

# LAN Remote sample software (V3.1)

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## 1.Outline

This application software is for the U3700 series 2-channel Spectrum analyzer (SA). When option10 (2ch input) is installed in the U3700 series, and we use this software, it will forward and display 2-channel screen on the personal computer. Two screen display and the overlay display to say nothing of one screen can be done as a method of the display. In addition, the basic function can be remotely controlled. The data displayed in preservation (Screen Shot) and the personal computer of the SA screen as other functions can be preserved. We are very happy if it helps in a wave monitor etc. even a little. (This software is free software.)

## 2.System configuration

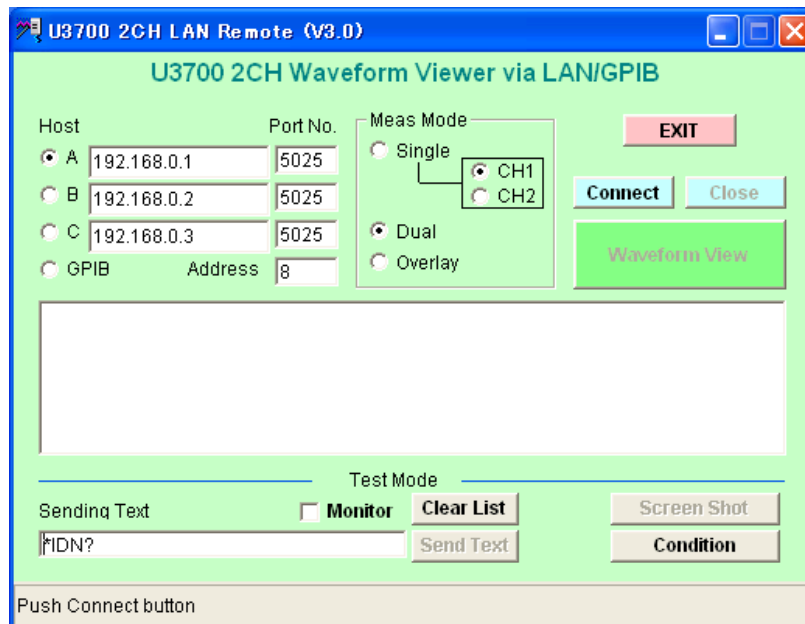
Spectrum Analyzer: U3741+OPT10 (U3751, U3771, and U3772/+OPT10 operate.)  
Initialization of SA: Confirm the following basis mode.  
Set to 2ch mode ON and the trace 1001 points.  
Personal computer: Windows XP/ 2000 (OS that has been confirmed)  
Interface: GPIB (made of NI) or LAN

## 3.Installation

Execute setup.exe that exists in this software. Operate it according to the instruction of the screen while executing it.

## 4.Start

Execute the **Wave(2ch) Monitor** there because the menu named **U3700 LAN Client 2ch** is made for the start menu of the personal computer. The following initial (the 1st) screen is displayed.



