

72-2500

Editing Software for Arbitrary Waveforms

**Operation Manual
&
Installation Instructions**

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Chapter 1 Installation of Editing Software for Arbitrary Waveforms

1.1 Hardware Requirement

Device required	Minimal requirement
Device	72-2500
Computer	Windows 2000/XP/Vista/Windows 7 System, 128M memory, 16X CD-ROM or even better (Separate requirement shall be complied with if it is for a Vista system), Resolution 1024*768 or even better.
U Disk	U disk in FAT16 or FAT32 format that has a memory space larger than 4M

1.2 Steps for Installation of Editing Software for Arbitrary Waveforms

The editing software for arbitrary waveforms comes with the 72-2500 Signal Source purchased. (The editing software for arbitrary waveforms is contained in the CD that comes with the purchase)

Software name: ARB Editor

Installation Steps:

Step 1: Put the CD into computer CD-ROM and await till the CD content is readout. Editing software for arbitrary waveforms is shown as below. (Fig. 1-1)



Fig. 1—1

Notes: 1. The installation package downloaded from Internet needs to be unzipped before use.
2. The editing software is fully compatible with Windows 2000, Windows XP, Vista, and windows 7. However, it is only compatible with communication protocol for USB2.0 if it is for Vista Operation System.

Step 2: Double click the left mouse button to run the installation program of the software, which will auto pop up “Software Installation Guide Screen” (shown in Fig. 1-2).

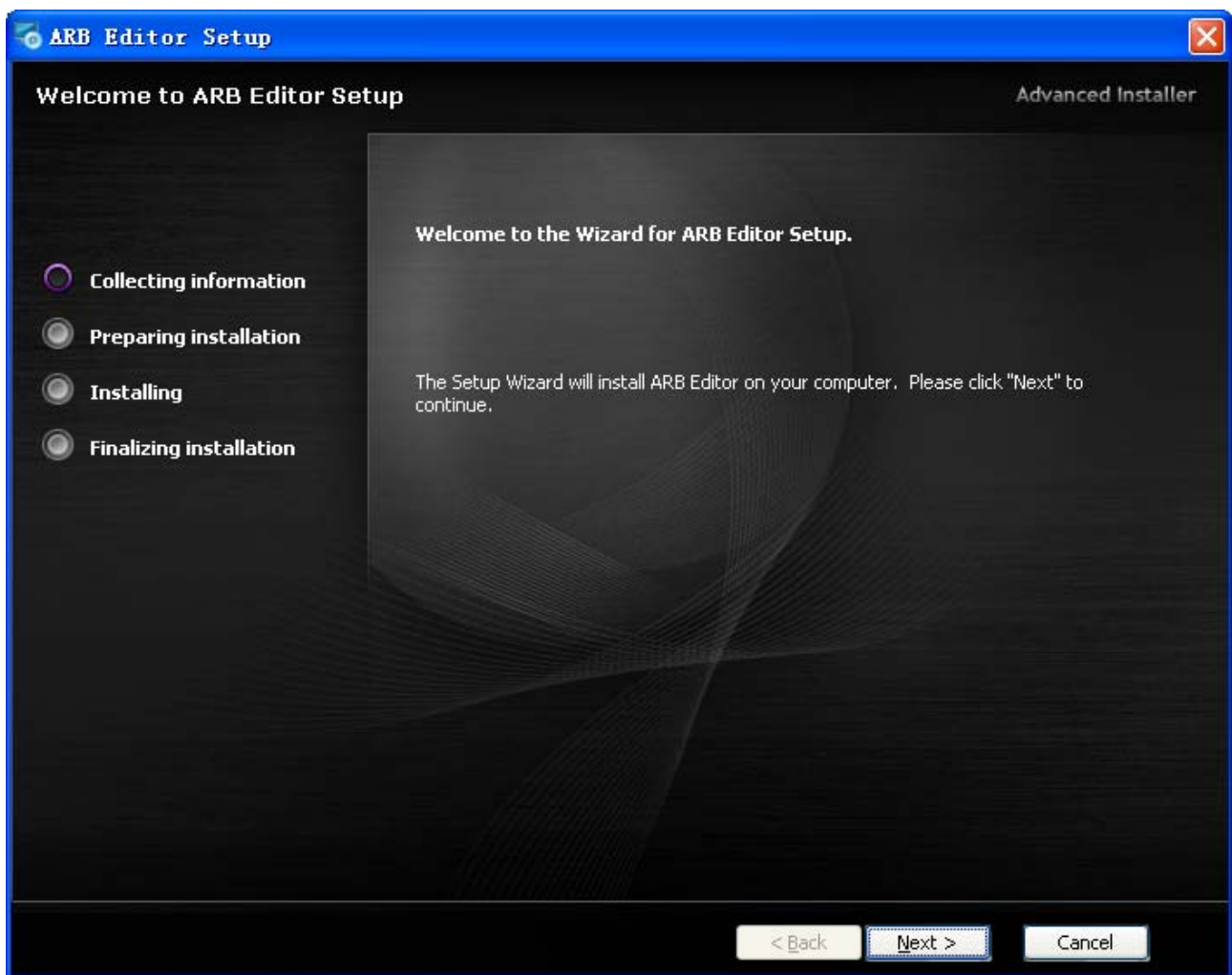


Fig. 1—2

Step 3: After read over the content shown in Fig. 1-2, please click “Next” to select the installation path at the screen pops up next. (shown in Fig 1-3):

