

Serial Graphic User Interface Program User's Guide

(AT6030D)



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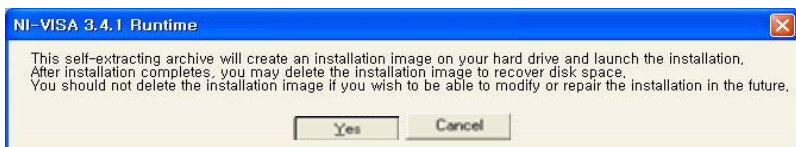
Chapter 1. Program Installation and Start-up

This program is used to observe or store frequency of data downloaded from Spectrum Analyzer in a PC or notebook computer. This program is made and configured for the Windows environment.

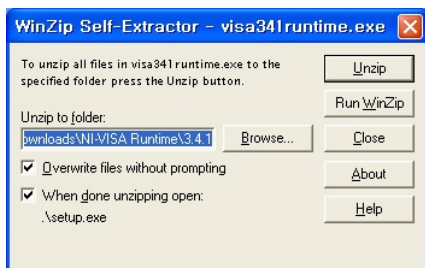
1-1. NI-VISA Runtime Program Installation

NI-VISA 3.4.1 Runtime is a driver program supplied by National Instrument. It should be properly installed in computers in order to run SA_Comm_RS without any problem.

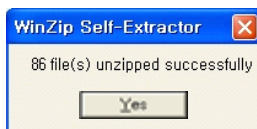
This program is stored in CD. The program is installed by executing visa341runtime.exe in the CD. Below, the figure is displayed after executing visa341runtime.exe.



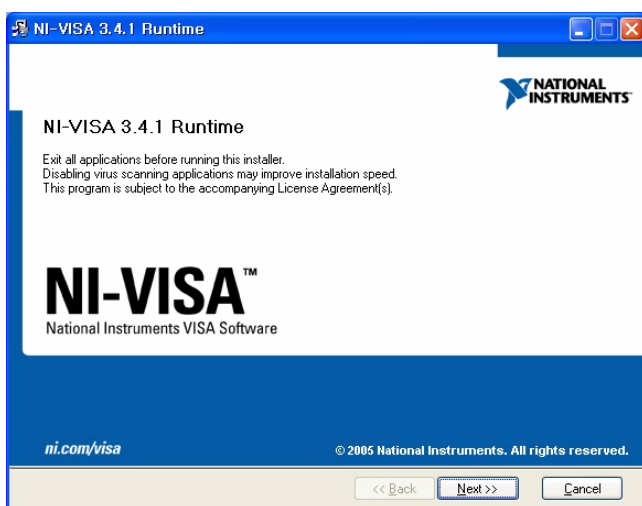
Continue the installation by clicking OK.



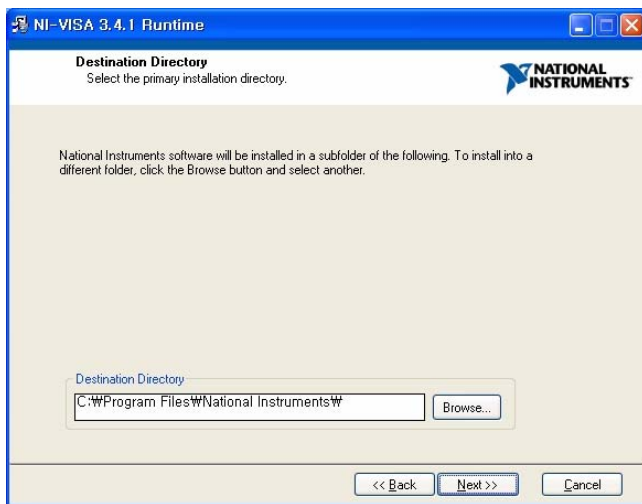
Click Unzip and continue the installation.



