Instrument Control Toolbox™ Release Notes

Contents

Summary by Version

This table provides quick access to what is new in each version. For clarification, see "Using Release Notes" on page 1.

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Latest Version V2.6 (R2008a)	Yes Details	No	Bug Reports Includes fixes	Printable Release Notes: PDF Current product documentation
V2.5 (R2007b)	Yes Details	Yes Summary	Bug Reports Includes fixes	No
V2.4.2 (R2007a)	Yes Details	Yes Summary	Bug Reports	No
V2.4.1 (R2006b)	No	No	Bug Reports	No
V2.4 (R2006a)	Yes Details	No	Bug Reports	No
V2.3 (R14SP3)	No	No	Bug Reports	No
V2.2 (R14SP2)	Yes Details	No	Bug Reports	No

Using Release Notes

Use release notes when upgrading to a newer version to learn about:

- New features

- Changes

- Potential impact on your existing files and practices

Review the release notes for other MathWorks™ products required for this product (for example, MATLAB® or Simulink®) for enhancements, bugs, and compatibility considerations that also might impact you.

If you are upgrading from a software version other than the most recent one, review the release notes for all interim versions, not just for the version you are installing. For example, when upgrading from V1.0 to V1.2, review the release notes for V1.1 and V1.2.

What's in the Release Notes

New Features and Changes

- New functionality

- Changes to existing functionality

Version Compatibility Considerations

When a new feature or change introduces a reported incompatibility between versions, the **Compatibility Considerations** subsection explains the impact.

Compatibility issues reported after the product is released appear under Bug Reports at the MathWorks Web site. Bug fixes can sometimes result in incompatibilities, so you should also review the fixed bugs in Bug Reports for any compatibility impact.

Fixed Bugs and Known Problems

The MathWorks offers a user-searchable Bug Reports database so you can view Bug Reports. The development team updates this database at release time and as more information becomes available. This includes provisions for any known workarounds or file replacements. Information is available for bugs existing in or fixed in Release 14SP2 or later. Information is not available for all bugs in earlier releases.

Access Bug Reports using your MathWorks Account.

Version 2.6 (R2008a) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.6 (R2008a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports Includes fixes	Printable Release Notes: PDF Current product documentation

New features and changes introduced in this version are:

- "Instrument Control Toolbox™ Block Library" on page 3

- "Improved Throughput" on page 4

- "Instrument Drivers" on page 4

- "Enhanced Capability of the TM Tool" on page 4

- "Support for Agilent® IO Libraries Suite 15.0" on page 4

- "fprintf Timeout Errors" on page 4

Instrument Control Toolbox™ Block Library

There are three new Simulink® blocks that can send and receive data via a serial port in Simulink.

- **Serial Configuration** — Configure the parameters for a serial port that you can use to send and receive data.

- **Serial Receive** — Receive binary data over a serial port.

- **Serial Send** — Send binary data over a serial port.

Improved Throughput

Throughput is improved in the Instrument Control Toolbox™ Serial interface and TCP/IP Receive blocks.

Instrument Drivers

Several new instrument drivers have been added to MATLAB® Central.

Enhanced Capability of the TM Tool

The capability for discovery of VISA-USB and VISA TCP/IP (VXI-11) instruments in the TM TOOL is now enhanced.

Support for Agilent® IO Libraries Suite 15.0

The Instrument Control Toolbox software now supports the Agilent® IO Libraries Suite 15.0.

fprintf Timeout Errors

You will no longer see sporadic timeouts when you write to the serial port using fprintf.

Version 2.5 (R2007b) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.5 (R2007b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	Yes	Bug Reports Includes fixes	No

New features and changes introduced in this version are:

- "Instrument Control Toolbox™ Block Library" on page 5
- "Instrument Drivers" on page 6
- "spoll GPIB Status Information" on page 6
- "Obsolete Functions" on page 6
- "New Error Message" on page 6

Instrument Control Toolbox™ Block Library

There are four new Simulink® blocks that can send and receive data over TCP/IP and UDP in Simulink.

- **TCP/IP Receive** — Receive data over a TCP/IP network from a specified remote machine.

- **TCP/IP Send** — Send data over a TCP/IP network to a specified remote machine.

- **UDP Receive** — Receive data over an UDP network from a specified remote machine.

- **UDP Send** — Send data over an UDP network to a specified remote machine.

Instrument Drivers

- Additional instrument drivers are now available for Agilent®, LeCroy®, Tabor, and Tektronix® instruments.

- Support for Keithley® version 8.3 GPIB drivers is updated.

spoll GPIB Status Information

Additional GPIB status information is now provided with the spoll function.

