User's
Manual

Model VJ77
PC-based Parameters Setting Tool

JUXTA

IM 77J01J77-01E

vigilantplant.™

YOKOGAWA
Yokogawa Electric Corporation

IM 77J01J77-01E
5th Edition

Introduction

This instruction manual describes the functions and operation of the Model VJ77 PC-based Parameters Setting Tool.

■ Configuation of This Manual

This manual consists of 12 chapters.

● Chapter 1 VJ77 PC-based Parameters Setting Tool

Gives an overview of VJ77 and describes its functions and the operating environment.

● Chapter 2 Setup

Describes how to setup the hardware and software required to use VJ77.

● Chapter 3 Basic Operation

Describes the basic operation and main windows of VJ77.

● Chapter 4 Setting Parameters

Describes how to set parameters of JUXTA instruments.

● Chapter 5 Setting a Program

Describes how to set a program for JUXTA computing units.

● Chapter 6 Uploading and Downloading Data from/to JUXTA

Describes how to upload parameter or program data inside JUXTA instruments from VJ77 and how to download the data to JUXTA instruments.

● Chapter 7 Saving Data

Describes how to save parameter or program data on a disk.

● Chapter 8 Printing Data

Describes how to print parameter or program data.

● Chapter 9 Monitoring Input/Output Values

Describes how to monitor the I/O values of JUXTA instruments and how to view the result of self-diagnosis.

● Chapter 10 Adjusting JUXTA Instruments

Describes how to adjust JUXTA instruments' input/output, how to correct the wiring resistance, and others.

● Chapter 11 Troubleshooting

Describes how to solve problems when any trouble has occurred while using VJ77.

● Appendix

Describes how to set a password (security function).

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■ Intended Readers

This manual is intended for people familiar with the functions of JUXTA signal conditioners and capable of working with Windows, such as instrumentation and control engineers and personnel in charge of maintaining instruments and control equipment.

■ Related Documents

● Instruction manuals for individual JUXTA signal conditioners

These manuals provide information about the procedure of installation and wiring of signal conditioners and parameter lists.

■ Trademark

All the brands or names of Yokogawa Electric's products used in this manual are either trademarks or registered trademarks of Yokogawa Electric Corporation.

Windows is a registered trademark of Microsoft Corporation, USA.

Visual Inspection and Cross-check of Accessories

On receiving the product, visually inspect it for any damage.

■ Checking Model and Suffix Codes

Make sure that the model and suffix codes of the delivered product are as specified in your order.

Model	Suffix code	Description
VJ77		PC-based parameters setting tool
	-E10	For use with IBM PC/AT compatible personal computers (English version)

■ Checking the Package Contents

Make sure that the delivered package contains all of the following items.

- VJ77 PC-based Parameters Setting Tool CD ..... 1 disk
- Communication adapter ..... 1 unit
- Communication cable with 9-pin D-sub female connectors at both ends ..... 1 cable
- JUXTA communication cable (3-pin connector type) ..... 1 cable
- JUXTA communication cable (5-pin connector type) ..... 1 cable
- Adapter for modular-jack ..... 1 unit
- User's manual (this manual: IM 77J01J77-01E) ..... 1 copy

Documentation Conventions

■ Documentation Conventions

The following conventions are used throughout this manual:

Item	Usage
The names of named dialog boxes, windows, and views are written in title cap and refer to the exact titles.	Parameter Setting Menu dialog box Gantt view
The names of unnamed windows, dialog boxes, and views are written in all lowercase letters.	document window print preview
Commands (including buttons) in a dialog box or window and menu commands are written in **boldface**.	Click **OK**. Click **Options**. From the **File** menu, choose **Exit**.
Dialog box elements, such as text boxes, list boxes, option buttons, and check boxes, are also written in bold face and refer to their exact labels.	Select the **Spaces** check box. Click to clear the **Bookmarks** check box. In the **Font** box, type or select the font you want to use. In the **File Name** box, enter a file name.
Characters to be typed by the user via keyboard are written in `monotype font`.	Type `JUXTA` in the **Model** box.

WARNING

Indicates that operating the hardware or software in a particular manner may damage it or result in a system failure.

CAUTION

Draws attention to information that is essential for understanding the operation and/or features of the product.

TIP

Gives additional information to complement the present topic.

See Also

Gives reference locations for further information on the topic.

■ Illustrations in This Document

(1) Illustrations and figures presenting this product or its functions in this manual may not be exactly the same as the actual product or functions so as to simplify understanding.

(2) Figures and illustrations representing the displays may differ from the actual displays in regard to the position and/or display characters (uppercase or lowercase, for example), but not to an extent that impairs a correct understanding of the functions and the proper setting operation.

Notice

■ Regarding This User's Manual

(1) This manual should be passed on to the end user. Keep this manual in a safe place.

(2) Read this manual carefully to gain a thorough understanding of how to operate this product before you start using it.

(3) This manual is intended to describe the functions of this product. Yokogawa Electric Corporation (hereinafter simply referred to as Yokogawa) does not guarantee that these functions are suited to the particular purpose of the user.

(4) Under absolutely no circumstances may the contents of this manual, in part or in whole, be transcribed or copied without permission.

(5) The contents of this manual are subject to change without prior notice.

(6) Every effort has been made to ensure accuracy in the preparation of this manual. Should any errors or omissions come to your attention however, please contact your nearest Yokogawa representative or our sales office.

■ Regarding Protection, Safety, and Prohibition Against Unauthorized Modification

(1) In order to protect the product and the system controlled by it against damage and ensure its safe use, make sure that all of the instructions and precautions relating to safety contained in this document are strictly adhered to. Yokogawa does not guarantee safety if the product is not handled according to these instructions.

(2) The following safety symbols are used in this manual.

● Symbols used on the product and in this manual

CAUTION

This symbol on the product indicates that the operator must refer to an explanation in the user's manual to avoid the risk of injury or death of personnel or damage to the instrument. The manual describes how the operator should exercise special care to avoid electrical shock or other dangers that may result in injury or the loss of life.

Protective ground terminal:

This symbol indicates that the terminal must be connected to ground prior to operating the equipment.

Function ground terminal:

This symbol indicates that the terminal must be connected to ground prior to operating the equipment.

■ Exemption from Responsibility

(1) Yokogawa does not make any warranties regarding the product except those mentioned in the WARRANTY that is provided separately.

(2) Yokogawa assumes no liability to any party for any loss or damage, direct or indirect, caused by the use or any unpredictable defect of the product.

(3) Be sure to use the spare parts approved by Yokogawa when replacing parts or consumables.

(4) Modification of the product is strictly prohibited.

(5) This software may be used with one specified computer only. You must purchase another copy of the software for use on each additional computer.

(6) Copying the software for purposes other than backup is strictly prohibited.

(7) Store the compact disk (original media) containing this software in a secure place.

(8) Reverse engineering such as the disassembly or decompilation of software is strictly prohibited.

(9) No portion of the software supplied by Yokogawa may be transferred, exchanged, leased, or sublet for use by any third party without the prior permission of Yokogawa.

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Model VJ77
PC-based Parameters Setting Tool

IM 77J01J77-01E 5th Edition

CONTENTS

1. VJ77 PC-based Parameters Setting Tool

This chapter gives an overview of the VJ77 tool and describes its operating environment.

1.1 An Overview of VJ77 and Its Functions

1.1.1 What is VJ77?

The VJ77 PC-based Parameters Setting Tool is a software package for setting various parameters and programs of microprocessor-based JUXTA signal conditioners and computing units from a personal computer. This tool simplifies the configuration of high performance functions of JUXTA instruments. In addition, it is also possible to adjust microprocessor-based JUXTA instruments using this tool.

1.1.2 Functions

- **Parameter setting**

  Sets parameters that configure the functions of microprocessor-based JUXTA instruments.

- **Program setting**

  Sets programs of microprocessor-based JUXTA computing units.

- **Download to/upload from the JUXTA instrument**

  Uploads parameters or program from a microprocessor-based JUXTA instrument to a personal computer, and downloads the parameters and program once loaded or a program you created, to a JUXTA instrument.

- **Data saving to disk**

  Saves parameters or program in a JUXTA instrument to the hard disk of a personal computer, etc.

- **Data printing**

  Prints parameters or program uploaded from a JUXTA instrument.

- **Input/output value monitor**

  Views the I/O values and the result of self-diagnosis of a microprocessor-controlled JUXTA instrument.

- **Adjusting JUXTA instruments**

  Adjusts inputs and outputs of a microprocessor-controlled JUXTA instrument.

1.2 Conceptual View of VJ77

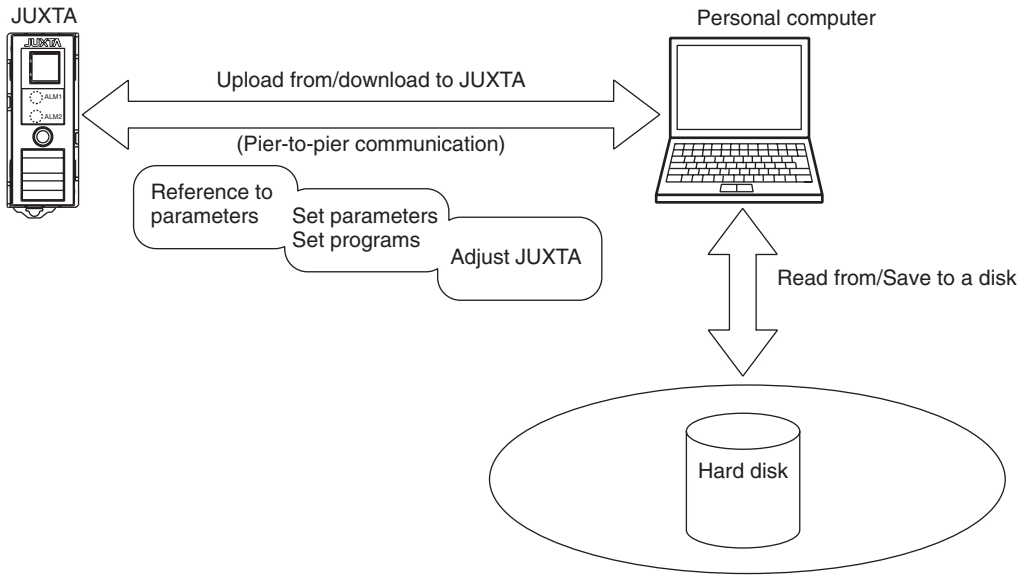

Figure 1.2.1 Conceptual View of VJ77 PC-based Parameters Setting Tool

1.3 Operating Environment and Wiring Specifications

1.3.1 System Requirements

OS:	Windows XP (Home Edition/Professional) (32-bit version) Windows Vista Business (Service Pack 1 supported) (32-bit version) Windows 7 Professional (32-bit/64-bit version)
CPU:	Pentium 300 MHz or higher recommended For Windows Vista Business or Windows 7 Professional: Equivalent to 3.0 GHz or higher recommended
Main memory:	Windows XP (Home Edition/Professional): At least 128 MB recommended Windows Vista Business/Windows 7 Professional: At least 2 GB recommended
Hard disk space:	At least 6 MB for tool program, and 2 MB for user files.
CRT:	800 × 600 pixels or better, 256 colors or more recommended, use small font
RS-232C communication port:	
	At least 1 channel (select from COM1 to COM16), IBMPC/AT compatible model: 9-pin D-sub connector
CD-ROM drive:	1 (required for installation)
Printer:	Required for printing, support for letter or A4 size

1.3.2 Communication Adapter

Power supply:	Supplied from RS-232C port's DTR, RTS, DCD, DSR, and CTS. However, power supply may be unavailable depending on the RS-232C port's load characteristic. In such a case, use AC adapter additionally.
Specifications of external power source:	
Should comply with EIAJ RC-5320A	
Input ratings:	8 V DC/150 mA
Connection to personal computer:	
	Straight cable with 9-pin D-Sub connectors (female) at both ends is required for connecting via the RS-232C port.
Insulation resistance:	100 MΩ or more (500 V DC) to connect to an RS-232C port and JUXTA instrument.
Dielectric strength:	500 V AC for 1 minute to connect to an RS-232C port and JUXTA instrument.
Ambient temperature:	0 to 50°C
Ambient humidity:	5 to 90%RH (no condensation)
Transport and storage conditions:	-40 to 70°C, 5 to 95%RH (no condensation)
Dustproof and waterproof construction:	None

1.4 External View of Communication Adapter

Unit : mm

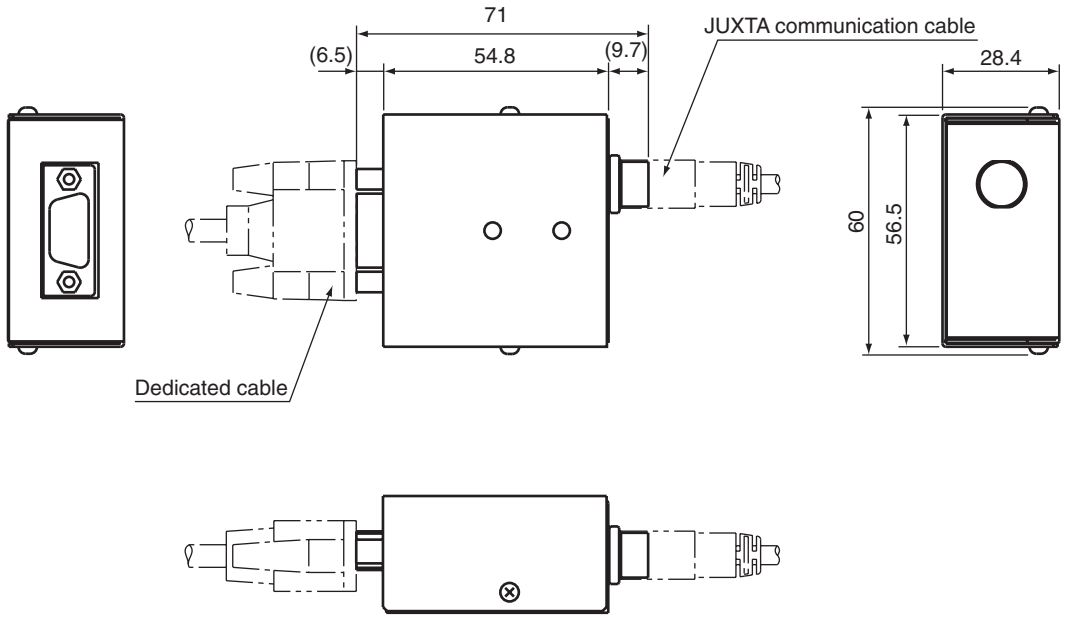

Figure 1.4.1 External View of the Communication Adapter

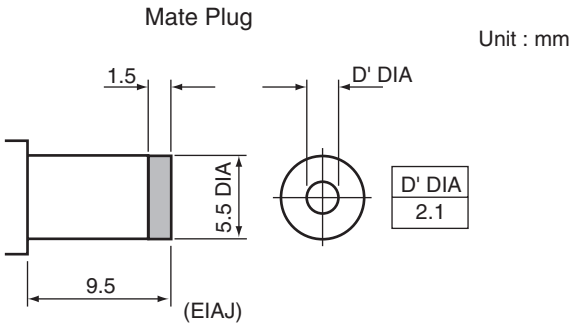

Figure 1.4.2 External View of the External Power Inlet on the Communication Adapter

1.5 Precautions When Communicating with JUXTA

CAUTION

When carrying out communication with a JUXTA instrument, do not change the cable connection to another JUXTA instrument except when any of the following dialog boxes is displayed. Also, even if any of the following dialog boxes is displayed, do not disconnect the cable while communication is in progress. Otherwise, a communication error will occur.

- Parameter/Program Setting Menu dialog box
- Parameter Setting Menu dialog box
- Program Setting Menu dialog box
- Data Uploaded from JUXTA dialog box
- Data Read from a File dialog box
- Program Editor dialog box

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2. Setup

This chapter describes how to set up the hardware and software required to run VJ77.

2.1 Installing VJ77

CAUTION

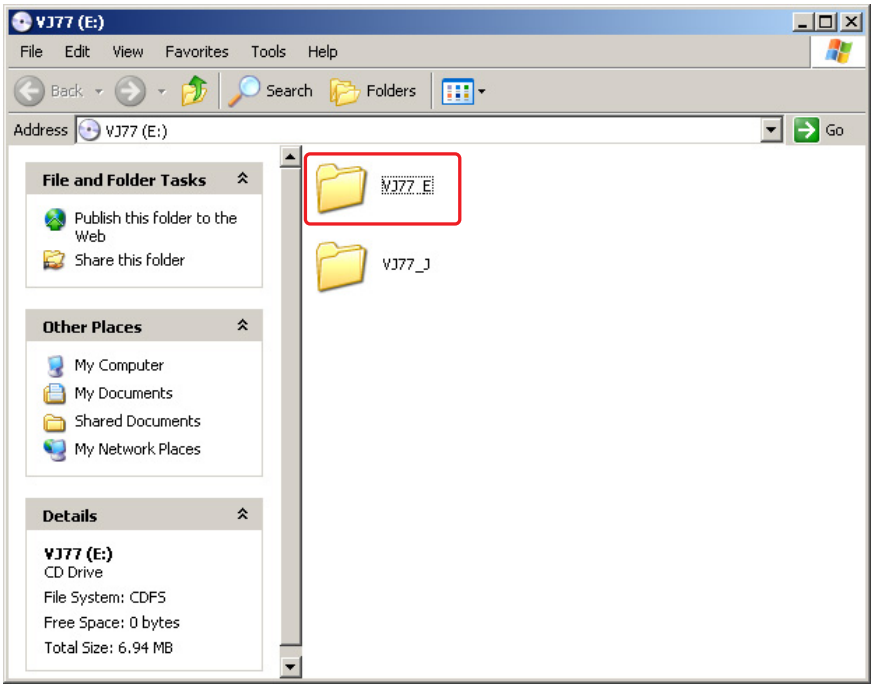
- Logon in Windows XP:
  - Log on using the user name of Administrators group.
  - The program does not start normally if the user name not belonging to the Administrators group is used for loggong on.
- In Windows Vista/Windows 7, install the software as an administrator.
- In Windows Vista/Windows 7, do not save VJ77 user file in Program Files folder. The VJ77 will not work properly.

  Also if VJ77 user file save directory is set in Program Files folder on Windows XP personal computer, do not upgrade its OS to Windows Vista/Windows 7.
- Before installing VJ77 Setting Software, quit all running applications.
- Avoid entering just the drive as the installation location, such as C:\. Enter the full directory path.
- When reinstalling VJ77, uninstall the installed VJ77 first, and then reinstall VJ77.

