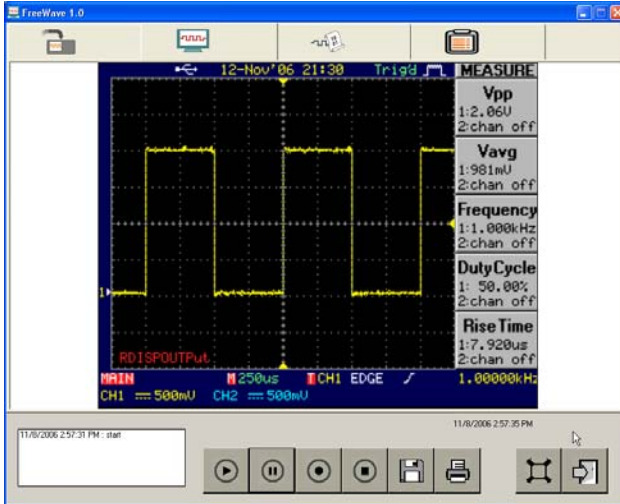


Getting Start

FreeWave -- GDS-2000 PC Software

2007/1/2 Rev. 6



Features:

Real-time Screen Image Display

Movie Clips Recorder

Waveform Data Capturer

Command Set Remote Control

USB Interface

Introduction:

A PC Software “FreeWave” supporting GDS-2000 is available to all customers for free, downloadable from GW Website.

FreeWave enables the full screen image transfer from GDS-2000 to PC via USB port in a fast-updating manner, so the user is able to see a nearly-real-time display on the PC screen. The screen image (.bmp or.jpg) and waveform raw data (.csv) could be saved into PC for further applications.

The continuous waveform images (.wav) in a time period could be recorded for later playback. This video recorder function facilitates the repetitive observation of a saved waveform with continuous variation in a certain period of time. Remote control function lets user create personal control procedure easily and quickly.

File Download:

Users need download 3 files for install full functional FreeWave:

- FreeWave program (Beta version).
- Windows .NET Frame Work 1.1.
- Windows Media Encoder 9 series.

FreeWave Program:

FreeWave (Beta version) could be downloaded from GWInstek website.

<http://www.gwinstek.com.tw>

Select these icons: **Support**→**Download**→**Software** and then select **Oscilloscope** item.

FreeWave program would be in the download list.



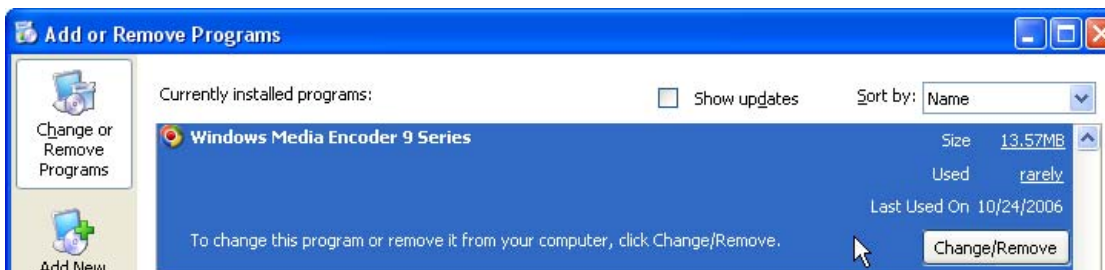
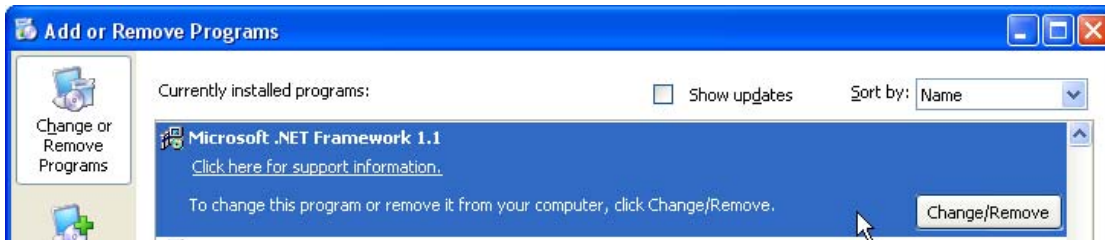
Install WINDOWS .NET Frame work 1.1

