



LCD MONITOR Management Tool

# Display Management Tool

Version 1.16

## OPERATION MANUAL

Supported Models (as of November 2015)

[Part of the functions of this software may not be available depending on the model.]

### LCD MONITOR

PN-T321/PN-T322B/PN-325/PN-425/PN-E421/PN-465E/PN-465U/PN-E471/PN-E471R/PN-E521/  
PN-525E/PN-525U/PN-S525/PN-V550/PN-V551/PN-60TA3/PN-60TB3/PN-60TW3/PN-A601/PN-C603D/  
PN-E601/PN-E602/PN-E603/PN-L601B/PN-L602B/PN-L603A/PN-L603B/PN-L603W/PN-R603/PN-V600/  
PN-V600A/PN-V601/PN-V601A/PN-V602/PN-G655E/PN-G655U/PN-G655RE/PN-G655RU/PN-S655/  
PN-70SC3/PN-70TA3/PN-70TB3/PN-70TW3/PN-C703B/PN-E702/PN-E703/PN-L702B/PN-L703A/  
PN-L703B/PN-L703W/PN-R703/PN-80TC3/PN-E802/PN-E803/PN-L802B/PN-L803C/PN-R903/LB-1085/  
PN-H series (PN-H701/PN-H801)/PN-K series (PN-K321/PN-K321H/PN-K322B/PN-K322BH)/  
PN-U series (PN-U423/PN-U473/PN-U553)/PN-Y series (PN-Y325/PN-Y425/PN-Y475/PN-Y555)

(Available models differ according to region.)

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# Introduction

This software supports the management and use of SHARP LCD MONITORS.

- You can turn on/off the LCD MONITOR, switch inputs, and set the schedule.
- You can control two or more LCD MONITORS simultaneously.
- You can set user levels to restrict operations.
- You can monitor the LCD MONITOR for errors.

## IMPORTANT INFORMATION

- Please understand that SHARP CORPORATION bears no responsibility for errors made during use by the customer or a third party, nor for any other malfunctions or damage to this product arising during use, except where indemnity liability is recognized under law.
- Transcribing or duplicating part or all of this manual and/or this software without permission from our company is not permitted.
- As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice.

## Trademarks

- Microsoft, Windows and Windows Live are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Names of products and other proper nouns are the registered trademarks or trademarks of their respective copyright holders.

## How to read this manual

- **Menus, windows, dialog boxes, buttons, tabs, etc. are indicated with square brackets.**  
E.g.  
**1. Click [New...].**  
The [Enter new schedule name.] dialog box is displayed.
- **Options, check boxes, radio buttons, etc. are indicated with quotation marks.**  
E.g. "Error Detection" check box
- **The description in this manual assumes that this software has been installed in the default folder shown below.**  
If you changed the folder, use that folder instead of the default folder.  
C:\Program Files\SHARP\Display Management Tool
- **The screens and operation procedures are typical examples.**  
The contents or details may vary depending on the model of your LCD MONITOR, screen configuration, and OS version, etc. Examples in this manual are based in Windows 7.
- **This manual does not contain basic operating instructions for Windows.**

# Preparation

## Operating environment

Item		Description
Personal computer (PC)	OS	Microsoft Windows 7 / 8 / 8.1 / 10 (English version)
	Hard disk	40 MB or more free space (Additional space required for saving data.)
	Interface	LAN port (TCP/IP communication must be functional.) or RS-232C serial port
Display		Full-color display with resolution of 1024 x 768 or better