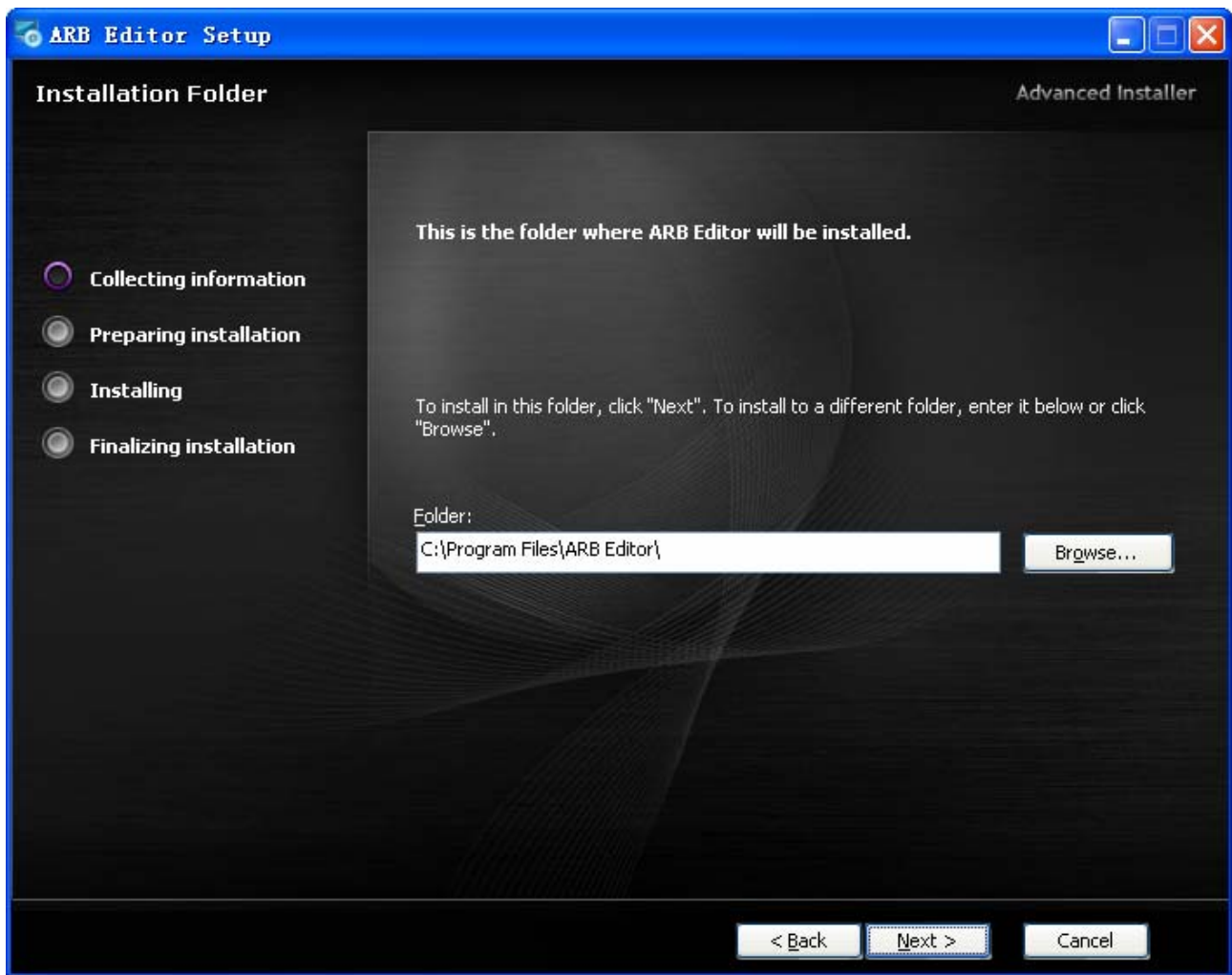


Fig. 1—3

Step 4: Click “Change...” in Fig. 1-3 to set the installation path for the software, then again, press “Next” or directly click “Next” to use default path, after that, press “Install” to begin auto installation of the program:

