

COGNEX

VisionView[®] Application Note

Mitsubishi Touch Screen Panels

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Introduction

This application note describes the necessary steps to connect a VisionView VGA adapter to a Mitsubishi GT15 or GT16 series touch screen.

VisionView Support

Cognex online support is available to assist you in using the VisionView application software. For online support, documentation, and downloads, visit:

<http://www.cognex.com/Support/VisionView>.

Installation and Configuration

Install the Hardware

1. Connect the Mitsubishi touch screen to the VisionView VGA. For complete installation information, refer to the *VisionView® VGA Quick Start Guide* that is shipped with the VisionView VGA hardware.

Note:



- The Touch Screen cable is sold separately, as an optional accessory for the VisionView VGA.
- To enable touch screen operation, you will need to connect a USB mouse to the VisionView VGA's USB port.

2. Attach the optional Video/RGB Input Unit to the Mitsubishi GOT for video input. The RS-232 connection to the terminal allows data points from the touch screen to be sent to and from the VisionView VGA. Refer to the table below to determine the card that is appropriate for the touch screen model. For complete installation information, refer to the applicable Mitsubishi Video/RGB input unit documentation.

Table 2-1: Video/RGB Input Units

Touch Screen Model	Video/RGB Input Unit Model	Description
GT15 Series	GT15V-75V4R1	Video/RGB input unit
	GT15V-75R1	RGB input unit
GT16 Series	GT16M-V4R1	Video/RGB input unit
	GT16M-R2	RGB input unit

Configure GT Designer

1. Launch the Mitsubishi GT Designer software.
2. Create a new project.

Controller Setting

- 1. From the Common menu, click *Controller Setting...*
- 2. The Controller Setting dialog appears. Select the manufacturer, controller type, GOT interface and communication driver for the controller to be connected.

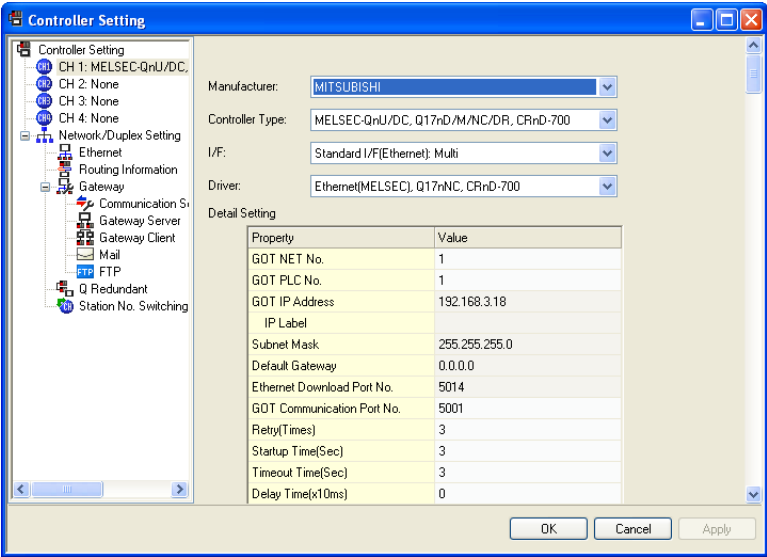


Figure 2-1: Controller Setting Dialog

- 3. Set the Ethernet address for the connection to the correct Ethernet adapter for your system. This example shows the connection to the built-in Ethernet port on the QnUDE PLC.
- 4. Click the **OK** button.