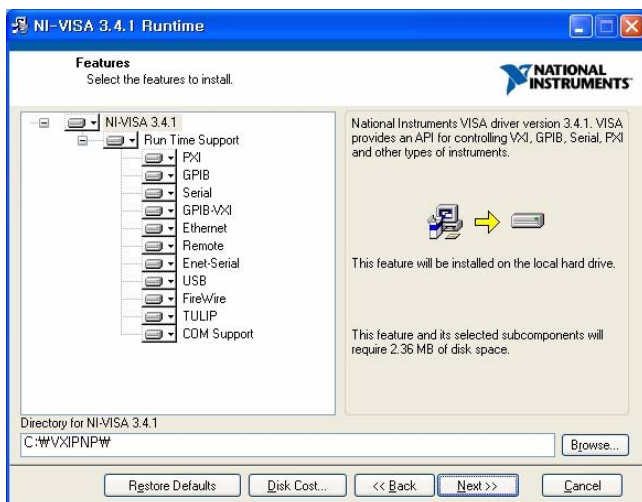
Continue the installation by clicking OK.



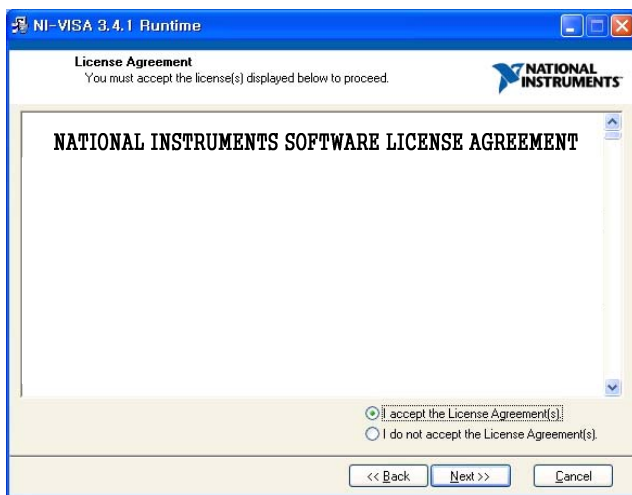
By clicking Next start the installation of the NI-VISA 3.4.1 Runtime program.



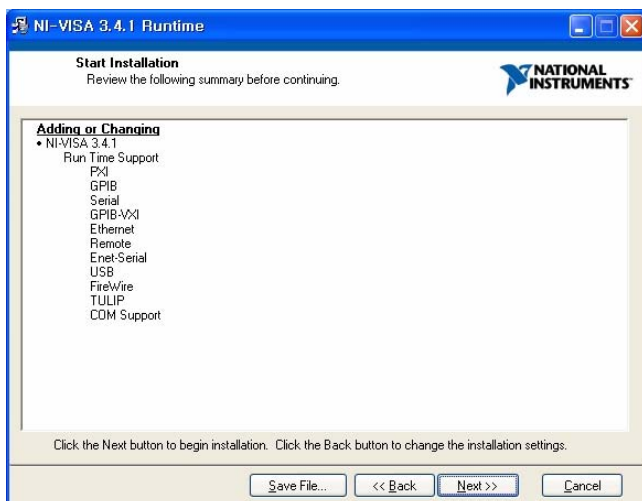
By clicking Next, continue the installation. If a user wants to change the default directory path, a user can set a new directory path by clicking Browse...



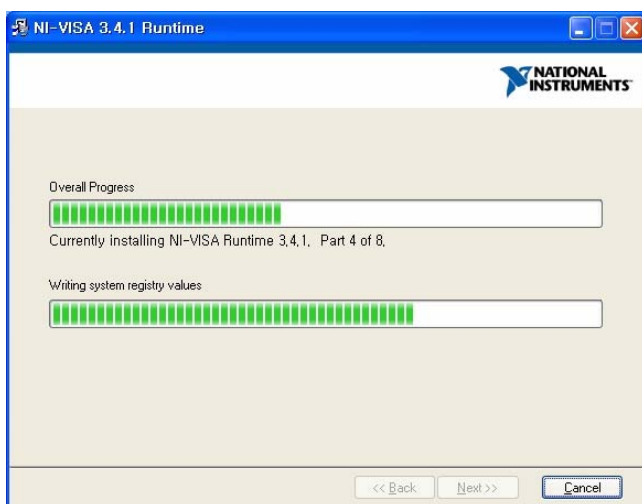
By clicking Next, continue the installation.