### 5. Click the **Connect** button and connect it with SA. (LAN or GPIB connection)

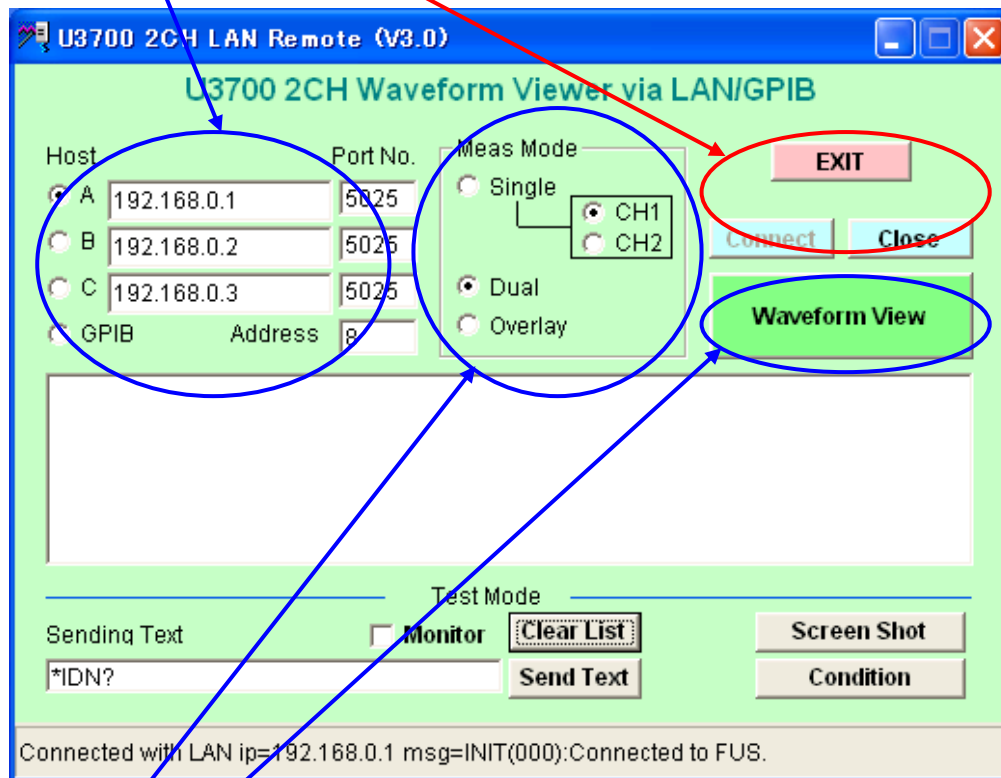
(When the connection is completed, connected message is displayed in the message display area of under figure.)

#### **Connected procedure:**

- Set the address of SA. (Refer to the setting of Internet Protocol address of "P.10" for details.)
- Set Internet Protocol address of SA to the Host address column. (Port No. is 5025)
- Select Internet Protocol address from one A B C. or, choose GPIB and set the address.
- Connect Ethernet cable. (or, GPIB cable.)
- Click the Connect button.

