

GOT1000

GT1150/GT1155 to FX Connection

Start-up Guide

About this Manual

The texts, illustrations, diagrams and examples in this manual are only intended as aids to help explain the functioning, operation, use and programming of the GOT1000 terminals in combination with an FX PLC.

If you have any questions regarding the installation and operation of the hardware described in this manual, please do not hesitate to contact your sales office or one of your Mitsubishi distribution partners.



CAUTION:

Do not attempt to install, operate, maintain or inspect the graphical operator terminal or the PLC until you have read through the corresponding instruction manual carefully and can use the equipment correctly. Do not use the PLC until you have a full knowledge of the equipment, safety information and instructions.

You can also obtain information and answers to frequently asked questions from our Mitsubishi website under www.mitsubishi-automation.com.

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Manual References:

Refer to the following manuals for more detailed explanations. For any further questions, please contact your local Mitsubishi Product Provider.

- GT11 User's Manual (JY997D17501)
- GT11 General Description (JY997D17401)
- GOT1000 Series Connection Manual 1/3 (SH(NA)-080532ENG)



CAUTION:

This Start-up Guide includes a brief summary of the main specifications of the GOT1000 graphic operation terminals and the FX series of PLC, which should be sufficient to enable experienced users to install and configure the units. For further information on the operation terminals and the inverters please refer to the above mentioned manuals.

Please observe also the safety precautions given in the manuals mentioned above.

Table of Contents

1	Overview	1
2	Hardware Introduction	1
3	Cabling	2
3.1	Programming Cables	3
3.2	Example Connection Diagram	3
4	Firmware Updates	4
5	Confirm Communication	5

1 Overview

This document provides a simple guide and reference for setting up the GT1150 or GT1155 Graphic Operation Terminal (GOT) hardware and firmware for use with an MELSEC FX Series PLC.

2 Hardware Introduction

The GT1150 and GT1155 are GOT1000 Series touch panel interfaces with three built-in communication channels used for capturing user input to a system. They also have Compact Flash card interfaces and a Reset button built-in.

The models that are connectable to an FX Series PLC are identified in the table below:

Model		Display Size	Display Type	Comm. IF	Power
GT1150	-QLBD	5.7" 320 x 240 dot	STN, monochrome, 16 gray-scales	RS232 RS422 USB (for PC Communication)	24 V DC
GT1155	-QSBD		STN, 256 colors		
	-QTBD		TFT, 256 colors		

Tab. 1: Specifications of the operator terminals



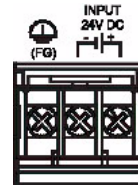
For new GT1150 and GT1155 units, included in the box should be the following items:

- (A) GT1150/GT1155
- (B) A sealed plastic bag containing
 - 1 rubber Dust-/Water-Proof Packing
 - 4 metal Mounting Brackets
 - 4 M4 Mounting Screws

3 Cabling

Power

All GT1150/GT1155 GOTs require an external 24 V DC power supply to be connected to the Power Terminals on the back of the GOT.



Communication

For the GT1150/GT1155 to communicate with an FX Series PLC, a dedicated communication cable is required to connect the provided PLC Communication Connector with the Programming Port (RS-422 8-pin Mini-DIN) or other communication channel of the FX (RS-422 8-pin Mini-DIN or RS-232C 9-pin D-SUB). The cable names and length and specific wiring for each case are illustrated below:

Cable Name	Length	FX Comm. Equipment
GT01-C10R4-8P	1 m	Programming Port FX3U-422-BD FX2N-422-BD FX1N-422-BD
GT01-C30R4-8P	3 m	
GT01-C100R4-8P	10 m	
GT01-C200R4-8P	2 0m	
GT01-C300R4-8P	30 m	