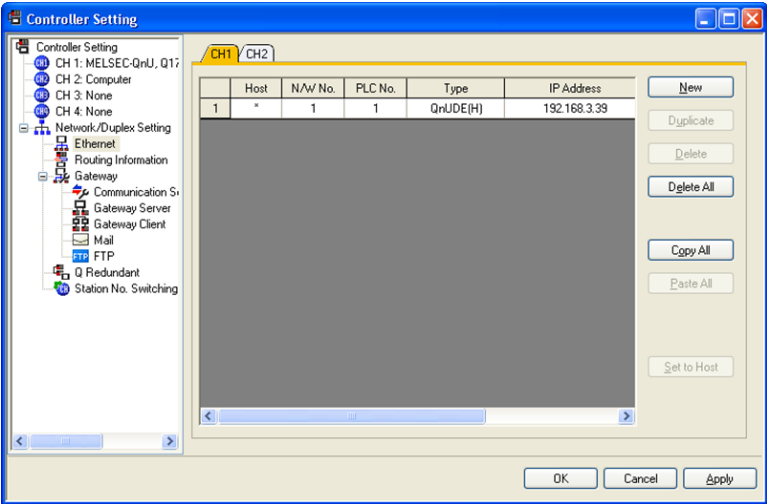


Figure 2-2: Controller Setting Dialog: Ethernet

PC Remote Operation

1. From the Common menu, click *Peripheral Setting > PC Remote Operation*.
2. The PC Remote Operation dialog appears. Select **Standard I/F(RS232)** from the Destination I/F drop-down list.
3. Check the **Use PC Remote Operation (Ethernet)** checkbox.
4. Click the **OK** button.

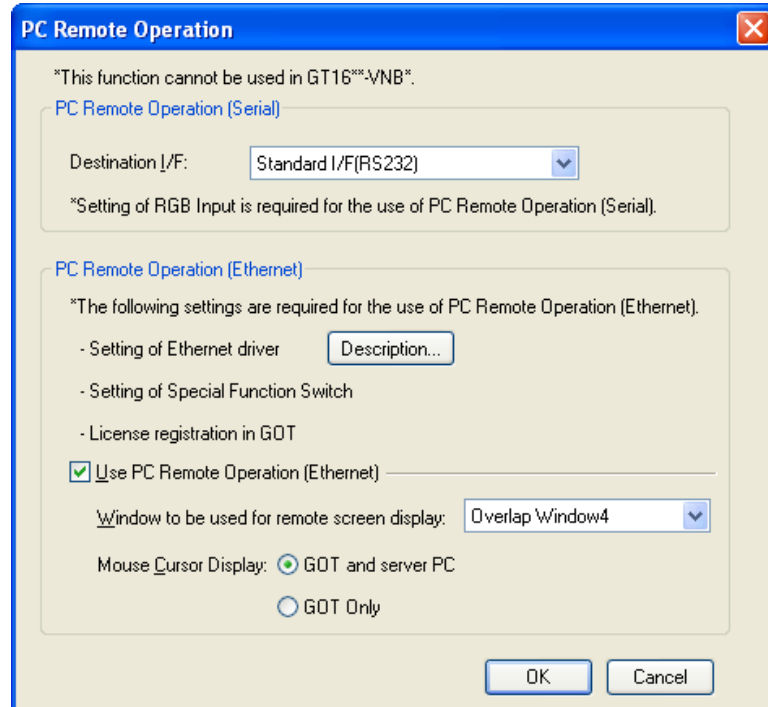


Figure 2-3: PC Remote Operation Dialog

Video/RGB Input

- 1. From the Common menu, click *Peripheral Setting > Video/RGB Input*.
- 2. The Video/RGB Input dialog appears. Configure a bit to enable the display from the VisionView VGA to appear on the terminal. This can be a bit from the PLC that turns on when required, or it can be a bit from the GOT, as shown below.
- 3. Click the **OK** button.

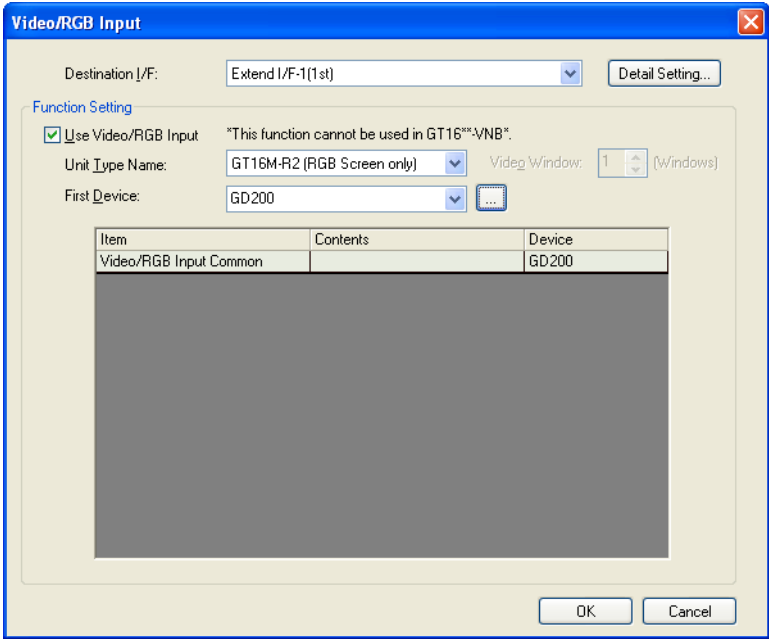


Figure 2-4: Video/RGB Dialog

I/F Communication Setting

1. From the Common menu, click *I/F Communication Setting*.
2. The I/F Communication Setting dialog appears. For the Standard I/F Setting, specify the following for the RS232 connection:
 - **CH No.:** 8
 - **Driver:** PC Remote Operation (Serial)
3. Click the **OK** button.