## Connection

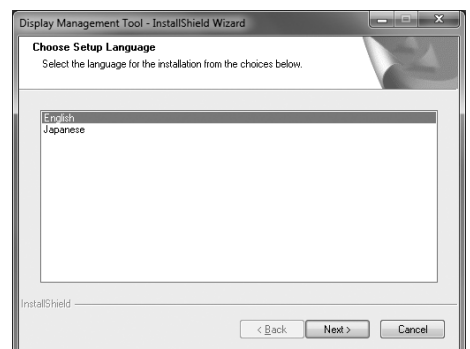
Connect the LCD MONITOR to a PC with the RS-232 cable.  
Or, connect the LCD MONITOR to a network with a LAN cable.  
It is also possible to control an LCD MONITOR daisy-chain.  
For connection details, refer to the operation manual of your LCD MONITOR.  
Up to 25 monitors can be daisy-chain connected with RS-232 cables.  
Up to 100 monitors can be connected with RS-232 cables and LAN cables.

### ! Caution


- Different communication method that can be used depending on the model.  
For communication method that can be used, refer to the operation manual of your LCD MONITOR.
- During LCD MONITOR start-up, you can not control the monitor from this software. Please operate this software after the LCD MONITOR start-up is finished.
- Do not set POWER ON DELAY on the LCD MONITOR. When ON the POWER ON DELAY, this software may not work correctly.
- See page 16 for notes of each model.

## Installing the software

- Administrator authority is required to conduct the following operation.
- You may need to restart your PC, after installing this software.
  1. **Start your PC.**
  2. **Close down all applications.**
  3. **Start the setup program (IDPManageToolSetup.exe).**
    - Double-click IDPManageToolSetup.exe and the setup program will start.
    - When a security warning saying 'The publisher could not be verified.' is displayed during installation, click [Yes].
  4. **Follow the instructions displayed on the screen to complete the operation.**

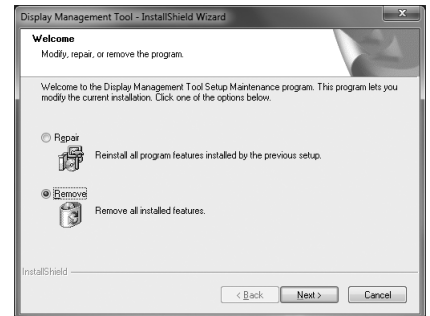


When the installation is complete, a shortcut icon of Display Management Tool () has been created on the desktop.

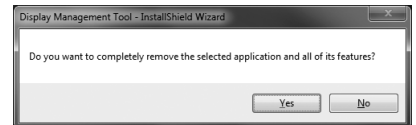
The Display Management Tool Server starts and its icon () is displayed in the task tray.

## ●Uninstalling the software

1. **Start your PC.**
2. **Close down all applications.**
3. **Start the setup program (IDPManageToolSetup.exe).**
  - Double-click IDPManageToolSetup.exe and the setup program will start.
  - When a security warning saying 'The publisher could not be verified.' is displayed during installation, click [Yes].
4. **Select the “Remove” radio button and click [Next >].**

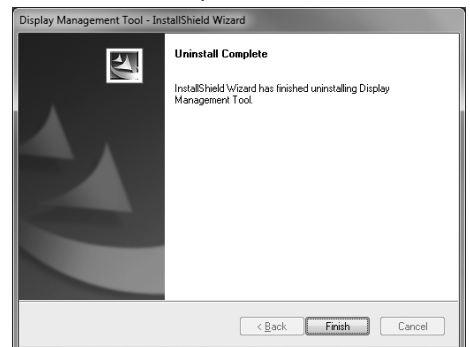


5. **Click [Yes].**  
The uninstallation will start.



If the Display Management Tool Server is running, a message will appear. In this case, click [Yes] to terminate Display Management Tool Server and continue the uninstallation process.