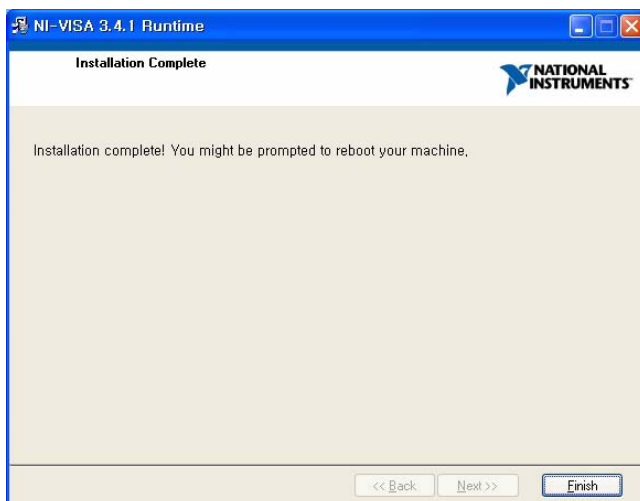
Select "I accept the License Agreement(s)" and continue the installation by clicking Next.



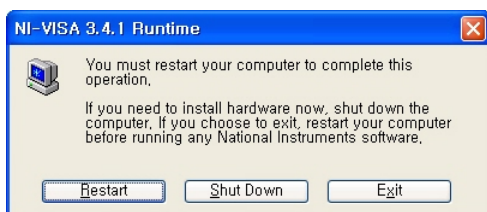
By clicking Next, start the installation



During the installation, the process is displayed as shown in the above Figure.



Once the installation is completed, the above window appears. The program installation is completed by clicking Finish.



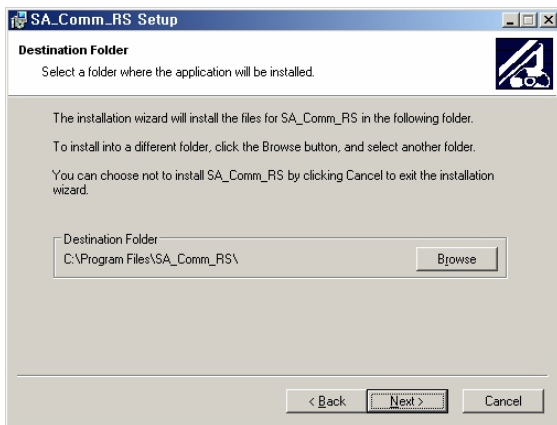
After the above window appears, restart a computer by clicking Restart.

1-2. Serial Graphic User Interface Program Installation

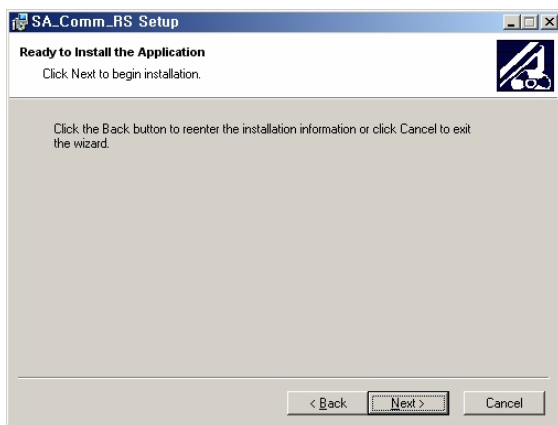
This program is stored in CD. The program is installed by executing setup.exe in the CD. Below, the window is displayed after executing setup.exe.



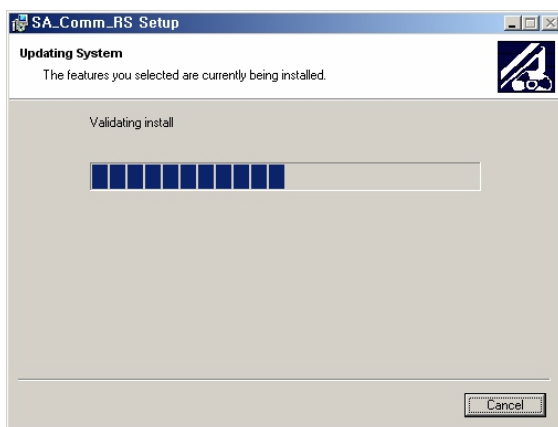
After clicking Next, the next window will be followed.