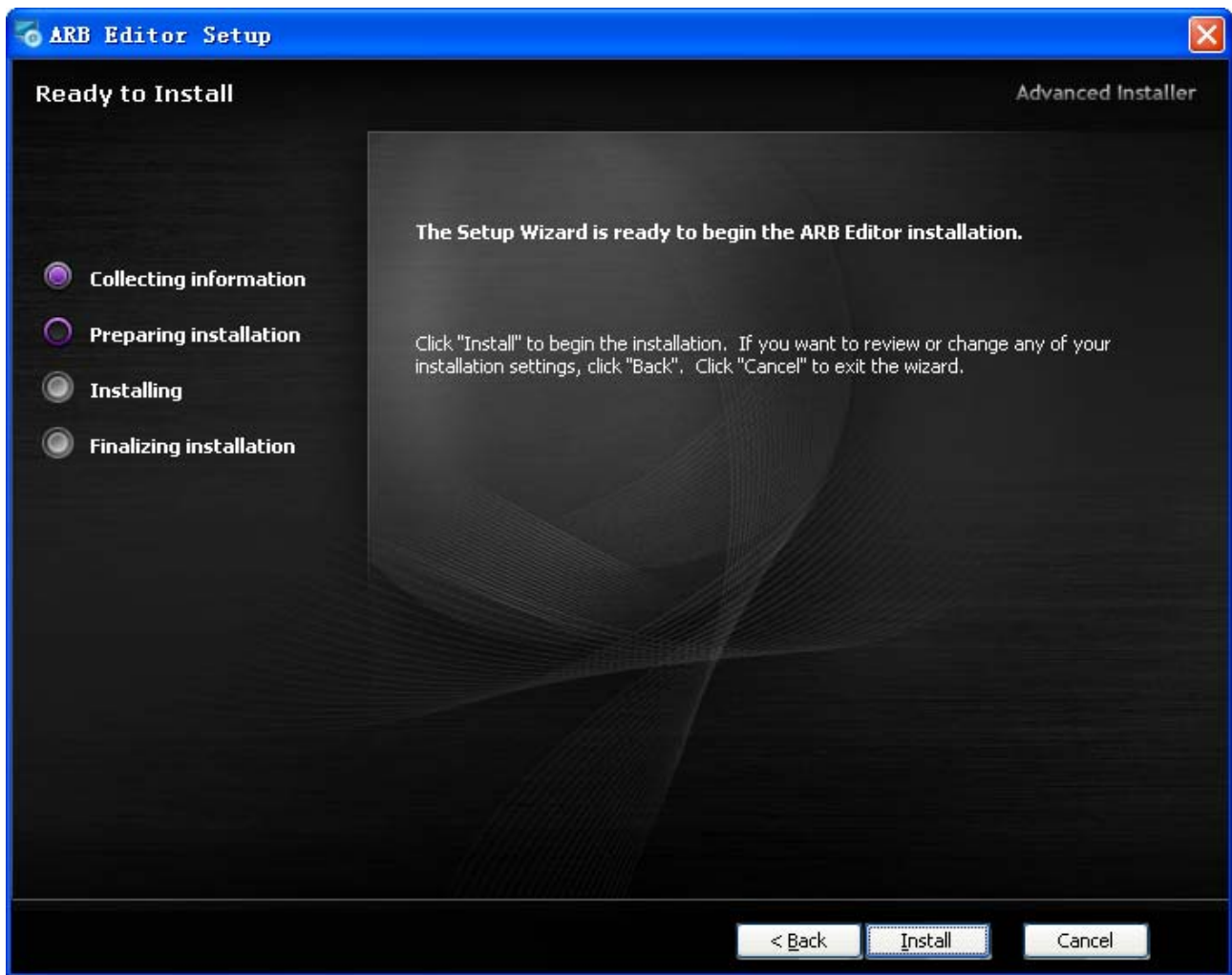


Fig. 1—4

Step 5: The screen as shown in Fig.1-5 shall pop up the moment it finishes auto installation. The software by now has been installed onto the computer upon click the “Finish” button.

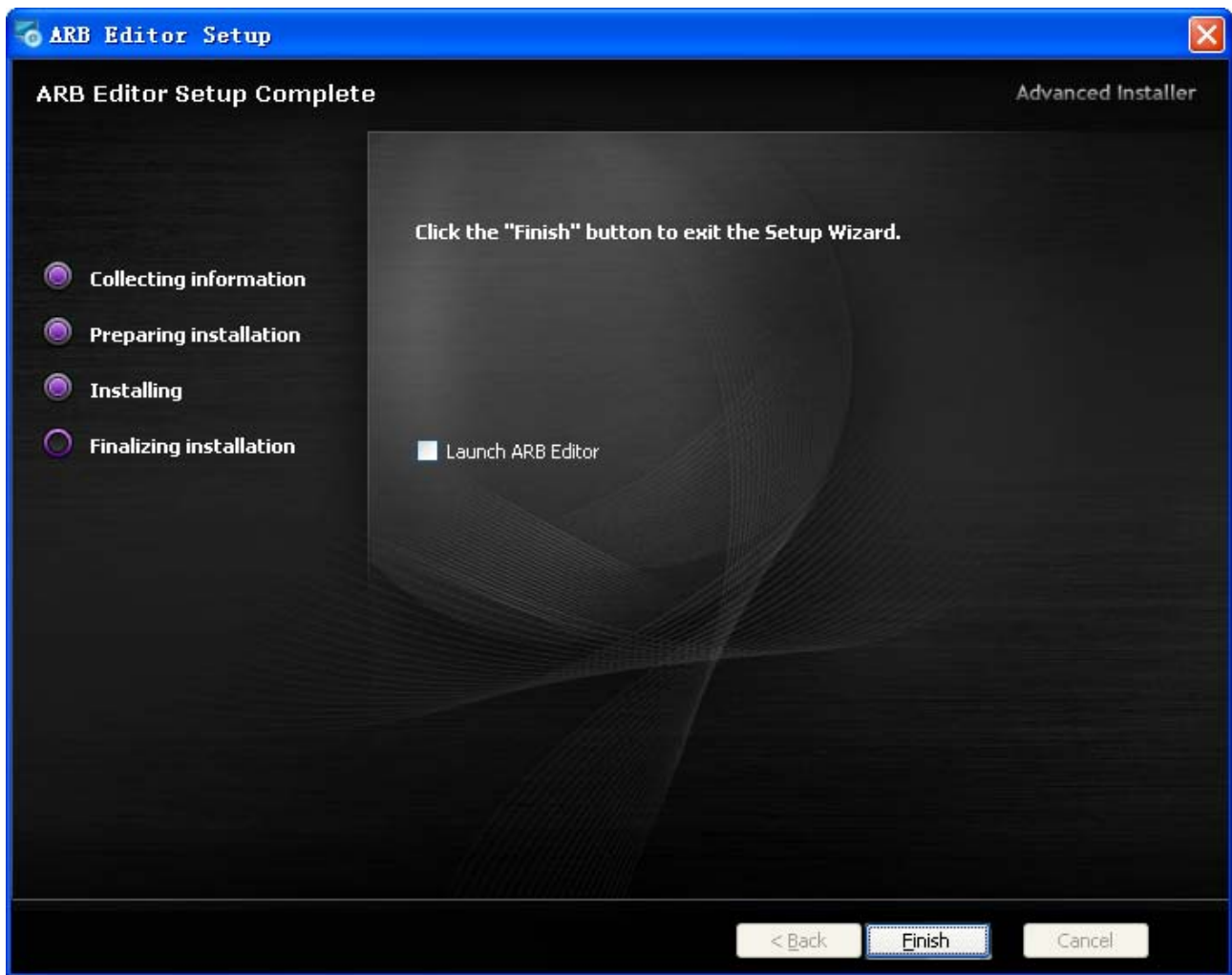


Fig. 1—5

If the user wants to return to a former step during the installation, please click “Back”.

