

## 1. Outline

This application software is for the U3800 series Cross Domain Analyzer (CDA). The Vector Correction data of each measurement band is acquired in a wide frequency range when the U3800 series and this software are used. And this software makes files for Recall. (This software only makes the Recall files.) Afterwards, it is necessary to select the file including the measured frequency and to do Recall when actually measuring it. The measurement can begin at once because the Vector Correction data is set after Recall.

As for the correction data acquisition mode, the following 2 varieties can be selected.

- 1) Mode-1: Get Inband Corr Data (The correction data is acquired in capture band width 40MHz.)  
Frequency Range: The frequency range selected by the menu is measured.  
The lower limit frequency is 10MHz.
- 2) Mode-2: Get Current Corr Data (The correction data is acquired in selected capture band width.)  
Frequency Range: Only center frequency is measured. The capture band width selected by the menu is used. When the correction accuracy is improved by a point frequency, moreover, when the influence of zero careers is received easily, the capture BW is narrowed and used.

The file of the frequency range including the measured frequency is made when correcting it with an actual measurement condition set. Then, the measurement can begin without setting the measurement condition after Recall. For instance, when the measured frequency is 300MHz, the recall does the file that contains the frequency, and the measurement can begin. (The file name can be searched according to the frequency and the frequency range is center frequency  $\pm 20$ MHz.)

We are very happy if it helps getting the Vector Correction data, even a little.

(This software is free software.)

## 2. System Configuration

Spectrum Analyzer: U3841, U3851, U3872 (Firmware Version is A03 or later)

Setup conditions: Please set the following parameters that influence the acquisition of the Vector Correction data by manual. (Other conditions do not set by this software.)

-Ref Level      -ATT      -High Sensitivity

-Additionally, please set the conditions necessary for the measurement.

PC: Windows XP/ 2000/ (VISTA/ 7: probable ok.)

Interface: LAN

### 3. Install

Please execute the Setup.exe that exists in folder PackageForU3800 of this software.

While executing, please operate it according to the instruction.

#### 4. Software executing

After it installs, U3800 Get\_Vector\_Correction is made to PC's Start Menu.

Please execute the Vector Correction. The following screen is displayed.

The screenshot shows the 'U3800 Get Vector Correction Data V1.0' application window. It features a 'File' menu at the top left. The main area is divided into several sections: a large 'Correction Table' on the left with columns for 'CF(MHz)' and 'File name'; a 'Table Input Mode' section with 'Auto' (selected) and 'Manual' options; an 'Auto Frequency Range' section with frequency range checkboxes (10MHz-1GHz selected) and an 'Offset Freq' field set to 0 MHz; a 'Manual setup' section with fields for 'CF(MHz)' (300), 'Name:' ('VecCorr0300M'), and a checked 'Header' option ('PreAmp'); and control buttons 'Set Table' and 'Delete'. On the right side, there's an 'IP Address' field (10.77.151.115) with 'Connect' and 'Close' buttons, and a 'Vector Correction' section with a 'Get Correction' button, 'Correction Mode' options ('Get Inband Correction' selected), a 'Capture BW' dropdown (Select), and 'Stop' and 'Recall' buttons.