### Explanation of panel:

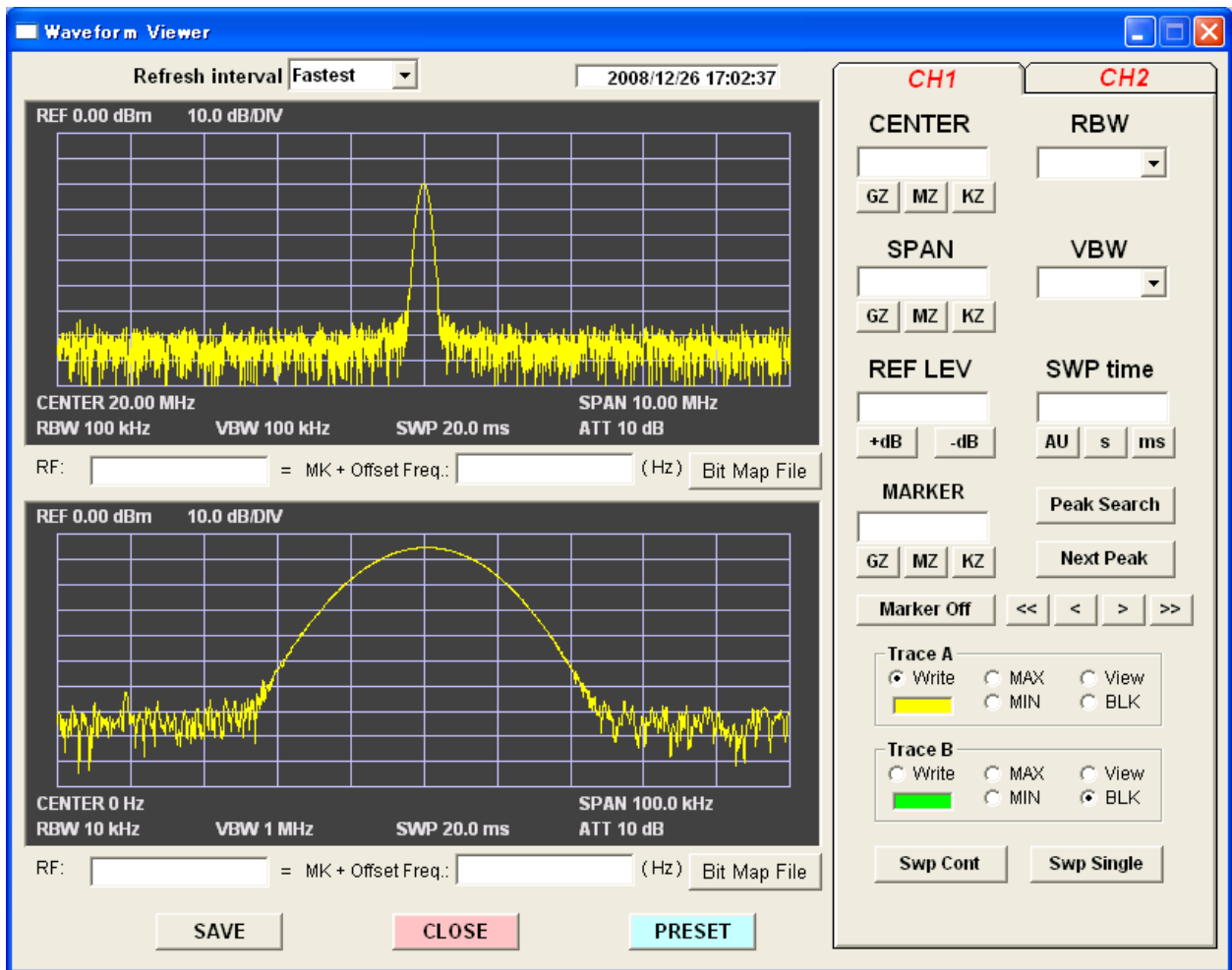
- **Host (SA):** Setting and selection of IP address
- **Connect:** Establish the connection with SA
- **Close:** Release the connection with SA
- **EXIT:** End of this program



- **Waveform View:** Window of the wave monitor opens
- **Meas Mode:** Select the display mode (Single, Dual, Overlay)
- **Condition:** Set condition for Screen Shot and data save (Refer to chap. 7.)
- **Screen Shot:** Execution of Screen Shot (Refer to chap. 9.)
- **Send Text:** Send the GPIB command text (Refer to chap.11.)
- **Clear List:** Clearness in display area (monitor) used by test mode
- **Monitor:** The reading data is displayed when making it to check ON

6. When Waveform View is clicked, the shape of waves is displayed.

Example of two screens: Meas Mode (display mode) selects Dual.