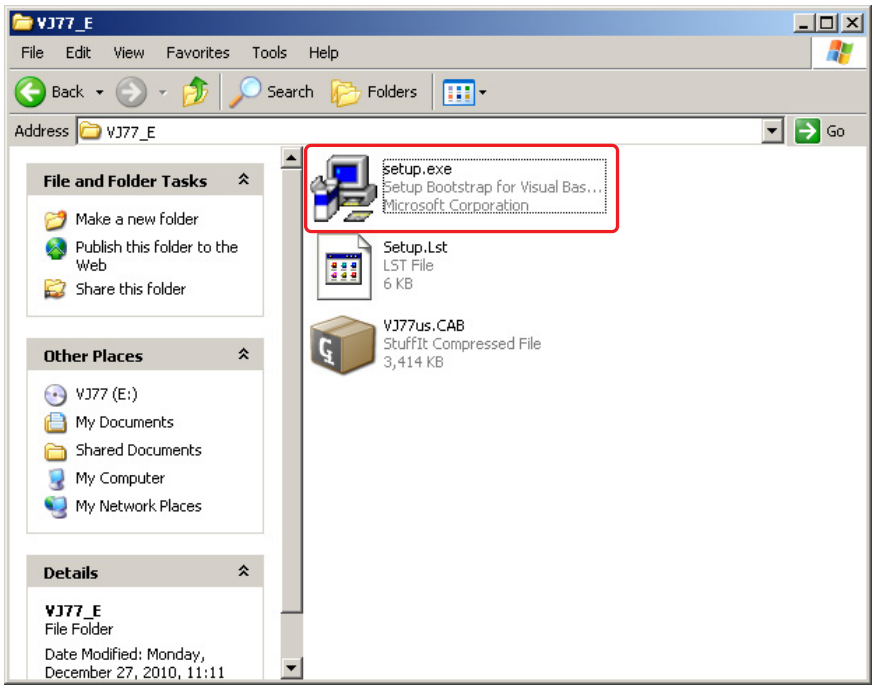
Step 1 Insert the CD of VJ77 into the CD-ROM drive.

Step 2 The following screen appears. (The following example is for Windows XP.) Double click **VJ77_E**.

Note: For a PC on which a English OS is installed, be sure to open **VJ77_E**.



Step 3 Double-click **setup.exe**. Follow the instructions appearing in the dialog boxes.



In Windows Vista/Windows 7, the User Account Control screen appears. Click **Allow**.

When installation is complete, **VJ77** is added to the **Programs** submenu of the **Start** menu.

2.2 Uninstalling VJ77

Step 1 From the **Start menu** of Windows, select **Control Panel** > **Programs and Features** (*1) > **VJ77** and uninstall it.

In Windows Vista/Windows 7, the User Account Control screen appears. Click **Allow**.

*1: From the Start menu of Windows, select Control Panel > Uninstall a program if the control panel's display method is Control Panel Home.
In Windows XP, Add or Remove Programs.

2.3 Connecting JUXTA Instrument to Personal Computer

This section describes how to connect a JUXTA instrument to a personal computer.

2.3.1 Items Required for Connection

To connect a JUXTA instrument to a personal computer, the following are required:

(1) Personal computer with VJ77 installed

(2) Communication cable with 9-pin D-sub female connectors at both ends (comes with VJ77): E9786WK

(3) VJ77-dedicated adapter (comes with VJ77): E9789HA

(4) JUXTA communication cable (3-pin connector type) (comes with VJ77):F9182ED
Used when communicating with JUXTA F, W and M series.

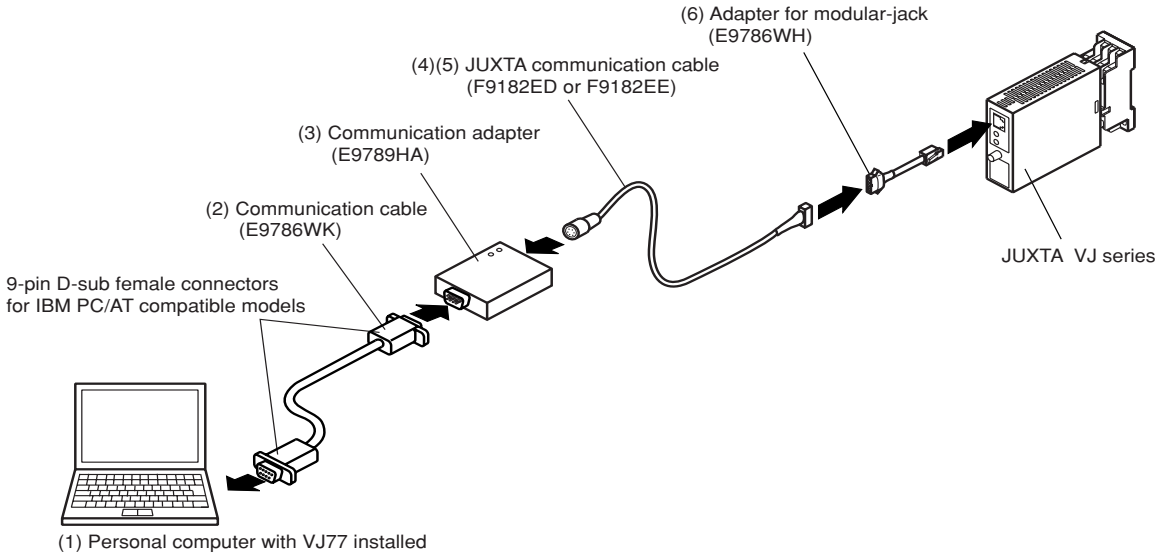
(5) JUXTA communication cable (5-pin connector type) (comes with VJ77):F9182EE
Used when communicating with JUXTA D series (DSC2).

(6) Adapter for modular-jack (comes with VJ77):E9786WH
Used when communicating with JUXTA VJ and M series.

2.3.2 How to Connect

Step 1 Connect the dedicated cable (IBM PC/AT compatible cable with 9-pin D-sub) to the personal computer.
Then, connect the VJ77-dedicated adapter to the other end of the dedicated cable.

Step 2
- When communicating with JUXTA D series (DSC2), connect the JUXTA communication cable with 5-pin connector (F9182EE) to the VJ77-dedicated adapter.
- When communicating with JUXTA F, W and M series, connect the JUXTA communication cable with 3-pin connector (F9182ED) to the VJ77-dedicated adapter.
- When communicating with JUXTA VJ and M series, connect the JUXTA communication cable with 5-pin connector to the VJ77-dedicated adapter, then connect the modular jack adapter (E9786WH) to the connector of the JUXTA communication cable.



2.4 Setting the Communication Port

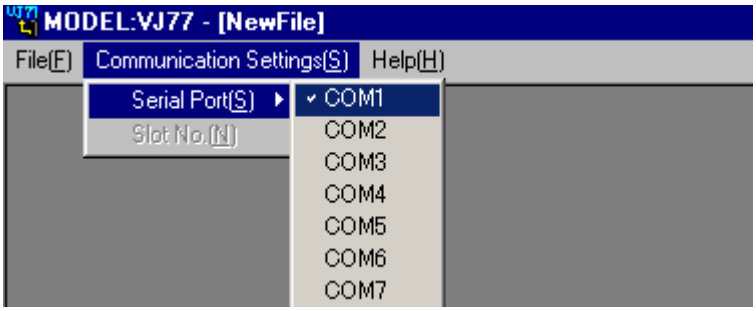
This section describes how to set the communication port to connect a JUXTA instrument to the personal computer (VJ77).

The communication port can be set, choosing from COM1 to COM16, when any one of the following dialog boxes is displayed.

- Parameter Setting Menu dialog box
- Menu dialog box
- Data Uploaded from JUXTA dialog box
- Data Read from a File dialog box
- Program Setting Menu dialog box
- Program Editor dialog box

Step 1 Start VJ77(refer to Section 3.1). In the Parameter/Program Setting Menu dialog box, select **Parameter Setting** then click **OK**.

Step 2 From the menu bar, click **Communication Settings** then **Serial Port.** Click the communication port you wish to set from **COM1** to **COM16**. The port currently selected is checked in the menu.



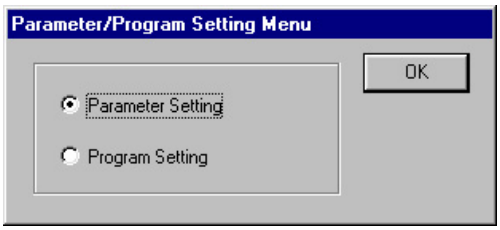
3. Basic Operation

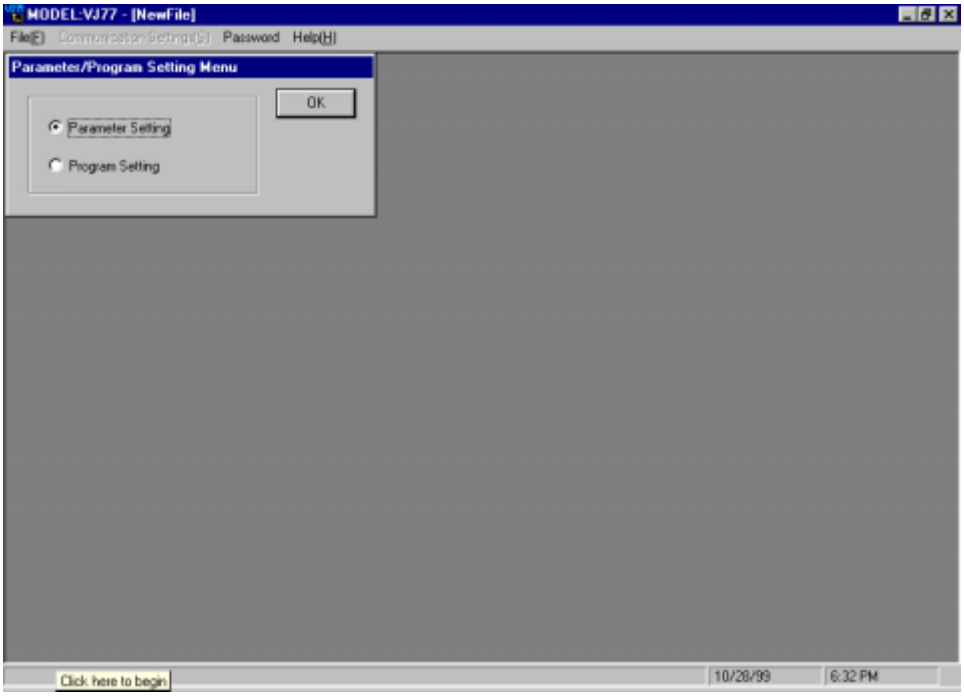
This chapter describes basic operation and identifies the main dialog boxes of VJ77.

3.1 Starting VJ77

Step 1 From the **Start** menu, choose commands in the following sequence. Point to **Programs, VJ77,** then **VJ77**.

Step 2 VJ77 starts up and the Parameter/Program Setting Menu dialog box appears.



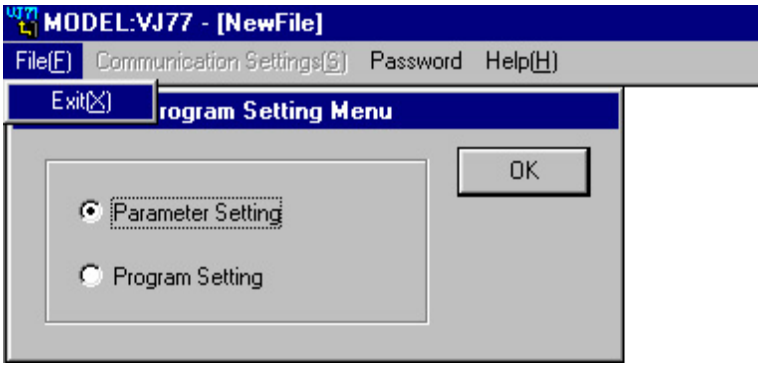


3.2 Quitting VJ77

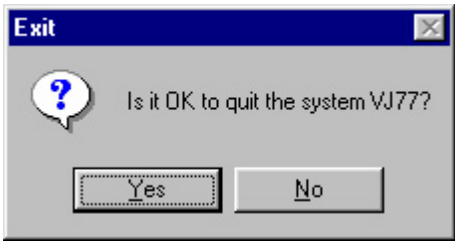
You can quit VJ77 when any one of the following dialog boxes is displayed.

- Parameter/Program Setting Menu dialog box
- Parameter Setting Menu dialog box
- Program Setting Menu dialog box
- Menu dialog box
- Data Uploaded from JUXTA dialog box
- Data Read from a File dialog box

Step 1 From the menu bar, point to **File** then **Exit**.

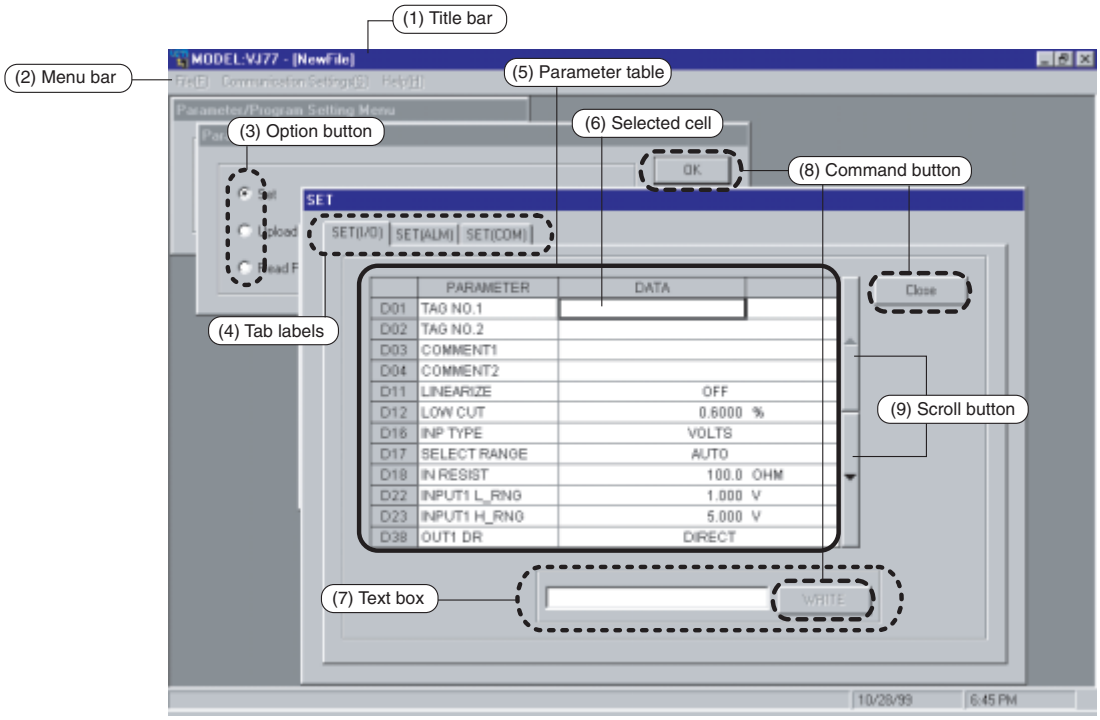


Step 2 The Exit dialog box appears. Click **Yes** to exit.



3.3 Dialog Box Elements and Functions

This section identifies the element and their functions of a window and dialog box of VJ77 with reference to the SET dialog box.



(1) Title bar

Shows the name of the window or dialog box displayed as is usual for Windows applications.

(2) Menu bar

As is usual for Windows applications, the menu bar is displayed below the title bar of a window. Each menu name contains the related commands.

(3) Option button

Used to select one item from alternatives as is usual for Windows applications.

(4) Tab labels

As is usual for Windows applications, some dialog boxes have more than one page with a tab, often referred to as tabbed pages.

(5) Parameter table

Shows a list of the parameter data values of the connected JUXTA instrument.

(6) Selected cell

The cell currently selected by double-clicking is displayed with thicker borders.

(7) Text box

Used to enter a value to be set. In the SET dialog box, double-clicking the parameter you wish to set makes the text box available for the entry of a parameter value.

(8) Command buttons

Carry out the corresponding functions when clicked.

OK: Makes the operation take effect and displays the next dialog box.

Cancel: Discards the operation and displays the previous dialog box.

Close: Closes the dialog box.

WRITE: Writes the data entered in the text box to the JUXTA instrument.

(9) Scroll buttons

Used to bring hidden part of the parameter table into view.

3.4 Basic Operation

3.4.1 Operation Using a Mouse

■ Menu bar operation

(1) Click an item on the menu bar to open a menu.

(2) From the menu, click the command you wish to execute.

■ Selecting an item

(1) Click the command you wish to select.

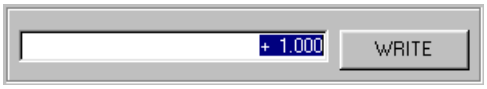
■ Data entry operation

(1) To enter data in the SET dialog box, double-click the data cell of the parameter you wish to change. The text box in the bottom of the SET dialog box is selected. Then, enter the data in the text box.

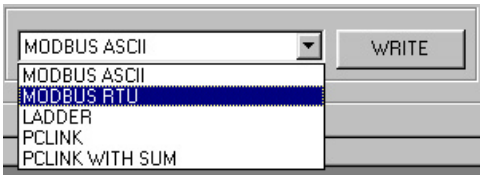
	PARAMETER	DATA
D01	TAG NO.1	
D02	TAG NO.2	
D03	COMMENT1	
D04	COMMENT2	
D11	LINEARIZE	OFF
D12	LOW CUT	0.6000 %
D16	INP TYPE	VOLTS
D17	SELECT RANGE	AUTO

(2) After entering data in the text box, click **WRITE**. The data is written to the JUXTA instrument.
There are two types of data entry with text boxes:

• Text boxes that require a numeral to be typed as shown below.



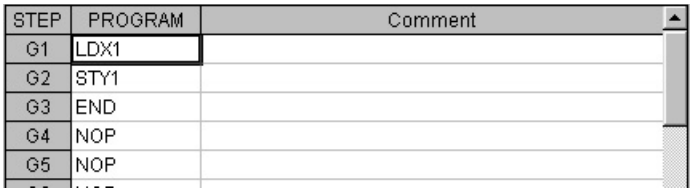
• Text boxes that require a choice from a list as shown below.



CAUTION

If you click **Close** without clicking **WRITE**, any data typed in the text box will not be written to the JUXTA instrument. Be sure to click **WRITE** after you enter data.

(3) To enter data via the Program Editor dialog box, double-click the cell you wish to enter data and directly enter data in the cell.



3.4.2 Operation Using Keyboard

■ Menu bar operation

(1) Press the F10 or ALT key on the keyboard. **File** in the menu bar is displayed as a button, indicating that it is selected. Move to the menu item you wish to execute using the RIGHT ARROW and LEFT ARROW keys, then press the ENTER, UP ARROW, or DOWN ARROW key. The menu of the selected item is then displayed.
(Pressing the ALT key+F key opens the pull-down menu of **File**)

(2) In the pull-down menu, move to the command you wish to execute using the UP ARROW and DOWN ARROW keys, then press ENTER.