## 5. Connect to Spectrum Analyzer

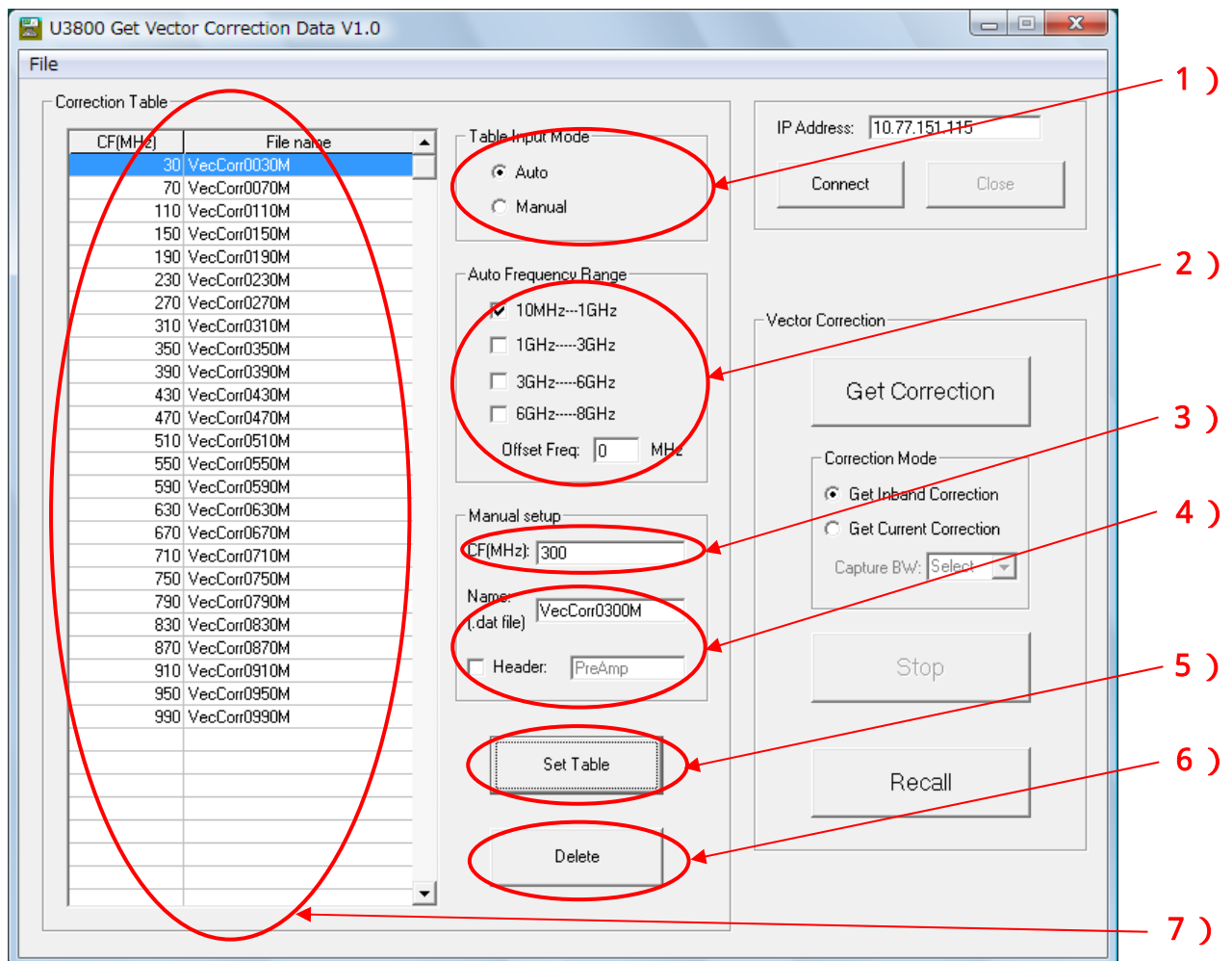
The interface of Spectrum Analyzer and Personal Computer are LAN:

Connection procedure:

- Set the IP address to the U3800 series CDA. (Or, get the IP address from CDA.)
- Set the IP address in the Address Box of this application software.
- Connect LAN cable.
- Push the Connect button.

Please refer to the manual of U3800 LAN GetTrace sample software for details of LAN connection.

## 6. Edit the Correction Table



### 1) Select the input mode of the Correction Table

Auto: Mode that automatically inputs center frequency and a save file name according to selected frequency range.

Manual: Mode that inputs assignment center frequency and a save file name one by one.

- 2) Select the frequency range for to acquire the Vector Correction. (The plural can be selected).

Center frequency (CF) and the file name are automatically progressed to the Correction Table according to the assignment frequency range that the Set Table button is pushed when the input mode is Auto. Lower limit frequency +30MHz is the first CF, and next the CF of 40MHz step is listed in the Correction Table. In addition, assignment Offset Freq is added to center frequency. (Maximum  $\pm 20\text{MHz}$ ) The file name corresponding to CF becomes VecCorrXXXXM.dat. The XXXX shows CF (unit of MHz), and becomes four digits.