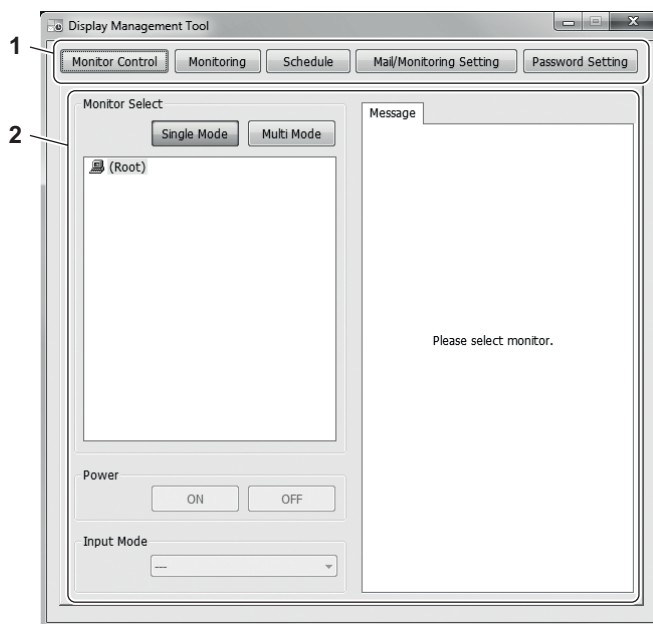
6. **Click [Finish].**  
The uninstallation has finished.



## Starting and exiting the software

### •Starting the software

1. Double-click the shortcut icon of Display Management Tool (  ) on the desktop.



1)

Monitor Control	Used to register/edit the individual LCD MONITOR or a group.	Page 6
Monitoring	Used to check the status of each LCD MONITOR.	Page 11
Schedule	Used to set the schedule function to control Power or Input Mode of the LCD MONITOR.	Page 10
Mail/Monitoring Setting	Used to set the tool configuration.	Page 12
Password Setting	Used to set the password and operating authority.	Page 14

2)

Used to turn the power of an LCD MONITOR on and off, and change the input.  
The items that appear vary depending on the LCD MONITOR.

#### ! Caution

- Do not operate the LCD MONITOR directly, when using this software.

#### TIPS

- To control your LCD MONITOR, you need to select [Monitor Control] and register the LCD MONITOR to be controlled.

### •Exiting the software

1. Click the  of the Display Management Tool.

## Registering an LCD MONITOR to be controlled (Monitor Control)

To control your LCD MONITOR, you need to select [Monitor Control] and register (add) the LCD MONITOR to be controlled.

### •Adding/editing an LCD MONITOR

**1. Click [Monitor Control].**

The [Monitor Control] dialog box is displayed.

**2. To add a new LCD MONITOR to be controlled:**

**Click [Add Monitor].**

**To change the existing setting:**

**From the list, select the LCD MONITOR to change.**

**3. Set each item.**

Item to be set differ depending on the model.

**1) Monitor Name (mandatory)**

Assign a name to identify the monitor.  
(Up to 256 characters)

**2) Interface**

Select the connection method (RS-232C or LAN).

When RS-232C is selected:

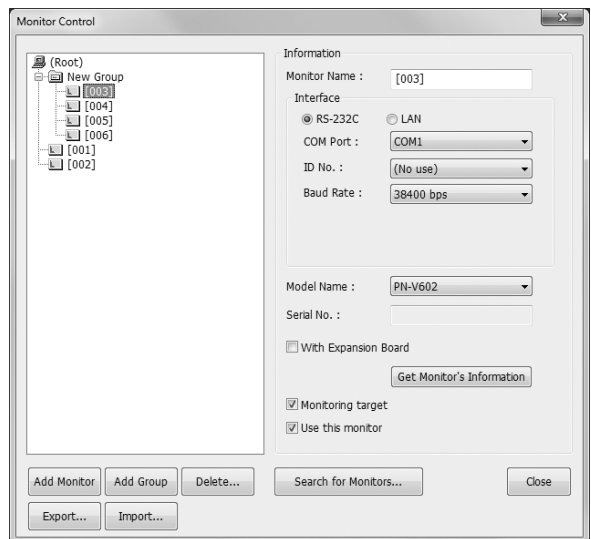
Specify "COM Port", "ID No.", and "Baud Rate".