If the user wants to terminate the installation in progress, please click “Cancel” to exit the software installation guide screen.

1.3 Software Startup

After finish up the installation, there are two ways the user can use to start up the software on the computer.

1. The shortcut icon for the software will be automatically generated on the computer desktop upon the installation of such software completes. As shown in Fig 1-6, double click with left mouse button to start the software.



Fig. 1—6

2. In addition, the user can also start the software through this way, which is from *Start→Programs*

→ ARB Editor → ARB Editor”. (Shown in Fig. 1-7)

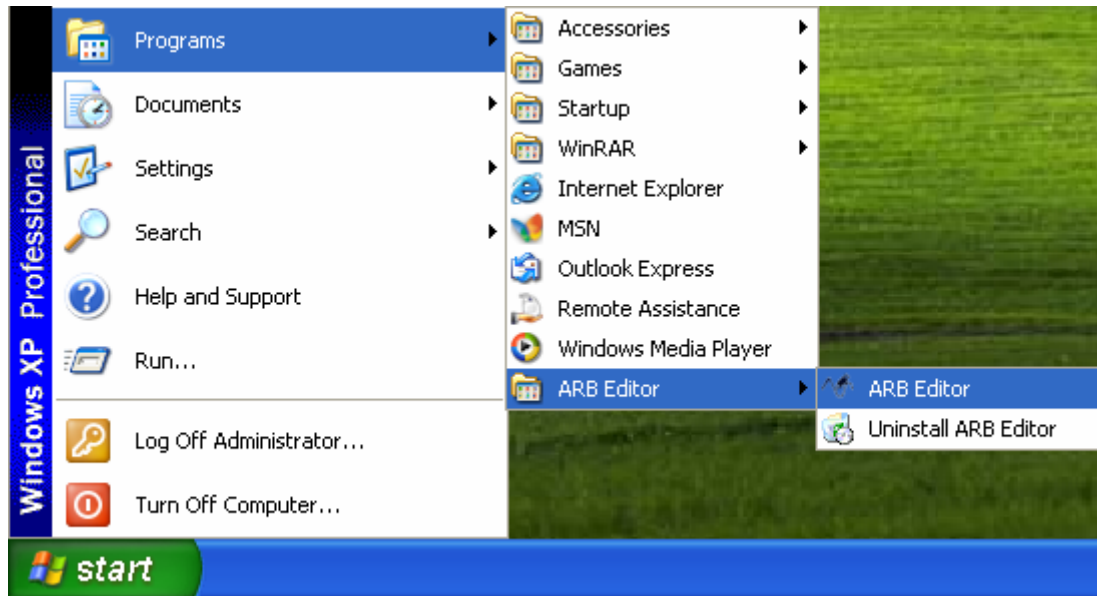


Fig. 1—7

3. Software Interface Pops up (Shown in Fig. 1-8)

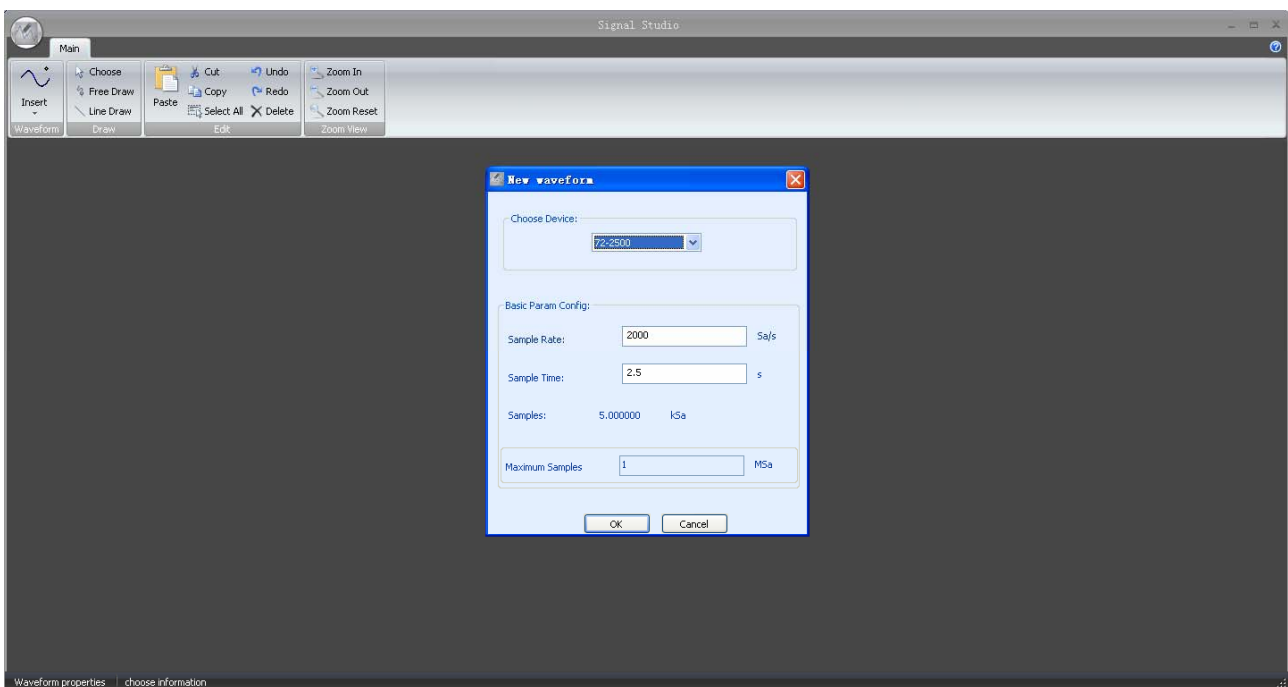


Fig. 1—8

Chapter 2 Operation Instructions

2.1 Introduction on Software Panel

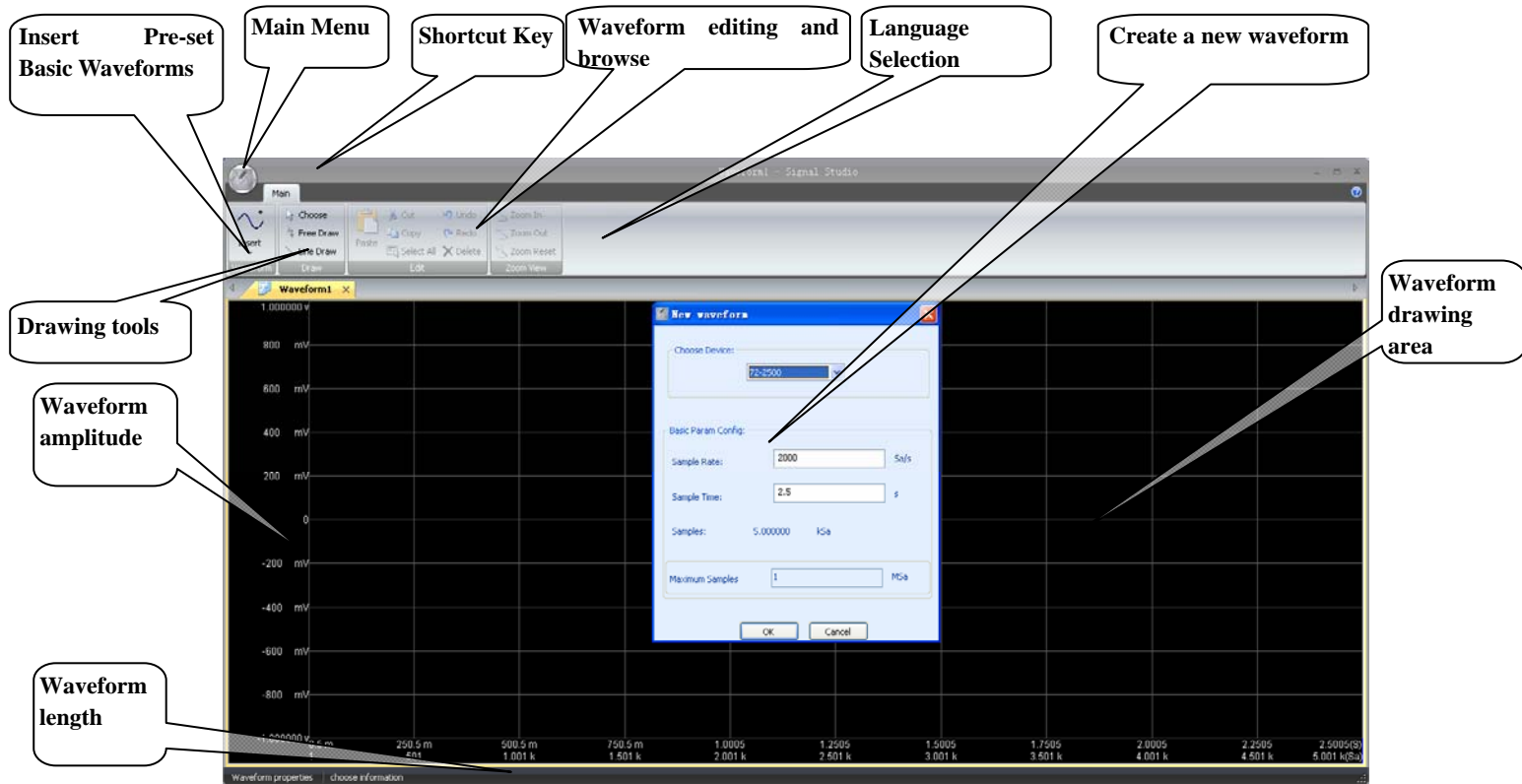


Fig. 2—1

2.2 Operation Instructions

Create a waveform window

New waveform window pops up with the software startup. Select your device model in the new waveform window. Sampling rate is to set up the waveform playing rate (points per second); Sampling time is to set up the waveform lasting time (which is the cycle period); total sampling points is the product of sampling rate and sampling time and its value should be equal or greater than 10Sa but less than the maximum data processing ability of this device.

Notes:

1. Under playing mode, Function/Arbitray Waveform Generator processes the waveform points it picks up in the forms of 2^n . In case the valid points of a waveform drawn by any user turns

out to be another figure other than 2^n , it will increase corresponding points by means of linear interpolation so that the points will become in the form of 2^n , then output the waveform frequency after it's been auto calculated under the device's sampling rate (such as: 250MSa/s). For example, if the user has drawn three waveforms that are consisted by 18, 1024 and 2050 points respectively, Function/Arbitray Waveform Generator will insert another 14 points into the waveform with 18 points, and 2046 points into the waveform with 2050 to make them $32 (2^5)$ and $4096 (2^{12})$ respectively, but doing nothing to the waveform with 1024 points. Under non-playing mode, by using the software, Function/Arbitray Waveform Generator will output the waveform in fixed length (4096 points or 8192 points) and under the frequency listed by auto value insertion and point extraction.