In the figure above, if a user wants to change the default directory of SA_Comm_TC program, a user can change this to another directory.



After clicking Next, installation starts while coping the files.



During the installation, the process is displayed as above.



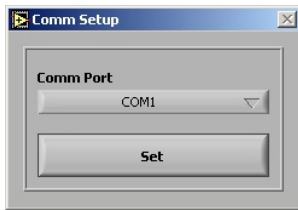
After the completion of the installation, the above display is followed. The SA_Comm_TC program installation is completed by clicking Finish.

1-3. Serial Graphic User Interface Program Execution



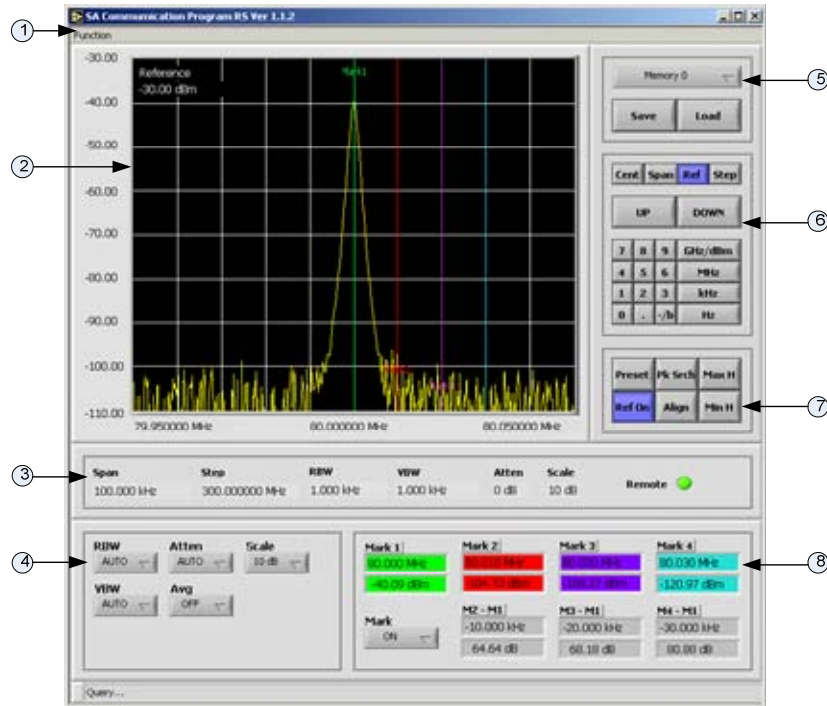
When you clicks Start > Program > SA_Comm_TC, the execution icon is displayed. By clicking the icon, Serial Graphic User Interface Program is executed.

1-4. Port Setup



Once the Serial Graphic User Interface Program is executed, the main window and RS-232C port setup window will appear at the same time. In the combo box, only available RS-232C ports are shown after a computer searches the available ports. Among the available ports, select a port which is connected to the Spectrum analyzer through cable. Click the Set button to finish the setup.

Chapter 2. Program Main Window



The main window will be displayed after the program execution. The main window consists of the following parts:

- ① Pull down Menu
- ② Display Graph
- ③ Setup State Display
- ④ State Setup
- ⑤ Memory Setup
- ⑥ Keypad Input
- ⑦ One Button Feature Setup
- ⑧ Marker Display