I/F Communication Setting

Standard I/F Setting

	CH No.	Driver	
I/F-1: RS232	8	PC Remote Operation (Serial)	Detail Setting...
I/F-2: USB	9	Host (PC)	
I/F-3: RS422/485	0	None	Detail Setting...
I/F-4: Ethernet	1	Ethernet(MELSEC), Q17nNC, CRnD-700	Detail Setting...

Extend I/F Setting

Extend I/F-1

	CH No.	Driver	
1st	*	Video/RGB	Detail Setting...
2nd	0	None	Detail Setting...
3rd	0	None	Detail Setting...

Extend I/F-2

	CH No.	Driver	
1st	0	None	Detail Setting...
2nd	0	None	Detail Setting...
3rd	0	None	Detail Setting...

OK Cancel

Figure 2-5: Video/RGB Dialog

Insert Object

1. From the Object menu, click *Switch > Bit Switch*.
2. Click the position where the bit switch should be located to complete the arrangement.
3. Repeat to insert a second bit switch.

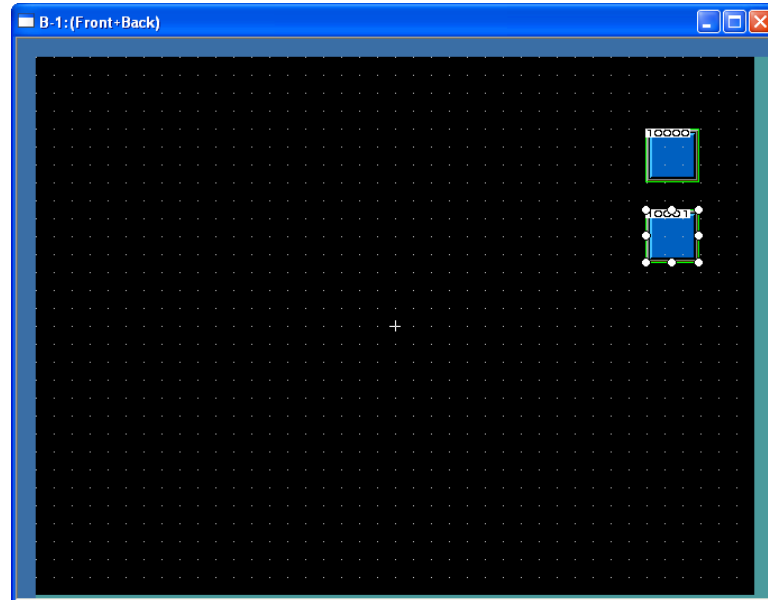


Figure 2-6: Switch Screen

4. Double-click the first arranged bit switch to display the Bit Switch dialog.
5. Designate the switch to enable the VGA input.

- Click the **OK** button.

