



**Model: 9171, 9172, 9173, 9174, 9181, 9182, 9183, 9184, 9185**

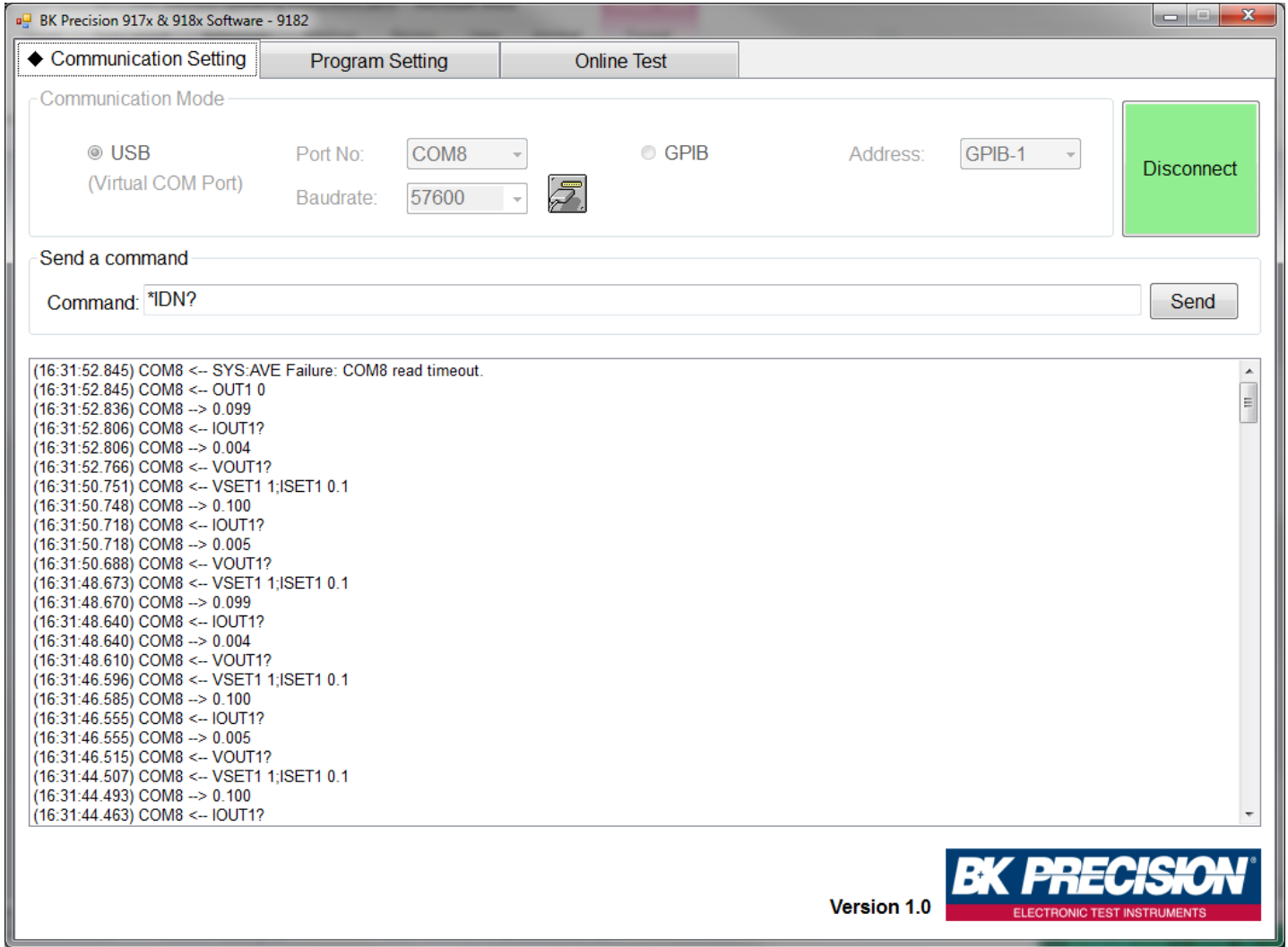
## **Programmable DC Power Supply**

**Software Operating