When LAN is selected:

Specify "IP Address", "ID No.", and "Data Port".

When a user name and a password

are required to access the LCD MONITOR, click [Register Password...] and specify "User name" and "Password".



RS-232C	COM Port	Select the port to which the LCD MONITOR is connected.
	ID No.	Select the ID number specified in the LCD MONITOR.
	Baud Rate	Select the communication speed set in the LCD MONITOR. On models with no communication speed setting, select "9600 bps".
LAN	IP Address	Enter the IP address of the LCD MONITOR.
	ID No.	Select the ID number specified in the LCD MONITOR.
	Data Port	Specify the TCP port number used for data communication.
	MAC Address	Click [Get Monitor's Information], and the MAC address of the LCD MONITOR is displayed.

3) Model Name/Serial No.

Select the model name.

By clicking [Get Monitor's Information] while the LCD MONITOR is connected, you can acquire the model name and serial number.

For some models, a checkbox may appear. Select as appropriate for your LCD MONITOR.

4) Monitoring target

Uncheck this box when you are not monitoring the LCD MONITOR.

5) Use this monitor

Uncheck this box when you do not use the LCD MONITOR.

**4. Click [Close].**

## ●Adding/editing a group

**1. Click [Monitor Control].**

The [Monitor Control] dialog box is displayed.

**2. To add a group:**

Click [Add Group].

To edit a group:

From the list, select a group to edit.

**3. Enter "Group Name".**

(Up to 256 characters)

**4. Click [Close].**

## ●Deleting the LCD MONITOR/group

**! Caution**

When you delete a group, all LCD MONITORs that belong to the group are deleted.

**1. Click [Monitor Control].**

The [Monitor Control] dialog box is displayed.

**2. From the list, select the LCD MONITOR or group to be deleted.**

**3. Click [Delete...].**

A confirmation message is displayed.

**4. Click [OK].**

**5. Click [Close].**

## ●Adding the LCD MONITOR automatically

The software automatically acquires the information and adds the monitor.

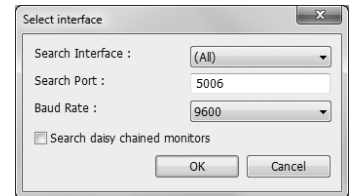
**1. Click [Monitor Control].**

The [Monitor Control] dialog box is displayed.

**2. Click [Search for Monitors...].**

**3. Specify the interface used for the search for the LCD MONITOR.**

- When "(All)" is selected, the software searches for all LCD MONITORS connected to COM ports or via LAN.
- When "(All)" or "LAN" are selected, set the port number to search at "Search Port".
- In "Baud Rate", specify the communication speed that is set in the LCD MONITOR. On models with no communication speed setting, specify "9600 bps".
- If you want to obtain the information about daisy-chained LCD MONITORS, check the "Search daisy chained monitors" check box.



**4. Click [OK].**

**5. Click [OK].**

**6. Click [OK].**

**7. Click [Close].**

### TIPS

- PN-H series / PN-Y series that is connected to the LAN can not be added automatically. Please add manually.
- An LCD MONITOR that has been turned off may not be added.
- If you could not obtain information about daisy-chained LCD MONITORS, click [Search for Monitors...] again.
- If LAN settings are changed in the LCD MONITOR, turn the main power of the LCD MONITOR off and then on.
- If LCD MONITORS with different conditions such as daisy-chain capability or baud rate are mixed together, add the LCD MONITOR manually.
- When the user name and password have been set in SECURITY settings of LCD MONITOR, the [Register Monitor's Password] dialog box is displayed. Enter the user name and password.

## ●Import/Export

Export: Output the information of registered LCD MONITOR to the file.

Import: Import the exported information of the LCD MONITOR.