[Download Here](#) (Download from Microsoft website)

Install WINDOWS MEDIA ENCODER 9 SERIES

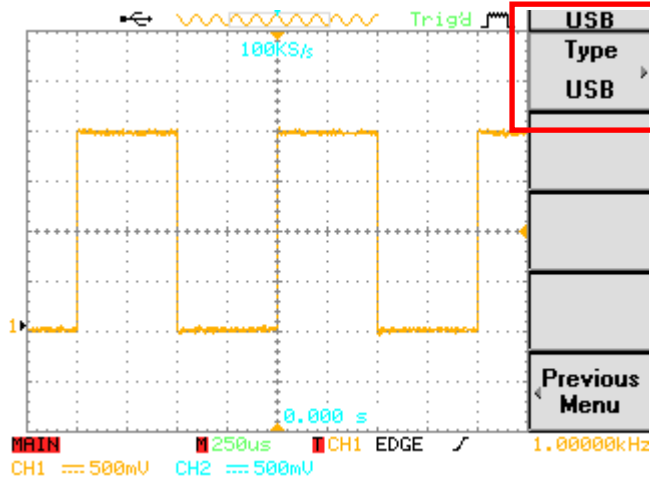
[Download Here](#) (Download from Microsoft website)

Check the [Microsoft .NET Framework 1.1] and [Windows Media Encoder 9 Series] has installed in your PC:



Install FreeWave

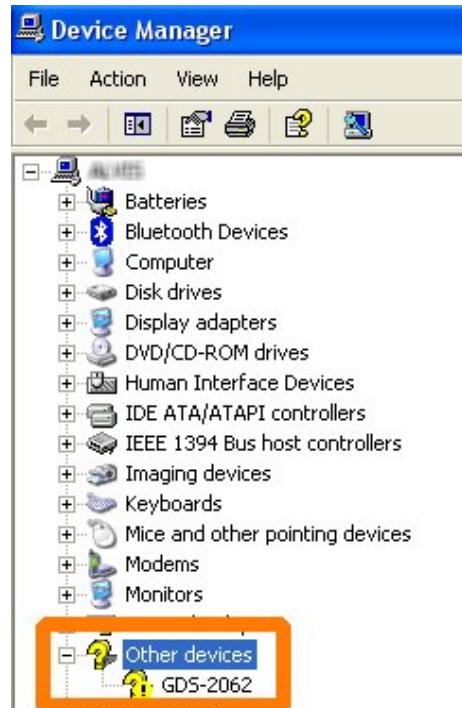
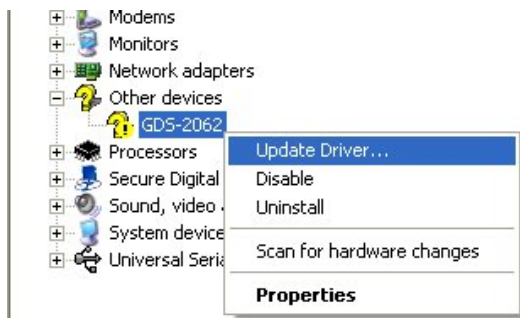
1. Execute Setup.exe to install FreeWave to your PC
2. Press next step icon until install process finished (Default install folder is C:\Program Files\FreeWave\).
3. Connect GDS-2000 USB device port(rear panel) to PC via USB cable and setting the interface type of DSO is USB (Utility→F2→F1)