The number of center frequency listed automatically is as follows in each frequency range.

[Frequency Range]	[Number]	[Measurement Time]
10MHz - 1GHz	25	9 min
1GHz - 3GHz	50	18 min
3GHz - 6GHz	75	27 min
6GHz - 8GHz	50	18 min

- 3) Input center frequency in which the Vector Correction data is acquired.

It is added to the Correction Table with the file name specified that the Set Table button is pushed when the input mode is Manual.

- 4) Input the file name of the Vector Correction data.

It is added to the Correction Table with the frequency specified that the Set Table button is pushed when the input mode is Manual. The file names are 12 characters or less.

- 5) Center frequency and the save file name can be input to the Correction Table by pushing the Set Table button according to the input mode.

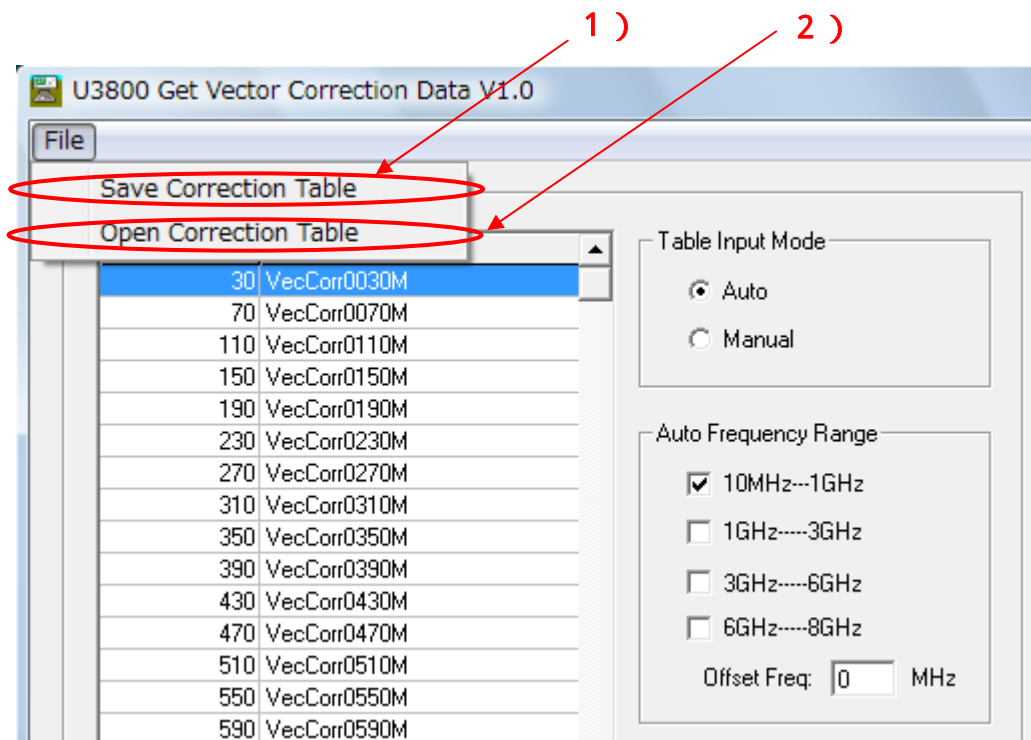
When the input mode is Auto, present data is cleared, and listed automatically according to the assignment frequency range by 2).

When the input mode is Manual, the pair of center frequency and the save file name is added to the end of the Correction Table.

- 6) Center frequency and the save file that has been selected can be deleted from the Correction Table by pushing the Delete button.

- 7) The 200 files or less can be set to the Correction Table.