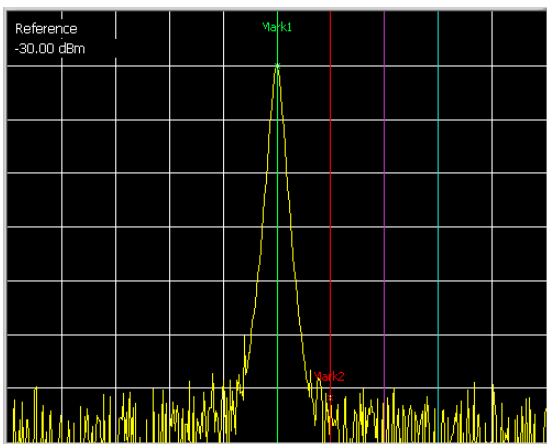
2-1. Pull down Menu



■ Function Menu

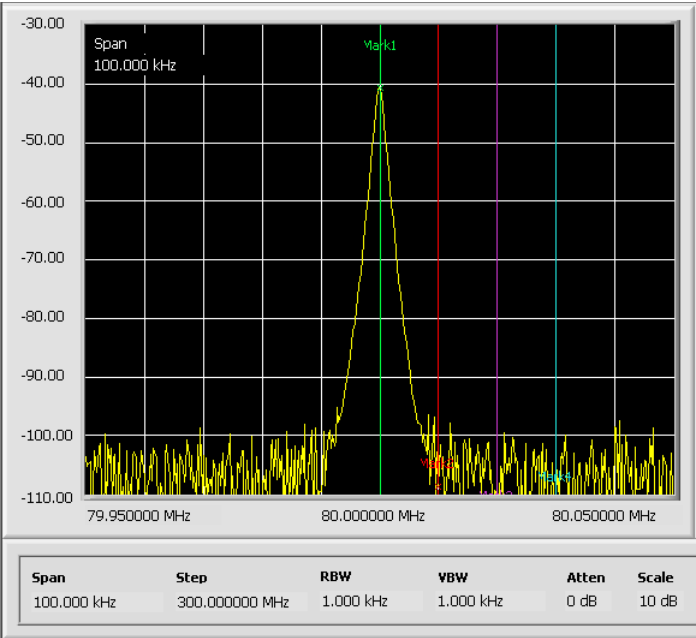
- **Comm Setup**
It activates the RS-232 setup window.
- **Print Windows**
It prints out the main window
- **Save Windows Image**
It saves the main window as a JPG file.
- **Graph Color Change**
It changes the color of the Graph Display.

2-2. Display graph



This is the display window which shows the data transferred from the Spectrum Analyzer.

2-3. Setup State Display



Below the graph display, current center frequency, span frequency, RBW, VBW, Atten, scale and frequency step are shown. On the upper right, LED is displayed to show the current communication state.

2-4. State Setup



RBW, VBW, Atten, Avg On/Off and Scale can be specified conveniently using the combo box.

2-5. Memory Setup



Up to 20 setup states can be stored. Once saved memory is selected in the combo box, the saved memory can be loaded by clicking the load button or current state of SA can be saved by clicking the Save button.

2-6. Keypad Setup



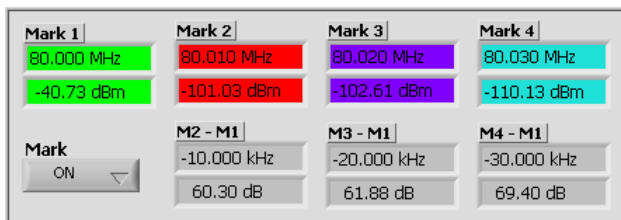
By using the Keypad input, Center frequency, Span frequency, Reference level and Step frequency can be set. Alternatively, the setup value can be modified by using the UP or DOWN button conveniently.

2-7. One Button Setup



Factory Preset, Peak Search, 80 MHz Reference and Alignment can be run simply by using the buttons.

2-8. Marker Setup



It is a window which consists of the Marker setup combo box and marker values.

Chapter 3. Program Features

3-1. Spectrum analyzer State Setup Feature

■ Center frequency Setup Feature

It sets Center frequency.



Once the combo box is set to “Center”, Center frequency can be set by clicking the keypad with a mouse. Alternatively, Center frequency can be set by using the UP or DOWN button. The amount of modification of Center frequency is determined by the Step frequency.