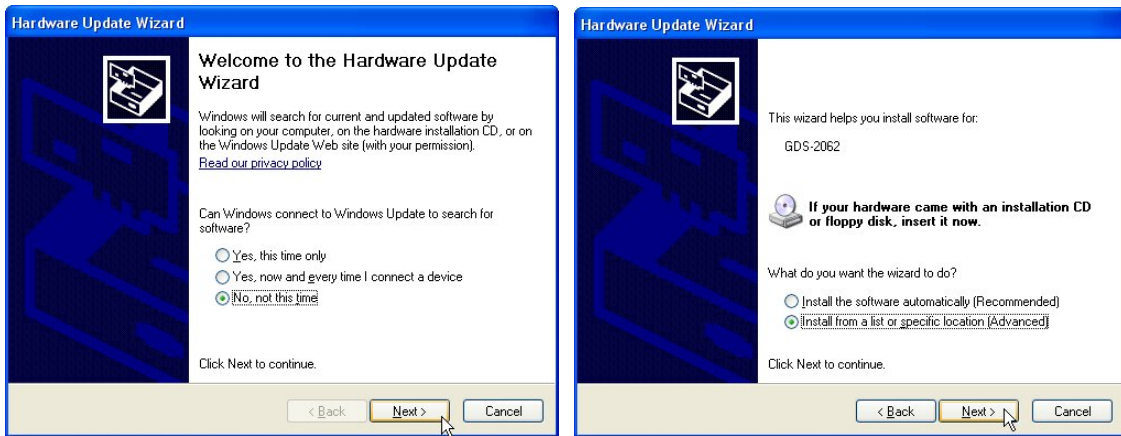
4. First time connects GDS-2000 to PC and select USB interface. The hardware install message would notice to user, press install continuously or install driver as below steps:

A) Connect PC and GDS-2000 in USB mode, but the driver is not installed. The device manager would disappear error message as below (Orange square shows the unknown device for PC).

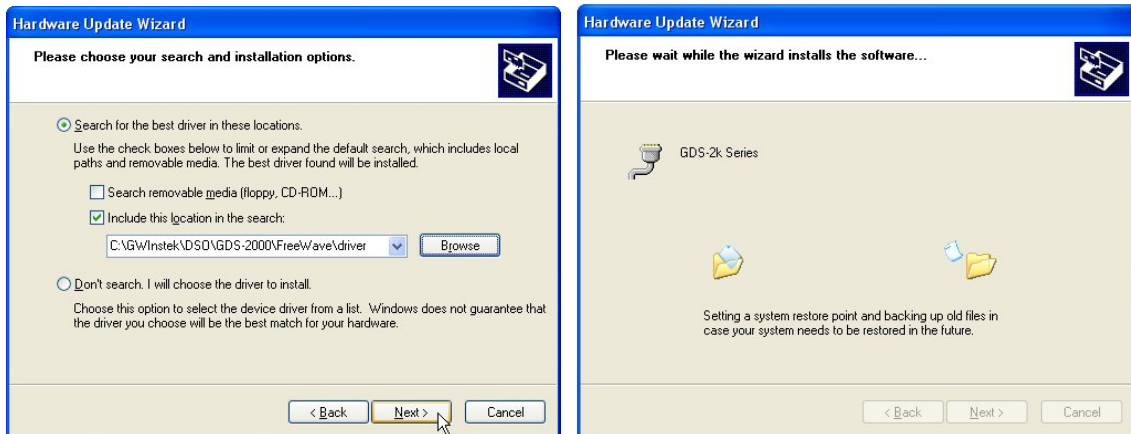
B) Click right button of mouse in the question mark, and select “Update Driver”



C) Select install driver manually.