Obsolete Functions

The following functions are obsolete as of this release. Any attempt to use these functions now results in an error message.

Obsolete Function Name	New Function Name
freeserial	fclose
instrcomm	tmtool
instrcreate	tmtool

Compatibility Considerations

In the previous release, freeserial was nonoperational and generated a warning. Now any call to this function generates an error.

In previous releases, instrcomm and instrcreate opened their own graphical user interfaces. The functionality of these interfaces is available in the tmtool GUI.

New Error Message

The fwritef and the fprintf functions will return an error message if the flowcontrol property is set to hardware and a hardware connection is not detected. Previously, MATLAB® software would fail to respond while it waited for the connection.

Compatibility Considerations

In the previous release, MATLAB software would become unresponsive if the `flowcontrol` property was set to `hardware` and a hardware connection was not detected. The `fwrite` and the `fprintf` functions will now return an error message.

Version 2.4.2 (R2007a) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.4.2 (R2007a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	Yes	Bug Reports	No

New features and changes introduced in this version are:

Confirmation Dialog Preference Settings Moved

The preferences for setting whether a dialog box confirms that you want the MATLAB® Instrument Driver Editor and the MATLAB Instrument Driver Testing Tool to create new files are in a new location. You now access them in the General > Dialog Confirmations node of the MATLAB Preferences dialog box.

For details on these Instrument Control preference settings, see "General Preferences for Instrument Control" in the Instrument Control User's Guide documentation.

Compatibility Considerations

In previous versions of MATLAB and Instrument Control Toolbox™ software, these dialog box preferences were found under the Instrument Control node of the Preferences dialog box.

Version 2.4.1 (R2006b) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.4.1 (R2006b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
No	No	Bug Reports	No

Version 2.4 (R2006a) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.4 (R2006a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports	No

New features and changes introduced in this version are:

- "Generic Instrument Drivers Supported" on page 10
- "LeCroy® Driver" on page 10
- "Agilent® Instrument Simulations" on page 11

Generic Instrument Drivers Supported

This release includes support for generic instrument drivers that allow Instrument Control Toolbox™ software to communicate with devices or software that do not use industry-standard drivers or protocols.

For more information, see "Using Generic Instrument Drivers" in the Instrument Control Toolbox documentation.

LeCroy® Driver

This release includes support for LeCroy® instrument drivers.

Several drivers ship with the toolbox. You can find these drivers by looking in the directory

```
matlabroot\toolbox\instrument\instrument\drivers
```

where *matlabroot* is the MATLAB® installation directory, as seen when you type

```
matlabroot
```

in the MATLAB Command Window.

Many other drivers are available on the MathWorks Web site at

```
http://www.mathworks.com/matlabcentral/fileexchange
```

including drivers specifically for Instrument Control Toolbox software under the Test and Measurement category.

Agilent® Instrument Simulations

Instrument Control Toolbox software includes simulations of the Agilent® 33120a function generator and Agilent e3648 DC power supply. These simulations are available as instrument drivers.

You can see the drivers shipped with the release by looking in the directory

```
matlabroot\toolbox\instrument\instrument\drivers
```

where *matlabroot* is the MATLAB installation directory, as seen when you type

```
matlabroot
```

in the MATLAB Command Window.

The Agilent simulations are provided by the drivers

```
generic_agilent_33120a.mdd
generic_agilent_e3648a.mdd
```

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Version 2.3 (R14SP3) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.3 (R14SP3):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
No	No	Bug Reports	No

Version 2.2 (R14SP2) Instrument Control Toolbox™ Software

This table summarizes what is new in Version 2.2 (R14SP2):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports	No

New features and changes introduced in this version are

Advantech® GPIB Supported

Supported GPIB interfaces now include Advantech® GPIB.

For further information, type

```
instrhelp gpib
```

Compatibility Summary for Instrument Control Toolbox™ Software

This table summarizes new features and changes that might cause incompatibilities when you upgrade from an earlier version, or when you use files on multiple versions. Details are provided in the description of the new feature or change.

Version (Release)	New Features and Changes with Version Compatibility Impact
Latest Version **V2.6 (R2008a)**	None
V2.5 (R2007b)	See the **Compatibility Considerations** subheadings for these changes: • "Obsolete Functions" on page 6 • "New Error Message" on page 6
V2.4.2 (R2007a)	See the **Compatibility Considerations** subheading for this change: • "Confirmation Dialog Preference Settings Moved" on page 8
V2.4.1 (R2006b)	None
V2.4 (R2006a)	None
V2.3 (R14SP3)	None
V2.2 (R14SP2)	None