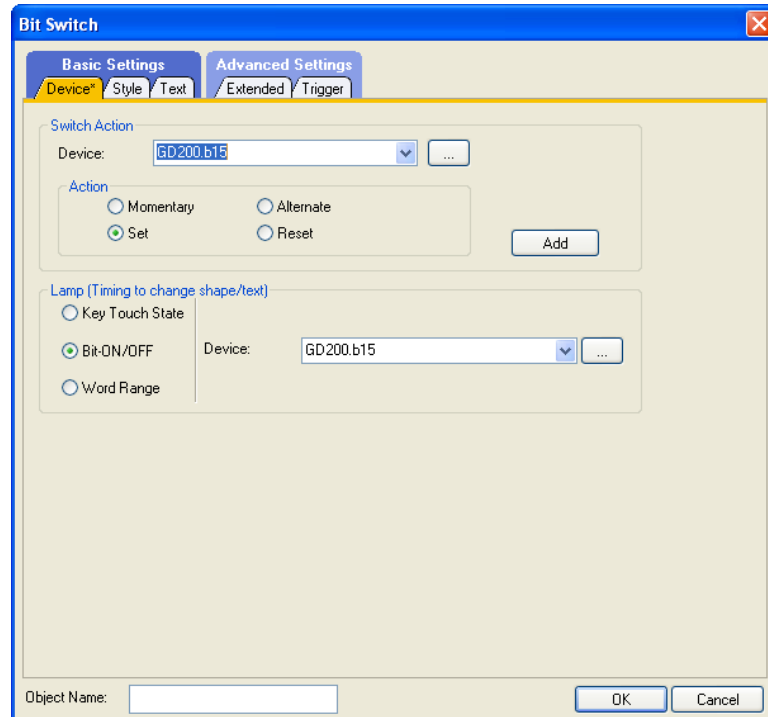


Figure 2-7: Bit Switch Dialog: VGA Input

- Double-click the second arranged bit switch to display the Bit Switch dialog.
- Designate the switch to enable the remote mouse operation.
- Click the **OK** button.

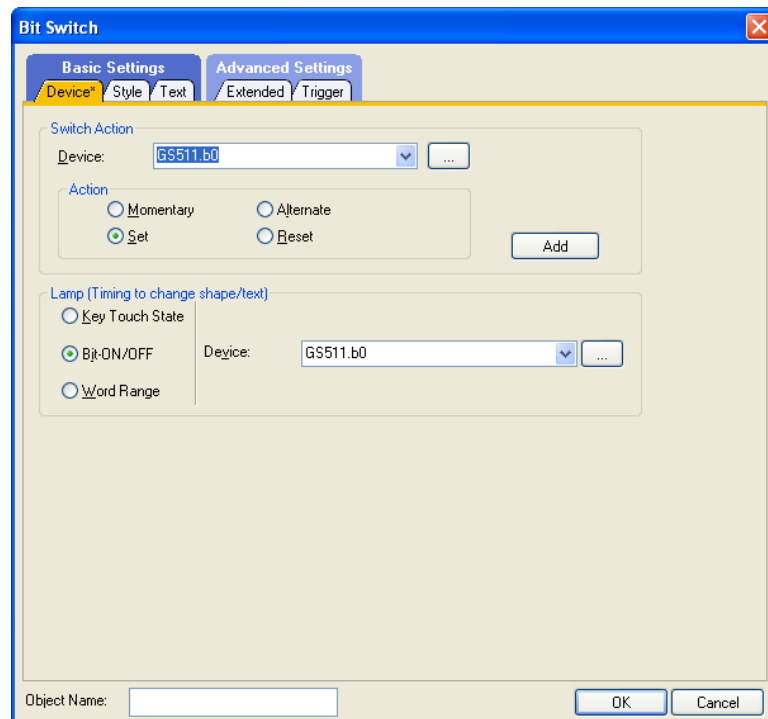


Figure 2-8: Bit Switch Dialog: Remote Mouse Operation

Write to GOT

1. From the Communication menu, click *Write to GOT...*
2. The Communication Configuration dialog appears. Configure the communication settings between the GOT and the PC.
3. Click the **OK** button.