(3) To cancel the operation, press the ESC key.

■ Selecting an item

(1) In a dialog box, each press of the TAB key switches the selected command in turn. To select a cell in a table, use the UP ARROW, DOWN ARROW, RIGHT ARROW, and LEFT ARROW keys. (The selected cell is displayed with thicker borders.)

■ Data entry operation

(1) To enter a value in a cell in the SET dialog box, press the CTRL+ENTER keys. The cell is then displayed with thicker borders, thus allowing an entry to be made.
To enter a value in a selected cell in the Program Editor dialog box, press the CTRL+ENTER keys or F2 key. The cell is then displayed with thicker borders, thus allowing an entry to be made.

(2) Type the desired value.

(3) In the SET dialog box, after typing a numeral in the text box, press the TAB key so as to select the **WRITE** button, and then press the ENTER key. The data is then written to the JUXTA instrument.

■ Command buttons (WRITE, Close, Cancel, etc.)

(1) Select a command button using the ARROW keys or TAB key.

(2) Press ENTER to execute the corresponding command.

■ Function keys

For data entry in the Program Editor dialog box, the following functions are assigned to the function keys. While functions are assigned to Fn keys, the assignment is displayed in the status bar at the bottom of the dialog box.

F2: Edits the active cell.

Select the desired program, comment, or constant cell (namely, a cell in the **PROGRAM, Comment,** or **CONST** column), and press the F2 key. The cell then allows a value to be entered.

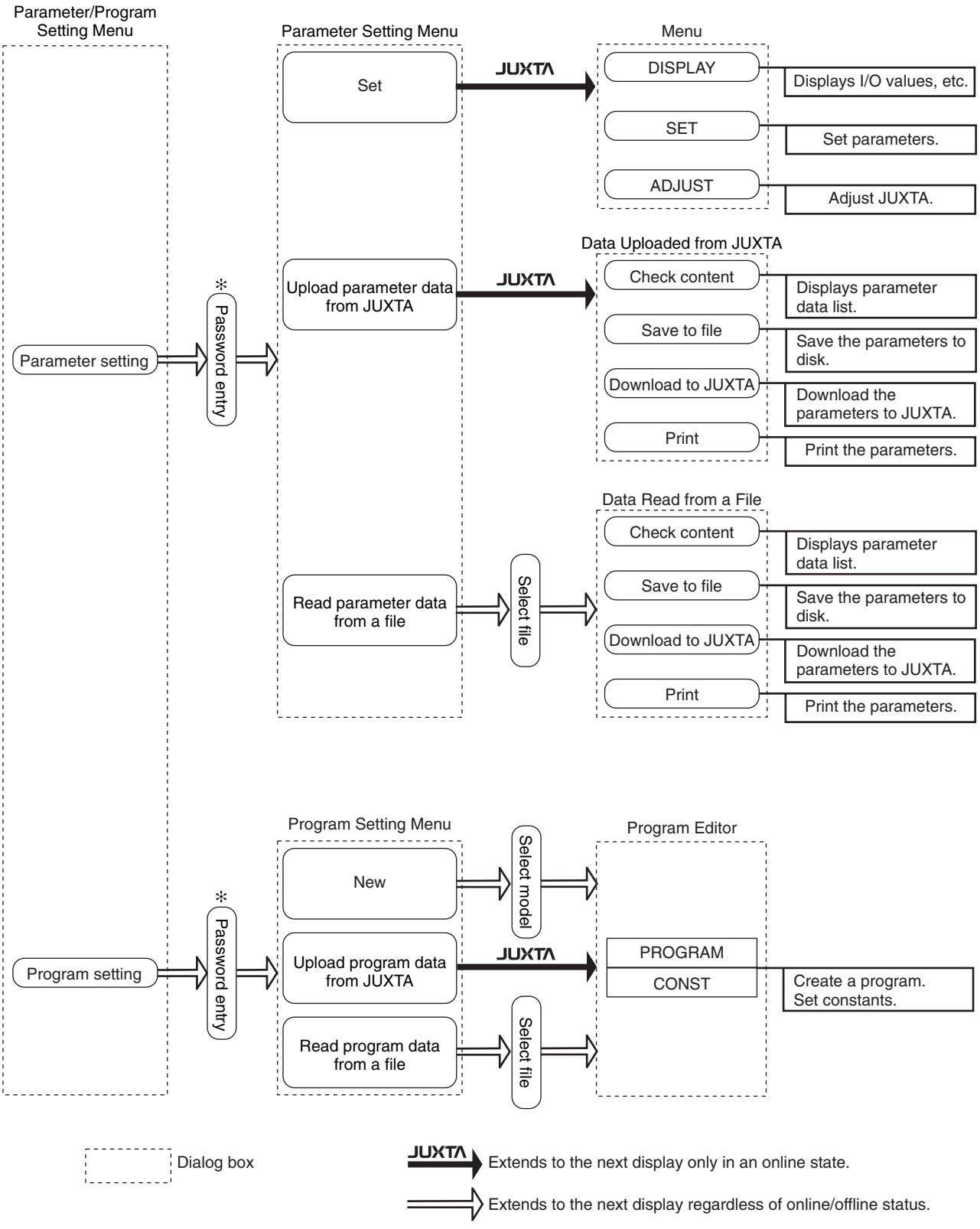
F3: Inserts a row.

Pressing the F3 key when a program cell or comment cell is selected, inserts a row above the selected cell.

F4: Delete a row.

Pressing the F4 key when a cell in a program cell or comment cell is selected, deletes the row of the selected cell.

3.5 Display Sequence



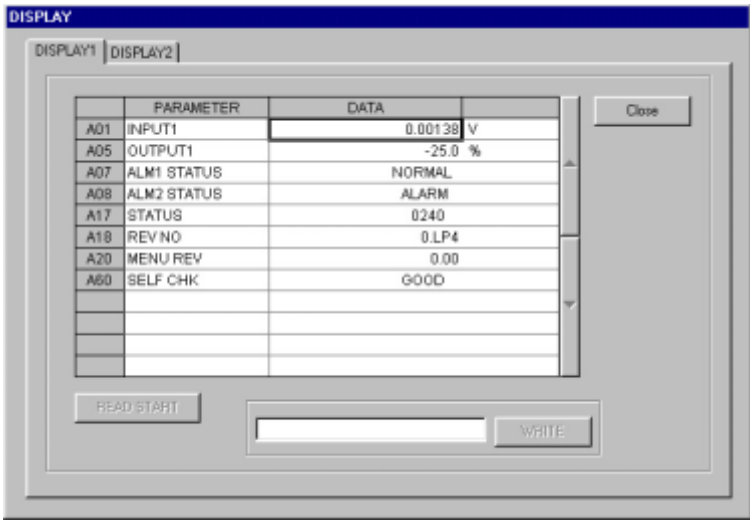
"Online" refers to a state in which JUXTA instrument and the personal computer (VJ77) are connected via a dedicated adapter.

※ The Password Entry dialog box appears if a password is set.

3.6 Main Dialog Boxes and Their Functions

3.6.1 DISPLAY Dialog Box

This dialog box shows the input/output values of the JUXTA instrument and the results of self-diagnosis.

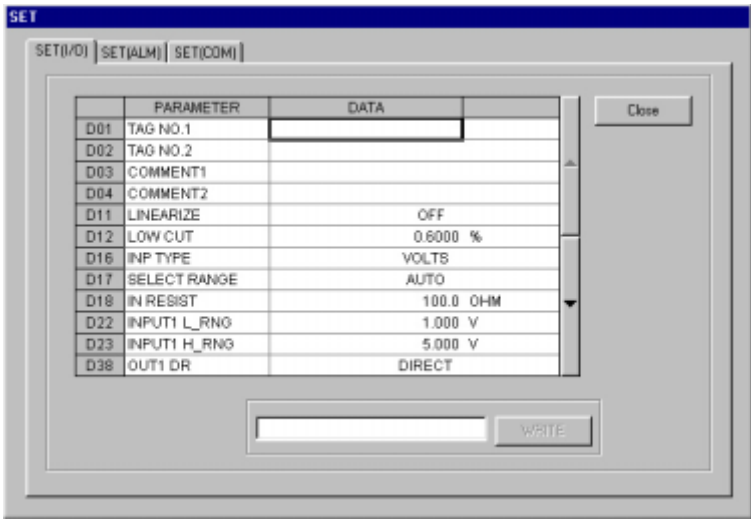


See Also

For more information about the DISPLAY dialog box, see Chapter 9, “Monitoring I/O Values.”

3.6.2 SET Dialog Box

This dialog box is used to set various parameters of the JUXTA instrument.

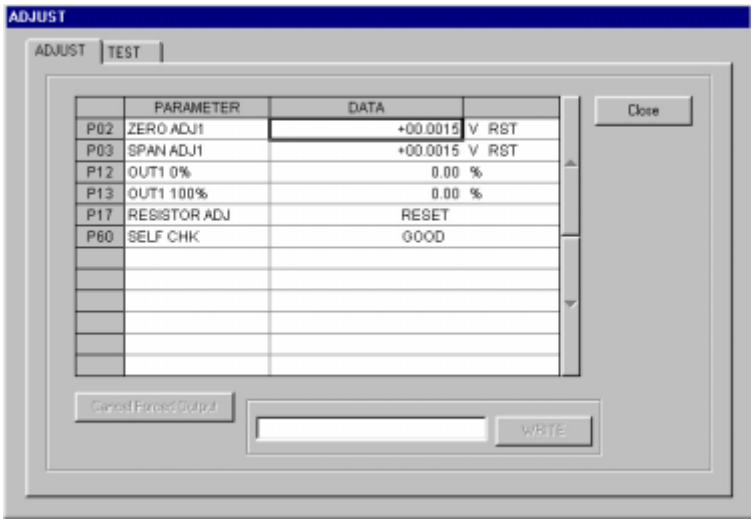


See Also

For more information about the SET dialog box, see Chapter 4, “Setting Parameters.”

3.6.3 ADJUST Dialog Box

This dialog box is used to adjust the I/O of the JUXTA instrument.

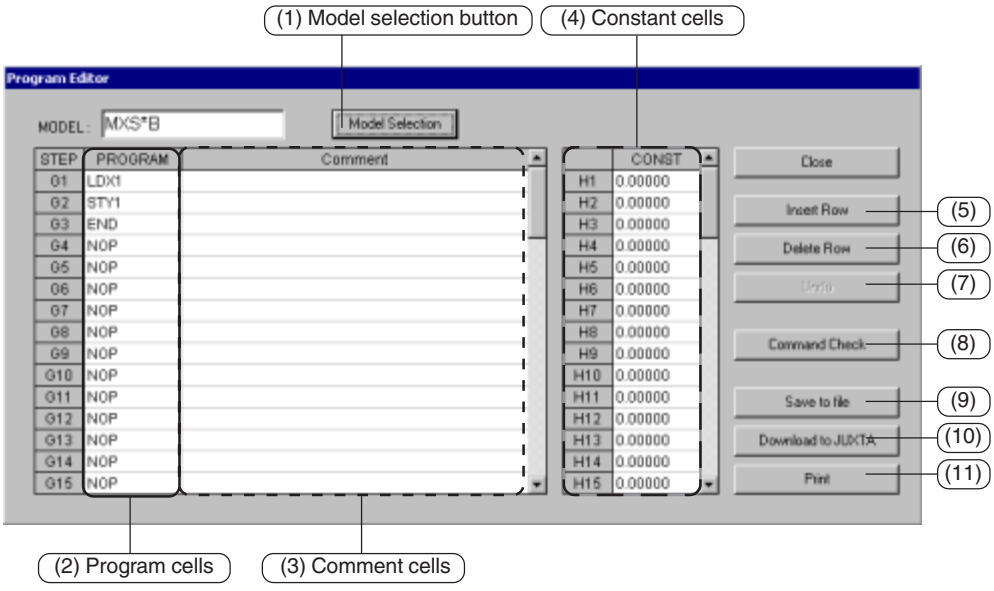


See Also

For more information about the ADJUST dialog box, see Chapter 10, “Adjusting JUXTA Instruments.”

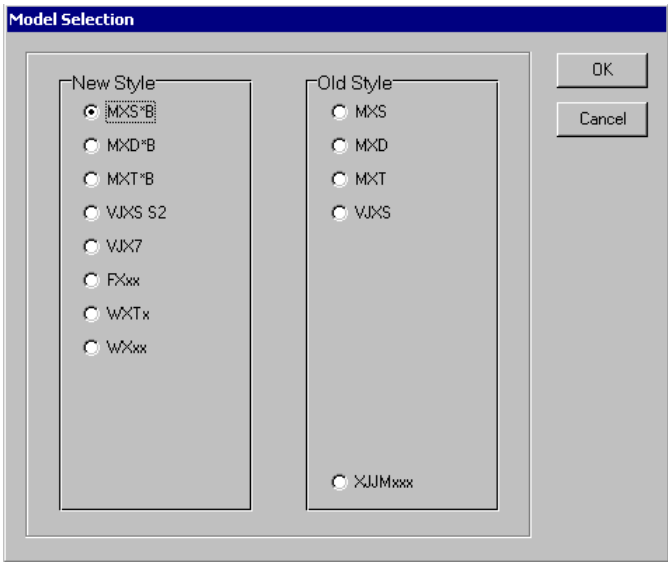
3.6.4 Program Editor Dialog Box

This dialog box is used to create/edit programs for JUXTA computing units.



(1) MODEL selection button

Clicking **Model Selection** selects the model name of a JUXTA computing unit.



(2) Program cells*

Cells to input program codes.

(3) Comment cells

Cells to input a comment for each line of the program. A maximum of 25 characters can be entered for a comment.

(4) Constant cells*

Cells to input constants used in the program.

*: When **Upload Program Data from JUXTA** is executed and the Program Editor dialog box is displayed, these cells show the program and constants uploaded from the JUXTA instrument.

(5) Insert Row button

Clicking **Insert Row** when a program cell or comment cell is selected inserts a row above the selected cell.

(6) Delete Row button

Clicking **Delete Row** when a program cell or comment cell is selected deletes the selected row.

(7) Undo button

Clicking **Undo** cancels the most recent operation you have performed. Each click of this button restores the display to the state one operation before.

(8) Command Check button

After inputting program codes and constants, clicking this button performs a syntax check of your entry.

(9) Save to File button

Clicking **Save to File** saves the created/edited program to disk.

(10) Download to JUXTA button

Clicking **Download to JUXTA** downloads the created/edited program to a JUXTA instrument.

(11) Print button

Clicking **Print** prints the created/edited program.

See Also

For more information about the Program Editor dialog box, see Chapter 5, “Setting a Program.”

4. Setting Parameters

This chapter describes the operation to set parameters of JUXTA instruments using VJ77. Parameters are set in the SET dialog box.

See Also

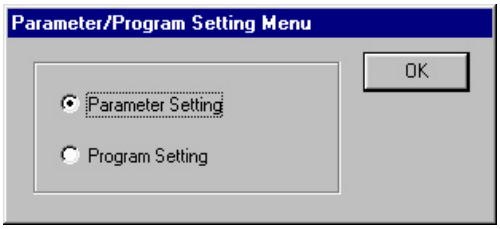
When you set parameters, refer to the parameter lists given in the respective user's manuals of JUXTA signal conditioners and computing units.

4.1 Displaying the Parameter Setting Dialog Box

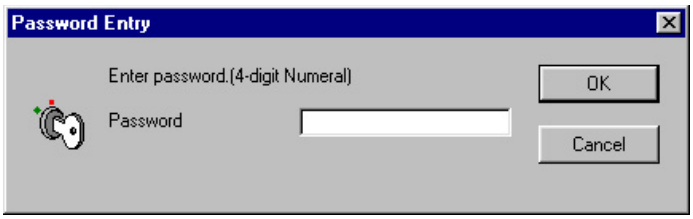
● Preparation

Connect the JUXTA instrument to the personal computer, then turn on the power to the JUXTA instrument.

Step 1 Start VJ77. In the Parameter/Program Setting Menu dialog box, select **Parameter Setting** then click **OK**.



Step 2 If a password is set for VJ77, the Password Entry dialog box appears. Enter the password (4-digit numeral) in the text box and click **OK**.
This dialog box does not appear if no password is set.



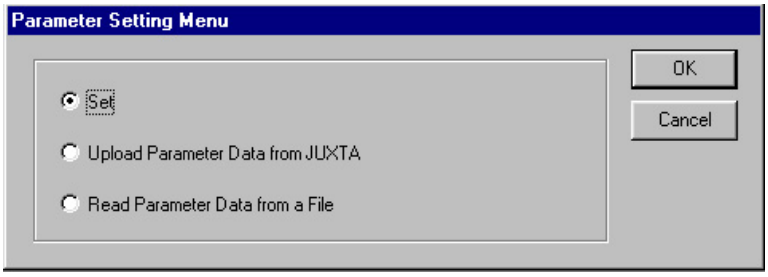
TIP

A password can be set for security to prevent parameter and program settings for JUXTA instruments from being changed by an unauthorized person. If a wrong password is entered, data can be read from the JUXTA instrument but cannot be written to it.

See Aiso

For how to set a password, see Appendix.

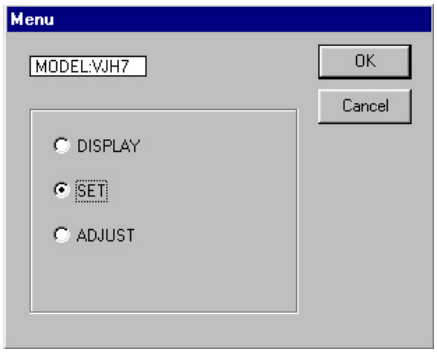
Step 3 The Parameter Setting Menu dialog box appears. Select **Set** and click **OK**.