■ Span frequency Setup Feature

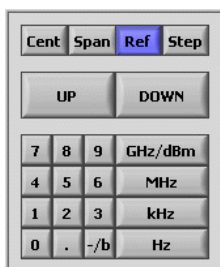
It sets Span frequency.



Once the combo box is set to “Span”, Center frequency can be set by clicking the keypad with a mouse. Alternatively, Span frequency can be set by using the UP or DOWN button. The amount of modification of Span frequency can be one of 1, 2 and 5 steps.

■ Reference level Setup Feature

It sets the Reference level.



Once the combo box is set to “Reference”, Reference level can be set by clicking the keypad with a mouse. Alternatively, Reference level can be set by using the UP or DOWN button. The amount of modification of Reference level is 10 dB.

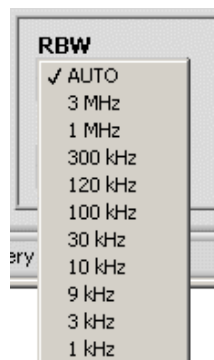
■ Step frequency Setup Feature

It sets Step frequency.



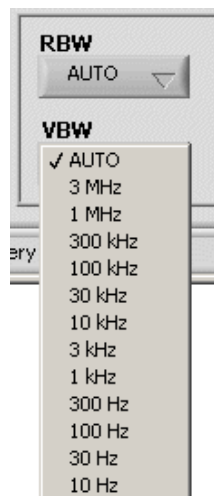
Once the combo box is set to “Step”, Step frequency can be set by clicking the keypad with a mouse. Alternatively, Step frequency can be set by using the UP or DOWN button. The amount of modification of Center frequency can be one of 1, 2 and 5 steps.

■ RBW Setup Feature



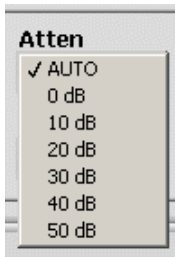
RBW can be set to a desired value by using the combo box. Once AUTO is selected, the value of RBW is determined automatically by the Span frequency. Once a value other than AUTO is selected, the value selected is set as the Manual mode.

■ VBW Setup Feature



VBW can be set to a desired value by using the combo box. Once AUTO is selected, the value of VBW is determined automatically by the current RBW value. Once a value other than AUTO is selected, the value selected is set as the Manual mode.

■ Atten Setup Feature



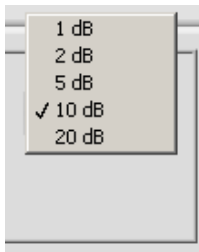
Atten can be set to a desired value by using the combo box. Once AUTO is selected, the value of Atten is determined automatically by the current Reference level. Once a value other than AUTO is selected, the value selected is set as the Manual mode.

■ Avg Setup Feature



Avg can be ON/OFF by using the combo box.

■ Scale Setup Feature



It sets the scale of Display graph.

■ Preset Feature



It initializes the Spectrum analyzer.

■ Peak search Feature



This feature can be used only when Marker is set to On. Peak search is run only at Marker 1.

■ Align Feature



It performs alignments.

■ Ref out Setup Feature

It ON/OFF 80 MHz Reference signal.



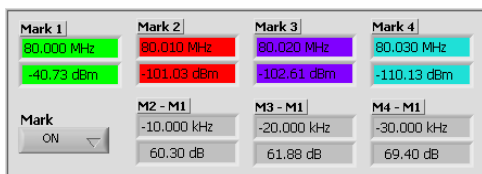
The 80 MHz Reference signal output is set to OFF.



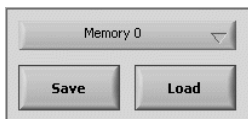
The 80 MHz Reference signal output is set to ON.

3-2. Marker Feature

This feature marks frequencies and levels which correspond to the values set in Graph display by real time signal tracking. It consists of Marker 1 and Marker 2. The differences of the frequency and level between Marker 2 and Marker 1 are displayed on M2 - M1.



3-3. Memory Feature



The memory feature can store the current state of the Spectrum Analyzer window. It also can load one of the setups which are stored on the memory in order to apply the setup to the current Spectrum Analyzer.