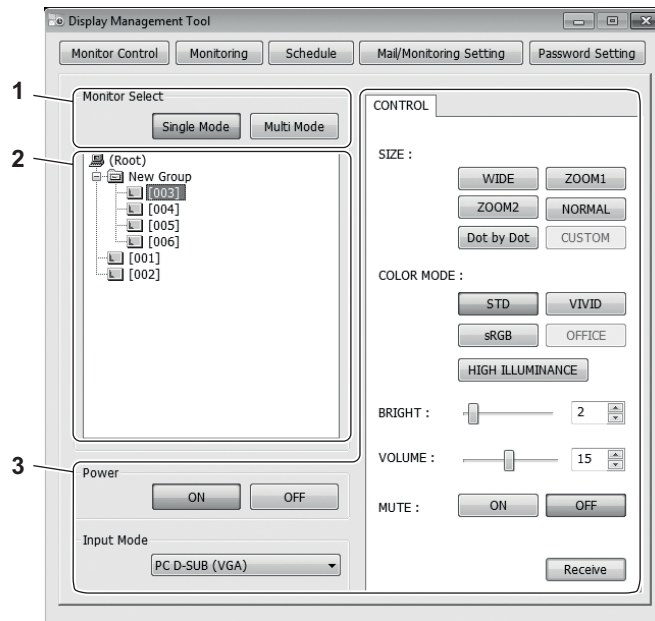
### TIPS

- The monitor name will change when the information is imported.
- The Multi Group and Enlarge Group information that was set with the Display Installation Tool will not be imported.



# Control

## Power ON/OFF, Change Input, Remote operation



### 1. Select the option according to the number of LCD MONITORS to be controlled.

- To control one monitor, click [Single Mode].
- To control two or more monitors simultaneously, click [Multi Mode].  
(If you select a different model, operation will be limited.)

### 2. Select the LCD MONITOR(s) to be controlled.

- When [Single Mode] is selected, click the monitor icon (E.g. [001] ).
- When [Multi Mode] is selected, check the boxes next to the monitors or groups (E.g. [001] ).  
Uncheck the uncontrolled monitor.

### 3. Perform setup.

- You can control Power or Input Mode of the LCD MONITOR and change the settings. For setting details, refer to the operation manual of your LCD MONITOR.
- When [Single Mode] is selected, the software communicates with the LCD MONITOR and changes the monitor settings every time you change a setting here.
- When [Multi Mode] is selected, you need to click [Send] after you change the settings. After clicking, the software communicates with the LCD MONITORS and changes the monitor settings.

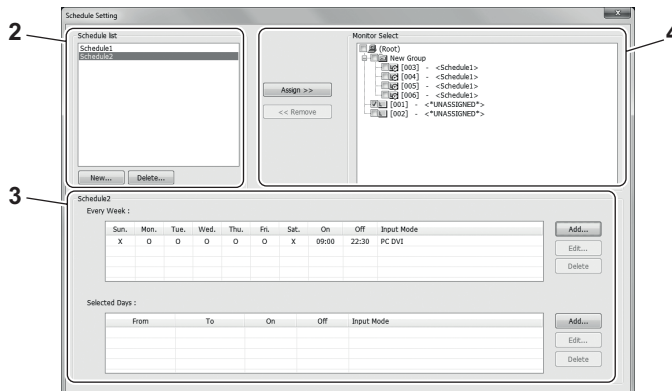
[Receive]

Click this button to read the settings of the selected LCD MONITOR shown on the screen and replace the settings in this software with the read settings.

#### TIPS

Some options may not be set depending on the Input Mode.

## Schedule



1. Click [Schedule] in the Display Management Tool window.

2. Create a schedule.

1) Click [New...].

- The [Enter new schedule name] dialog box is displayed.

2) Enter the name of the schedule and click [OK].

- A new schedule is created and added to the schedule list.

