

CONNECT is pushed. The response from SA is displayed in the Connected Message frame at once.

The initialization of SA is executed and a wave display will begin in 2-3 seconds.

(If not displayed, it ends once with X button and re-start this program ant the connection.)

- A Trace: The waveform data of trace A of SA is displayed.

Max and Min of waveform data can be displayed. (Operate it though it is not displayed.)

The clearness of Max and Min operation data pushes a clear button when it is necessary.

Moreover, four cursors have been put out with the sample. It is possible to move respectively with the mouse,

and it is X at that time, and data of Y axis. However, it is displayed.

(The display is a number of points because of the sample.)

- Time Graph: The Time Domain Analysis data is displayed at the FFT mode.

F-T, PH-T, and L-T are displayed by condition of button. (it's individual or simultaneously)

Moreover, the cursor location data is displayed in the vicinity of each button.

(In L-T, (using Ref, dB/div) F-T, and PH-T are the cursor location data from Graph Center Position.)

- Density: The spectrum is seen, and the signal intensity is seen on and a time change is seen with Y axis in the color.

In this graph, there are X cursor and Y cursor, and the data of the part there is displayed in another graph.

Y cursor is Spectrum View, and the spectrum at a certain time can be observed.

X cursor can observe the level change in a certain frequency with the time base in Time View.

Each cursor can be moved with the mouse. Moreover, slowly when you turn off rewriting when it is necessary

It is possible to observe it.　As for the data of this graph, "Save and the Recall" can be done.

- 3D　Graph: Waveform data can be observed by three dimensions. Because it somewhat takes time for the operation,

rewriting the shape of waves that wants to be observed.

Please turn off rewriting when ending. Moreover, the aspect angle and the size are re-write because of the mouse.

IQ Data CSV File Format

ADVANTEST-SPA: IQ-Data

Center Frequency	20.001	(MHz)	0	40MHz
Capture BW	4	(Code)	1	30MHz
ORG-Sampling Clock	3939393.75	(Hz)	2	10MHz
ORG-Sampling Points	3940	(Points)	3	3MHz
Re-Sampling Clock	1000000	(Hz)	4	1MHz
Re-Samping Points	1000	(Points)	5	300kHz
Re-Start-Ofs	0	(us)	6	100kHz
IQ-Scale	2.904123068	(V)	7	30kHz
Original_IQ			8	10kHz

I	Q		Code	
0.001448	-0.007574	Original IQ	9	3kHz
0.001411	-0.007585		10	1kHz
0.001357	-0.0076		11	300Hz
0.001309	-0.007614		12	100Hz
0.001281	-0.007622			
0.001277	-0.007623			
0.001293	-0.007617	(N Points)		
0.001327	-0.007608			

Re-Sampling_IQ — Re-Sampling IQ Data

I	Q	
0.001448	-0.007574	
0.001281	-0.007622	
0.001367	-0.007599	
0.001413	-0.00759	
0.001328	-0.007615	
0.001206	-0.007614	
0.001042	-0.007667	(N Points)
0.000993	-0.007666	
0.001001	-0.007648	

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