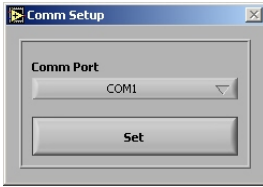
■ Save

Once Memory 0 is selected in the combo box, the text in the combo box is changed to Memory 0 - save. This means that the setup values are stored in Memory 0. Once the new setup values are stored in memory later, the old setup values are removed and the new values are stored.

■ Load

Once the memory storing the setup values is selected, the setup values stored in the memory replace the current setup values by clicking Load. If the memory which does not store setup values, that is, without "save" in the combo box, has no effect on the setup values by clicking Load.

3-4. Port Setup Feature



This window is to set a port for RS-232C communication. In the combo box, only available RS-232C ports are shown after a computer searches the available ports. Among the available ports, select a port which is connected to the Spectrum analyzer through cable. Click the Set button to finish the setup. Other setups for RS-232C are not required to set up by a user.

3-5. Print Feature

It prints out the main window.

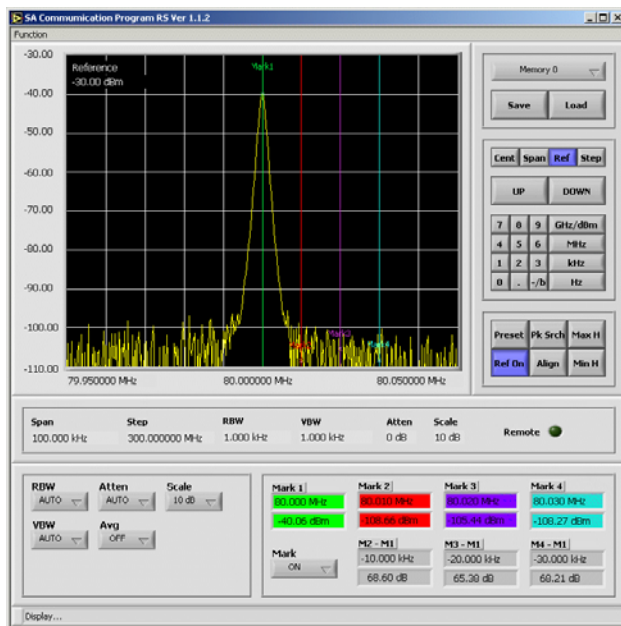
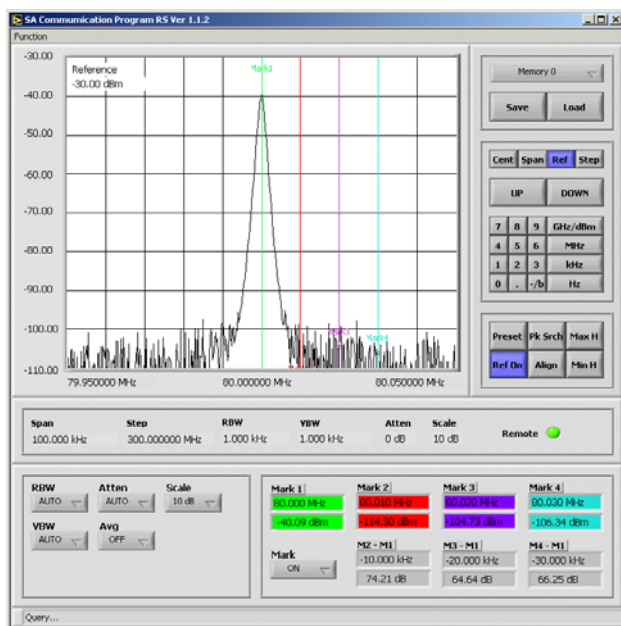
To print out the main window, select Function > Print Window... under the Pull down menu. Alternatively short key Ctrl + P can be used.

3-6. Image Save Feature

It saves the main window as a JPG file.

From the Pull down menu, select Function > Save Window Image. Then, file save window is displayed. After naming the file name, click OK to save the image.

3-7. Graph Color Change Feature



It allows the background color of Display graph to change to black or white.
From the Pull down menu, select Function > Graph Color Change.