

Antenna Adjustment (Level Monitor) Software Manual V1.0

ADVANTEST

1. Outline

A convenient level monitor can be done by using this sample software and spectrum analyzer (SPA) U3800 series when setting up of the antenna and positioning it. The personal computer controls SPA, the level of marker is acquired due to interval or arbitrarily, and the graph is written. For instance, when this software is started, and the antenna is rotated by 180 degrees, the angle pattern graph is obtained. Afterwards, the angle and the position of the antenna are decided while seeing the graph. However, neither the angle data nor the height data adhere. The user can input the comment to the arbitrary measurement point. This software is an image of digital graph that makes the application to record Y out power output with the pen recorder in analog SPA. Therefore, it is thought that the application reach like not only the application of the antenna positioning but also the power supply rise characteristic of the oscillation circuit (short-term characteristic) and the level fluctuation characteristic etc. of several hours is wide.

2. System configuration

SPA: U3841, U3851, U3872 (Operating Channel is CH1)

PC: Windows XP /2000, and using the Visual Basic

Interface: LAN (Please refer to LAN GetTrace sample software for LAN connection)

3. Setting Items of Spectrum Analyzer

A central frequency, the frequency of span, the Reference level, and offset level,

Preset (Execution and non-execution can be selected)

Input terminal (Software displays input terminal 1(Low) or 2(High) from the measured frequency) When the input cable confirmation message is displayed, it is necessary to confirm the input terminal and Active CH1 (If differing, SPA is made local and match it by manual operation).

4. Number of data read from SPA

Frequency and level of marker: 2000 points or less

Interval time: 0.1 to 60 sec

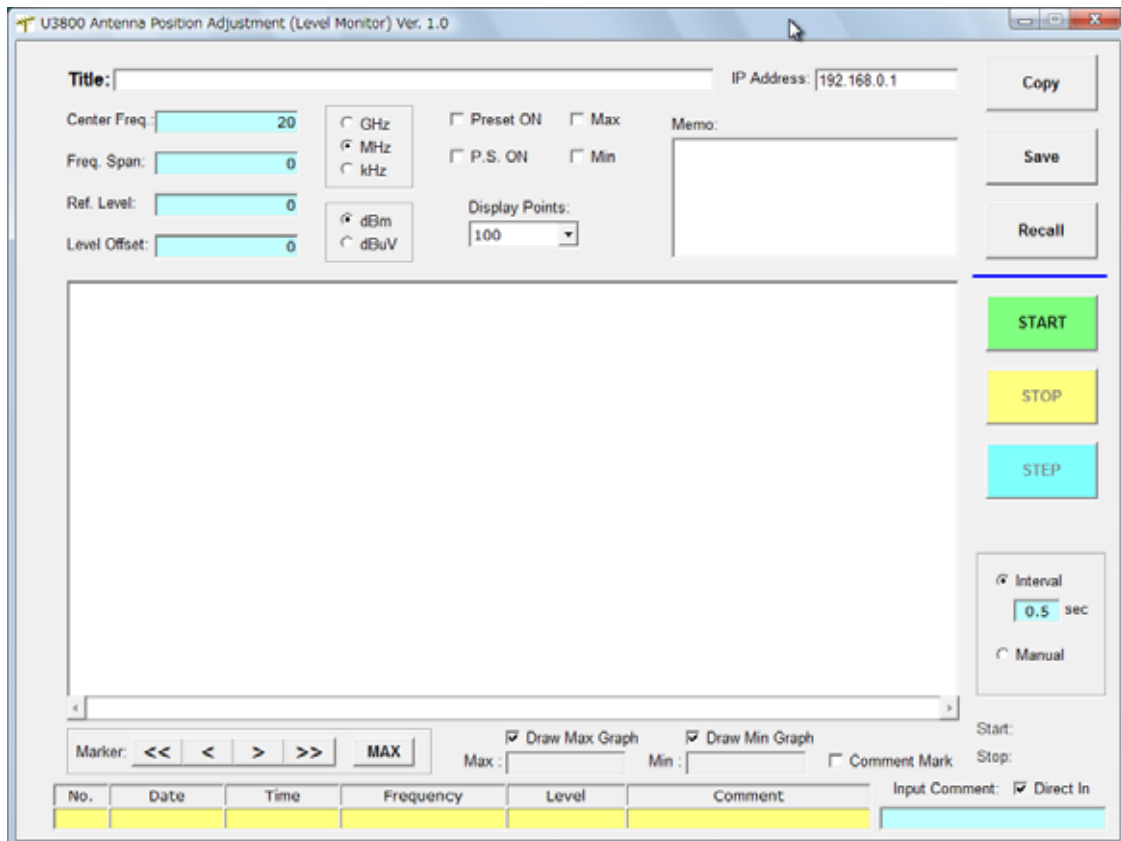
Maximum measuring time: Interval time * data points

(Become about 33 minutes when the interval is one second.)