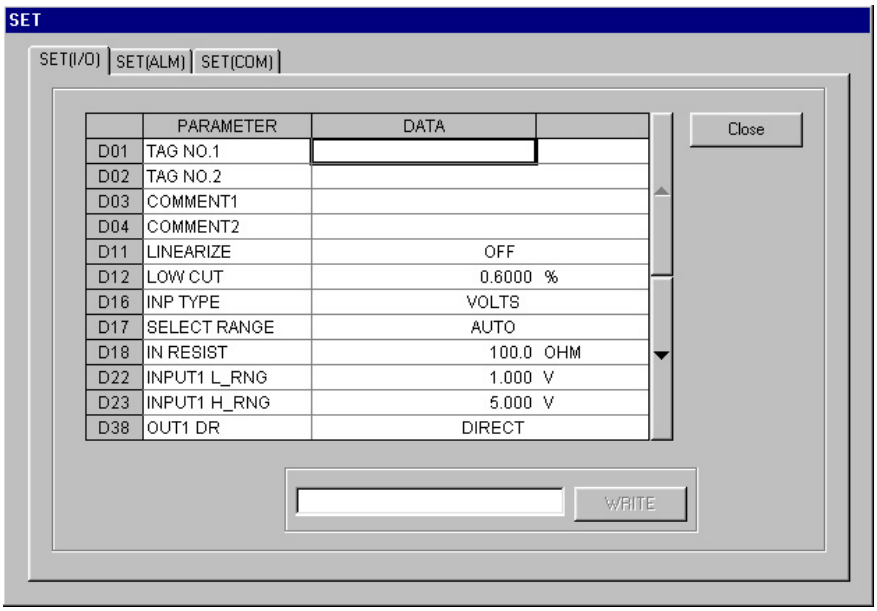
Step 4 The "Starts communication. Press **OK** button if ready" message appears. Click **OK** if ready.
If connected via the DSC or DSC2 port of the JUXTA D series, carry out Step 5.

Step 5 When connected via the DSC or DSC2 port of the JUXTA D series, the SLOT No. Setting dialog box appears. Enter the slot number you wish to communicate with in the entry box and click **OK**.
(Slots are numbered from 1 to 16, from the left to right of the D series nest.)

Step 6 The Menu dialog box appears. Select **SET** and click **OK**.



The SET dialog box appears. You can set parameters here.



	PARAMETER	DATA
D01	TAG NO.1	
D02	TAG NO.2	
D03	COMMENT1	
D04	COMMENT2	
D11	LINEARIZE	OFF
D12	LOW CUT	0.6000 %
D16	INP TYPE	VOLTS
D17	SELECT RANGE	AUTO
D18	IN RESIST	100.0 OHM
D22	INPUT1 L_RNG	1.000 V
D23	INPUT1 H_RNG	5.000 V
D38	OUT1 DR	DIRECT

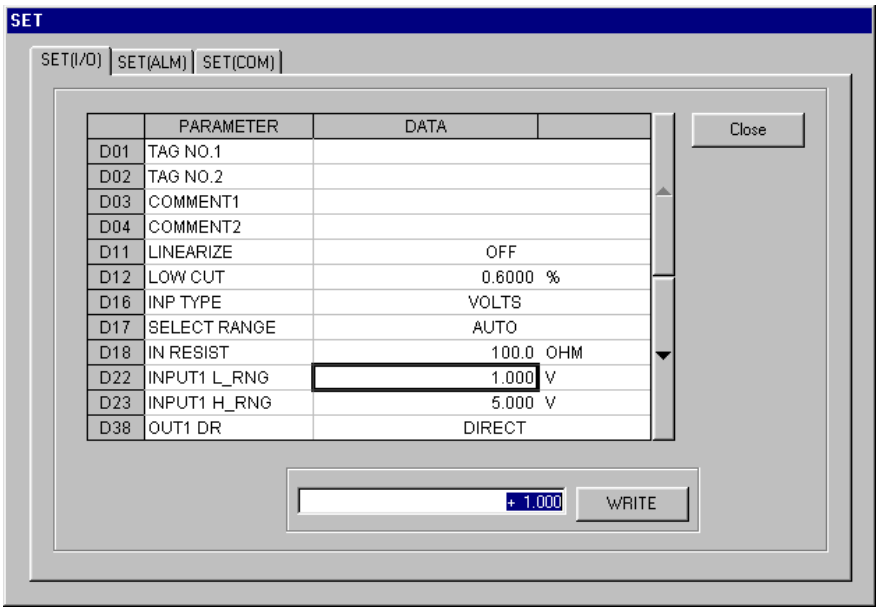
4.2 Setting Parameters

This section describes how to input individual parameter data and write the data to the JUXTA instrument from the parameter setting display (the SET dialog box).

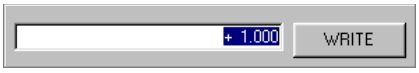
4.2.1 Entering a Setting Value and Writing It to JUXTA

The following describes how to change the input range of JUXTA VJH7 (isolator unit) with reference to the example of changing the input range from 1 to 5 V DC, to –10 to 10 V DC.

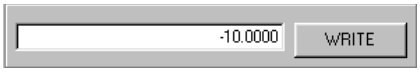
Step 1 In the SET dialog box, open the **SET (I/O)** page. Then double-click the data cell of parameter **D22: INPUT1 L_RNG**.

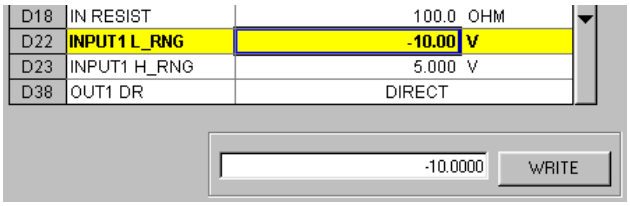


Step 2 The text box at the bottom becomes available, showing the current setting



Step 3 In the text box, type `-10`and click **WRITE.** The new data is written to the JUXTA instrument, and the display data in the cell is updated from 1 to –10.





CAUTION

After you click **WRITE**, the data value shown in the data cell may be different from the value you entered in the text box. This is because the JUXTA instrument has limits for some of its parameters, and if the entered value is outside the limits, the instrument automatically sets the parameter to the nearest limit value.

Step 4 In the same way as Step 1 to Step 3, set the 100% value of the input range by double-clicking the data cell of **D23: INPUT1 H_RNG**.

Step 5 Enter `10`in the text box and click **WRITE**. The data is written to the JUXTA instrument, and the display data is updated from 5 to 10.

The input range of the connected JUXTA instrument has now been changed from 1 to 5 V DC, to –10 to +10 V DC.

4.2.2 Notes on Setting Parameters

The input range/output range of a JUXTA instrument can be set in two ways, depending on the model of the instrument.

(1) Models for which 0% and 100% values of the range are set:

The high range limit and low range limit are represented as L_RNG and H_RNG, as in **INPUT L_RNG** and **INPUT H_RNG**.

(2) Models for which the span value and span of the range are set:

The 0% value and span are represented as ZERO and SPAN, respectively, as in **INP ZERO** and **INP SPAN**.

For example, to set an input range of –10 to 10 V DC:

- In case (1), set –10 for **INPUT L_RNG** and 10 for **INPUT H_RNG**.
- In case (2), set –10 for **INP ZERO** and 20 for **INP SPAN**.

WARNING

When you set the range of a JUXTA instrument, confirm the respective parameter codes to determine whether they are **L_RNG** and **H_RNG**, or **ZERO** and **SPAN**, to make sure that you set 0% and 100% values of the range or set the 0% value and span.

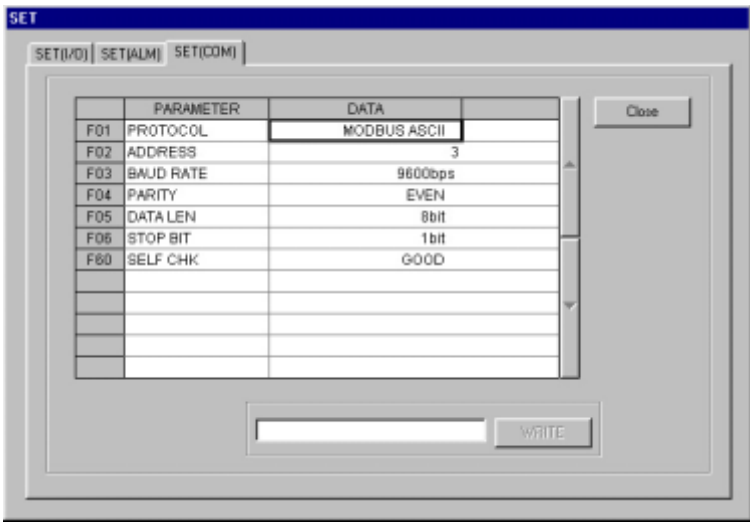
CAUTION

For a numeral parameter, the number of significant digits is 4. For example, if you enter 12345, the data value will be written as 12340 and if you enter 0.12345, the data value will be written as 0.12340.

4.2.3 Selecting an Item from a List Box and Writing It to JUXTA

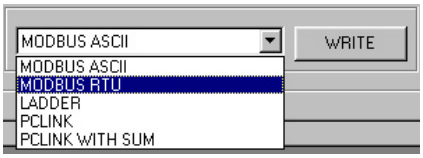
As an example of procedures to select an item from a list box and write it to the JUXTA instrument, the following shows how to change the communication protocol for a JUXTA VJH7 (an isolator whose output 2 is a communication port) from MODBUS ASCII to MODBUS RTU.

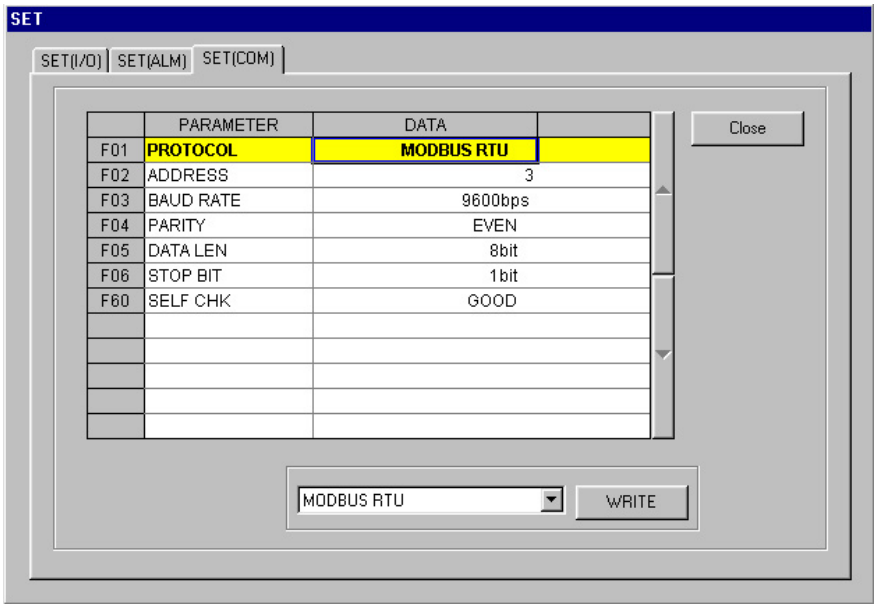
Step 1 In the SET dialog box, click the **SET (COM)** tab. The **SET (COM)** page contains the communication settings.



Step 2 Double-click the data cell for parameter **PROTOCOL (F01)**. The text box at the bottom of the dialog box then becomes available.

Step 3 Click the arrow button (▼) next to the text box, select **MODBUS RTU** from the list which opens, and then click **WRITE**. The change you made is written to the JUXTA instrument.





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5. Setting a Program

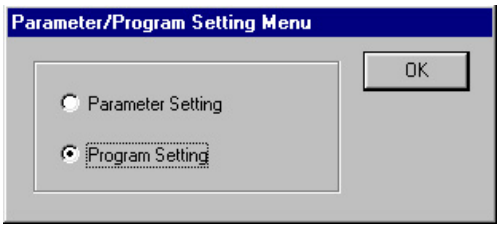
This chapter describes the procedure to set a program for a JUXTA instrument via the Program Editor dialog box.

See Also

When setting programs, refer to the parameter lists given in the documentation for the respective JUXTA computing units. For details about creating a program, see the Technical Information documents for the respective programmable computing units (document No. TI 231-01E or TI 1501-01E).

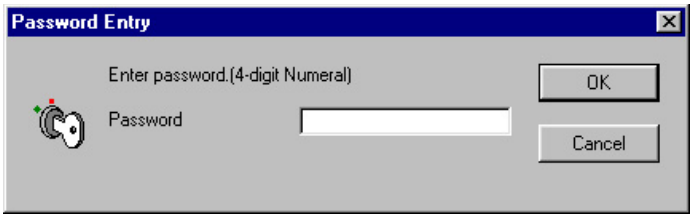
5.1 Opening Program Editor Dialog Box

Step 1 Start VJ77. In the Parameter/Program Setting Menu dialog box, select **Program Setting** then click **OK**.



Step 2 Only if a password is set for VJ77, does the Password Entry dialog box appear. In the **Enter password (4-digit Numeral)** box, type the 4-digit password and click **OK**.

This dialog box does not appear if no password is set.



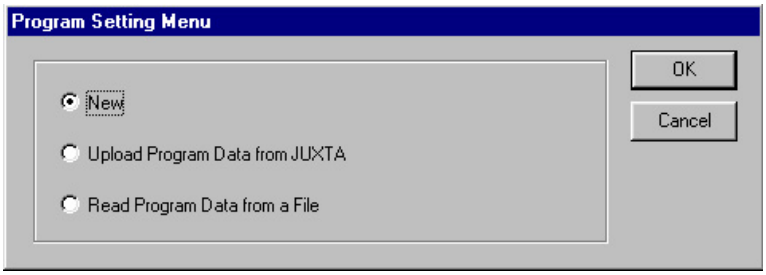
TIP

A password can be set for security to prevent parameter and program settings for JUXTA instruments from being changed by an unauthorized person. If a wrong password is entered, data can be read from the JUXTA instrument but cannot be written to it.

See Also

For how to set a password, see Appendix.

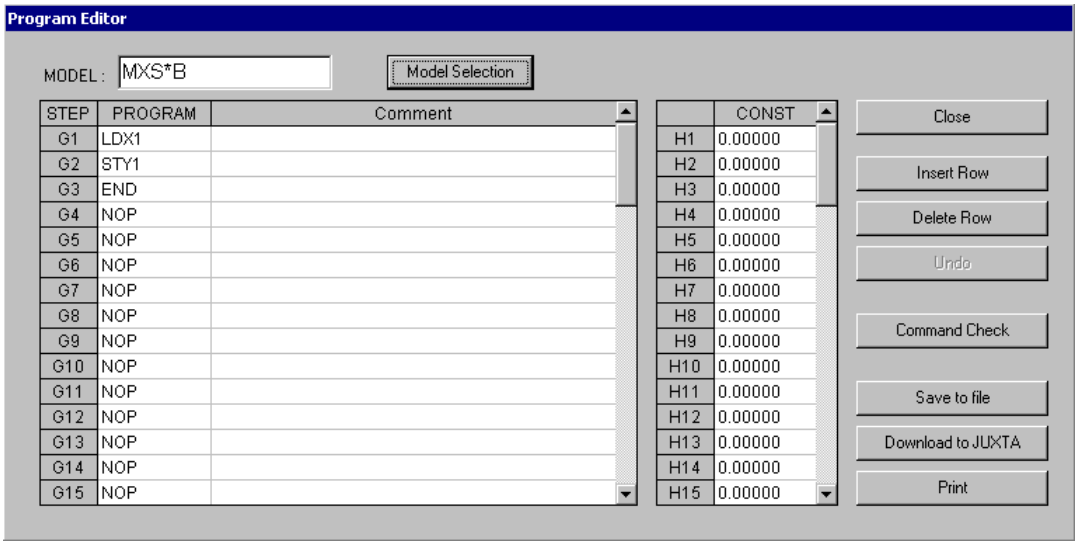
Step 3 The Program Setting Menu dialog box appears. Select **New, Upload Program Data from JUXTA,** or **Read Program Data from a File** depending on what you want to do, then click **OK**.



See Also

For operations after selecting **Upload Program Data from JUXTA** or **Read Program Data from a File**, see Chapter 6, “Uploading and Downloading Data from/to JUXTA.”

The Program Editor dialog box appears. You can now start setting a program.



5.2 Setting a Program

This section describes the procedure to enter data via the Program Editor dialog box. To set a program, do one of the following:

- Create a new program.
- Upload program data from a JUXTA instrument and modify it.
- Read program data from a file and modify it.

Whichever method is chosen, there are no major differences in operations in the Program Editor dialog box. The following is an example of the procedure to create a new program.

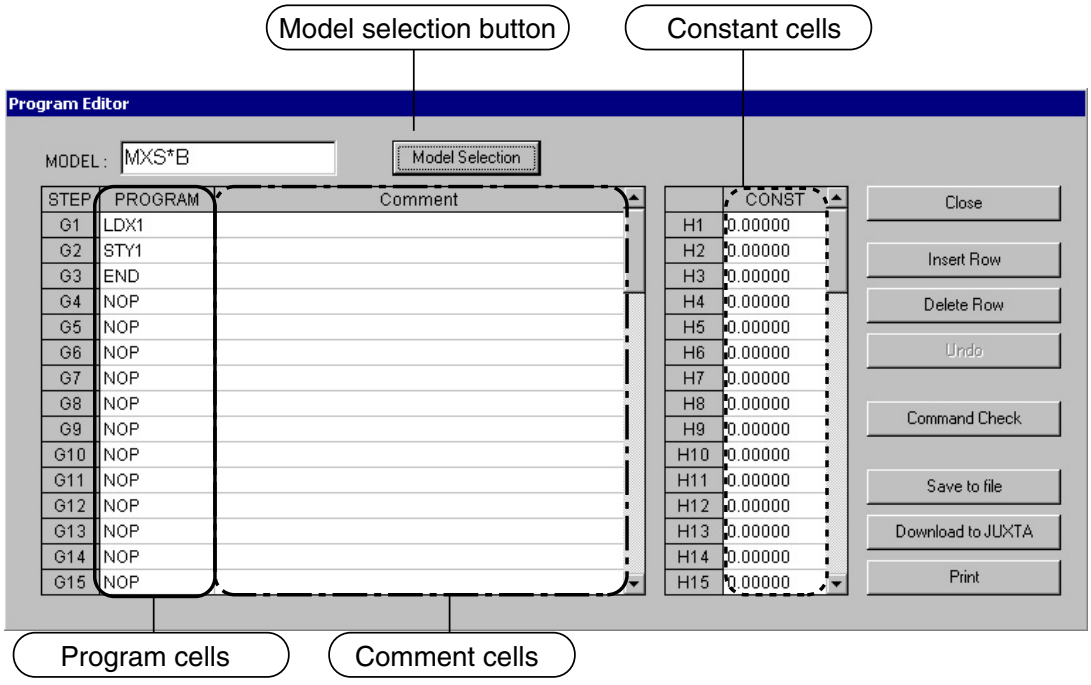
5.2.1 Creating a New Program

The following is an example of the procedure to set a moving average computation (of the last 100 seconds) for a MXS free program.