Tab. 2: Connection to an RS-422 FX communication channel

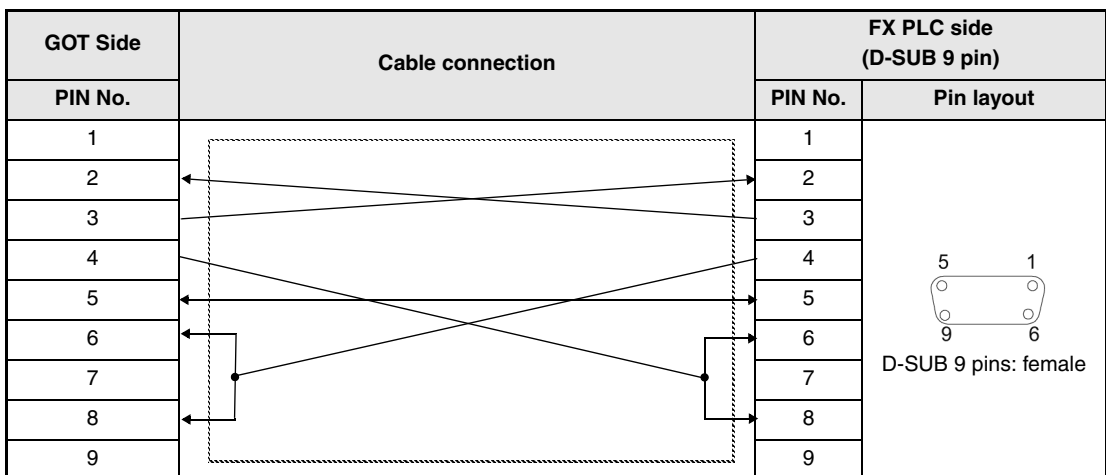
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Cable Name	Length	FX Comm. Equipment
GT10-C30R2-9S	3 m	FX3U-232-BD FX3U-232-ADP(-MB) ^① FX2N-232-BD FX2NC-232ADP ^① FX1N-232-BD

Tab. 3: Connection to an RS-232 FX communication channel

^① Special Adapters require an additional FX**-CNV-BD or, for the FX3U only, a Communication Expansion Board.

Connection diagramm of the RS-232 cable.



3.1 Programming Cables

The GT1150 and GT1155 come pre-installed with an OS only and without any project data. To download a project from a PC running GT Designer2 to the GOT, a programming cable is required to connect the PC to one of the communication interfaces.

For a new out-of-the-box GOT, the easiest way to connect to the GOT is through the USB Mini-B type port on the front panel with a standard USB cable. After setting up the GOT communication settings from the GOT main menu or with GT Designer2, the RS-422 and RS-232C interfaces can also be used for program transfer. Connection via USB is shown below.

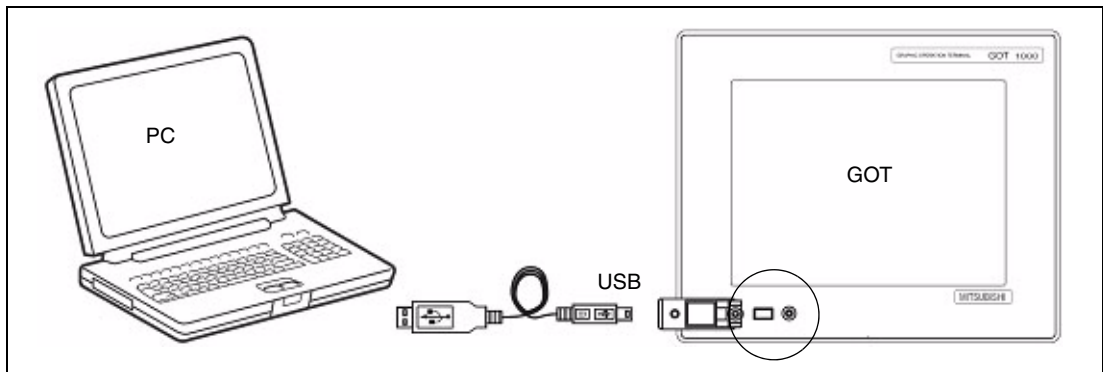


Fig. 1: USB connection of a PC

3.2 Example Connection Diagram

The GOT in the following figure is supplied from the 24V DC service power supply of the FX3U base unit.

