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## General Information

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### **Supported Models**

This release note applies to the Keithley 3390 Arbitrary Waveform Generator.

### **Installation Instructions**

Detailed instructions are included in the Model 3390 User's Manual (Document Number: 3390-900-01C). The manual is available on the Product Information CD that ships with the Model 3390 Arbitrary Waveform Generator and is also available for download from the Keithley website at <http://www.keithley.com/support/data?asset=52054>. Alternatively, Keithley factory upgrades can be arranged by calling your local Keithley support office.

## v1.06 Release

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### **Overview**

v1.06 is a maintenance release.

### **Critical Fixes**

There are no critical fixes in this release.

## **Non-Critical Fixes**

### **Symptom:**

\*RST would not reset critical settings to default states. Set a waveform's polarity to INVERT. Then when a \*RST is sent, the waveform is still inverted, although the front display shows the setting as NORMAL. The waveform polarity setting was also not being properly stored and recalled when using saved setups.

### **Resolution:**

Issue has been resolved. Sending a \*RST will now correctly return critical settings such as waveform polarity back to default states. Waveform polarity is now being stored and recalled correctly when using saved setups.

### **Symptom:**

When using an IE browser page to operate the 3390 webpage, if a user presses any function key multiple times the webpage may stop responding. The instrument remains functional.

### **Resolution:**

Issue has been resolved. The 3390 webpage now operates correctly if a user presses any function key multiple times when using an IE browser.

### **Symptom:**

When the 3390 is set to Manual Trigger, a frequency sweep will start before being triggered if the sweep time is greater than 100s. Also, the start frequency is a value different than that which was set by the user. The sweep executes correctly when the next trigger is received.

### **Resolution:**

Issue has been resolved. In manual trigger mode if the sweep time is greater than 100s, the sweep will not start until the user triggers the instrument. The starting frequency is also correct based on the user's settings.

### **Symptom:**

When the user modulates the rate of the FSK, there is potential that the output will have no signal.

### **Resolution:**

Issue has been resolved. Now when the user modulates the rate of the FSK, the output will have a signal at all times.

### **Symptom:**

Regarding USBTMC, the trigger was not functioning correctly. Also RL1 support needed some improvements.

### **Resolution:**

Issue has been resolved. USBTMC trigger functions correctly and improvements have been made to RL1 support.

***Symptom:***

There were several issues with VXI-11 when the device was locked. The following were not operating correctly: device\_lock, device\_write, device\_read, device\_trigger, device\_readstb, and device\_clear.

***Resolution:***

Issue has been resolved. Upgrades were made to the VXI-11 behavior to correct issues with device\_lock, device\_write, device\_read, device\_trigger, device\_readstb, and device\_clear.

## ***Enhancements***

There are no enhancements in this release.

## **v1.05 Release**

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### ***Overview***

v1.05 is a maintenance release.

### ***Critical Fixes***

***Symptom:***

If a user sets up a Half Arbitrary Waveform on the 3390 and then adjusts the High or Low Level, the 3390 will crash.

***Resolution:***

Issue has been resolved. The 3390 will no longer crash when a user selects a Half Arbitrary Waveform.

***Symptom:***

When the amplitude is set to 0dBm and the user switches to Graph Mode, the 3390 will crash.

***Resolution:***

Issue has been resolved. The 3390 will no longer crash when a user switches to Graph Mode while set to 0dBm.

## **Non-Critical Fixes**

### **Symptom:**

The High and Low Level values are not updated when a user inputs new waveform data into the 3390.

### **Resolution:**

Issue has been resolved. The High and Low Level values are now correctly updated when a user inputs new waveform data.

### **Symptom:**

User cannot use a waveform name that is the same as a command. Examples include SIN, DC, RAMP, etc.

### **Resolution:**

Issue has been resolved. User can now use the names SIN, DC, RAMP, etc. to name waveforms.

### **Symptom:**

If the Amplitude units are set to dBm, the graph mode scale will display incorrectly when the Amplitude, Vos, Hi or Low Levels are adjusted.

### **Resolution:**

Issue has been resolved. The Graph Mode scale now displays correctly when Amplitude units are in dBm and the settings are adjusted.

### **Symptom:**

Several issues exist regarding memory state locations. Memory State Locations are not being limited to proper values, and the default state location did not match what the manual states, 0. Also, the number of memory states was being reported incorrectly. The user was unable to recall a default memory state remotely if no data was saved in the other memory states.

### **Resolution:**

Issue has been resolved. The default memory state location is now '0'. The state locations are also limited to proper values. The number of memory states is now properly returned as '4'. The user can successfully recall the default state remotely now. Also, the Memory state recall auto value will always be set to '0' or 'OFF' if this option is not available on the 3390.

### **Symptom:**

When using a web browser other than Internet Explorer, the INSTR TCPIP interface can hang after buttons on the webpage are continuously pressed. Also, in the remote.html, pressing the Function Button for Help information does not bring up the correct introduction.

### **Resolution:**

Issue has been resolved. Browsers other than Internet Explorer no longer cause the 3390 INSTR TCPIP to hang when buttons are continuously pressed on the webpage. The Help Introduction is now correctly opened when help information is requested with the Function Button.

**Symptom:**

The Pattern Mode does not turn off when sending the following command:  
DIGital:PATTeRn[:STATe] {OFF}

**Resolution:**

Issue has been resolved. The Pattern Mode correctly turns off when sending the following command:  
DIGital:PATTeRn[:STATe] {OFF}

**Symptom:**

When using Burst Mode, the wrong signal output is generated when the number of cycles is increased using the control knob.

**Resolution:**

Issue has been resolved. The output is correct during Burst Mode when the number of cycles is increased using the control knob.

**Symptom:**

When the amplitude units are set to dBm, the front panel setting was not being limited to 2 decimal places as expected.

**Resolution:**

Issue has been resolved. The amplitude in dBm is now limited to 2 decimal places on the front display setting.

**Symptom:**

The Pattern Output function would not properly export a waveform that is over 128K points.

**Resolution:**

Issue has been resolved. The Pattern Output function now properly exports waveforms that are over 128K points.

**Symptom:**

While Trigger is turned on, the LED light of the Trigger button was not ON/OFF at the appropriate times when the button was pushed over and over again.

**Resolution:**

Issue has been resolved. The LED light of the Trigger button is correctly turning ON/OFF when the button is pushed over and over when Trigger mode is turned on.

## ***Enhancements***

### ***New Remote Command:***

The following SCPI commands have been added to allow a user to turn INTERPOLATION on/off:

```
DATA:LINE {OFF | ON}  
DATA:LINE?
```

### ***New Function:***

An option was added for ARB for the sweep type/spacing. The following SCPI command has been modified:

```
[SOURCE:]SWEep:SPACing {LINear | LOGarithmic | USER}
```

The front panel also provides the new option . ARB can be selected under the Sweep Type menu.