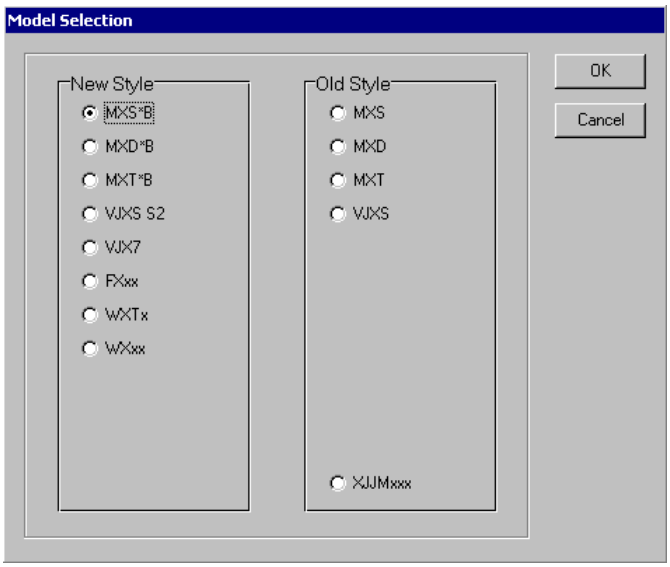
CAUTION

- When setting a program, be sure to click Model Selection button to select a model (see Step 2 in the following procedure). Selecting a model name updates the contents of the **STEP** and **CONST** columns accordingly.
- If the model name of your target instrument is not included in the list of models, click **Close** to return to the Program Setting Menu dialog box. Then, choose **Upload Program Data from JUXTA** and open the Program Editor dialog box again.

Step 1 In the Program Setting Menu dialog box, select **New**, then click **OK**. The Program Editor dialog box appears.



Step 2 Click the Model Selection button and select the model name from the Model Selection dialog box. (Select MXS*B in this example) Click **OK**.



Step 3 To input program codes, double-click a Program cell and type a code.
In this example, double-click the Program cell in step **G1** and type LDX1.

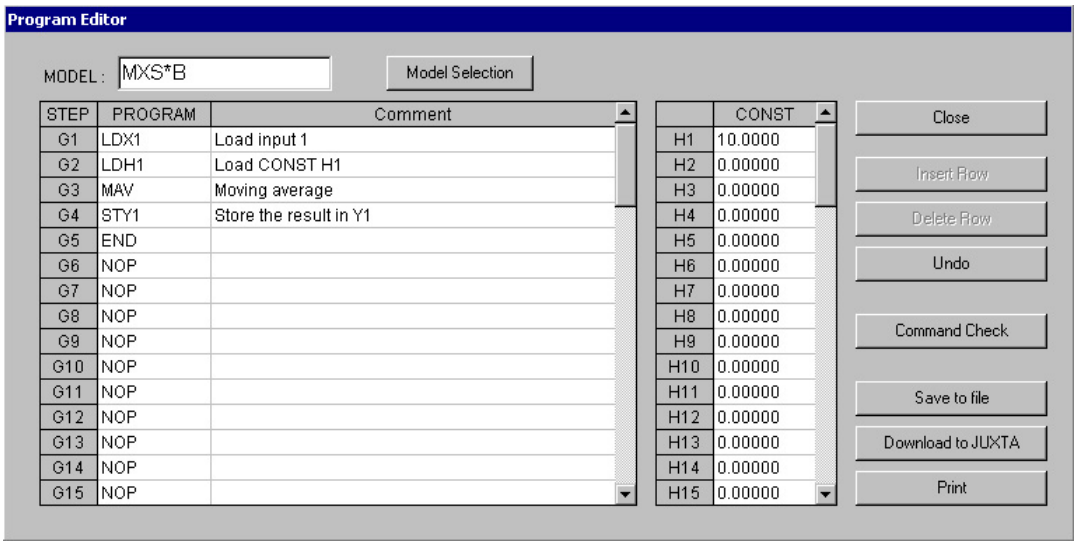
Step 4 In the same way, input:

- LDH1 in step **G2**,
- MAV in **G3**,
- STY1 in **G4**, and
- END in **G5**.

Step 5 To input a comment for each step, input the comment in the Comment cell. A maximum of 25 characters can be entered for a comment.

Step 6 Set the moving average time span to 100 seconds. This data is to be specified as a percent value where 0.0–100.0% corresponds to 0–1000 seconds. Double-click the constant cell for **H1** and enter 10.

Now the program setting is complete.



CAUTION

In the Program Editor dialog box, the step numbers of program cells and the constant numbers of constant cells differ depending on the JUXTA model selected. Refer to the parameter lists given in the documentation for the respective JUXTA computing units.

WARNING

DO NOT change a program for a computing unit of the JUXTA F series and JUXTA W series other than programmable computing units. In case the unit is operated on the computing function with program changed after factory-ship, the operation will not be guaranteed.

5.2.2 Functions to Facilitate Program Coding

■ To insert a step:

Click the cell immediately below the position where you want to insert a step, then click **Insert Row** or press the F3 key.

■ To delete a step:

Click the cell of the step you want to delete, then click **Delete Row** or press the F4 key.

TIP

If the program contains a jump (GO**) or a conditional jump (GIF**) and a step is inserted or deleted before a destination to be jumped, VJ77 automatically changes the destination step number specified with the GO or GIF code. For example, when GO6 (meaning “go to step G6”) is set in step G2, deleting step G3 automatically changes the code in step G2 to GO5. Or, if step G6 (the destination step!) is deleted, GO6 in step G2 is automatically changed to simple GO, namely, the destination step number is cleared.

STEP	PROGRAM	Comment
G1	LDX1	
G2	GO6	
G3		
G4		
G5		
G6	END	
G7	NOP	
G8	NOP	

STEP	PROGRAM	Comment
G1	LDX1	
G2	GO5	The specified destination step number is changed.
G3		
G4		
G5	END	
G6	NOP	
G7	NOP	
G8	NOP	

■ To check the syntax of the program you created or modified:

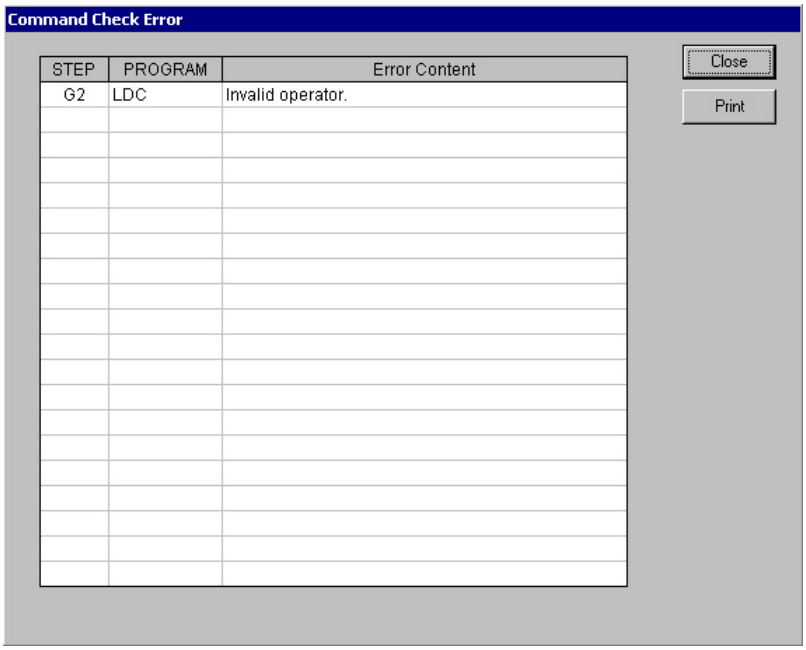
Command Check **Click Command Check.**

CAUTION

- The **Command Check** function is disabled when setting up the program of any model whose name is not listed in the Model Selection dialog box.
- The **Command Check** button is only used to check the spelling of operation codes.

● A dialog box appears if no error is found:

● A dialog box appears when an error is found:



■ To copy/move program code, comment, or constant to another cell:

● To copy contents of a cell or characters:

Select a cell or characters and press the Ctrl + C keys. Then click the position to which you want to copy the contents of the selected cell or the selected characters, and press the Ctrl + V keys.

● To move contents of a cell or characters:

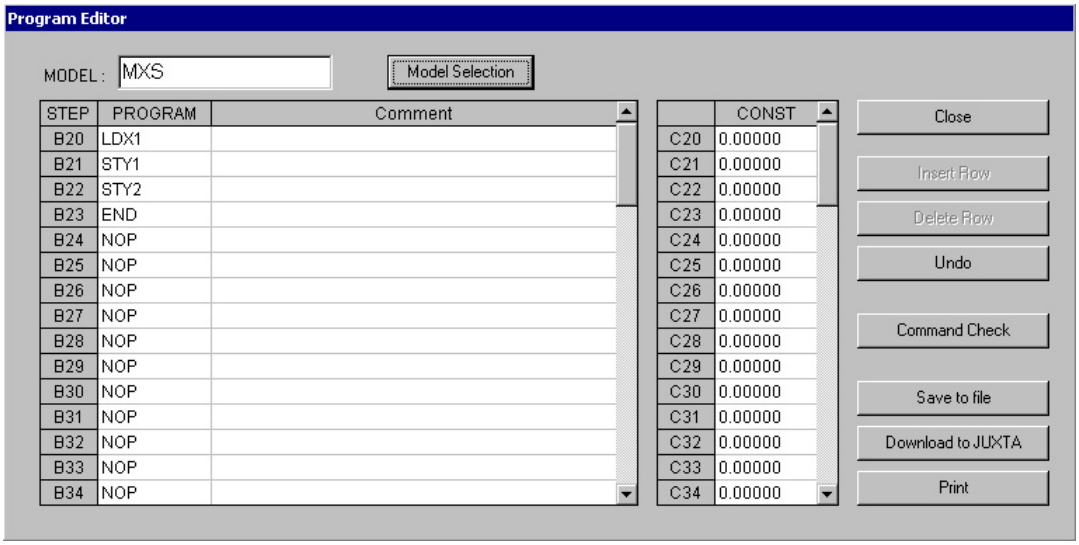
Select a cell or characters and press the Ctrl + X keys. Then, click the position to which you want to move the contents of the selected cell or the selected characters, and press the Ctrl + V keys.

5.2.3 Converting Free (User) Program Automatically

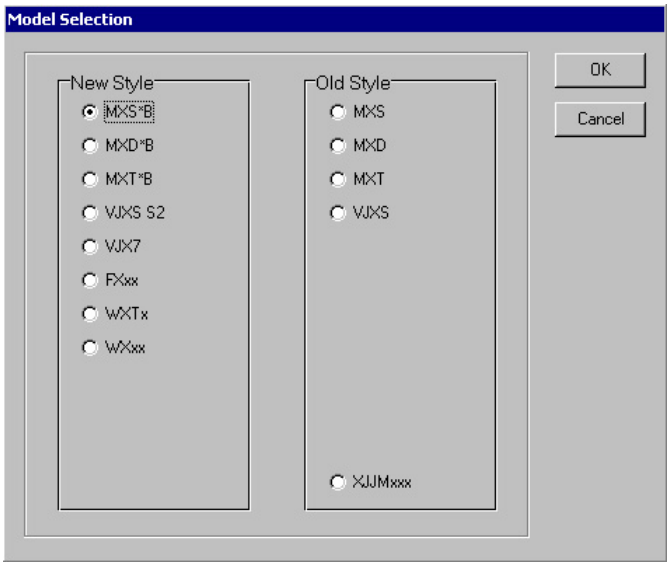
This section explains how to convert old style MXS free (user) programs to those for the new style MXS.

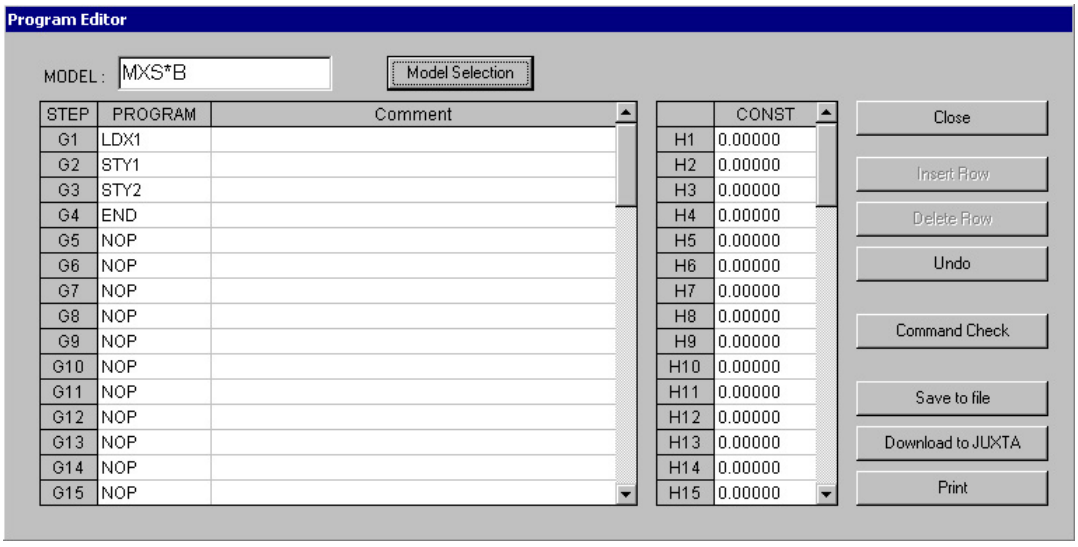
Step 1 Upload free (user) program data from the JUXTA (see Section 6.1.3 for details on the uploading procedure).

Step 2 In the Program Editor dialog box, click the **Model Selection** button.



Step 3 In the Model Selection dialog box, select a new style **MXS** and click the **OK** button. Check the command after conversion because some program codes are not available depending on the model.





Step 4 Download the free (user) program to the JUXTA (see Section 6.2.2 for details on the downloading procedure).

Step 5 Save the free (user) program to the disk as necessary (see Section 7.2 for details on the saving procedure).

■ Automatic conversion of free programs

Free programs can be converted from older style models to new style models or vice versa, or between different models. Converting a free program automatically causes the start address name, start address number and operation code to be converted as well. Automatic conversion of free programs may not be possible, however, depending on the number of steps in the user program or on the number of fixed constants (CONST).

Example: Assume that a new style MXS user program (59 steps and 59 fixed constants) is converted to an old style MXS user program. In this case, conversion is not possible since the old style MXS can only have up to 40 steps and 44 fixed constants; therefore the number of user program steps exceeds the limit.

Old style models: MXS, MXD, MXT, VJXS, XJJMnnn

New style models: MXS(*B), MXD(*B), MXT(*B), VJXS(S2), VJX7, FXnn, WXTn, WXnn

● Converting the start address of user programs and fixed constants (CONST)

Target model to which the user program is converted	Program start address after conversion	CONST start address after conversion
FXnn, WXn	B20	C11
WXTn, MXS, MXD, MXT, VJXS, XJJMnnn	B20	C20
VJX7	G01	H01
MXS(*B), MXD(*B), MXT(*B), VJXS(S2)	G01	H01

● Converting operation code (operation code LDC before conversion and operation code LDH)

If the new style target model to which the program is converted is either the VJX7, MXS(*B), MXD(*B), MXT(*B) or VJXS(S2), the operation code LDC is converted to LDH.

If the source model whose program is converted is new style VJX7 and the target model is either the FXnn, WXTn or WXnn; or either the old style MXS, MXD, MXT, VJXS or XJJMnnn, the operation code LDH is converted to LDC.

6. Uploading and Downloading Data from/to JUXTA

This chapter describes how to upload/download parameter or program data.

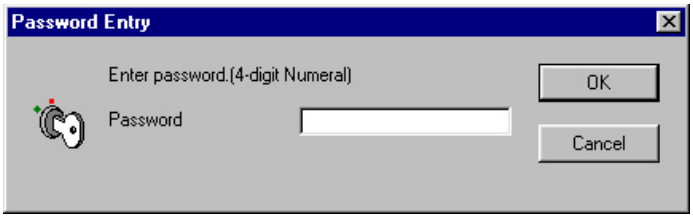
6.1 Uploading Data to Your PC

This section describes how to upload parameter or program data inside a JUXTA instrument or open a parameter file.

6.1.1 Uploading Parameter Data from JUXTA Instrument

Step 1 Start VJ77. In the Parameter/Program Setting Menu dialog box, select **Parameter Setting and** click **OK**.

Step 2 If a password is set for VJ77, the Password Entry dialog box appears. Enter the password (4-digit numeral) in the entry box and click **OK**. This dialog box does not appear if no password is set.



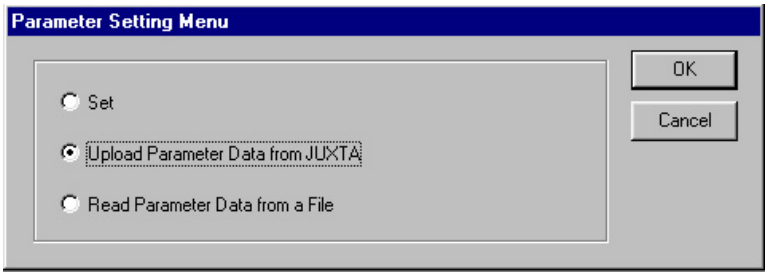
TIP

A password can be set for security to prevent parameter and program settings for JUXTA instruments from being changed by an unauthorized person. If a wrong password is entered, data can be read from the JUXTA instrument but cannot be written to it.

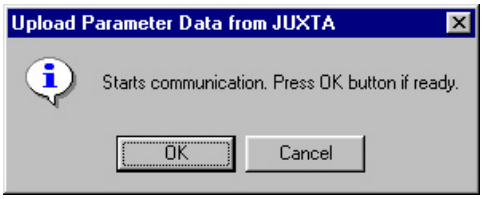
See Also

For how to set a password, see Appendix.

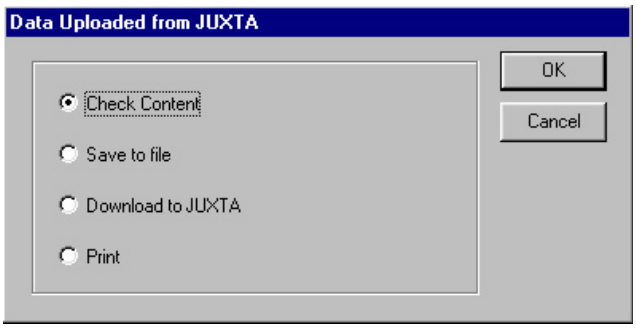
Step 3 The Parameter Setting Menu dialog box appears. Select **Upload Parameter Data from JUXTA** and click **OK**.