D) Driver file is " *dso_cdc.inf* " (in the FreeWave download file, or download from GWinstek website). Select the file folder using "Browse" button. Press "Next" to install driver as below:



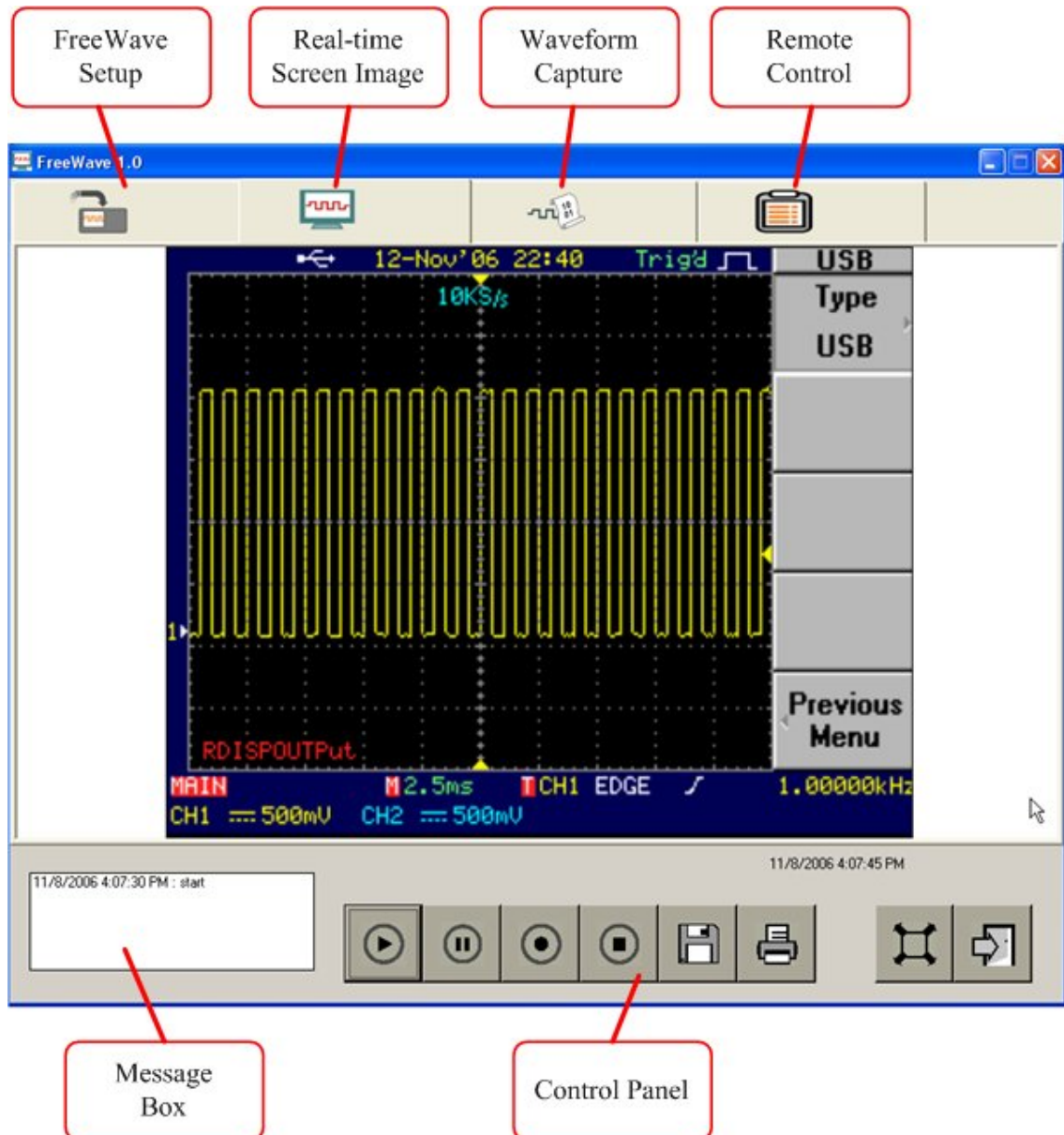
E) GDS-2000 USB driver has been installed in the PC. Check the Device Manager, the device has been installed correctly.