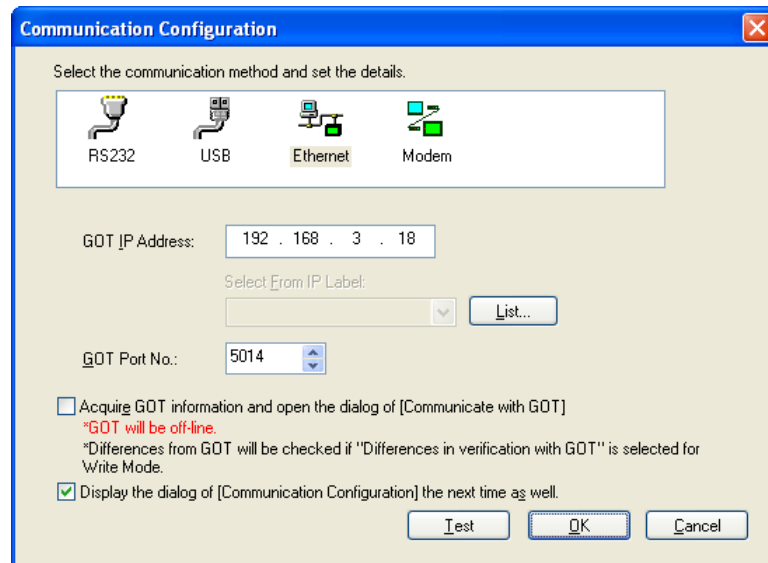


Figure 2-9: Communicate Configuration Dialog

4. The Communicate with GOT dialog appears. Specify the correct Communication drivers and communication settings.

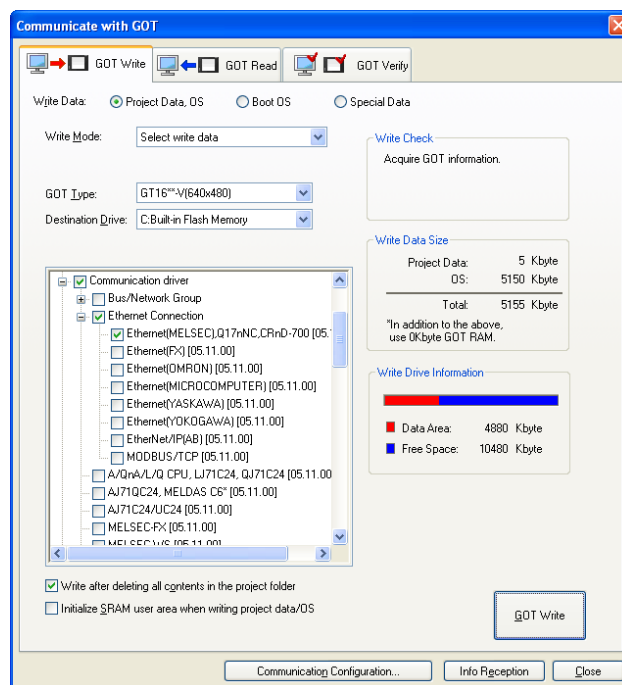


Figure 2-10: Communicate with GOT Dialog: Ethernet Connection

5. Check the **Video/RGB** checkbox.
6. Check the appropriate **PC Remote Operation** checkbox.
7. Click the **GOT Write** button.
8. Click the **Close** button.

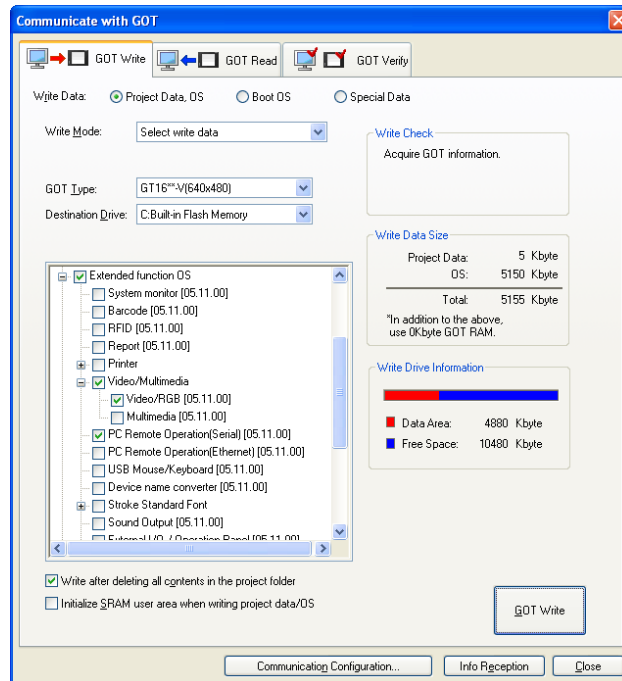


Figure 2-11: Communicate with GOT Dialog: Video/RGB

Configure the VisionView Application

1. Ensure that a USB mouse is connected to the VisionView VGA's USB port.
2. Using the USB mouse, specify the appropriate language.
3. Click the **OK** button.