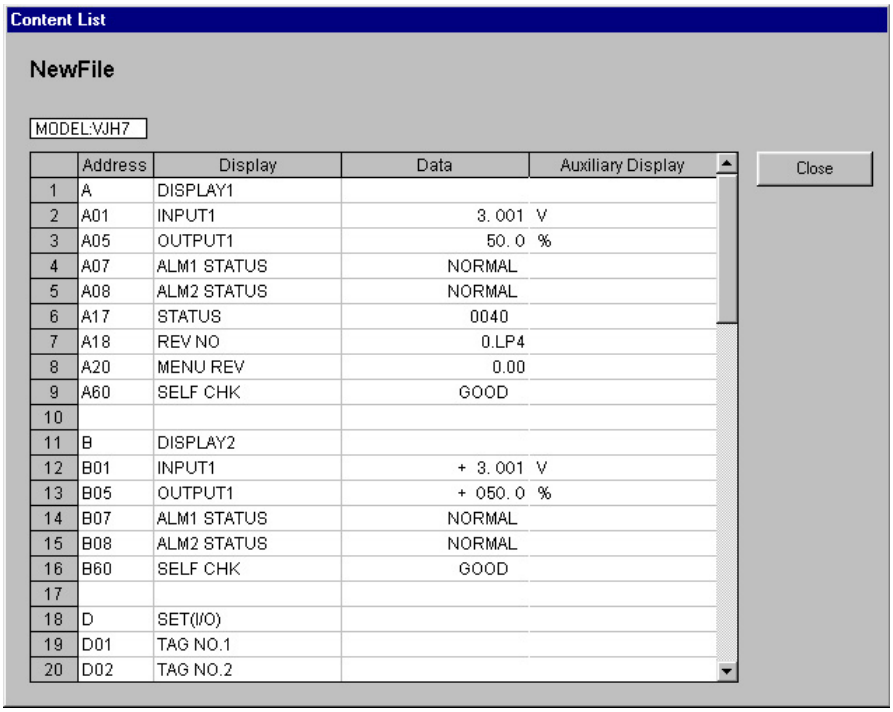
Step 4 The “Starts communication. Press OK button if ready.” message appears. Click **OK** to upload data from the JUXTA instrument.



Step 5 The Data Upload from JUXTA dialog box appears.



Step 6 Select **Check Content and** click **OK**. The Content List dialog box appears, showing all the parameter values of the JUXTA instrument.



	Address	Display	Data	Auxiliary Display
1	A	DISPLAY1		
2	A01	INPUT1	3.001 V	
3	A05	OUTPUT1	50.0 %	
4	A07	ALM1 STATUS	NORMAL	
5	A08	ALM2 STATUS	NORMAL	
6	A17	STATUS	0040	
7	A18	REV NO	0.LP4	
8	A20	MENU REV	0.00	
9	A60	SELF CHK	GOOD	
10				
11	B	DISPLAY2		
12	B01	INPUT1	+ 3.001 V	
13	B05	OUTPUT1	+ 050.0 %	
14	B07	ALM1 STATUS	NORMAL	
15	B08	ALM2 STATUS	NORMAL	
16	B60	SELF CHK	GOOD	
17				
18	D	SET(I/O)		
19	D01	TAG NO.1		
20	D02	TAG NO.2		

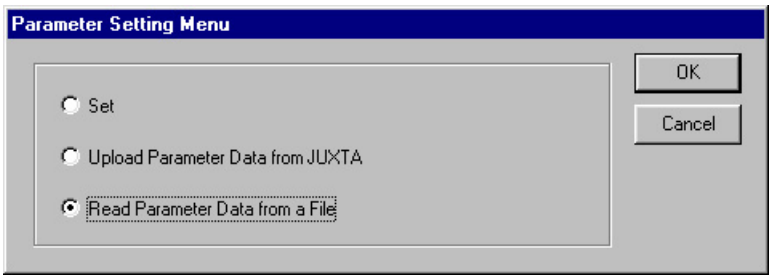
CAUTION

The parameter values in the Content List dialog box cannot be changed.

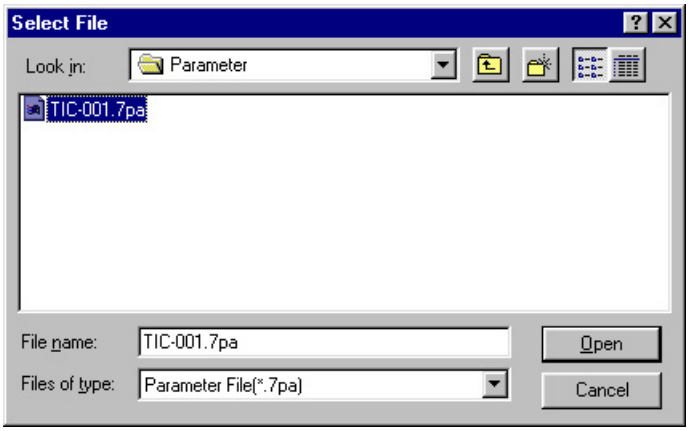
6.1.2 Opening a Parameter File

Step 1 Start VJ77. In the Parameter/Program Setting Menu dialog box, select **Parameter Setting** then click **OK**. If a password has been set, enter the password in the Password Entry dialog box and click **OK**.

Step 2 The Parameter Setting Menu dialog box appears. Select **Read Parameter Data from a File** and click **OK**.



Step 3 The Select File dialog box opens. Select a file name from the list box and click **Open**. To continue, follow steps 5 to 6 in Section 6.1.1, “Uploading Parameter Data from JUXTA Instrument.”



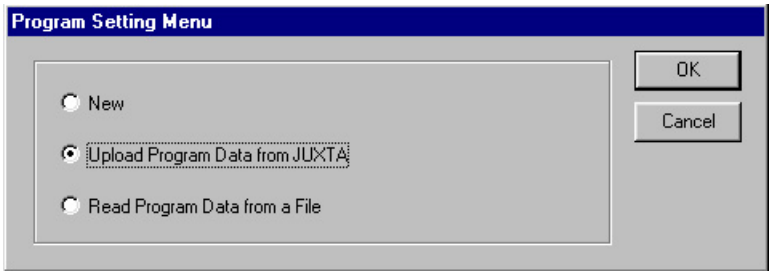
See Aiso

For how to save the parameter data to disk, see Chapter 7, “Saving Data.”

6.1.3 Uploading Program Data from JUXTA Instrument

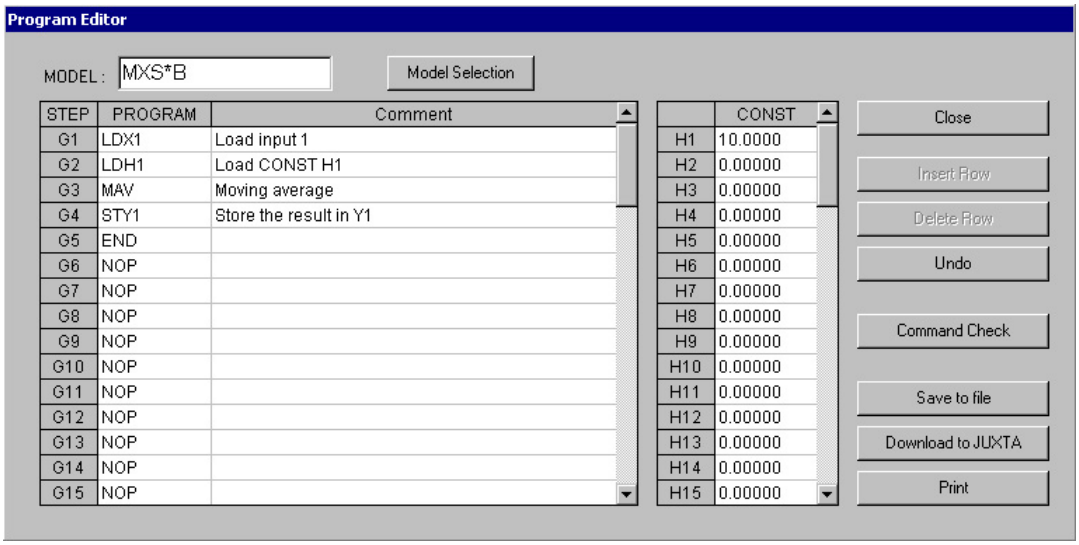
Step 1 In the Parameter/Program Setting Menu dialog box, select **Program Setting** then click **OK**. If a password is set, enter the password in the Password Entry dialog box and click **OK**.

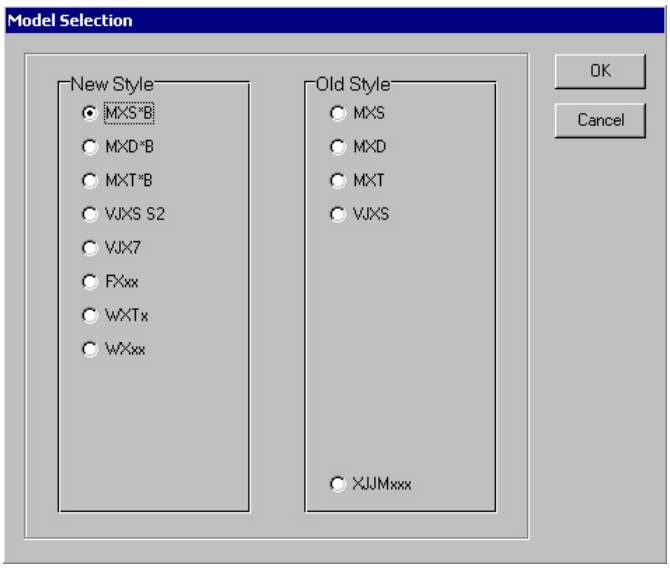
Step 2 The Program Setting Menu dialog box appears. Select **Upload Program Data from JUXTA** and click **OK**.



Step 3 The “Starts communication. Press OK button if ready.” message appears. Click **OK** to start uploading.

Step 4 The Program Editor dialog box appears. In this dialog box, programs can be modified and models can be changed.





CAUTION

Only constants (CONST) are displayed for a computing unit other than programmable computing units of the JUXTA VJ series, JUXTA M series, and WXT.

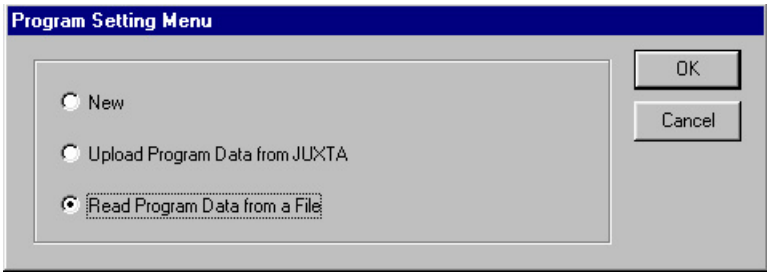
See Aiso

For the how to create and modify a program in the Program Editor dialog box, see Chapter 5, “Setting a Program.”

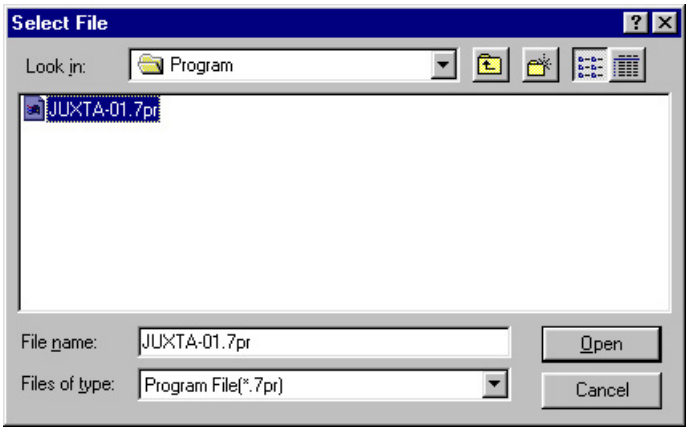
6.1.4 Opening a Program File

Step 1 In the Parameter/Program Setting Menu dialog box, select **Program Setting** then click **OK**. If a password has been set, enter the password in the Password Entry dialog box and click **OK**.

Step 2 The Program Setting Menu dialog box appears. Select **Read Program Data from a File** and click **OK**.



Step 3 The Select File dialog box opens. Select the file name from the list box and click **Open**. The Program Editor dialog box appears, allowing you to modify the uploaded program.



See Also

For how to save program data to disk, see Chapter 7, “Saving Data.”

6.2 Downloading Data to JUXTA Instrument

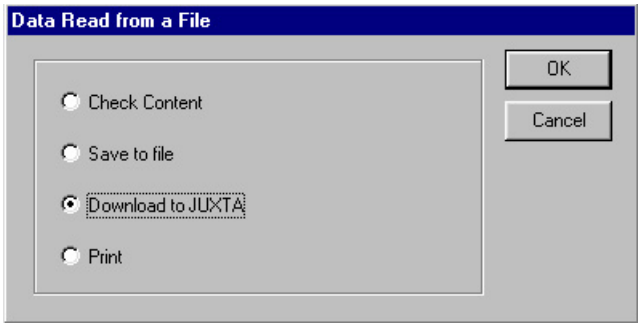
This section describes the operation to download the parameter or program data from VJ77 to the JUXTA instrument. You can copy parameter settings or a program to multiple JUXTA instruments.

CAUTION

Before you download parameter data, make sure that the model name of the JUXTA instrument selected in **MODEL** box matches with that of the product's nameplate. For some models, VJ77 cannot determine whether it is a standard product or a customized product, and a communication error may result.

6.2.1 Downloading Parameter Data to JUXTA Instrument

Step 1 In the Data Upload from JUXTA or Data Read from a File dialog box, select **Download to JUXTA** then click **OK**.



Step 2 The "Starts communication. Press OK button if ready." message appears. Click **OK** to download data to the JUXTA instrument.

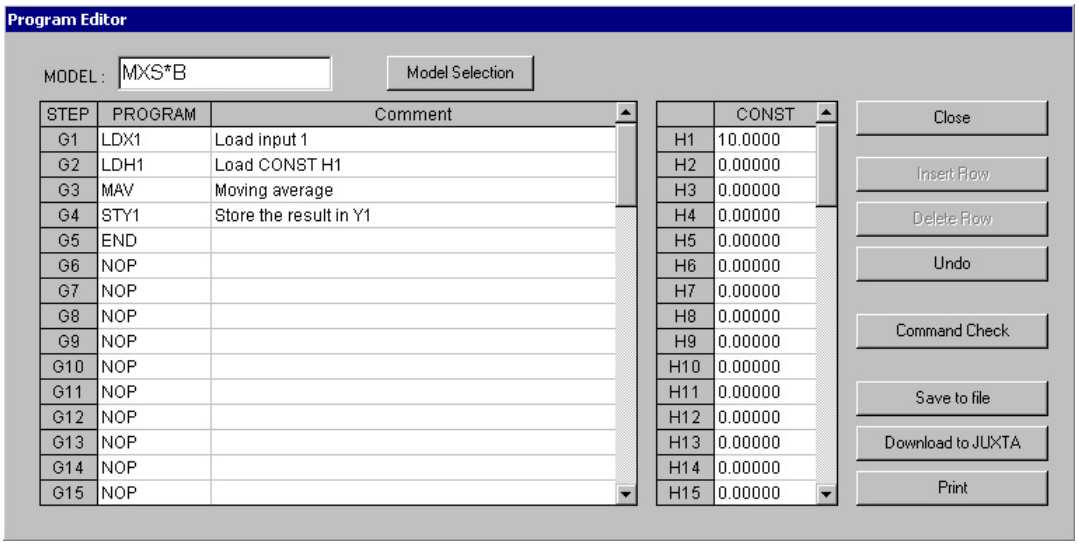
Step 3 The Now Communicating dialog box appears and shows the progress of downloading. When the download is complete, the "Downloading to JUXTA completed." message appears.

CAUTION

VJ77 only downloads the data shown in the SET dialog box. Data shown in the DISPLAY or ADJUST dialog box is not downloaded.

6.2.2 Downloading a Program to JUXTA Instrument

Step 1 In the Program Editor dialog box click **Download to JUXTA**.



Step 2 The “Starts communication. Press OK button if ready.” appears. Click **OK** to start downloading.

Step 3 The Now Communicating dialog box appears and shows the progress of downloading. When the download is complete, the “Downloading to JUXTA completed.” message appears.

CAUTION

Data in the **Comment** cells are not downloaded.

A created program downloaded to the JUXTA computing unit other than programmable computing units is not downloaded and only constants are downloaded.

TIP

The “Error found during command check. Do you want to see the error content?” appears if the program contains any syntax error or other kind of error. Clicking **Yes** opens the Command Check Error dialog box shown in Section 5.2.2. Or, clicking **No** downloads the data containing the program with syntax errors. In this case, each illegal program code will overwrite the corresponding current code or be written as “NOP” and the Check Downloading to JUXTA dialog box appears.

Blank Page

7. Saving Data

This chapter describes how to save to disk the parameter/program data that was uploaded or you created.

Parameter data and program data will be saved with the following filename extensions:

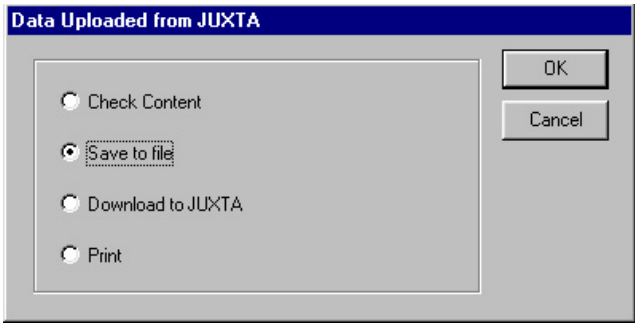
- Parameter data files: ********.7pa
- Program data files: ********.7pr

(File names are 16 or less characters.)

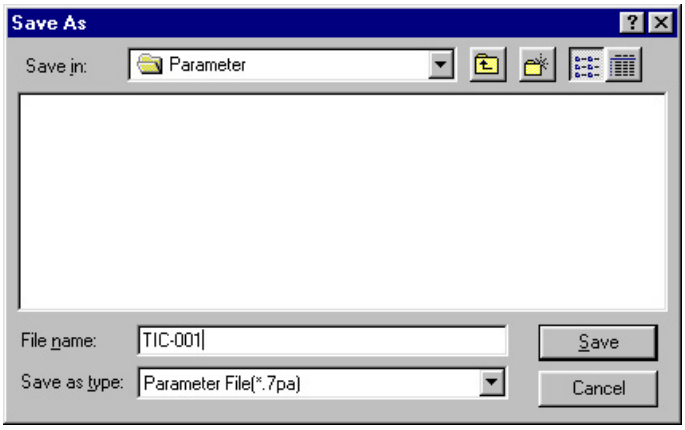
7.1 Saving Parameter Data to Disk

Step 1 Follow the instructions in Section 6.1, “Uploading Data to Your PC” to upload parameter data.