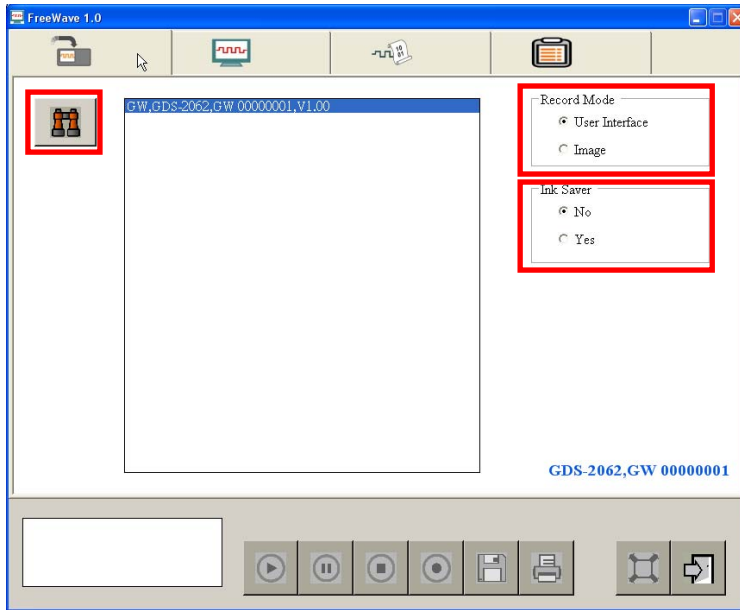
Run FreeWave

Execute “FreeWave” program. (Start → All Programs → FreeWave).


FreeWave is made by four main functions, control panel and message box.



1. FreeWave Setup



(1) Search Device

Press  icon to search DSO.

If the setting is correct, message box would show the information of the DSO.

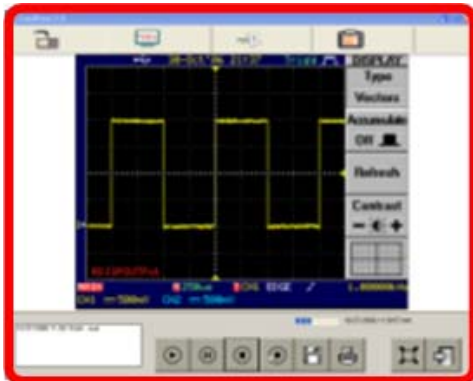
If there is no correct message in the message box, please check:

- Interface setting is USB in the DSO
- USB cable is connected from DSO (Device port) to PC (Host port)
- GDS-2000 USB hardware setting is correct in Device Manager of user's PC

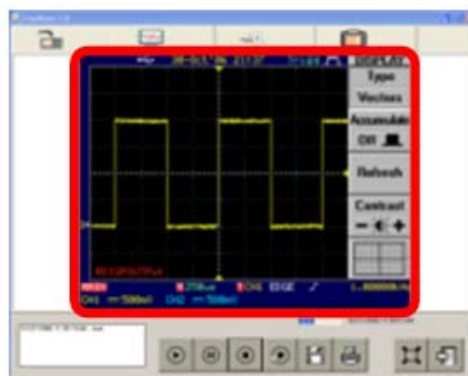
(2) Record Mode in real-time screen display

Select different clip record mode (Red square area):

- User Interface: recorded clip will include all program windows.
- Image: recorded clip only include the waveform area.