2. The device only reads about the total valid points of the waveform drawn by the user, including the amplitude of each point. Waveform shall then be output at a fixed rate of 250MSa/s or 125MSa according to the data picked up. Setting the sampling rate can be meaningful only if the device has such function. Currently, our Function/Arbitray Waveform Generator does not allow any change of sampling rate for its arbitrary wave function. Therefore no matter how much the sampling rate is set at, it brings no effect to the device. However, if the user's device allows the change of sampling rate for its arbitrary wave function, the sampling rate must be set at a value equal or less than the maximum sampling rate.

Main Menu and Shortcuts.

Press the icon for the main menu to get 7 dropdown menus, as shown in Fig.2-2:

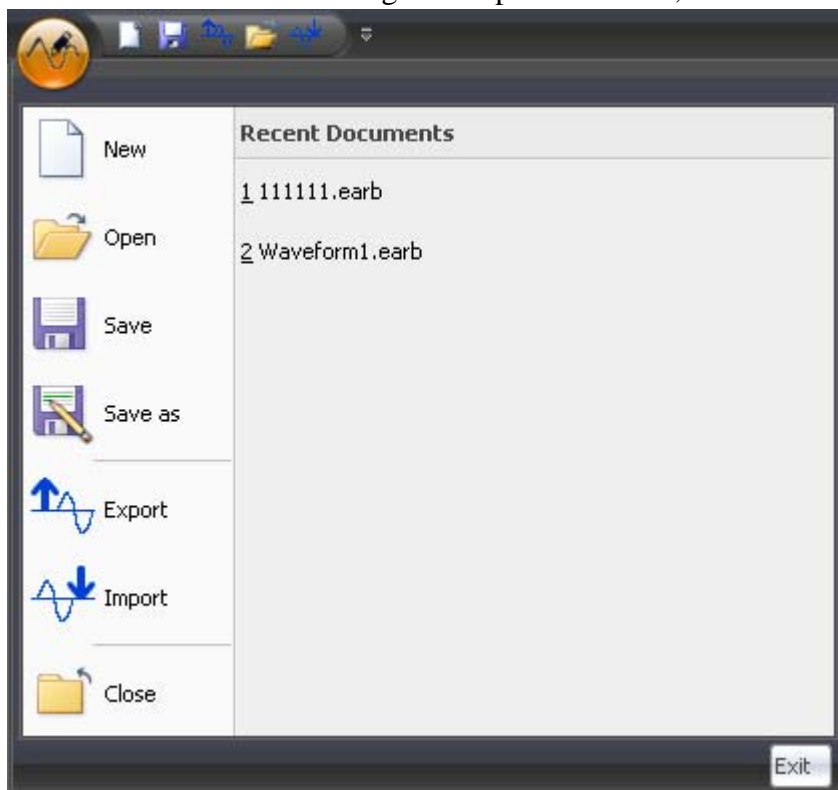



Fig. 2—2

The user can create or open a saved engineering file (the format is *.earb), or alternatively export into U disk the waveform saved in the format of *.CSV (less than or equal to 400K points) or *.BSV (less than or equal to 1M or 8k points). Reads the waveform files saved in U Disk through

USB port located at its front panel. The user can also define a shortcut key for rapid access.

Insert Pre-set Waveform and Drawing Tools

When press  button or insert —> waveform (6 types in total), new waveforms selection window will popup. (Shown in Fig. 2-3)

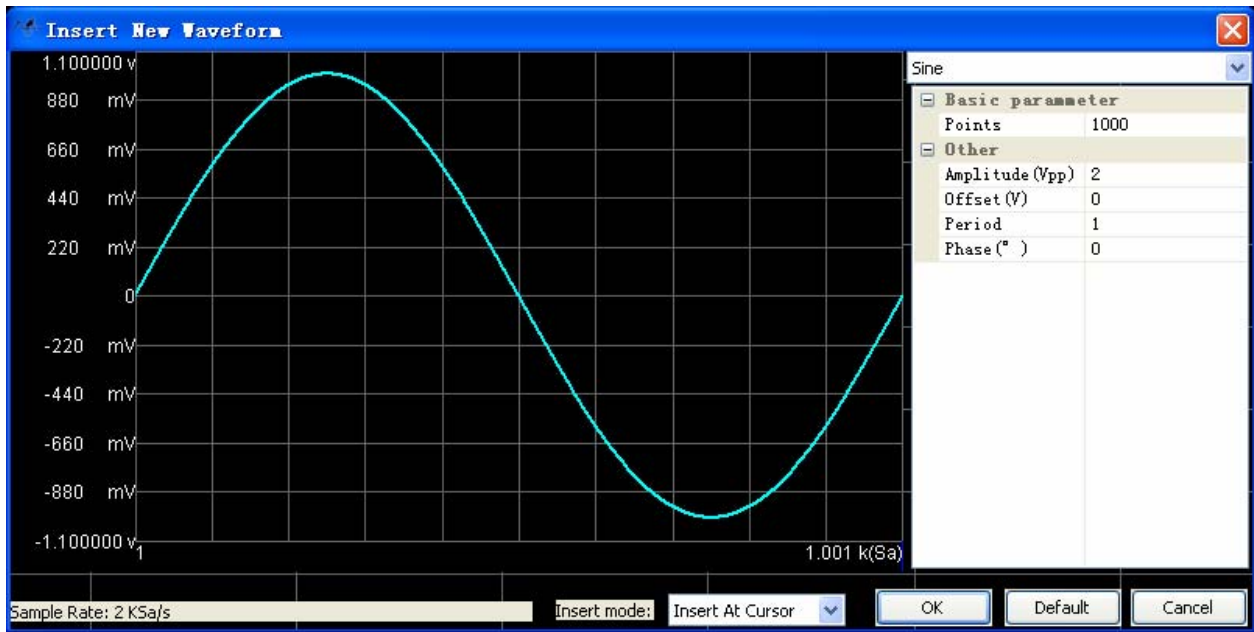



Fig. 2—3

Except for selecting pre-set basic waveforms through insert button, the user may as well select waveform from above right column. Besides that, it also allows the user to set up basic parameters of the waveform in that column. Free drawing or line type drawing can be selected from drawing tools area, then by right clicking or by clicking  to end the drawing process if using the line type drawing. As shown in Fig. 2-4, 3 pre-set waveforms are inserted first, then use free drawing tools to draw waveform. In case the waveform points of current project is not enough to contain the points of a newly inserted waveform. The waveform points of current project will automatically increase till it is able to contain it (Notes: Maximum processing point of this device is 1M or 8k points).

