User's Manual

Additional Information about the 7555 Digital Multimeter GP-IB Window

This User's Manual describes the procedures to control the 7555 Digital Multimeter using the GP-IB window (7555 operation panel) of the GP-IB Controller Module WE7021. The contents of this manual describe the software Ver. 1.02.

This manual only describes information about the operational panel that is displayed when the 7555 control software file [DMM7555.gpl] is loaded by selecting [File] > [Load] in the GP-IB window's menu. For the procedures regarding the steps necessary to display the 7555 operation panel in the GP-IB window, see the User's Manual for the GP-IB Controller Module WE7021 (IM 707021-01E). Because this software application uses communication commands complying with the IEEE488.2-1987 Standard, set the 7555 Digital Multimeter's command number setting to "4."

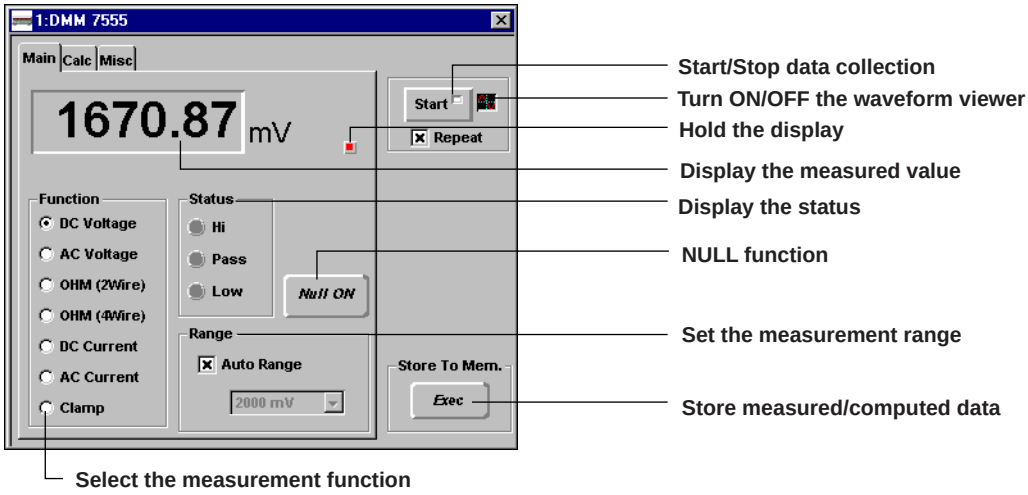
The GP-IB Window can be used to control a 7555 Digital Multimeter that has a software version of 1.09 or later.

For information regarding the PC-based Measurement Instruments WE7000 or the WE7021, see the following manuals.

Manual Title	Manual No.
WE7000 User's Manual	IM 707001-01E
GP-IB Controller Module WE7021 User's Manual	IM 707021-01E

Main Panel

This section describes the Main panel that is displayed when the Main tab is clicked.



Selecting the measurement function

Select the function using the [Function] option buttons.

For details related to the functions and specifications, see chapter 4 in the IM755501-01E User's Manual.

OHM(2Wire) and OHM(4Wire) represent a 2-wire resistance measurement and a 4-wire resistance measurement, respectively.

Setting the measurement range

Checking the [Auto Range] box enables auto range.

When the check is removed, a numerical value is entered.

For details related to the functions and specifications, see chapter 4 in the IM755501-01E User's Manual.

Displaying the status

Displays the comparator result.

The Calc operation panel is used to set the reference value.

For details related to the functions and specifications, see section 7.2, "Using the Comparator Function" in the IM755501-01E User's Manual.

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Using the Null Function

If you click the [Null ON] button, the data measured immediately afterwards will be set to the Null value.

For details related to the functions and specifications, see section 7.5, “Using the NULL Function” in the IM755501-01E User’s Manual.

Starting/Stopping data collection

Clicking the [Start] button starts the data collection operation and displays the results on the Main panel. Clicking the icon by the [Start] button opens the waveform viewer. Clicking the same icon again closes the waveform viewer. The operation indicator on the [Start] button turns green while data collection is in progress.

If the [Repeat] box is checked, data are acquired and displayed repetitively until the [Start] button is clicked again to stop the acquisition operation.
If the check is removed from the [Repeat] box, measured data are acquired once and displayed every time the [Start] button is clicked.

Note

If the load on the PC side becomes high, it will not be able to collect data from the 7555 at constant intervals. In this case the waveform that is displayed on the waveform viewer may not appear continuous.