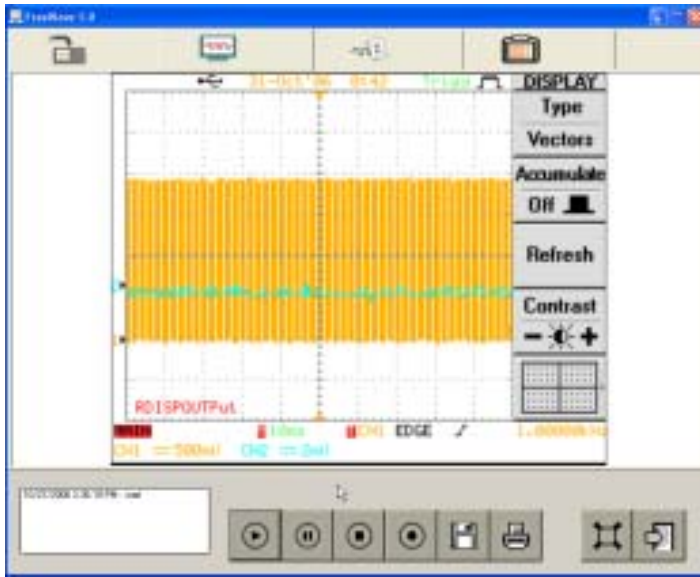
User Interface



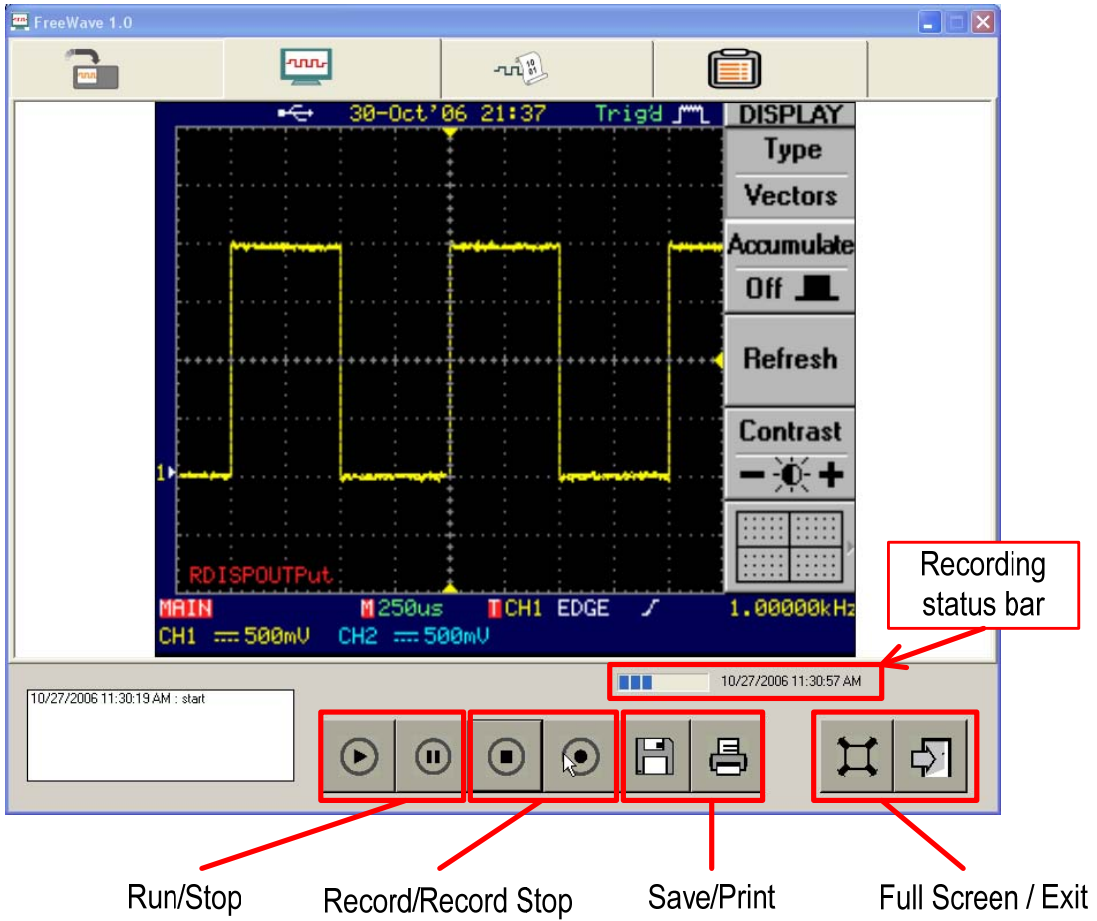
Image

(3) Ink saver mode in Real-time image display

Enable or disable ink saver function in Real-time screen display.