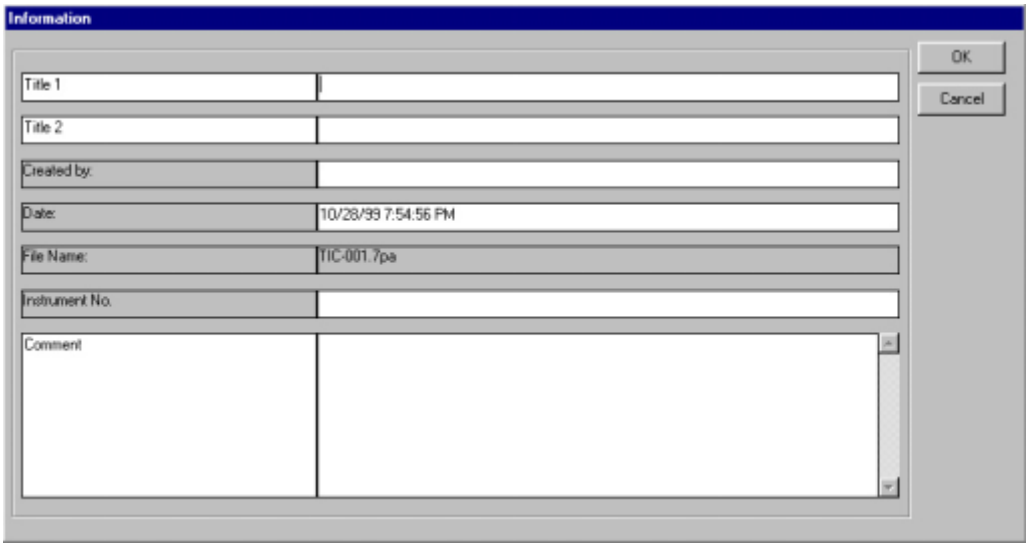
Step 2 In the Data Uploaded from JUXTA dialog box or Data Read from a File dialog box, select **Save to File** and click **OK**.



Step 3 The Save As dialog box opens. In the **File name** box, type the file name within 16 characters and click **Save**. The Information dialog box appears.



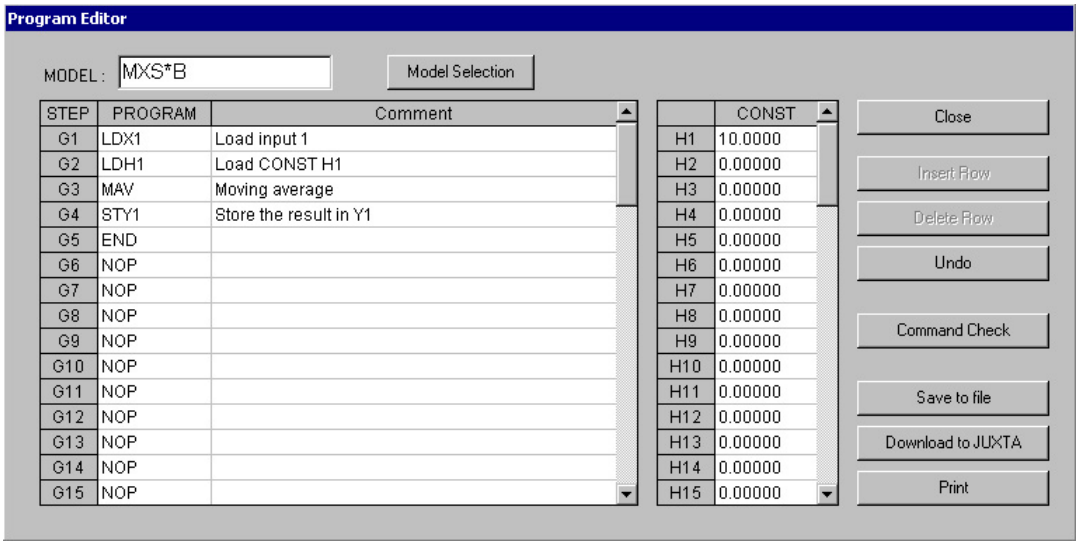
Step 4 In the Information dialog box, set the title, subtitle, author, date, instrument serial number, and comments and click **OK**. The file is saved to disk.



(A maximum of 40 characters can be entered for each of the title, subtitle, author, date and instrument serial number. A maximum of 400 characters can be entered for a comment.)

7.2 Saving Program Data to Disk

Step 1 In the Program Editor dialog box, click **Save to file**. The Save As dialog box opens.



Step 2 In the **File name** box of the Save As dialog box, type the file name within 16 characters and click **Save**. The Information dialog box appears. In the same way as in Section 7.1, set the file information and click **OK**. The file is saved to disk.

8. Printing Data

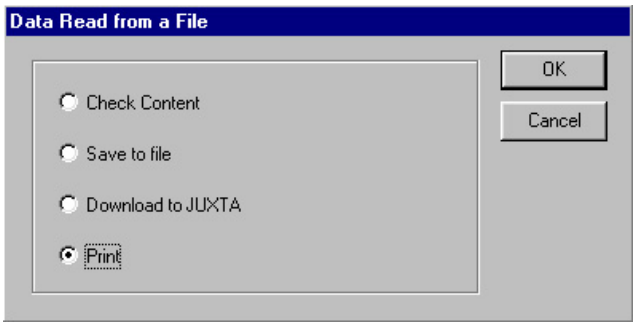
This chapter describes how to print the parameter or program data.

8.1 Printing Data

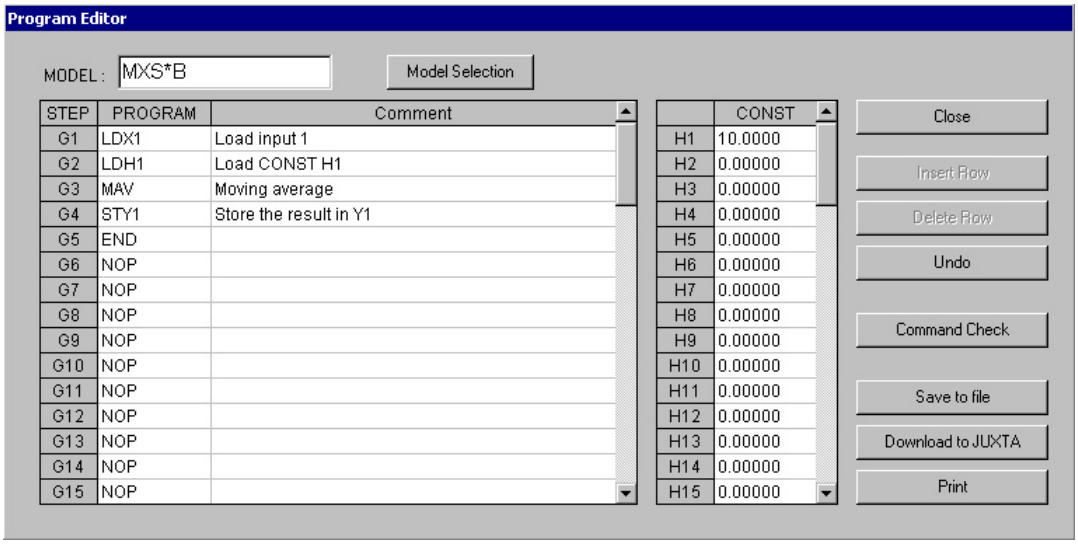
Step 1 To print parameters, in the Data Uploaded from JUXTA dialog box or Data Read from a File dialog box, select **Print** and click **OK**.

To print a program, click **Print** in the Program Editor dialog box.

● Printing parameters

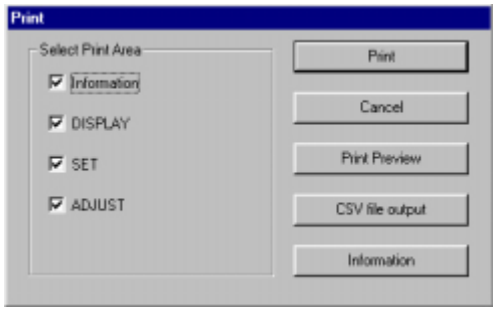


● Printing a program

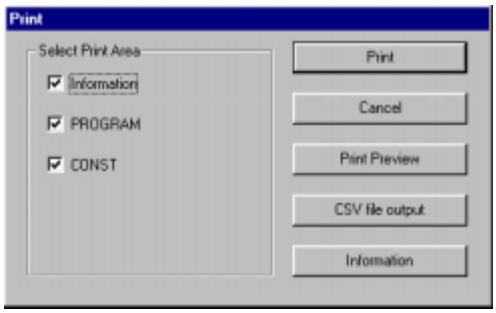


Step 2 The Print dialog box appears. You can select the ranges of items to be printed by selecting and clearing the check boxes. Then, click **Print** to start printing.

● Printing parameters



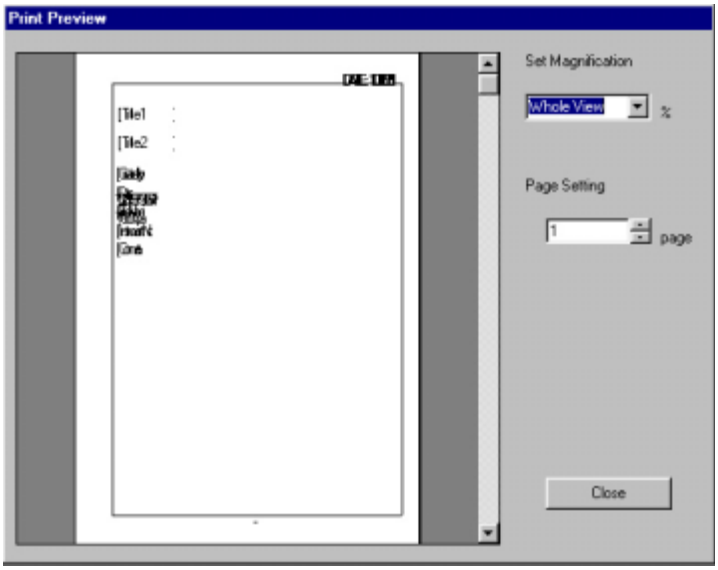
● Printing a program



8.2 Previewing the Print Image

This section describes how to view the print image.

Step 1 In the Print dialog box, click **Print Preview** to open the Print Preview dialog box. If the data spreads over more than one page, you can view other pages by clicking the arrow buttons next to the **Page Setting** box. You can also change the display magnification by selecting the zoom factor from the **Set Magnification** list. To return to the Print dialog box, click **Close**.



8.3 Saving Print Data As a Comma-separated Value File

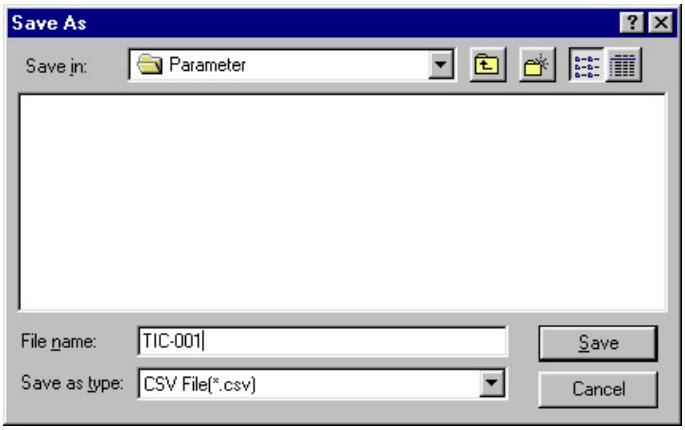
You can save the print data in a comma-separated value (CSV) file.

- Filename extension of CSV files: *.csv

  (File names are 16 or less characters.)

Step 1 In the Print dialog box, click **CSV file output**. The Save As dialog box appears.

Step 2 In the **File name** box, type the file name within 16 characters and click **Save**.



9. Monitoring I/O Values

This chapter describes how to monitor input/output values of a JUXTA instrument and the self-diagnosis result. You can monitor this information via the DISPLAY dialog box.

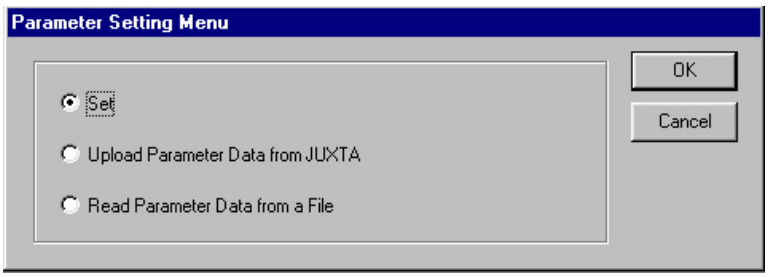
9.1 Opening the Monitor Dialog Box

● Preparation

Connect the JUXTA instrument to the personal computer, then turn on the power to the instrument.

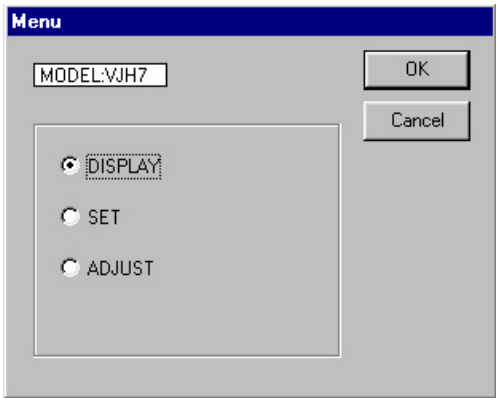
Step 1 Start VJ77. In the Parameter/Program Setting Menu dialog box, select **Parameter Setting** and click **OK**. If a password is set, enter the password in the Password Entry dialog box and click **OK**.

Step 2 The Parameter Setting Menu dialog box appears. Select **Set** and click **OK**.



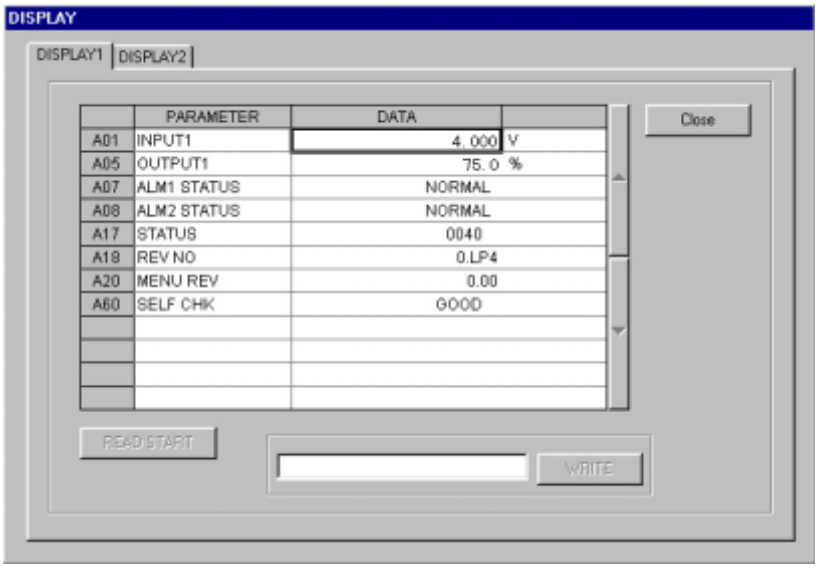
Step 3 The “Starts communication. Press OK button if ready.” message appears. Click **OK**.

Step 4 The Menu dialog box appears. Select **DISPLAY** and click **OK**.

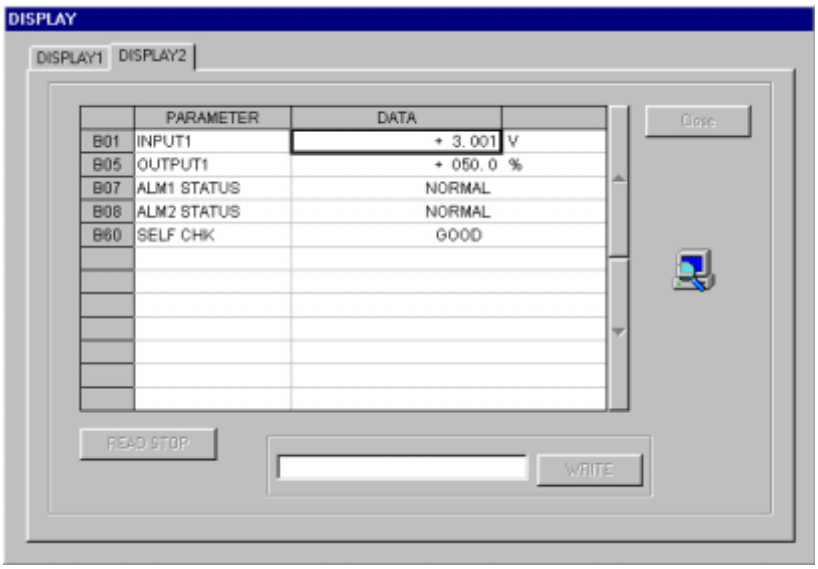


Step 5 The DISPLAY dialog box appears. For some models of JUXTA, this dialog box has the **DISPLAY1** and **DISPLAY2** pages.

● DISPLAY1 page of DISPLAY dialog box



● DISPLAY2 page of DISPLAY dialog box



TIP

The **DISPLAY1** page or the DISPLAY dialog box without a tabbed page shows the conditions at the time of communication. However, the **DISPLAY2** page updates its display contents in approximately 5-second intervals (periodic upload for updating).

To update the display data on the **DISPLAY1** page or in the DISPLAY dialog box without a tabbed page, double-click the cell of the parameter you wish to update.

To stop the periodic upload for updating of the **DISPLAY2** page, click **READ STOP**. The button label changes from **READ STOP** to **READ START**. To resume the periodic upload for updating, click **READ START**.

10. Adjusting JUXTA Instruments

This chapter describes how to adjust the input/output of JUXTA instruments, and the settings of the wiring resistance compensation. These adjustments are made via the ADJUST dialog box.

10.1 Opening the Adjusting Dialog Box

● Preparation

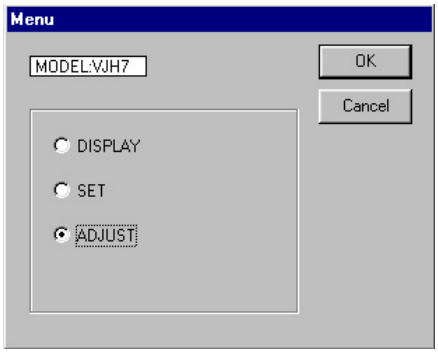
Connect the JUXTA instrument to the personal computer, then turn on the power to the instrument.

Step 1 Start VJ77. In the Parameter/Program Setting Menu dialog box, select **Parameter Setting** and click **OK**. If a password has been set, enter the password in the Password Entry dialog box and click **OK**.