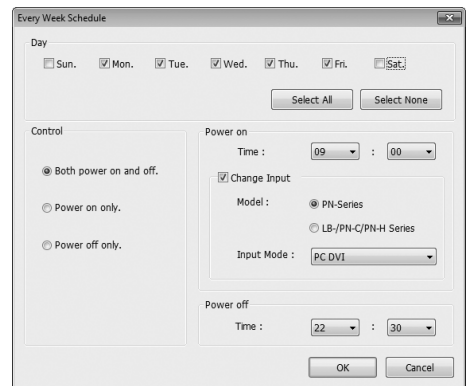
3. Set the details of the schedule.

1) Click the schedule to set details from the schedule list.

2) Click [Add...] of either "Every Week:" or "Selected Days:".

The [Every Week Schedule] or [Selected Days Schedule] dialog box is displayed.

3) Set the options and click [OK].



4. In the Monitor Select list, check the box next to the LCD MONITOR that the schedule is to be assigned (E.g. ☐ [001]) and then click [Assign >>].

The schedule is assigned to the LCD MONITOR that are checked.

- To cancel the assignment, click [<< Remove].

5. When you have finished assigning the schedule, click .

### ! Caution

- Do not turn off the PC after you set the schedule.  
If the PC is turned off at the scheduled time, the scheduled operation cannot be performed.
- If the settings of Every Week Schedule and Selected Days Schedule overlap, priority is given to the Selected Days Schedule. The Every Week Schedule is not performed.

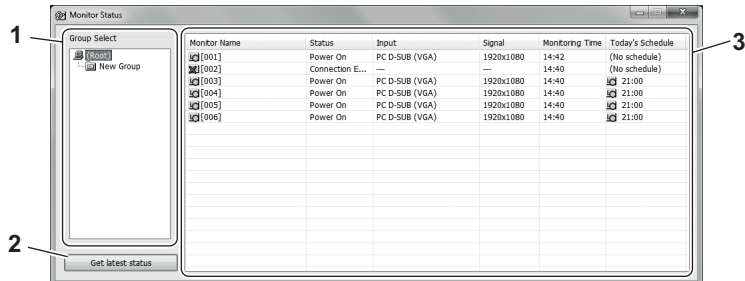
### TIPS

- This schedule setting is different from the schedule function of the LCD MONITOR.
- Click the name of a schedule and then click [Delete], and the schedule is deleted.

## Monitoring

The Monitoring function allows you to check the status of the LCD MONITOR and the schedule setting.

### 1. Click [Monitoring] in the Display Management Tool window.



#### 1) Group Select

The list of the registered groups are displayed.

When “(Root)” or a group is clicked, the LCD Monitors of the selected group are displayed in 3.

#### 2) Get latest status

When this button is clicked, the software communicates with the LCD MONITORs and displays their current statuses in 3.

#### 3) Status display

The statuses of the LCD MONITORs selected in 1 are displayed.

- : The monitor is turned on.
- : The monitor is waiting for input signal.
- : The monitor is turned off.
- : A hardware error has been detected.
- : A communication error has occurred. (Timeout, ERR response)
- : No statuses of the monitors have been received since startup.

You can right-click the status icon above and select operation from the displayed menu, such as turning the power on/off or selecting inputs.

### 2. To close the window, click .

## •Task tray icons

The Display Management Tool Server icon displayed in the task tray indicates the current monitoring setting and schedule as follows.

- : Monitoring is not set. Power control is scheduled later today.
- : Monitoring is set. Power control is scheduled later today.
- : Monitoring is set. Power control is not scheduled later today.
- : Monitoring is not set. Power control is not scheduled later today.

Part of the icon flashes while the communication is active.

## Mail/Monitoring Setting

In Mail/Monitoring Setting, set an error detection function. You can also set the function to receive mail notices about the status of the LCD MONITOR. (Note that the supported e-mail software is Windows Live Mail only.)