Instructions**

1. System Requirements

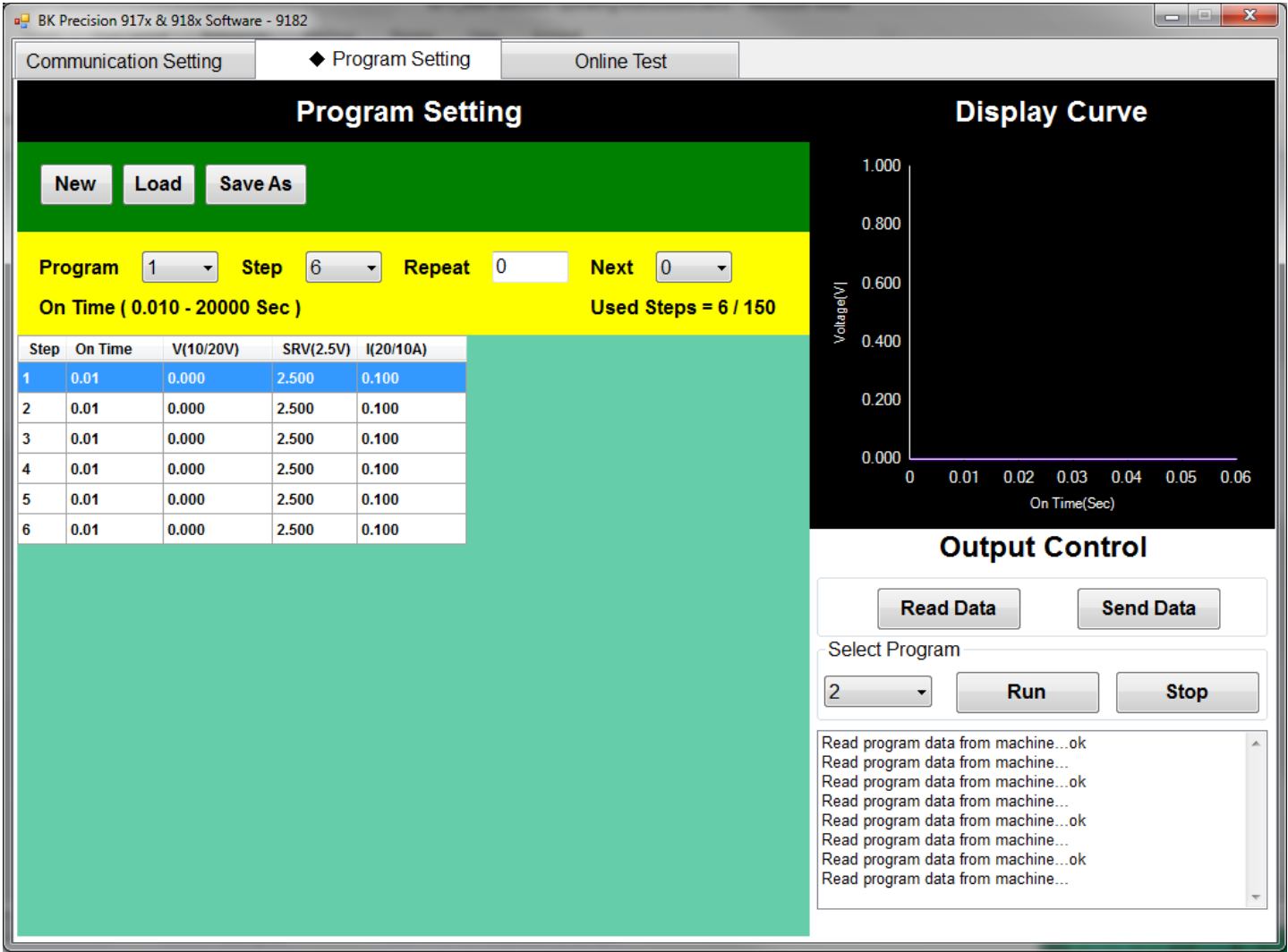
Operating System: Window XP, Windows 7 (32 and 64 bit)  
Microsoft .Net Framework 3.5 Service Pack 1