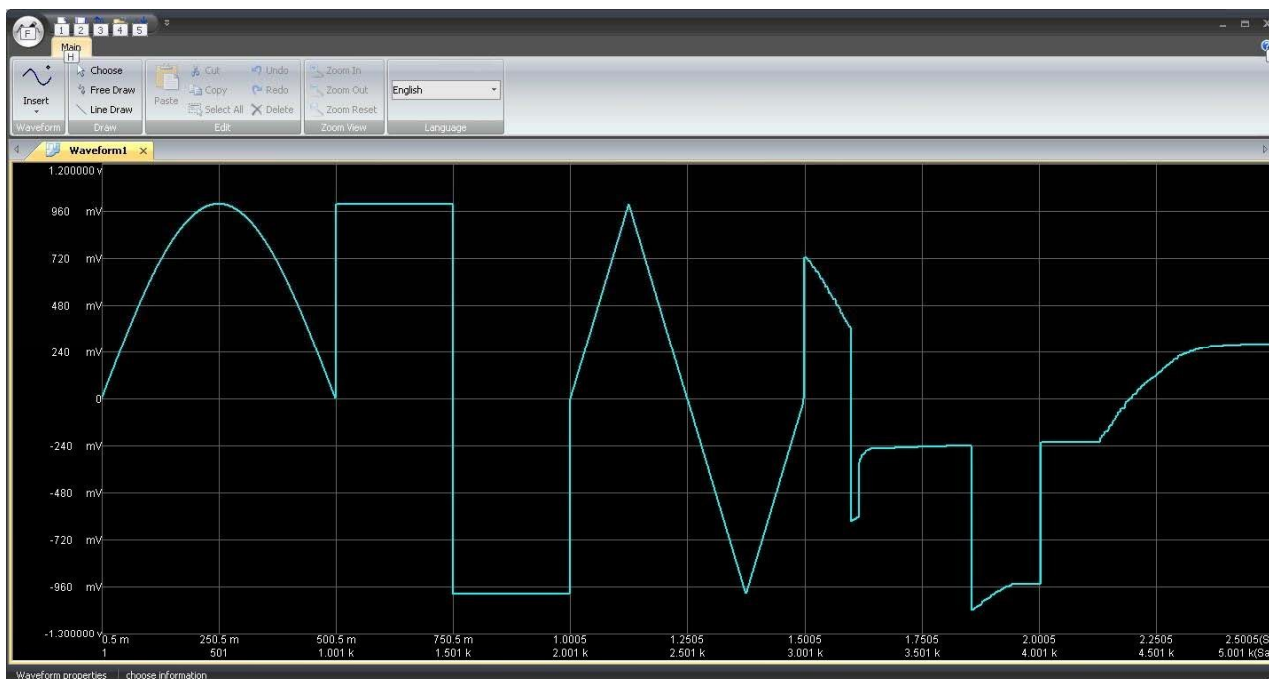
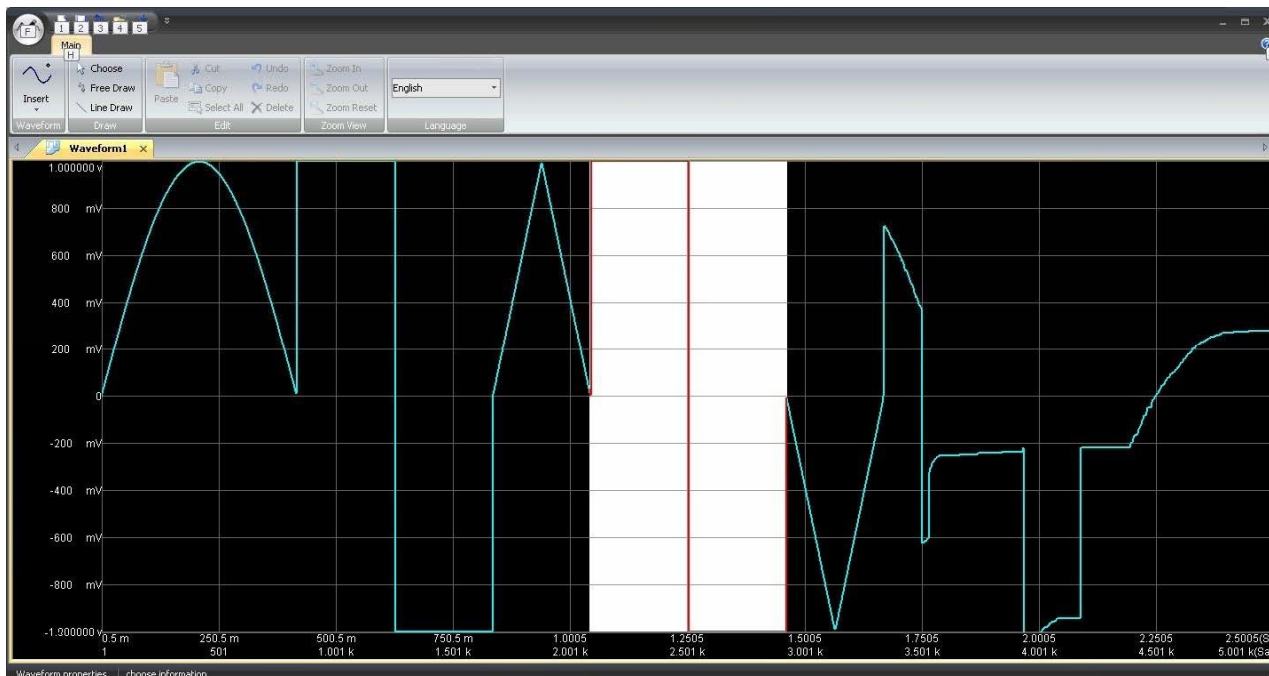