Display hold

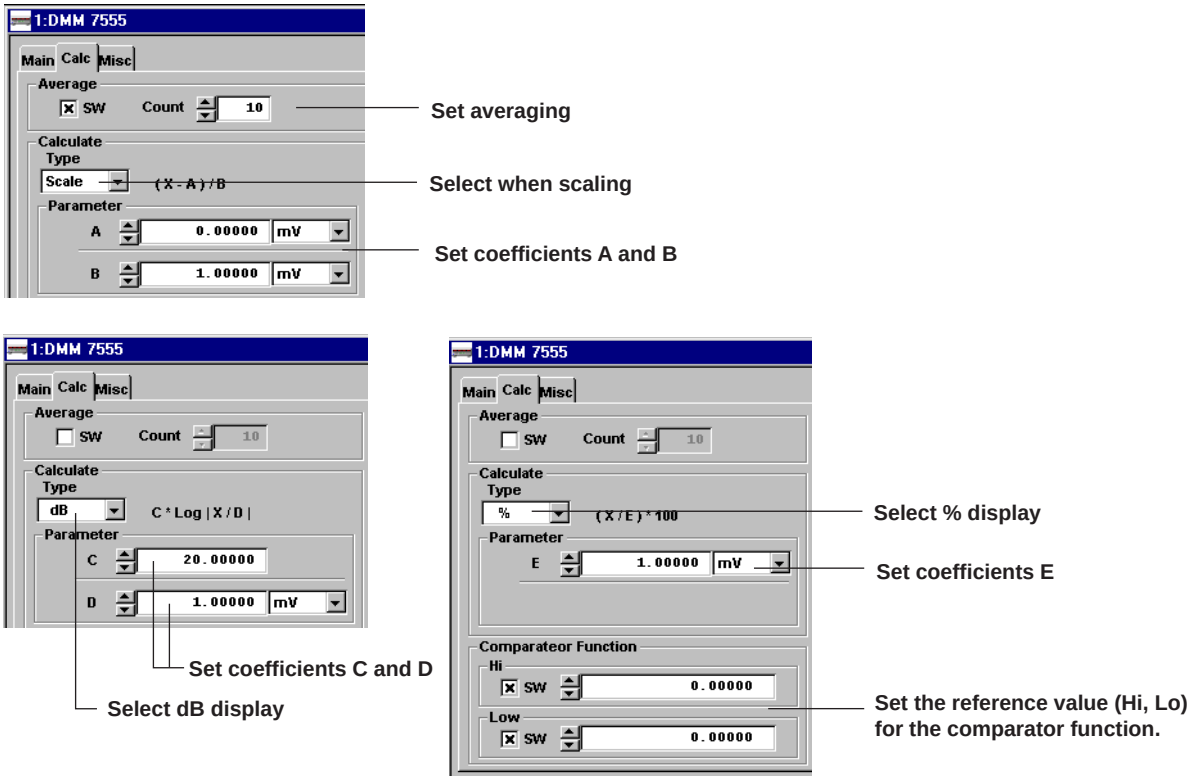
Clicking the display hold button will hold the measurement value display. Clicking it again releases the hold.

Storing the measured/computed data

Clicking the [Exec] button changes the button into [Abort] and starts storing data to the internal memory.
After storing 2000 data points, data are overwritten in order from the oldest data point. One SHOT store is not supported.
Clicking the [Abort] button terminates the store operation.
For details related to the functions and specifications, see section 6.3, “Storing/Recalling the Measured/Computed Data” in the IM755501-01E User’s Manual.

Calc Panel

This section describes the Calc panel that is displayed when the Calc tab is clicked.



Setting the Averaging Function

Averaging is performed by checking the [SW] box of the [Average] box. If you check the [SW] box, use the [Count] list box to set the average counts.
For details related to the functions and specifications, see section 5.2, “Carrying Out Averaging” in the IM755501-01E User’s Manual.

Setting Computations

- **Scaling**

  Select [Scale] in the [Type] list box. Entry boxes appear that are used to specify coefficients A and B. Set the desired values in the entry boxes.
  For details related to the functions and specifications, see section 5.3, “Carrying Out Scaling” in the IM755501-01E User’s Manual.

- **dB display**

  Select [dB] in the [Type] list box. Entry boxes appear that are used to specify coefficients C and D. Set the desired values in the entry boxes.
  For details related to the functions and specifications, see section 5.4, “Displaying the Measured Data in dB” in the IM755501-01E User’s Manual.