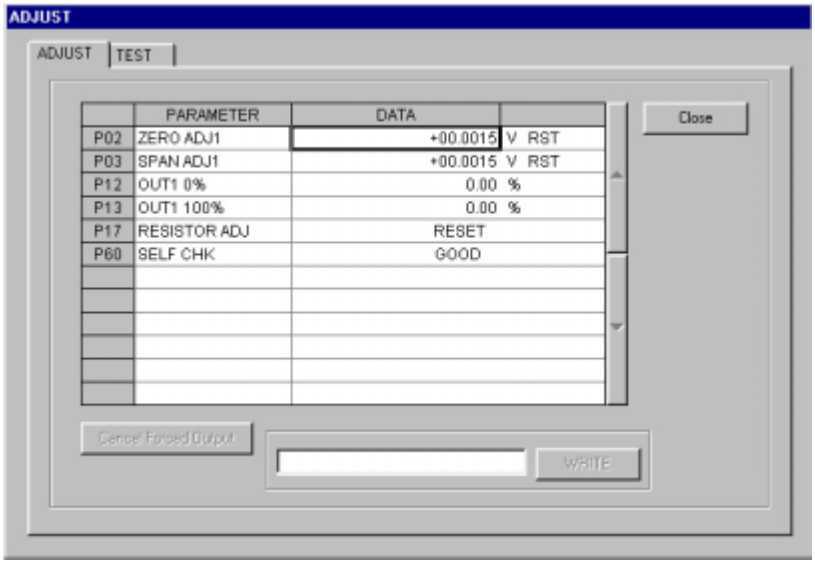
Step 2 The Parameter Setting Menu dialog box appears. Select **Set** and click **OK**.

Step 3 The "Starts communication. Press OK button if ready." message appears. Click **OK**.

Step 4 The Menu dialog box appears. Select **ADJUST** and click **OK.**



Step 5 The ADJUST dialog box appears.



10.2 Performing Fine Adjustment of Input

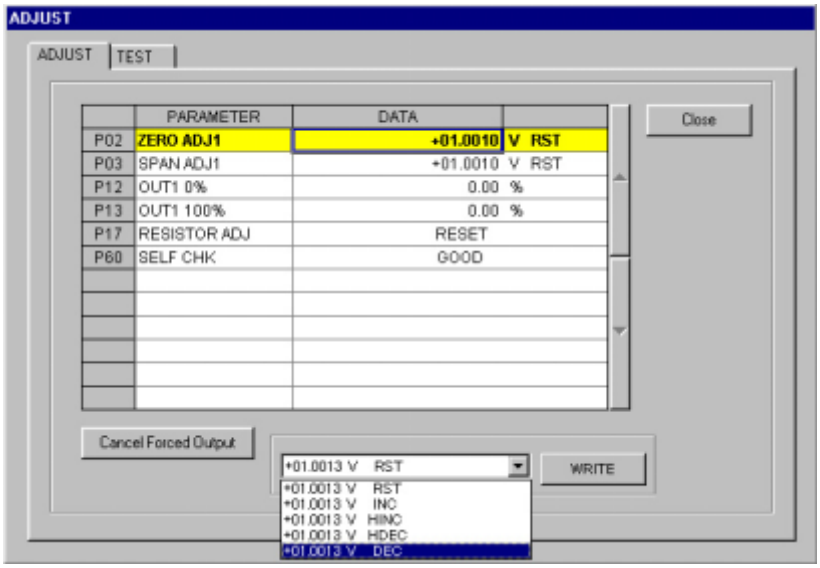
This section describes how to perform fine adjustments of inputs. The following shows an example when doing so for a JUXTA VJH7 isolator. For wiring with a calibrator or other apparatuses, see the user's manuals for respective JUXTA instruments.

10.2.1 Adjusting the Zero Point of Input

Step 1 Apply the 0% level of the input to the JUXTA instrument. If the signal level after A/D conversion in the JUXTA instrument (the value displayed in the **P02: ZERO ADJ1** data cell) and the value actually input do not match, perform the following steps to offset the zero-point shift.

Step 2 Double-click the **P02: ZERO ADJ1** data cell. The text box at the bottom of the ADJUST dialog box becomes available.

Step 3 Click the down arrow next to the text box to open a list, which contains the following:



+*.* V INC: Adds the specified voltage after A/D conversion.

+*.* V DEC: Subtracting specified voltage after A/D conversion.

+*.* V RST: Resets the value that has been adjusted by INC or DEC to 0.

HINC or HDEC: Adjusts the value by about 10 times that specified by the **+*.* INC** or **+*.* DEC** command."

Step 4 Since the value shown in the **P02: ZERO ADJ1** cell is larger than the actual input level in the example above, select **+*.* V DEC** and click **WRITE**. Repeat this procedure to complete the adjustment.

10.2.2 Adjusting the Input Span

Apply the 100% level of the input to the JUXTA instrument. If the signal level after A/D conversion in the JUXTA instrument (the value displayed in the **P03: SPAN ADJ1** data cell) and the actual input signal level do not match, you must correct the input span. The procedure is the same as above.

CAUTION

For some models, **+*.* HINC and +*.* HDEC** are not included in the list. The unit of signal differs depending on the model.

10.3 Correcting the Output

This section describes how to perform corrections of outputs. The following shows an example when doing so for a JUXTA VJH7 isolator. For wiring with a calibrator or other apparatuses, see the user's manuals for respective JUXTA instruments.

Step 1 Double-click the **P12: OUT1 0%** data cell and click **WRITE**. The 0% level is then forcedly set to the output regardless of the input level. Calculate the percent value of the deviation from zero in the reading of the calibrator. If there is a positive deviation, correct it by setting a negative percent value to offset the deviation.

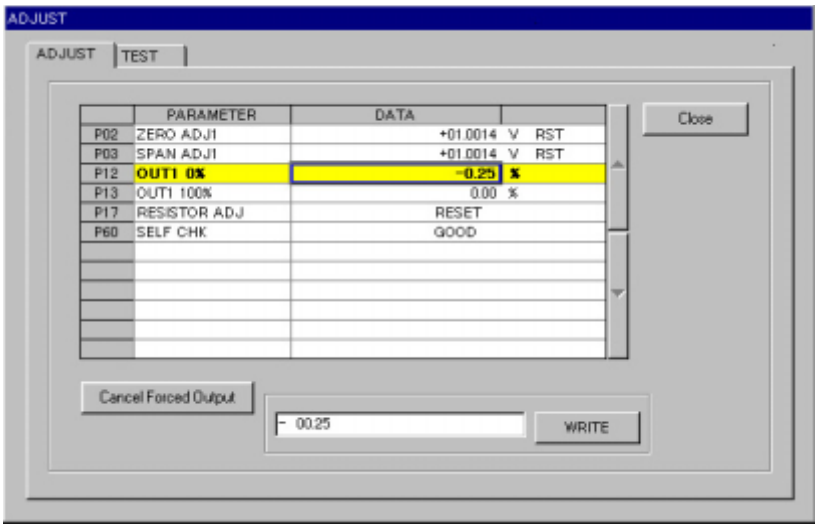
For example, provided the output signal range of the JUXTA instrument is 4—20 mA DC and the reading of the calibrator when forcibly outputting the 0% value is 3.96 mA DC, the error (%) can be calculated as follows and set the same value to the opposite polarity.

Error (%) = [(measured value – reference value)/span] ×100

= [(3.96 – 4.00)/16] ×100

= –0.25

Step 2 In this example, the output level read in step 1 showed the –0.25% deviation. Hence, you should type 0.25 in the text box and click **WRITE**. Check that the reading of the calibrator is within the range of rated accuracy and quit the procedure.



In the same way, correct the 100% output level.

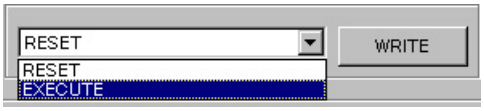
Step 3 To correct the 100% output level, double-click the **P13: OUT1 100%** data cell and follow steps 1 to 2.

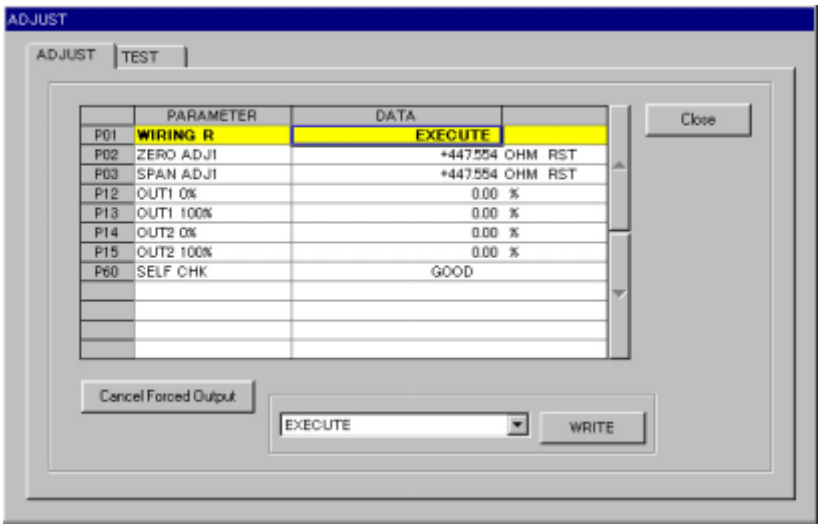
10.4 Setting Wire Resistance Compensation

If the input wiring resistance is causing a significant error after the wiring to the field device has been completed, you can compensate for the wiring resistance with the following procedure.

Step 1 Change the wiring connections in the field as shown at the bottom of this page.

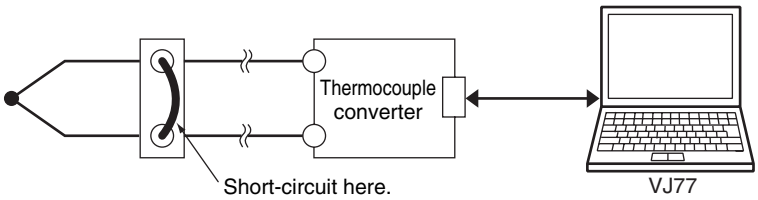
Step 2 When the input is stable, double-click the **P01: WIRING R** data cell.



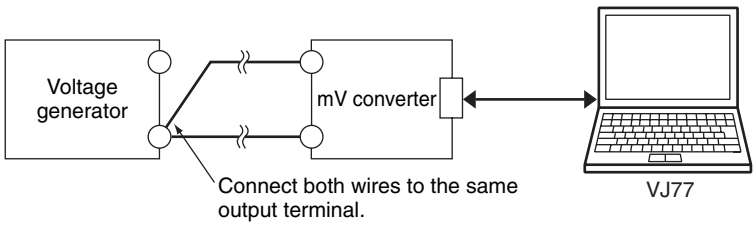


Step 3 Click the arrow next to the text box. Choose **EXECUTE** from the list and click **WRITE**. The wiring resistance is then compensated.

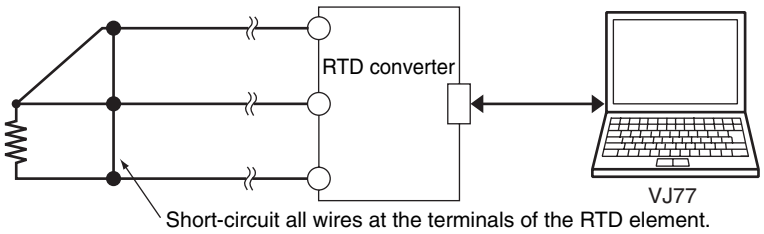
■ Field wiring for thermocouple converter



■ Field wiring for mV converter



■ Field wiring for RTD converter



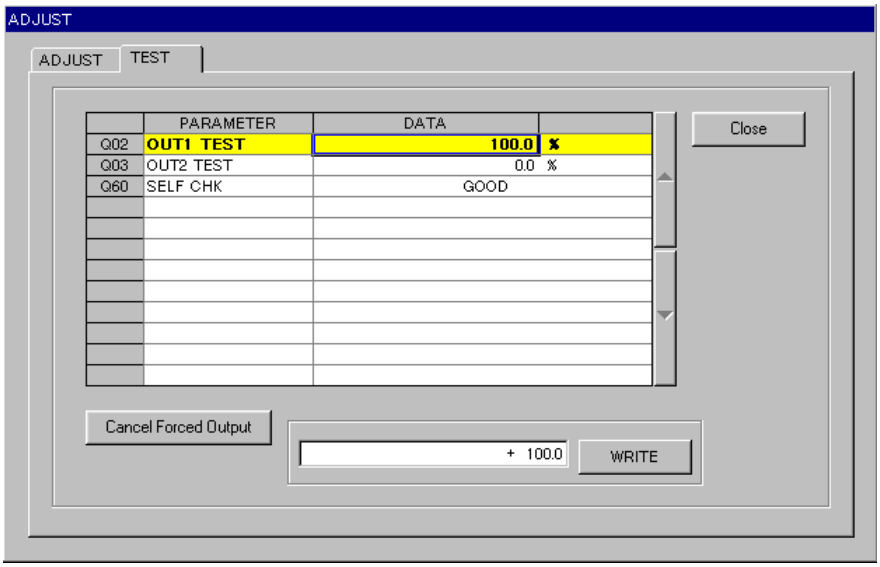
10.5 Using the Forced Output Function

Using the forced output function allows you to perform function tests of the equipment connected to the JUXTA instrument's output terminals.

Step 1 In the ADJUST dialog box, click the **TEST** tab.

Step 2 Double-click the **Q02: OUT1 TEST** data cell. In the text box, enter the percent value of the level you want to output. To output the 100% value forcedly for example, type 100 and click **WRITE**.

The 100% value is then output. During forced output, the selected cell is yellow.



Step 3 To cancel forced output, click **Cancel Forced Output** or double-click another parameter.

TIP

The ADJUST dialog box for some models of JUXTA does not have the **TEST** page on which you can forcibly set an output level. Even with such models however, it is possible to output 0% and 100% levels forcedly by the same procedure as that used for output correction. To do so, double-click the **OUT 0%** or **OUT 100%** data cell and click **WRITE**.

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11. Troubleshooting

This chapter explains troubleshoot problems that may occur when running VJ77.

● Symptom: Abnormal display

Possible Cause: There is a problem with the operating conditions of your computer.

Remedy: Check whether your system meets the following requirements:

- A display unit having a resolution of 800 × 600 pixels capable of displaying 256 colors or superior is required.
- Use of small fonts is recommended.

● Symptom: The "Communication error. Check the connection." message appears.

Possible Cause: The communication cable is disconnected or power is not being supplied to the JUXTA instrument.

Remedy: Check the connection of the communication cable and the power to the JUXTA instrument.

● Symptom: The "Communication error. Check the connection and try again." message appears.

Possible Cause: The communication cable was accidentally disconnected during communication with the DSC, or somebody reconnected the cable during communication.

Remedy: Check the cable connection and attempt communication again.

● Symptom: The "Parameter address error. Communication will be terminated." message appears.

Possible Cause: While setting parameters, the communication cable was disconnected and connected to another JUXTA instrument of a different model.

Remedy: Restart communication from the VJ77 window or restart VJ77 and start communication from the beginning.

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12. Appendix

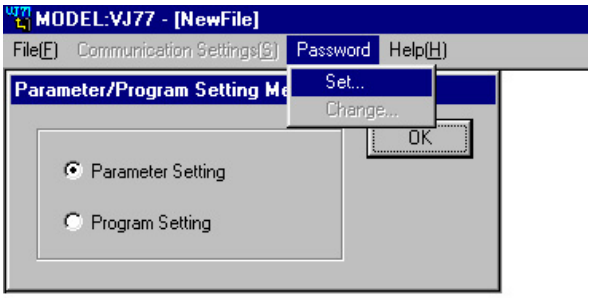
12.1 Setting the Password

This section describes how to set a password to VJ77.

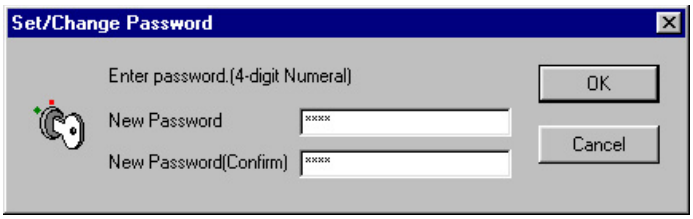
Password protection is a security function that prevents parameter and program settings in JUXTA instruments from being modified by an unauthorized person.

Step 1 Start VJ77.

Step 2 From the menu bar, click **Password**, then **Set**.



Step 3 The Set/Change Password dialog box appears. Type a password (4-digit numeral) in the **New password** box, and type the same numbers in the **New Password (Confirm)** box.



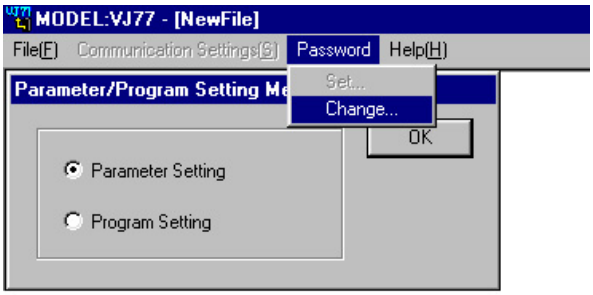
Step 4 Click **OK**.

12.2 Changing the Password

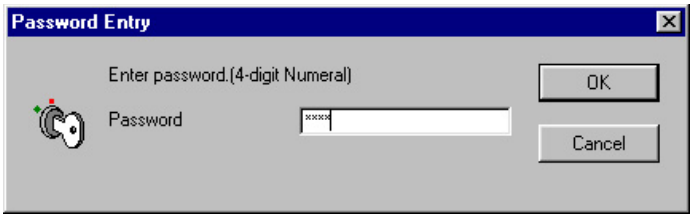
This section describes how to change the password already set to VJ77.

Step 1 Start VJ77.

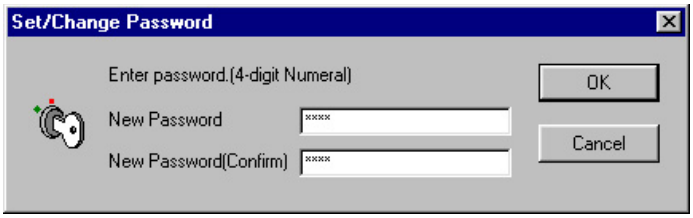
Step 2 From the menu bar, click **Password**, then **Change**.



Step 3 The Password Entry dialog box appears. Type the old password (4-digit numeral) and click **OK**.



Step 4 The Set/Change Password dialog box appears. Type the new password (4-digit numeral) in the **New Password** box, and type the same numbers in the **New Password (Confirm)** box.



Step 5 Click **OK**

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Dec. 1999/1st Edition
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Jan. 2004/2nd Edition
Supports Windows 2000 and XP.
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