Fig. 2—4

Waveform Editing and Browse

The user can perform various operations to current waveform at waveform editing and browse area, such as: duplicate, cut and delete a selected portion of a waveform or have a local preview of the waveform drawn by rolling mouse wheel or by clicking “zoom in” or “zoom out” button.



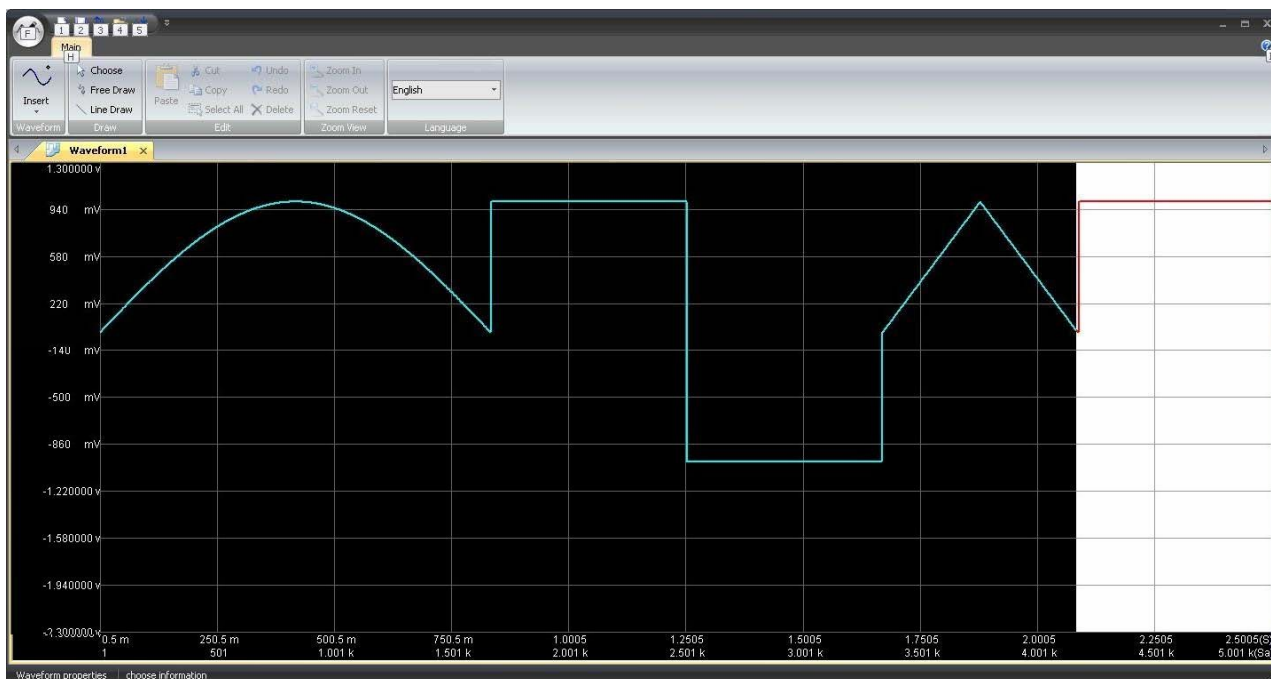


Fig. 2—5

Language Selection & Waveform-related Properties

Click small triangle within language menu to popup list of languages available. When select a language, a prompt window (shown in Fig. 2-6) will pop up.

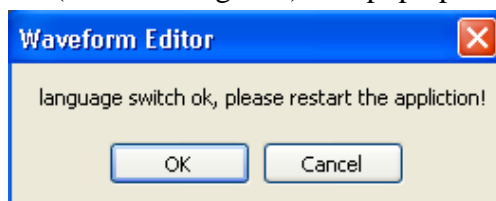


Fig. 2—6

Click to confirm it. It requires a restart to make it effective.

The amplitude of the waveform drawn is shown in the left of the waveform drawing area (High resistance: $\pm 10V$ 50Ω : $\pm 5V$), the device automatically sets the peak-peak value generated by editing software of arbitrary waveform as the amplitude when it reads a waveform file in the U disk, which may be changed freely later on.

The lower part of the waveform drawing area displays the sampling points and sampling time of the waveform depicted, which helps the user edit corresponding amplitude value for a randomly selected sampling point or sampling time.

Chapter 3 Troubleshooting

1. Prompt “error when loading arbitrary waveform!”

Please check whether an effective waveform data containing more than 400K points has been exported into a *.CSV format file. Because this device is only compatible with *.CSV file with equal or less than 400K points, or *.BSV file with equal or less than 1M or 8k points.

2. U disk can not be identified or failure to initialize

Check whether U disk is working properly or not. Ensure using U disk of FAT16 or FAT32 format.

3. U disk can be identified but failed to find waveform data

Through computer to check whether there is any waveform file saved in U disk. (File format is *.CSV or *.BSV).