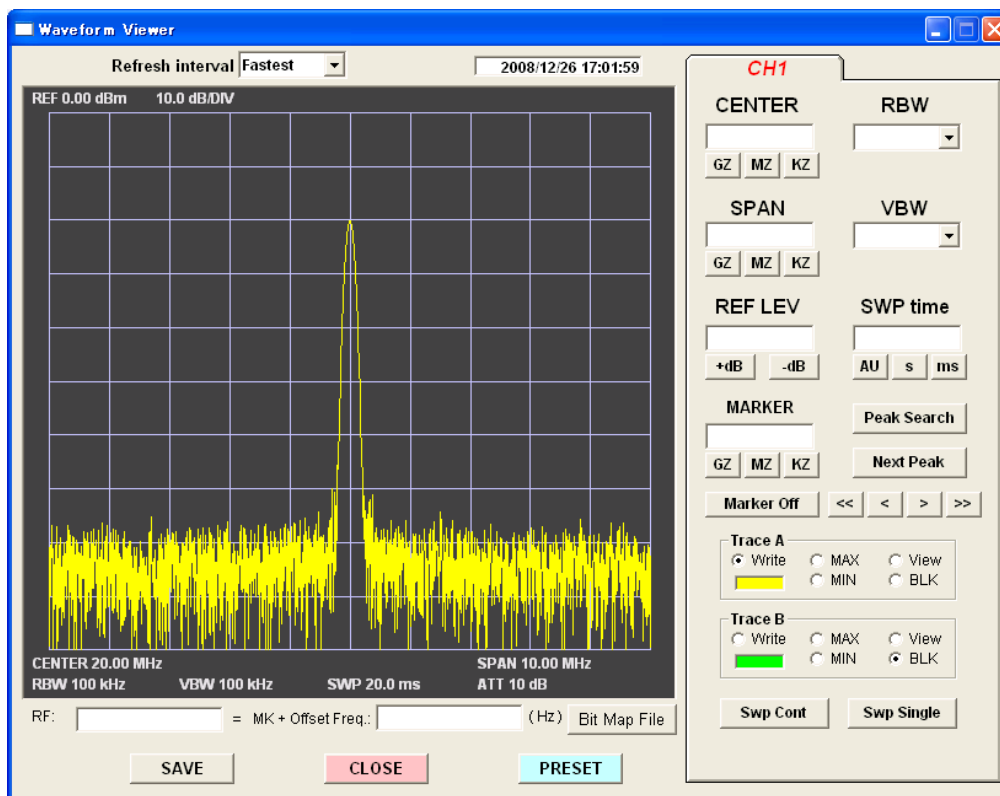
- A basic setting of SA can be done from this screen. (CH1 and CH2 click the tab.)
- The Bit Map File key preserves the bit map file of this wave screen in the personal computer.
- PRESET is reset of SA (initialization setting).
- The trace is secondarily possible.  
A is observed, and for instance, set Write doing and B to MAX (MIN) and observe the maximum (minimum).  
It is Write doing B once, make to View afterwards, and preserve it as a reference waveform.

- The offset frequency can be added when the IF frequency is measured, and the RF frequency be displayed.

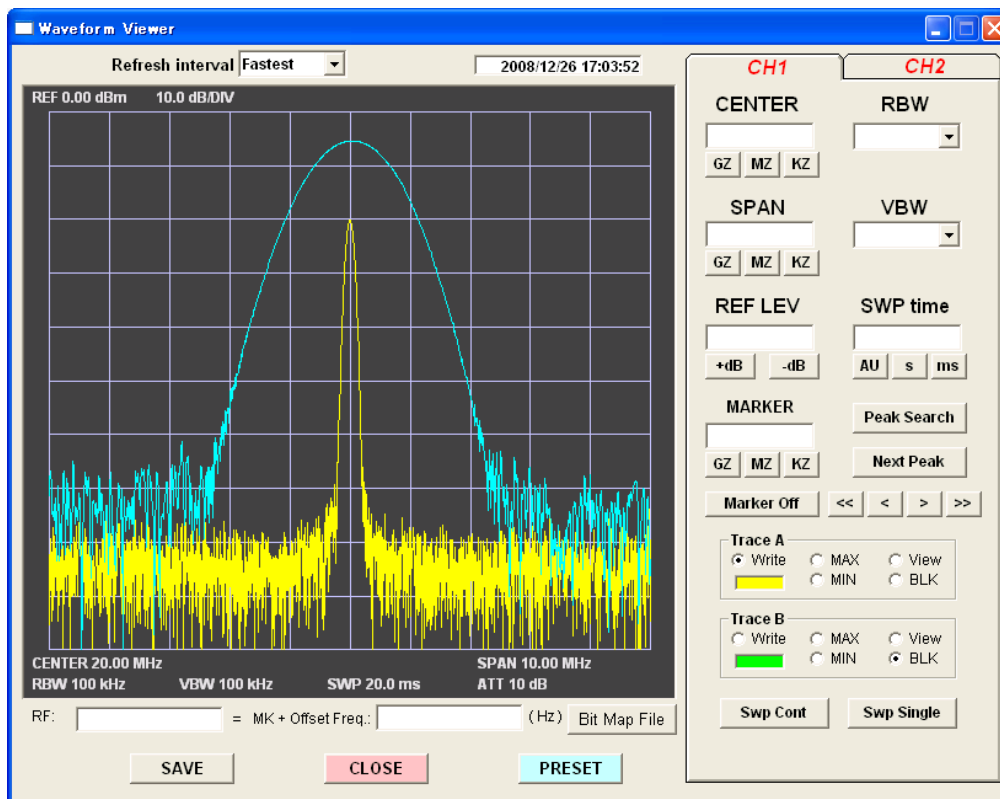
(The data of the offset can be arbitrarily input.)