Figure 2-12: Language Screen

4. From the Cognex VisionView Setup screen, click the **Settings** button.

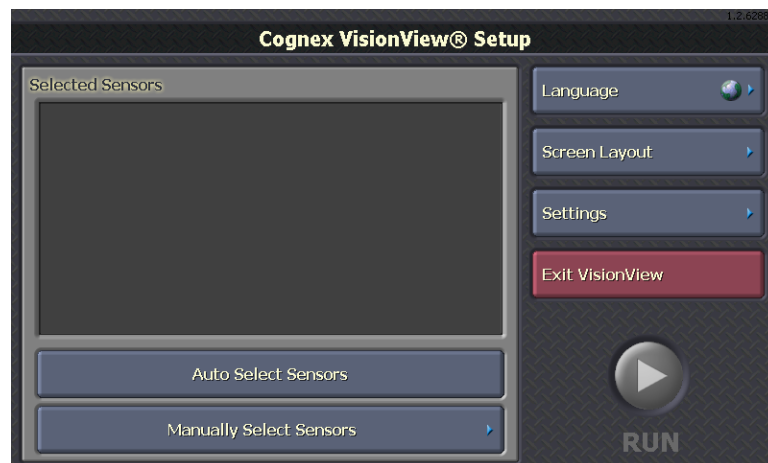


Figure 2-13: Setup Screen

5. From the Settings screen, click the **Display Settings** button.



Figure 2-14: Settings Screen

6. From the Display Settings screen, click the Touch Screen **Type** button.



Figure 2-15: Display Settings Screen

7. Select **Mitsubishi** from the list of touch screens.

Note: Touch Screen Calibration is not required when using a Mitsubishi GT15 series or GT16 series touch screen.

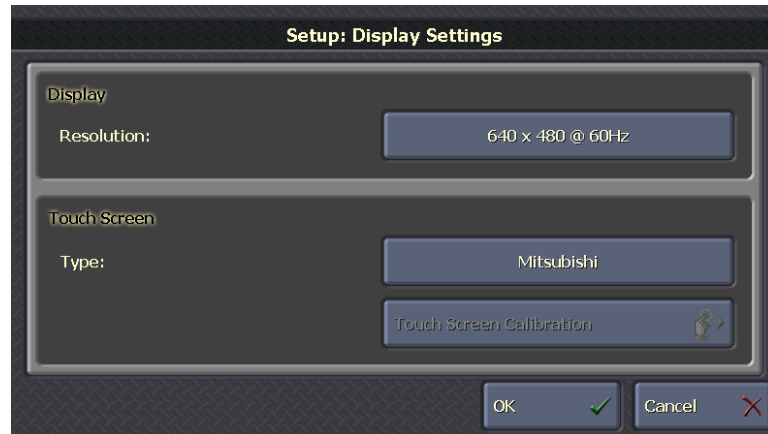


Figure 2-16: Display Settings Screen: Select Touch Screen Type

8. Click the **OK** button to apply the settings. The VisionView VGA will automatically reboot. Touch screen operation should now be functional and the runtime display can be customized using the VisionView application.

License

License the VisionView Application

To deploy the VisionView application on the panel, you must purchase and install a license. To install a license, launch the VisionView application, click the green key button in the Cognex VisionView Setup screen, enter the Activation ID provided by Cognex in the Enter the Activation ID screen, and click **OK**.

Emergency License

An emergency license allows you to operate the VisionView application for a fixed period of time without verification from Cognex. There are 5 emergency licenses available for each VisionView CE-based HMI panel, valid for 3 days for each activation. Emergency licenses are intended to allow you to keep critical PCs, processes and production lines running in cases where a standard license becomes invalid and it is not possible to perform online licensing immediately to solve the problem. Using an emergency license allows you to keep running until you solve the problem. Refer to the *VisionView Help* file for more information.

Troubleshooting

No Image on VisionView VGA

1. Verify that the VisionView VGA's RGB output and the Mitsubishi GOT's RGB input are connected. Refer to [Install the Hardware on page 3](#).
2. Verify that the Extension OS for the Video/RGB input is installed on the Mitsubishi GOT, and that the RGB Display Settings (to configure Video/RGB settings) can be configured from the Utility menu.
3. Verify that the Video/RGB input control signals are correctly configured.

VisionView VGA's Display Position is Misaligned

Adjust the horizontal and vertical positions using the RGB Display Settings in the Mitsubishi GOT Utility.

Cannot Operate the VisionView VGA from Mitsubishi GOT Using the Touch Screen

1. Verify that the VisionView VGA and the Mitsubishi GOT are correctly connected using the RS-232 cable.
2. Verify that the Extension OS for PC Remote Operation (Serial) is installed on the Mitsubishi GOT.
3. Verify that the Communication I/F Setting is assigned to the **PC Remote Operation (Serial)** as **CH No.8**. Refer to [PC Remote Operation on page 5](#).
4. From the VisionView VGA, open the Display Settings screen to verify that the Touch Screen Type is **Mitsubishi**. Refer to [Configure the VisionView Application on page 12](#).

Note: You can connect a USB mouse to the VisionView VGA's USB port to perform this operation.