### TIPS

- Windows Live Mail is included in Windows Essentials. (as of November 2015)
- The name / operation of the e-mail software may be changed. Please read also the help of e-mail software.

#### 1. Click [Mail/Monitoring Setting] in the Display Management Tool window.

#### 2. When you want to receive mail notices about the status of the LCD MONITOR, you need to set the mail options.

##### 1) Click [Add...].

The [Mail Destination] dialog box will be displayed.

##### 2) Enter the mail address.

##### 3) To receive periodic mails, check the “Send Periodical Mail” check box.

##### 4) To receive error mails, check the “Send Error Mail” check box.

##### 5) Click [OK].

Mail Address	Periodical	Error
xxxxx@sharp.co.jp	O	O

#### 3. When you checked “Send Periodical Mail” in the [Mail Destination] dialog box, you need to set the periodic mail options.

##### 1) Click the [Periodical Mail] tab.

##### 2) Click [Add...].

##### 3) Specify the options and click [OK].

- You can edit the mail sending time specified by clicking the time and then clicking [Edit...].
- You can delete the mail sending time specified by clicking the time and then clicking [Delete].

Time	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
20:00	X	O	O	O	O	X	O

#### 4. To use the Monitoring function, set the Monitoring options.

##### 1) Click the [Monitoring] tab.

##### 2) Specify the options.

##### 5. Click [OK].

Periodical monitoring

☒ Enable periodical monitoring


Monitoring Interval : 1 (Hour)

When detect errors while periodical monitoring or scheduling

☐ Show Message Box

**6. To use mail communication, configure e-mail software settings (Windows Live Mail).**

- Download and install Windows Live Mail, and then set it as the default e-mail program.
- Set the specified account and save the password.
- Once you have configured an e-mail software to send and receive mail using your existing mail account, you will need to adjust a security setting in the e-mail software to allow automated sending of mails.

Click [File] menu or [Windows Live Mail] button (). Select [Options] - [Safety options...] - [Security] tab and uncheck the "Warn me when other applications try to send mail as me." check box.

**TIPS**

- This setting is different from the mail function of the LCD MONITOR.  
Mail is sent from the PC where this software is installed.  
(Windows Live Mail installed in the PC is used.)
- To check the software version, click the [Version] tab.

# Appendix

## Password Setting

You can set passwords to restrict operations for each user level.  
This prevents settings from being changed accidentally.

### ! Caution

- Be careful not to forget the specified password.

1. Click [Password Setting] in the Display Management Tool window.
2. Specify passwords for each user (“Administrator”, “Normal Operator”, and “Restricted Operator”).
  - 1) Click [Set Password...].

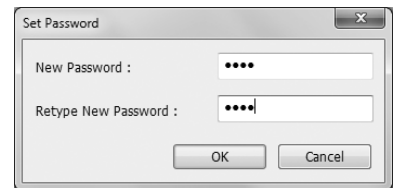
The [Set Password] dialog box is displayed.



- 2) Enter a password in the “New Password” field, and enter the same password in the “Retype New Password” field.

- 3) Click [OK].

The password is set.



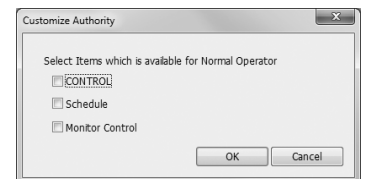
- 4) Click [Close].

3. Click the  to exit this software.


From the next startup, you need to select a user and enter its password. (See Page 15.)

### TIPS

- You can change the operation restrictions for the Normal Operator.
  - 1) In the [Password Setting] dialog box, click [Customize Authority...] in the “Normal Operator” section.
  - 2) Check the item for which the operation is allowed to the operator.
  - 3) Click [OK].
- The “Restricted Operator” is allowed to turn on/off the monitor only. However, if the “Can select Input Mode” is checked in the [Password Setting] dialog box, the restricted operator can also operate the input mode.
- When [Clear Passwords...] is clicked in the [Password Setting] dialog box, the passwords of all users are cleared.