- It returns to the first screen in CLOSE once to do the settings other than this panel.
  1. Send and set the GPIB command by using the Send Text mode. Waveform View afterwards.  
Click, and display the screen again.
  2. When the GPIB command manual is not near here, and the adjustment with more detailed manual operation can be done.  
Select STOP with Refresh Interval. Make SA local and set it by the manual operation afterwards. Make Refresh Interval Fastest etc. after it ends.

### Example of one screen:



Overlay example:

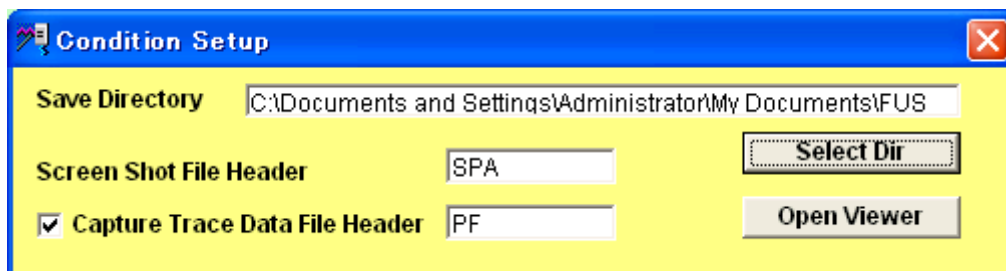


## 7.About the data storage of the personal computer screen (preservation by the numeric character data)

A present setting condition and the shape of waves can be saved by clicking the SAVE key. Because the file format is CSV, it is possible to open by Excel. The file name becomes a date that specification header character + saved. The storage place is specified beforehand. (It is possible to click even times how many.)

About the specification of the storage place and the header character:

Click the Condition key to the first screen.



**Save Directory display:** Directory where Save data and screen shot are preserved  
(When the name is long, Dir is specified though the display is lacked)

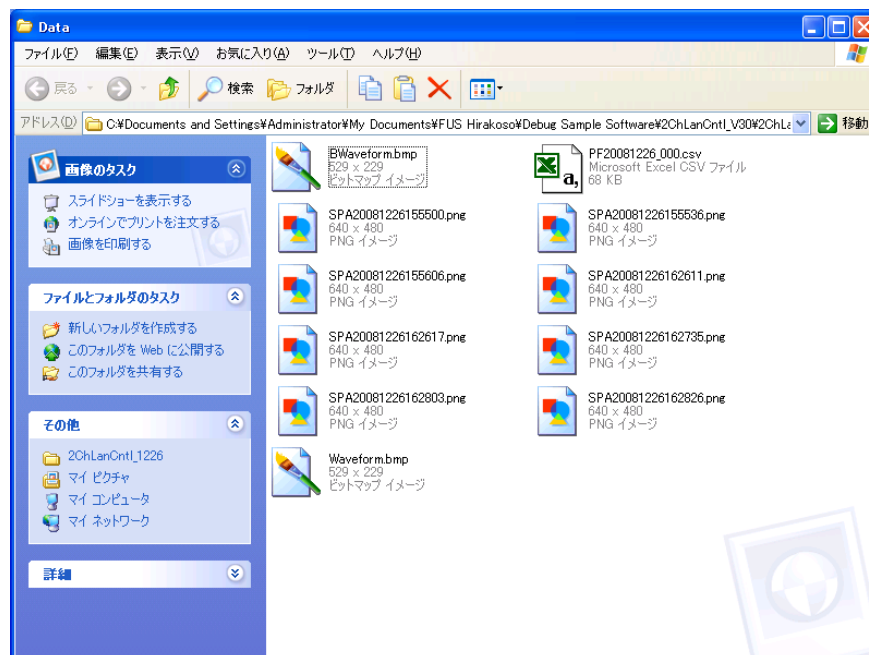
**The Select Dir key:** The directory can be specified