- **% display**

  Select [%] in the [Type] list box. An Entry box appears that is used to specify coefficient E. Set the desired value in the entry box.
  For details related to the functions and specifications, see section 5.5, “Displaying the Measured Data in Percentage” in the IM755501-01E User’s Manual.

  Note

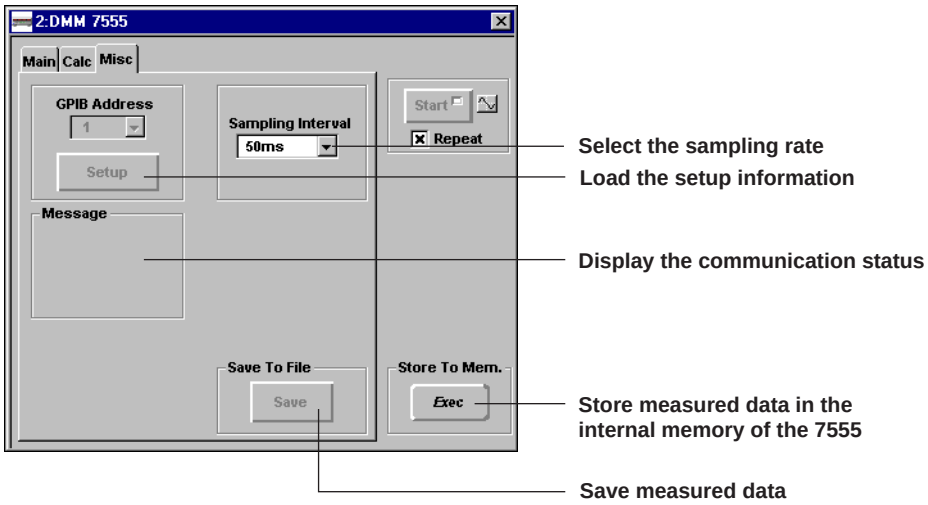
  If you select [Normal] in the [Type] list box, scaling will not be performed.

- **Set the reference value for the comparator function.**

  The comparator function is enabled by checking the [SW] box under [HI] and [LO] in the [Comparator Function] frame.
  If you check the [SW] box, enter the reference values in the [HI] and [LO] list boxes. In this case, the comparator result is displayed in the [Status] box of the Main operation panel.
  For details related to the functions and specifications, see section 7.2, “Using the Comparator Function” in the IM755501-01E User’s Manual.

Misc Panel

This section describes the Misc panel that is displayed when the Misc tab is clicked.



Loading setup information

Select the GP-IB address of the 7555 with which you wish to communicate in the [GP-IB Address] list box. Click the [Setup] button to load the 7555's current setup information. The settings are reflected in the Main, Calc, and Misc panels. When changing the setup data that are loaded, select [File] > [Unload] to abort all operation and terminate the GP-IB window. Then, reload the new setup data.

Selecting the sampling interval

Select the sampling interval in the [Sampling Interval] list box. The following sampling intervals are available.

8/20 ms: FAST
50 ms: MID1
250 ms: MID2
500 ms: SLOW

For details related to the functions and specifications, see section 6.1, "Changing the Sampling Rate" in the IM755501-01E User's Manual.

Storing measured data

Clicking the [Exec] button changes the button into [Abort] and data begins to be stored to the 7555's internal memory. Clicking the [Abort] button terminates the store operation. For details related to the items that are stored and specifications, see section 6.3, "Storing/Recalling the Measured/Computed Data" in the 7555 IM755501-01E User's Manual.

Saving measured data (Save to a specified file)

Clicking the [Save] button displays a [Save As] dialog box.
Enter the destination file name and click [Save]. Data in the 7555's internal memory are saved to the specified file. The data format of the saved file is binary (YOKOGAWA proprietary format with file extension wvf).

Precautions to be taken when using the operation panel

- If the sampling interval is set to 8/20 ms or 50 ms, data collection cannot be started. However, the store function can be used to store data in the internal memory of the 7555.
- Up to 2000 data points can be stored in the internal memory. However, only up to 1400 data points can be saved to a file.
- Up to 14 GP-IB devices can be connected. However, only one 7555 can be operated at any given time.
- A 7555 control software file with limited functions is also available. For details, see the [ReadmeDMM7555.txt] file in the folder to which the 7555 Control Software [DMM7555.gpl] was installed.