## 7. Save or Open the Correction Table

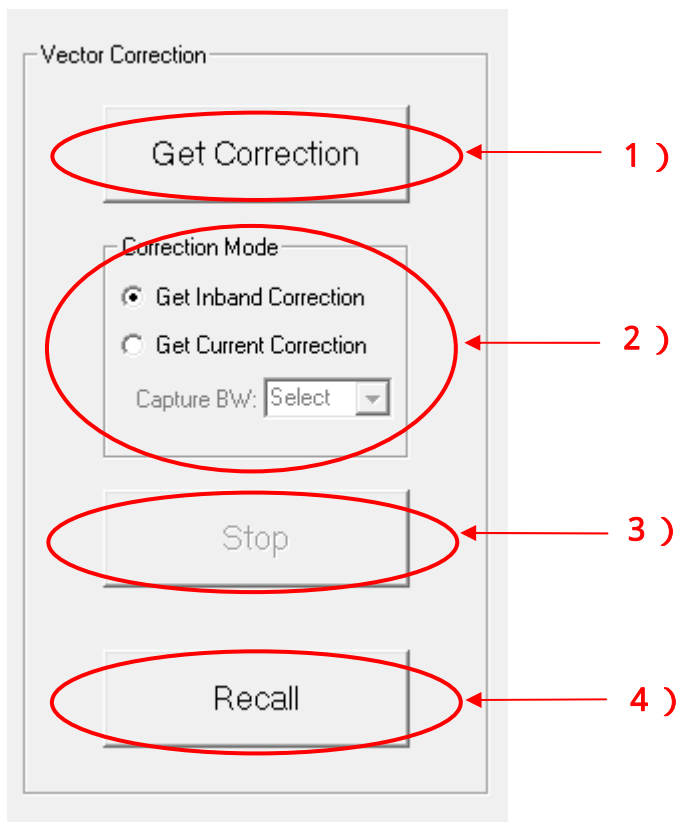


1) The Correction Table is saved by the csv format.

2) The saved csv format file is opened and the content of the Correction Table is restored.

## 8. Getting the Vector Correction

After the edit of the Correction Table is completed, acquire the Vector Correction data.



- 1) The acquisition of the Vector Correction data begins when the Get Correction button is pushed.  
Then, the message of connected confirmation is displayed. Confirm connection and push OK. The Vector Correction data of all center frequency set to the Correction Table is acquired and it saves it in the file. It is always saved in the adv/dat folder of an internal memory of CDA by binary format (.dat) (overwrite).
- 2) Select the Correction Mode
  - ☐ Get Inband Correction  
The correction data is acquired in the band width of 40MHz at the specified center frequency. This correction mode becomes a correction by the band width of 40MHz. The correction is done in the frequency in 40MHz band. The capture band width can be changed within the range of 3 - 40MHz after the recall, but a center frequency is not changed. In that case, the recall should do another file including a new measured frequency.
  - ☐ Get Current Correction  
The correction data is acquired with the specified frequency and the Capture BW. This correction mode basically becomes a correction only of a specified frequency. When the specification of Capture BW is Select, Capture BW set to CDA is used.

- When the Vector Correction data acquisition and the file save are completed, the corresponding line becomes a yellow display in the Correction Table.

Correction Table

CF(MHz)	File name
30	VecCorr0030M
70	VecCorr0070M
110	VecCorr0110M
150	VecCorr0150M
190	VecCorr0190M
230	VecCorr0230M
270	VecCorr0270M
310	VecCorr0310M
350	VecCorr0350M
390	VecCorr0390M
430	VecCorr0430M
470	VecCorr0470M
510	VecCorr0510M
550	VecCorr0550M
590	VecCorr0590M
630	VecCorr0630M
670	VecCorr0670M
710	VecCorr0710M
750	VecCorr0750M
790	VecCorr0790M
830	VecCorr0830M
870	VecCorr0870M
910	VecCorr0910M
950	VecCorr0950M
990	VecCorr0990M

- 3) When the Stop button is pushed in the Vector Correction data acquisition, the Vector Correction data acquisition is discontinued.
- 4) When the Recall button is pushed, the selected file is recalled. The Vector Correction of the frequency band set with the Recall file is completed, too.

## 9. Program End

LAN connection is ended pushing the Close button, and the program is ended by "X" mark.