2. Communication Setting



<div>Connect</div>	Click button after selecting the COM port number for USB communication or selecting the GPIB address for GPIB communication.
<div>Send</div>	Click to send command strings/protocols to communicate with the power supply. Enter commands in the Command input box.

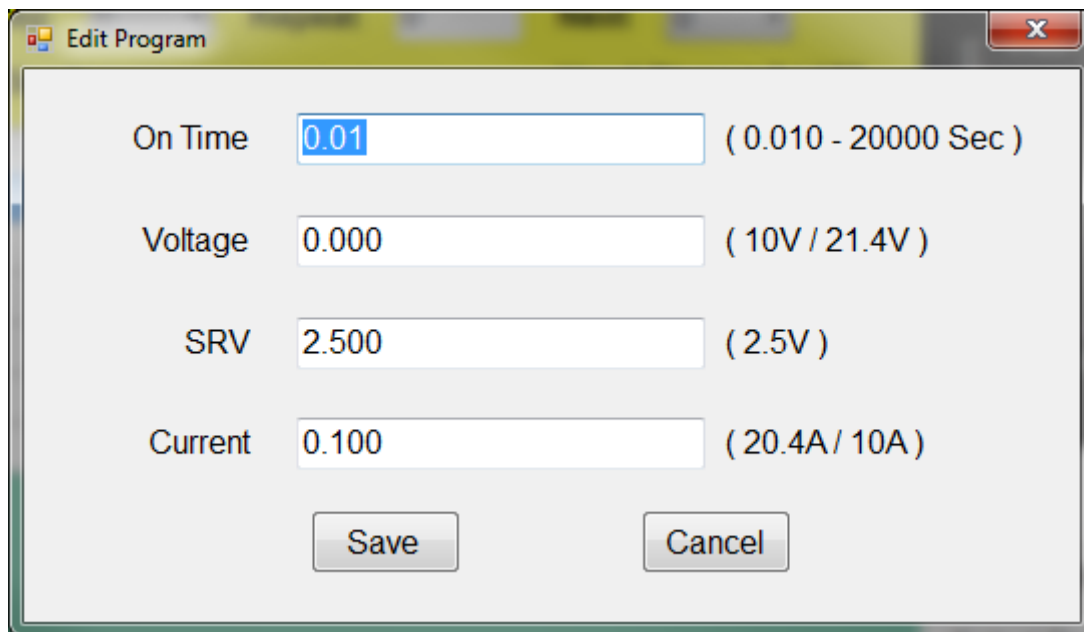
3. Program Setting



<b>New</b>	Click to create a new program sequence. This will prompt a confirmation to clear any existing programs loaded into the software if available.
<b>Load</b>	Click to load a previously saved program sequence.
<b>Save As</b>	Click to save the program sequence/list into a .csv file. The default file format is: model_yyyyMMdd_HHmmss.csv. Model is the model number, and the rest is the timestamp when file is saved. yyyy is the year, MM is the month, and dd is the date. HH is hours (24hr format), mm is minutes, ss is seconds.
<b>Program</b> 1	This selects the program number/location to which the program sequence will store into the instrument. If "Read Data" is clicked to load programs from memory, this will select which programs from memory to display.
<b>Step</b> 0	Selects the total number of steps of the program sequence. Maximum is 150.
<b>Repeat</b> 0	Selects the number of times to repeat the sequence.
<b>Next</b> 0	Selects the memory location of the next program to run immediately after the current program sequence ends. Set it to 0 if no subsequent program sequences are to be run.