2. Real-time Screen Display

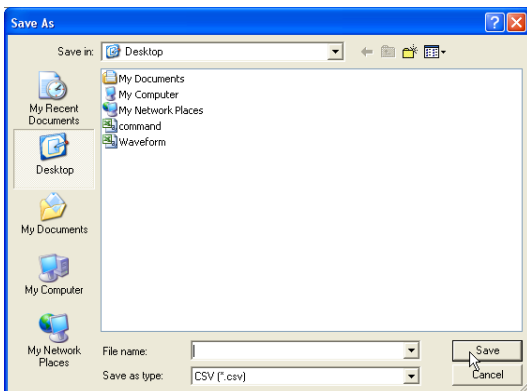
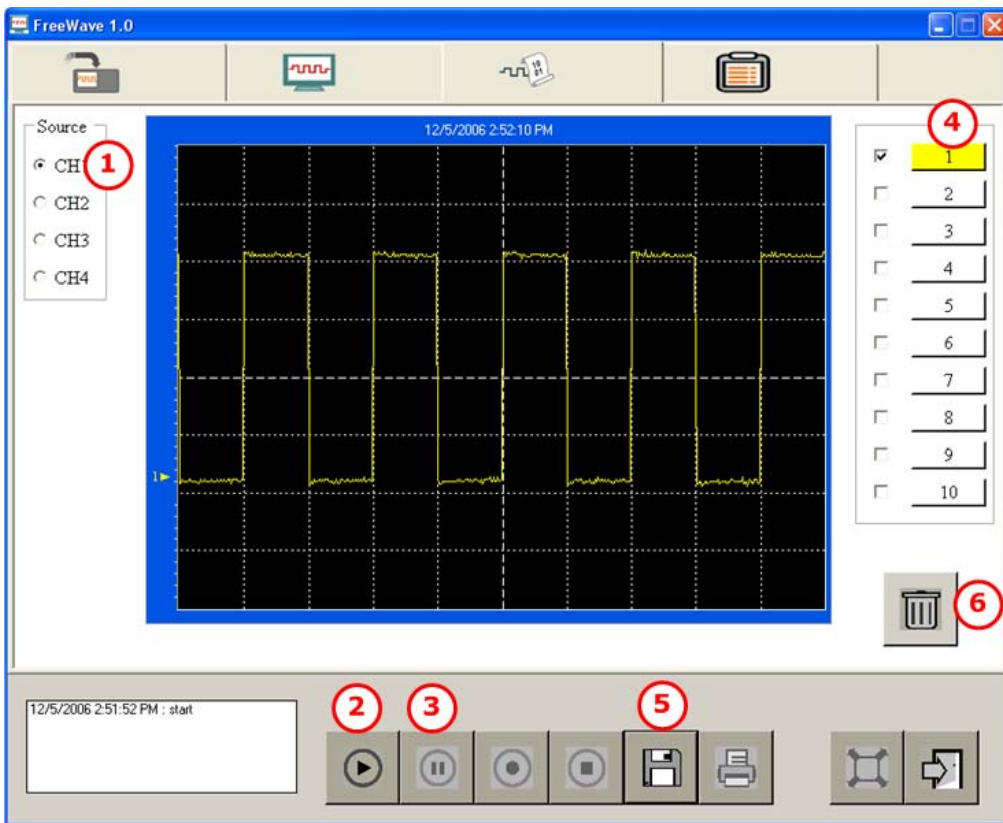


- (1) Run/Stop: Control image transfer to PC or transfer stop.
- (2) Record/Record Stop: Start/Stop to record movie clips.
- (3) Save/Print: Save image to picture file(JPG, BMP, etc) or print out the picture.
- (4) Full screen: Display full screen without control buttons, only waveform area.
- (5) Exit: Exit FreeWave program.