5. Save and Recall of data are possible. (Include it in the setting conditions.)

6 . Explanation of panel

- A) Install the U3800 Ant_posi_adj sample software.
(Installer is in PackageForU3800 folder)
- B) Software is started.
(Start > Program All > U3800 Ant_Pos Adj > Ant Position Adj)
- C) The menu in the figure below appears.

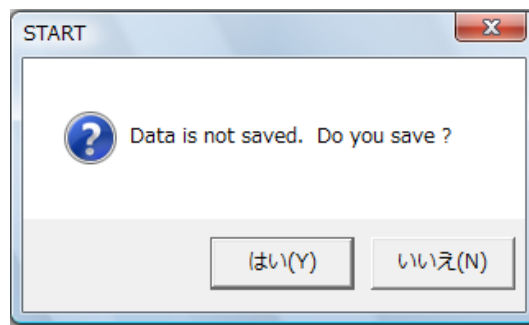


Title	: The title can be input.
IP Address	: IP address of SPA is input. (The setting of SPA is also necessary.)
Center Freq.	: Central frequency is input. (Measured frequency)
Freq. Span	: Frequency span is input. (Zero span usually)
The Ref. Level	: Reference level is input. (+ About 10dB from the signal.)
The Level Offset	: Offset level is input. (Input for ATT and cable loss etc.)
GHz,MHz,kHz	: The unit of the frequency is specified. (unit of center and span)
dBm,dBuV	: The unit at the level is specified. (unit of Ref.Lvl and Offset)
Memo	: It is possible to use it as a memo column of the measurement situation. (Save possible)

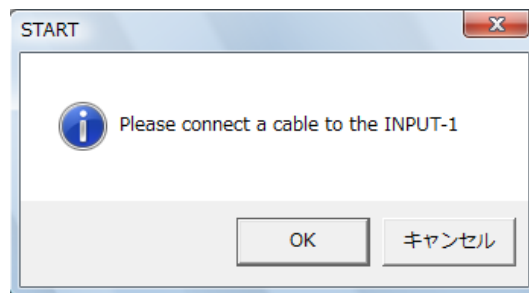
7 . Measurement procedure

- A) The setting condition of SPA is input. (CF, Span, Ref.lvl, Lvl.Offset)
- B) Span usually sets 0, and when the frequency changes, the frequency of span about twice the fluctuation band is set, and peak search (P.S.) is turned on.
- C) The sampling interval is input to the item of interval. (As for actual interval, the performance of PC is controlled though 0 can be set. Content becomes about 0.2 seconds in a minimum step at measuring time usually.)
- D) Manual Check Box is checked at the manual operation measurement.
- E) The start button is pushed.

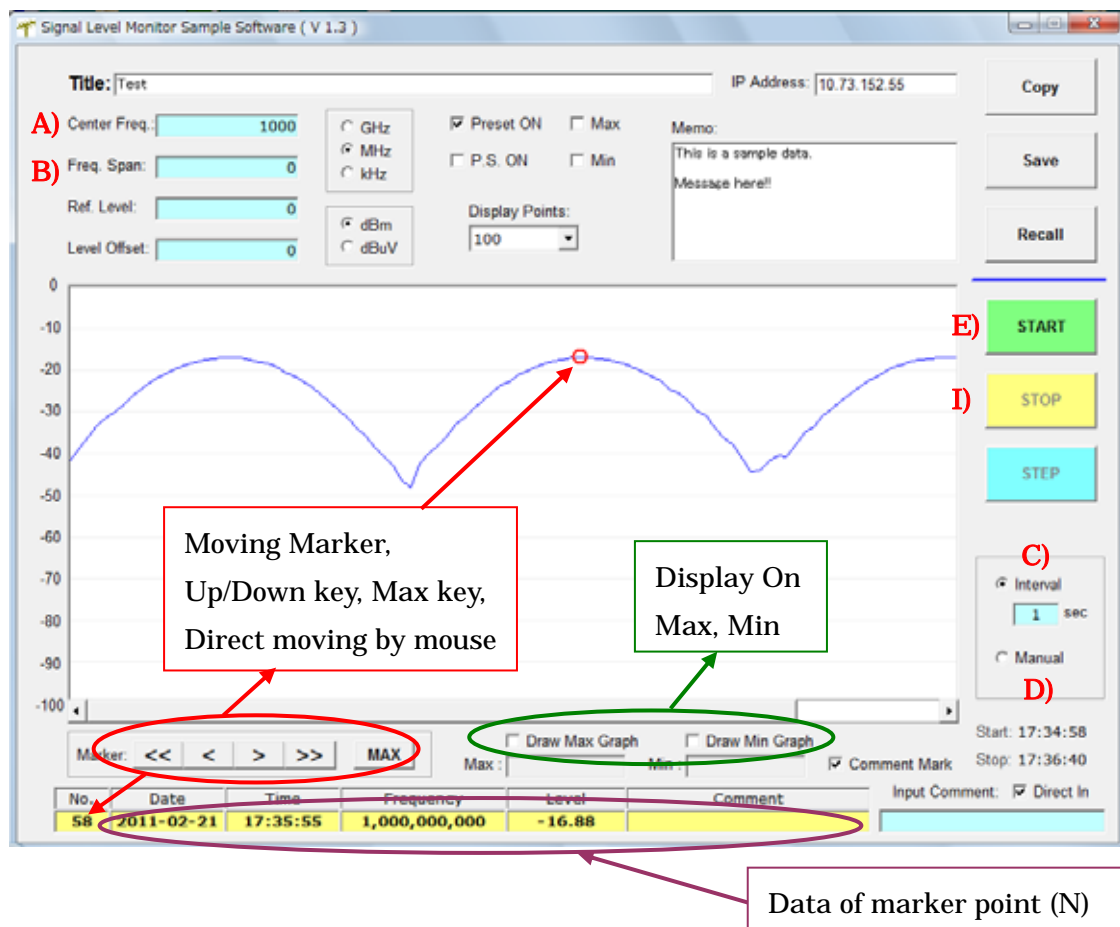
There is a confirmation message of save Yes/No when there is the last measurement data.