**Screen Shot File Header display:** Header of save file name of screen shot

**Capture Trace Data File Header display:** Header of save file name of trace data

**The Open Viewer key:** Open Window of a specified directory

Example: Open Window with Open Viewer:



If the CSV file is double-clicked, data is seen in Excel.

If the PNG file is double-clicked, the screen shot is seen.

## 8.About automatic preservation of the save data.

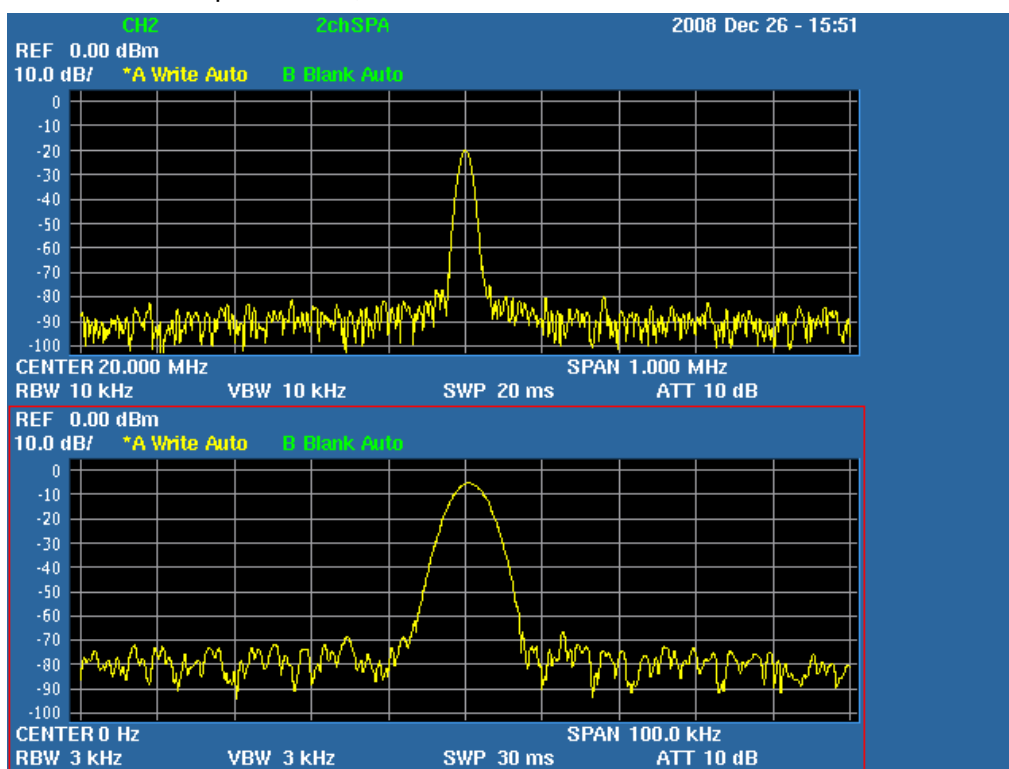
Confirm Pass/Fail of the SA when you check Capture Trace Data File Header (Refer to chap. 7) (ON), and save data automatically at Fail. However, only when becoming Fail, the timing of the following save returns to Pass the judgment, and becomes time when Fail was generated again. Pass/Fail of the SA is set by the manual operation beforehand.