3. Waveform Data Capture

Example for how to get waveform data:

- (1) Select Source: CH1
- (2) Press [READ] button.
- (3) When waveform display in the PC screen, Press [Stop] button
- (4) You can see there is a mark in the “NO1” box, and the [Save] button is active.
- (5) Press [Save] button and save the waveform data to *.csv file.
- (6) Press [Delete] button to remove this waveform box.

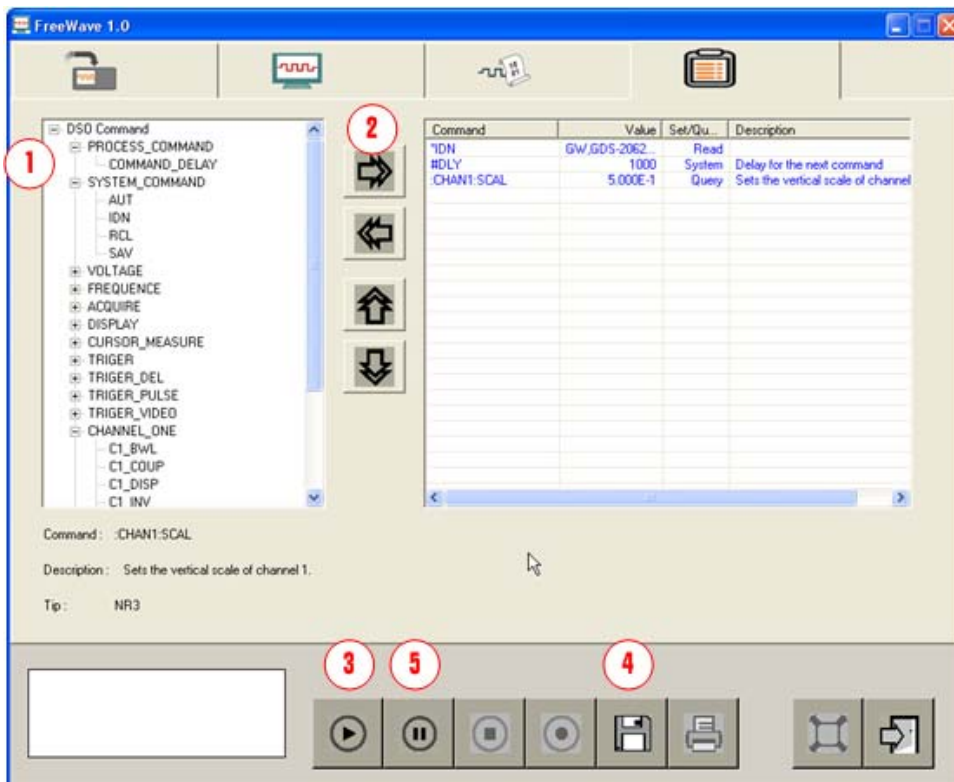


	A1	DESCRIPTION	
	A	B	C
24	LEVEL	1.20E-01	
25	SLOPE	0	
26	COUPLE	1	
27			
28	ACQUISITION:		
29	MODE	0	
30	RECORD LENGTH	500	
31	AVERAGE	1	
32			
33	POINT	VALUE	
34	1	49	
35	2	49	
36	3	49	
37	4	49	
38	5	49	

4. DSO Remote Control

Example for how to control DSO by remote command:

- (1) Expand the DSO command
- (2) Select commands to command list box (Press right arrow icon).
- (3) Press [Run] button to execute command.
- (4) The [Save] button could save the command for *.csv file.
- (5) [Stop] button would clear all commands in the box.



Microsoft Excel - command

	A	B	C	D	E	F
1	*IDN	GW	GDS-2062	GW 00000	V1.00	Read
2	#DLY	1000	System	Delay for the next command		
3	:CHAN1:SCAL	5.00E-01	Query	Sets the vertical scale of channel 1.		
4						
5						