<b>Read Data</b>	Click this to load all previously stored programs from the instruments' internal memory. This action will remove any existing programs created in the software.
<b>Send Data</b>	Click this to load the created program sequence into internal memory of the instrument.
<b>Run</b>	Click this to run the program selected by the program number to the left.
<b>Stop</b>	Click this to stop the current program from running.

**To Edit step parameters of a program, simply double-click on the steps and the following prompt will display:**



The screenshot shows a window titled "Edit Program" with a close button (X) in the top right corner. Inside the window, there are four rows of parameters, each with a label, a text input field, and a range in parentheses:

- On Time**: The input field contains "0.01" (highlighted in blue). The range is "( 0.010 - 20000 Sec )".
- Voltage**: The input field contains "0.000". The range is "( 10V / 21.4V )".
- SRV**: The input field contains "2.500". The range is "( 2.5V )".
- Current**: The input field contains "0.100". The range is "( 20.4A / 10A )".

At the bottom of the dialog, there are two buttons: "Save" and "Cancel".

For dual channel models, the following will display:

**Edit Program**

On Time  ( 0.010 - 20000 Sec )

**CH1**

Voltage  ( 10V / 20V )

SRV  ( 2.5V )

Current  ( 10A / 5A )

**CH2**

Voltage  ( 10V / 20V )

SRV  ( 2.5V )

Current  ( 10A / 5A )

**On Time** – This is the step time to which to hold the voltage and current settings.

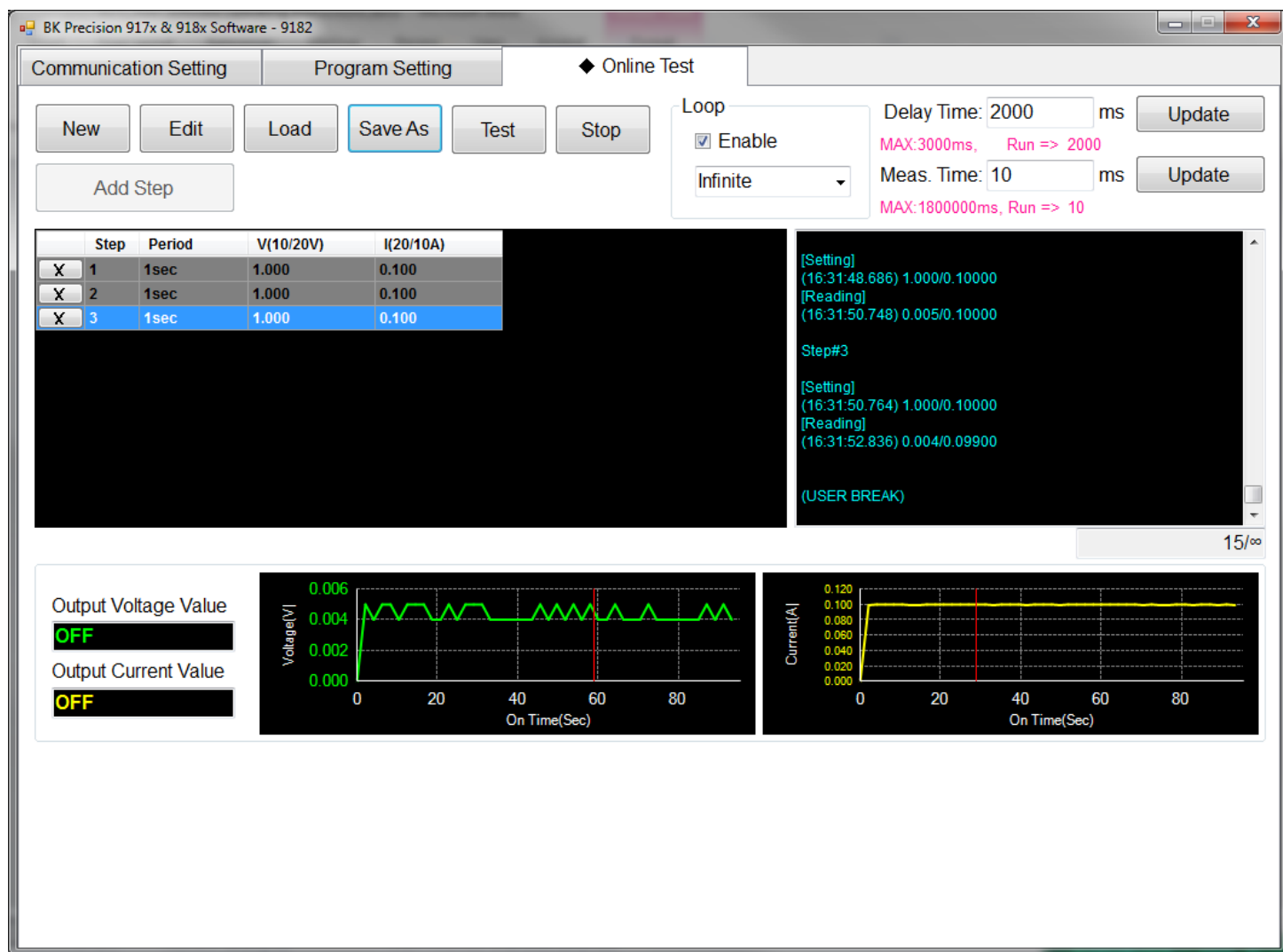
**Voltage** – The step voltage value.