- F) The message of having initialized SPA is displayed first. Terminal (INPUT 1 (or 2)) that continuously connects the input cable is displayed. The cable is connected with the terminal. Here, changing the setting of SPA becomes possible. It confirms or it changes if it is necessary. (The data of CF, Span, Ref.lvl, and dB/Div is read even if it changes.)



- G) It is confirmed that the cable is connected with a specified terminal, and push OK.
- H) The measurement is begun.
- I) The measurement ends if the STOP key is pushed. (Or, become an automatic stop 2000 points.)



About Comment Mark:

When it is checked, the measurement point that puts the comment is displayed.

As for the display, the blue O-marker is written on the graph.

8 . Detailed explanation of key button

START

: Measurement beginning

STOP

: It ends automatically by the measurement end (forced ending) or 2000 points.

STEP

: At manual operation, this key is used to go the next point measurement

Interval

: The measurement interval is decided. (0 or 0.1-60.0 seconds)

Manual

: When the manual operation is measured, it checks it.

The STEP key is used to the next point measurement.

Preset ON	: When beginning to measure it, SPA is initialized. (The check is removed in case of unnecessary.)
P.S. ON	: It looks for the peak in the screen when the level is acquired.
Max	: Max mode holds data at time that data acquisition is not done. (e.g. except sampling time) The Max data is acquired besides the master data. (The Max and Min data of each measurement point is reset.)
Min	: Min mode holds data at time that data acquisition is not done. (e.g. except sampling time) The Min data is acquired besides the master data.
Input comment	: Comment input column
Direct Input	: Comment direct input On/Off (It is possible to change while measuring it.) : (1) For comment direct On When * figure key, alphabetic capital letter key, and number key and @ key are pushed, the character is added to a present measurement result as it is as a comment. Because other keys enter the comment input column once, they can be input as a comment by pushing Enter. % enters when the input column is empty when Enter is pushed. : (2) For comment direct Off It enters the comment input column excluding * key and @ key once. The comment is input by pushing Enter. (% when input column is empty)
Display Points	: The display point in the graph is decided. It selects it from 100 to 2000.
Graph	: 2000 points or less are displayed. (Y axis is 10 divisions.) The Y axis becomes the same display as SPA. (Units, Ref, dB/Div)
Data display area	: The measurement result is displayed. (Optional point data)
Marker	: Marker can be moved. The mouse on the screen can move. It moves to the maximum point in the screen by MAX key. The data of the marker point is displayed in the data display area.
Draw Max Graph	: When data is acquired at Max On, data is displayed in the graph.
Draw Min Graph	: When data is acquired at Min On, data is displayed in the graph.
Comment Mark	: The measurement point that puts the comment is displayed on the graph. (Using O-marker)
Memo	: The comment can be input.
Copy	: The measurement screen is copied onto the clip board of Windows. The file can be made with the paint software. Moreover, Word Excel can do "Paste".
Save	: Save of setting condition and measurement data.
Recall	: Recall of setting condition and measurement data.