## 9.About the screen shot. (preservation of SA image data)

When the Screen Shot key to the first screen is clicked, a present SA screen is preserved by the personal computer. This becomes not the screen of the personal computer but the screen of the SA. It is an image that the copy destination becomes not the USB memory but a personal computer to the SA though the function to copy the screen is provided directly in the USB memory. The file name becomes file header + date + time (every one second). (The data preservation function in this software is SAVE and Bit Map File of the another item.)

### Example of screen shot:

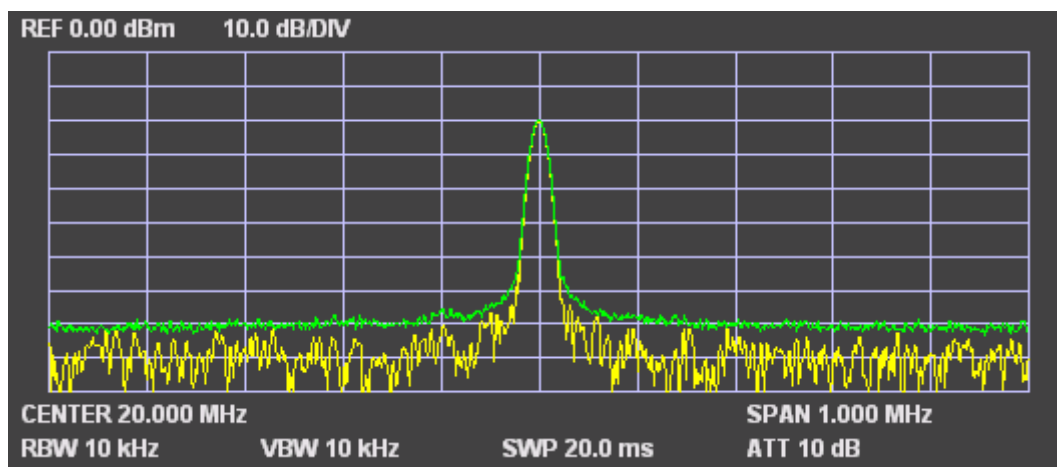
Open Window with Open Viewer, and double-click the PNG file.





## 10.About Bit Map File. (preservation of personal computer image data)

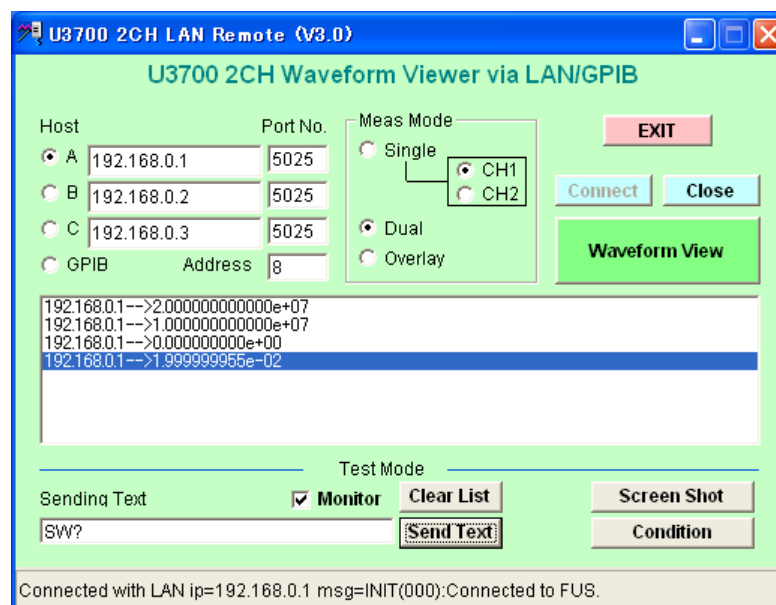
It is preserved in the directory that the screen of the personal computer specified.