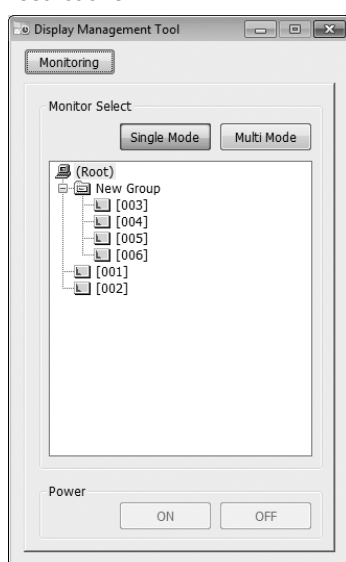
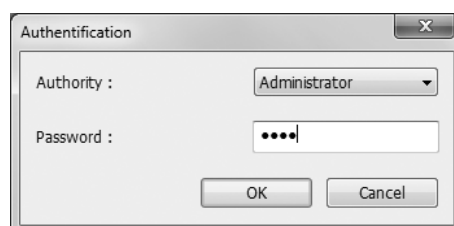


## ●Start the software set with a password

1. Double-click the shortcut icon of Display Management Tool (  ) on the desktop.
2. Authenticate the user.
  - 1) Select "Authority".
  - 2) Enter the password.
  - 3) Click [OK].

The software starts.

The software may be shown in the small window shown below depending on the specified operation restrictions.



## Notes of each model

PN-E421/PN-E471/PN-E471R/PN-E521/ PN-60TA3/PN-60TB3/PN-60TW3/ PN-A601/PN-E601/PN-E602/PN-L601B/ PN-L602B/PN-L603A/PN-L603B/ PN-L603W/PN-R603/PN-V600/PN-V600A/ PN-V601/PN-V601A/PN-V602/PN-70TA3/ PN-70TB3/PN-70TW3/PN-E702/ PN-L702B/PN-L703A/PN-L703B/ PN-L703W/PN-R703/PN-80TC3/PN-E802/ PN-L802B/PN-L803C/PN-R903/ PN-H series/PN-Y series	<ul style="list-style-type: none"> <li>When LCD MONITORs are connected in a RS-232C daisy-chain connection, or are connected by LAN, set "STANDBY MODE" to "STANDARD" ( or "POWER SAVE MODE" to "OFF" ) . When the setting is different, this software may not work correctly.</li> </ul>
PN-V550/PN-V551/PN-E603/PN-E703/ PN-E803	<ul style="list-style-type: none"> <li>When LCD MONITORs are connected in a RS-232C daisy-chain connection, or are connected by LAN, set "STANDBY MODE" to "STANDARD". When the setting is different, this software may not work correctly.</li> <li>When LCD MONITOR enters input signal waiting mode, this software may not work correctly. Enter the video signal to the LCD MONITOR, or set to "OFF" the "POWER MANAGEMENT" in the LCD MONITOR.</li> </ul>
PN-C603D/PN-C703B	<ul style="list-style-type: none"> <li>Set "STANDBY MODE" on the LCD MONITOR to "LOW POWER".</li> <li>If the video signal is not input to the LCD MONITOR, this software may not work correctly. Enter the video signal to the LCD MONITOR.</li> </ul>
PN-70SC3	<ul style="list-style-type: none"> <li>Set "QUICK START" on the LCD MONITOR to "OFF".</li> <li>If the video signal is not input to the LCD MONITOR, this software may not work correctly. Enter the video signal to the LCD MONITOR.</li> </ul>
PN-K series/PN-U series	<ul style="list-style-type: none"> <li>When LCD MONITOR enters input signal waiting mode, this software may not work correctly. Enter the video signal to the LCD MONITOR, or set to "OFF" the "POWER MANAGEMENT" in the LCD MONITOR.</li> </ul>