**Current** – The step current value.

**SRV** – The step rise/fall rate of the voltage.

#### 4. Online Test

This function is mainly used for quick testing of the instrument's power output under various programmable step sequences. It is computer controlled and differs from **Program Setting**, which actually stores the sequence values into internal memory of the instrument for faster transitioning between steps. The advantage of **Online Test** function is that it will plot the measured voltage and output while the test sequence is running, allowing you to monitor the output.



New	Click to create a new test sequence.
Edit	Click to return the list to “editing” mode.
Load	Click to load a previously saved test sequence.
Save As	Click to save the test sequence into a .csv file. The default file format is: model_yyyyMMdd_HHmms.csv. Model is the model number, and the rest is the timestamp when file is saved. yyyy is the year, MM is the month, and dd is the date. HH is hours (24hr format), mm is minutes, ss is seconds.
Test	Click to start running the test sequence.
Stop	Click to stop running the test sequence.
Add Step	Click to add steps to the test sequence.
Switch Level <input checked="" type="radio"/> HIGH <input type="radio"/> LOW	This selects high or low range. This option is only available on high voltage models 9184 and 9185 only.

Delay Time: <input type="text" value="300"/> ms MAX:3000ms, Run => 300	Selects the delay time between each steps. (Range: 400~3000ms)
Meas. Time: <input type="text" value="100"/> ms MAX:1800000ms, Run => 100	Selects the measurement time interval. (Range: 0~1800000ms)
Loop <input checked="" type="checkbox"/> Enable <input type="text" value="Infinite"/>	Selects to configure for loop testing.
Output Voltage Value <b>OFF</b> Output Current Value <b>OFF</b>	Indicates the measured output voltage and current value.
<input type="button" value="X"/>	This is displayed next to each steps in the test sequence. Click this to remove the step.
Note	The maximum number of data points that can be plotted is 100000.

The following prompt will display when double-clicking each steps for editing:

Edit Online Test



Time Value  (0.1~20000)

Time Unit

Voltage  ( 10V / 21.4V )

Current  ( 20.4A / 10A )

For dual channel models, the following will display:

 Edit Online Test 

Time Value

(Max: 20000)

Time Unit

sec

CH1

Voltage

( 10V / 20V )

Current

( 10A / 5A )

CH2

Voltage

( 10V / 20V )

Current

( 10A / 5A )

Save

Cancel