## 11.About Test Mode.

When the GPIB command is written in the Sending Text column, and the Send Text key is clicked, the command is forwarded to SA. Because data is displayed when Monitor is checked for the query command, the read data can be confirmed. (Reading command: only a single command)  
(Make the check on Monitor Off when you select Waveform Viewer.)

**Example of Test Mode:**

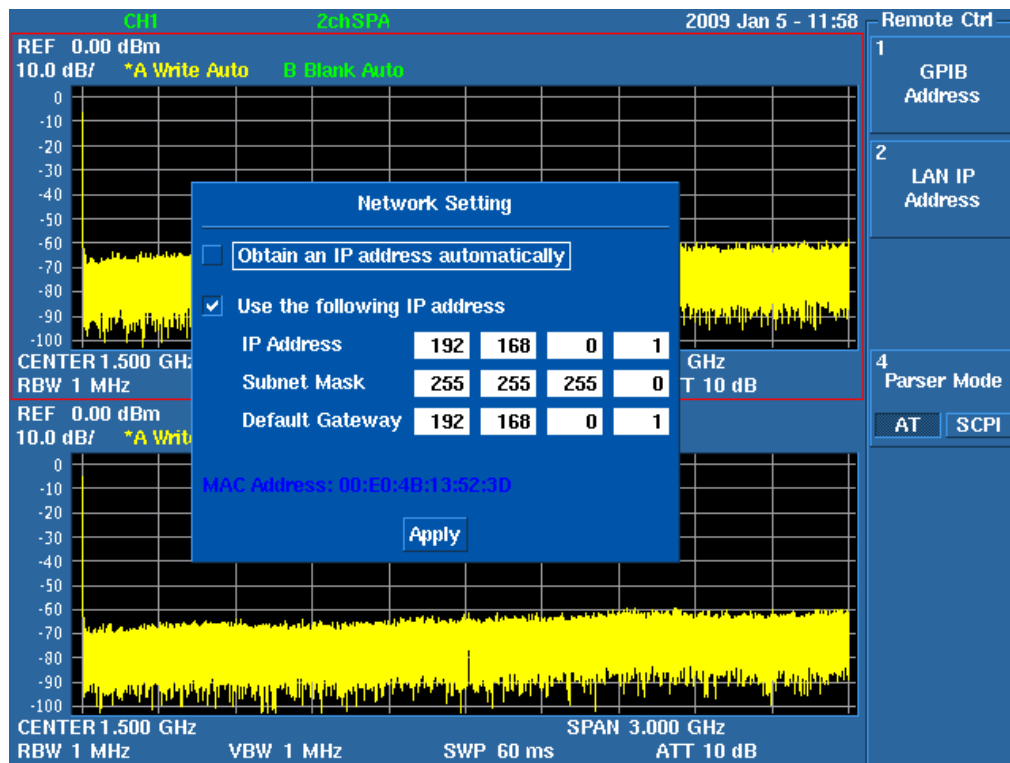


(Display when CF?, SP?, RL?, and SW? are sent sequentially)

## Reference: Setting and connection method of IP address

### (1) IP address setting of SA.

- SYSTEM->Remote Control->LAN IP Address->Network Setting from panel key
- The following example is direct connection (local connection).
- Inquire the address of the network administrator when connecting it with LAN (WAN)
- The acquisition address is displayed at automatic connection (DHCP).



### (2) Set IP address of the personal computer. (At direct (Local) connection)

(When both SA and personal computer are connected with LAN, it is unnecessary)

- My network: Following page referring to:

Right-clicking property

Local area connection-right-clicking property

Internet portal site (TCP/IP)-property

Following page referring to:

- Set Internet Protocol address. (Make it to an address different from SA U3700)  
(192.168.1.2 for instance) Shut the menu with OK and OK after it sets it.

### (3) Connect LAN cable.

- Connect cross LAN cable at SA and PC (Local connection).
- Connect straight LAN cable for LAN (WAN).

