

# Interface Introduction for PeakTech4055MV/4060 Function Generator

With the advantages of high transfer speed, simple interface, instant use and high reliability, Universal Serial-interface Bus, which is named as USB for short, is widely used in data transfer.

The PeakTech4055MV/4060 Function Generators configure USB interface. PC is able to send commands through USB interface to realize remote control along with the pre-written applications generally written with SCPI commands.

## 1. Interface connection

**1.1 Connect USB Interface:** Use the provided USB cable (Type A-B), plug one end into the USB socket of computer and the other end into the USB device socket on the rear panel of the generator.

**1.2 Install driver:** Turn on the generator. The computer will prompt “Found new hardware” . Install the USB driver according to the prompt of “Found New Hardware wizard” one by one and set the search path as the folder “CH372DRV” to complete the installation of USB driver which applies to instrument. The driver just needs to be installed once and it will be used normally after that.

**1.3 Software Installation:** Install the editing software by the driver “Setup.exe” in folder of CD. After installation, set the application program “Remote.exe” to desk as short cut for convenience use.

## 2. Remote control demonstration

### 2.1 Enter into remote control

**2.1 Enter program:** Turn on the instrument. After initialization, press the shortcut key “Remote.exe” to open the operating interface. Press buttons, there are relevant codes written and sent to window. Click **【Send】** to send command, the sending window is cleared and instrument enters into the programmable state, the sign “Remote” is shown at the down-right corner of screen, keypad is closed except of **【Local】** key. Press

**【Local】** then the instrument exit program and return “local” state. Keypad resumes its function.

Please note that, user should turn on the instruments first and only can click the shortcut key of “Remote.exe” after its initialization, then demo interface appears. Make sure to turn off the demo interface if the instruments be powered off. If not, the instruments will not enter into the program state when power on the instruments again.

**2.2 Command receiving:** After receiving a command string, the instrument will begin to check and will alarm once find mistake and refuse to execute. If no mistake, the instrument will carry on the programmable commands one by one until meet the end character. The buttons in the demo interface include all the key command words, click with mouse, a piece of command string can be formed in the sending window, which will be more convenient than entering by keypad. Make sure that the commands will comply with the command rules formulated in the “Programmer’s Guide”, otherwise the mistake will caused.

**2.3 Command response:** For the general programmable commands, the instrument will not return any information no matter the commands are executed or not. Only meet the enquiry commands with ‘?’ the instrument can return the response information to the computer. The instrument will come back into the receiving state again after transmission, and wait for another command string.

**2.4 Exit program:** Click**【Local】**, computer send the “Local” command. The instrument exit program and return “Local” state. The sign “Remote” in the down-right corner of screen disappears. Keypad resumes its function. If user sends the programmable command again, the instrument will return to the programmable state.

Close the interface and turn off the power switch, and then you can remove the USB cable.

### **3. Application**

The software in CD is just a simple USB demo program. The PC can programmable control the instrument through USB interface. Instrument is able to make the right

response for each command within practical command set. Command response and working parameters loaded from instrument to computer are able to be shown in demo interface exactly. If users need to set the auto measuring system by PC for more complicated work, you can program the application by yourself. This demonstration is programmed by Visual Basic application software, and the application can be programmed with the following data format. If user wants to program the application by himself, you can make reference to the following data.

**3.1 Download data format:** Computer send a programmable command string. The first byte is data length (including end character), then programmable command ASCII code string, last for end character (ASCII code value 10). Instrument receives the specified amount characters along with data length, nothing with end character, but end character must be needed. Because a string may conclude several commands, after receiving command character string, the instrument will check the correctness of the string, and instrument will execute continuously until meeting with end character, even when instrument executes next commands. If miss the end character, instrument may be out of work.

**3.2 Upload data format:** If meeting the query command with “?” in the executing process, the instrument firstly send the query-responding character string to computer, The first byte of send character string is length of data block, then send all characters of query-responding information and end-characters is not needed. After sending the query command with “?”, the computer must wait to receive the responding information of instrument, only after receiving the upload data, the computer can send the next programmable character string.