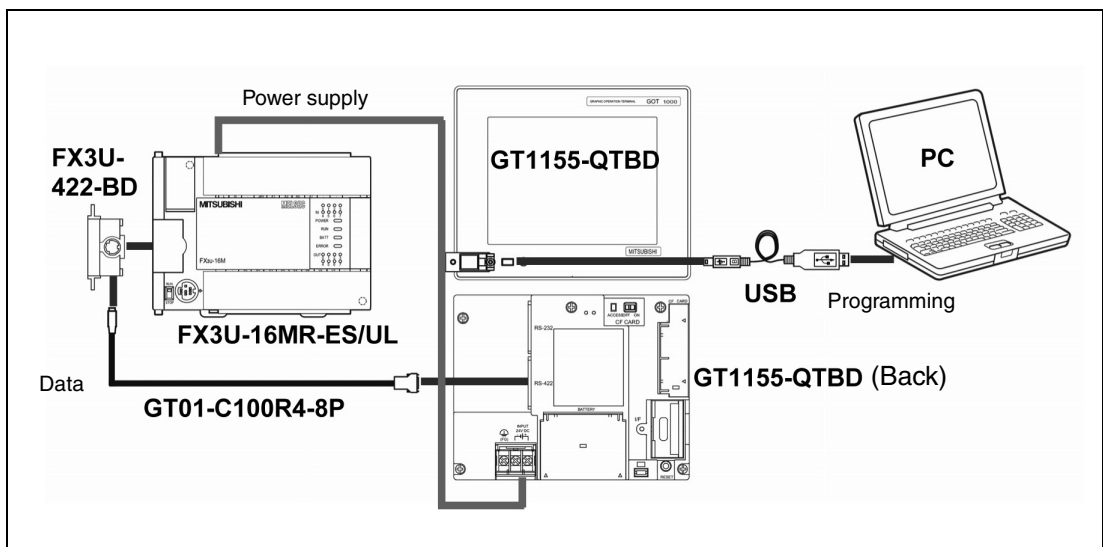


Fig. 2: Example for the connection of a GT1155 to a FX3U PLC

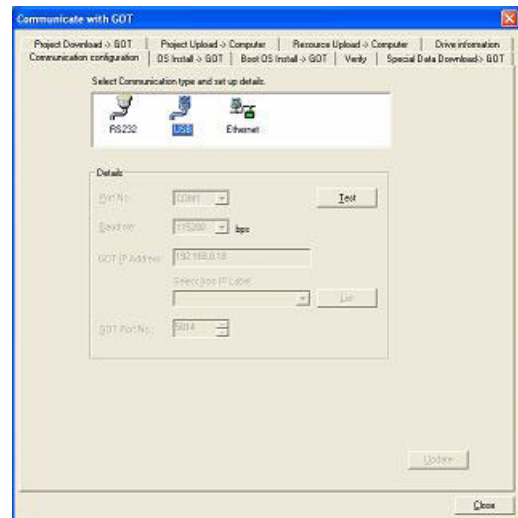
4 Firmware Updates

(Version 2.73 or later)

To make sure the GT1150/GT1155 GOT is able to use the latest functions and features, it is the responsibility of the user to check and update the firmware (Standard monitor OS) of the GOT.

Launch the latest copy of GT Designer2 and start a new project for the GOT model "GT11**-Q(320x240)" with the "MELSEC-FX" Controller Type. Select **Yes** to set the Communication Setting and make sure the Standard I/F-1 or Standard I/F-2 CH No. is set to 1, depending on RS-422 or RS232C connection, before selecting **OK**. The "Screen Property" window that pops up for making a new screen can be either canceled or accepted for the following steps.

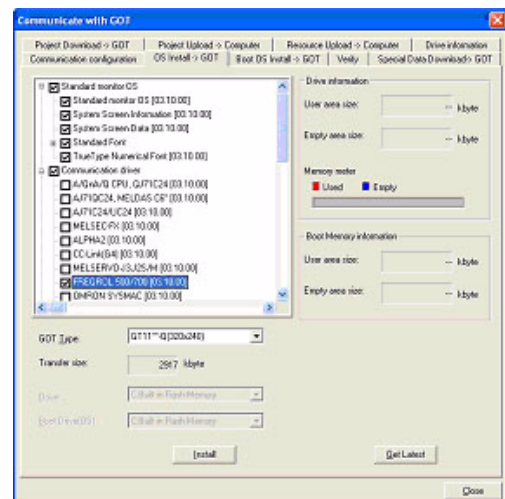
Go to the "Communication" menu and select "To/From GOT" to bring up the "Communicate with GOT" window. Go to the "Communication configuration" tab and select **USB**. With the GOT power ON, use the **Test** button to verify that the PC and GOT can communicate properly then turn the GOT power OFF.



Installing OS and communication drivers

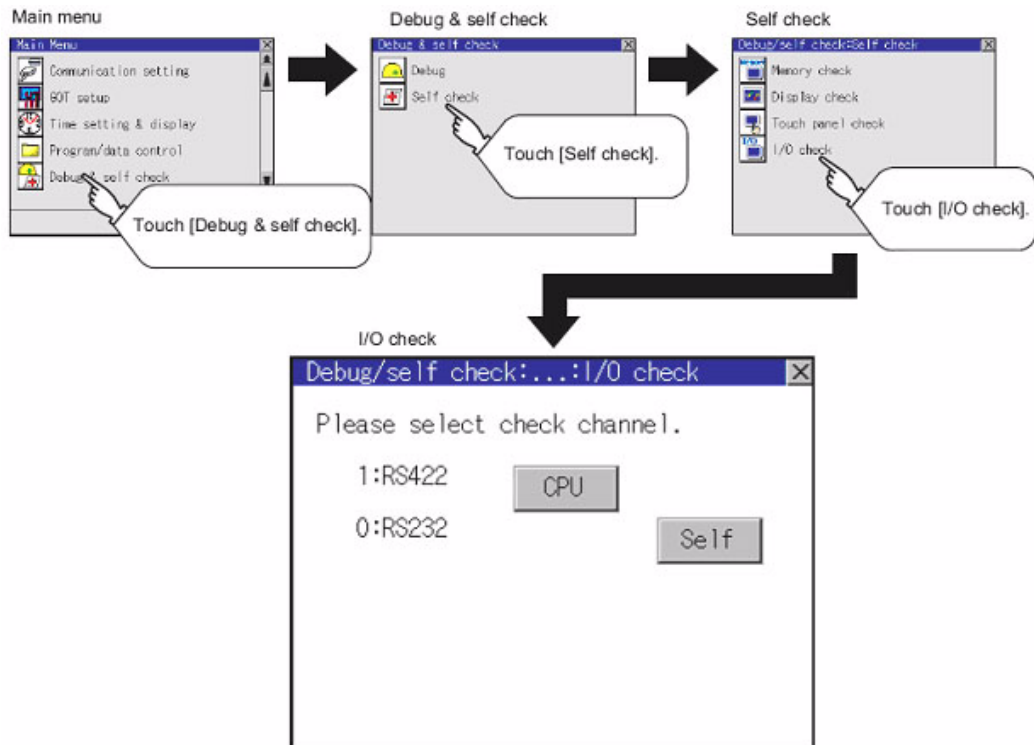
Go to the "OS Install -> GOT" tab in the "Communicate with GOT" window of GT Designer2 and select "Standard monitor OS" and "Communication driver" – "MELSEC-FX [**. **. **]" from the data selection tree. Use the **Install** button to initiate the data transfer and update the firmware.

Once the firmware update has been completed the GOT will automatically reboot and all features will be up to date. Note that new project data will need to be downloaded to the GOT.



5 Confirm Communication

The communication monitoring is a function that checks whether the GOT can communicate with the PLC. If no error is shown, communication has been set up correctly.



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