



Release Notes

ARC Plus and ARC Plus SL firmware version 3.0.3.4

Scope

This document describes the changes in ARC Plus and ARC Plus SL firmware from version 3.0.3.1 to version 3.0.3.4. AutoLoad Plus version 3.1.126 or higher should be used with this version of ARC Plus firmware.

Changes from firmware version 3.0.3.1 to version 3.0.3.4

New Features and Enhancements

Plus-X device handshake has been enhanced:

The ARC Plus now completes a handshake process to confirm receipt of commands sent to Plus-X Units and enters an error in the event log if a command is not confirmed.

Note: *This feature requires a firmware update to the Plus-X unit. Contact Burk Technology Technical Support for the corresponding Plus-X unit firmware update.*

Resolved Issues

Version 5 ARC Plus macros that control status channels on a version 3 ARC Plus now execute properly:

Macros on a version 5 ARC Plus that control a status channel on a version 3 ARC Plus now execute status changes properly.

Changes from firmware version 3.0.3.0 to version 3.0.3.1

Resolved Issues

Virtual meter channels that reference meter inputs on PLUSBUS IIU units now update properly:

ARC Plus virtual meter channels now calculate properly with input variables derived from meter inputs on PLUSBUS-equipped Integrated Input Units.

Network settings entered using the front panel user interface now save properly to the ARC Plus:

Network settings are now saved properly after entry or modification using the front panel interface.

ARC Plus now rejects invalid http requests:

Invalid HTTP requests are now ignored.

The ARC Plus system now transmits commands properly to a connected ARC-16:

With an ARC-16 connected to the ARC Plus, raise and lower command buttons on the ARC Plus are now properly relayed to the ARC-16.

Changes from firmware version 3.0.2.12 to version 3.0.3.0

Resolved Issues

ARC Plus systems now operate properly with up to sixteen connected Plus-X IIU units:

ARC Plus systems now operate properly while supporting connections to sixteen Plus-X Integrated Input Units.

Virtual channels which reference status inputs on PLUSBUS IIU units now update properly:

ARC Plus virtual channels now calculate properly with input variables derived from status inputs on PLUSBUS-equipped Integrated Input Units.

Changes from firmware version 3.0.2.10 to version 3.0.2.12

Resolved Issues

Macros now execute properly after system initialization:

The ARC Plus now properly executes macros after completing power-on and system initialization.

Changes from firmware version 3.0.2.6 to version 3.0.2.10

Resolved Issues

Virtual meter channels now properly track changes on referenced Plus Bus meter channels:

A virtual meter channel which uses a meter channel on a Plus Bus device as an input to its calculation now recalculates properly when the value of the Plus Bus meter channel changes.

Changes from firmware version 3.0.2.3 to version 3.0.2.6

Resolved Issues

IP addresses of the form [x.x.128.x] are now allowed:

The ARC Plus can now communicate over IP networks with the value “128” in the third octet of the IP address.

Changes from firmware version 3.0.1.60 to version 3.0.2.3

New Features and Enhancements

Warp Engine™ polling using AutoPilot® software is now supported:

Warp Engine polling enables fast, efficient, real-time monitoring of up to 100 sites per second, with each site reporting as many as 32 status and/or meter values. Larger networks just take a little longer, for example polling up to 500 sites in 5 seconds. Warp Engine polling uses very small packets, sending only required data and minimizing communications overhead. If communications bandwidth is at a premium cost, it can be further reduced by selection of a slower polling rate. AutoPilot version 2.10.50 or greater must be used for Warp Engine operation.

ARC Plus and ARC Plus SL users with Version 3 firmware can now take advantage of the Burk Email Cloud Service:

The cloud service works in conjunction with your ARC Plus or ARC Plus SL system to originate encrypted emails using the STARTTLS protocol extension. If your current email server does not support STARTTLS, you can open a free email account with an Internet email service provider. The Burk Email Cloud Service is compatible with email services from a wide range of providers including Gmail, mail.com, GMX and Zoho.

The alarm for communications network failure between the ARC Plus and a connected Plus-X device can now be suppressed:

The system alarm which normally occurs when communication is lost between the ARC Plus and a connected Plus-X device can now be disabled by the user. However, it is highly recommended that the alarm remain enabled so that any network failure between the ARC Plus Touch and its connected Plus-X devices can be quickly identified and corrected.

The alarm for an IP network outage between the ARC Plus and a connected Plus-X device now more clearly identifies the link failure:

When the communications link fails between an ARC Plus and a connected Plus-X device, the ARC plus alarm message now states “Link Down: xxxx”, where xxxx is the assigned name of the Plus-X device. The corresponding message placed in the ARC Plus event log now states: “Link Down: Plus-X Device [IP Address]: xxxx”.

Resolved Issues

ESI Raise and Lower commands now execute correctly on channels that control macros.

Command channels that are configured to start or stop macros can now be controlled using raise (#) and lower (*) commands on the Enhanced Speech Interface.

Values for indirect PlusBus meter channels now calculate correctly.

Meter values now calculate correctly for PlusBus IIU input channels configured as “indirect” meters.

Virtual channel calculations now correctly track state changes of status variables:

Virtual channels that use status values as input variables now correctly process state changes in those variables.

Virtual channel configuration on a channel formerly assigned to a Plus-X device now takes effect without delay:

A change of assignment of a Plus-X channel to a virtual channel now takes effect immediately.

Visual indicators now identify offline status for channels associated with non-communicating Plus-X devices:

When communication is lost with a Plus-X device, AutoPilot values for the associated channels are now grayed-out, and the ARC Plus web interface shows these channels as “offline”.

The Enhanced Speech Interface now reports status for all networked ARC Plus units when requested:

When accessing the ARC Plus Touch via the Enhanced Speech Interface, it is now possible to retrieve audible channel information from all networked ARC Plus systems.

Delays based on Wait commands in Jet Flowcharts or Macros executing on the ARC Plus are now implemented with improved accuracy:

Delays executed on the ARC Plus within Jet Flowcharts or Macros now complete within a narrow time window of the nominal programmed delay.

A running macro must now complete execution or be stopped before it can be started again:

A request to run a macro which is actively executing now has no effect. To restart a running macro it is necessary to first stop then run the macro.

A muted channel is now prevented from generating SNMP traps:

SNMP traps will not be generated for an alarm condition on a muted channel. If a channel is set to mute while an alarm condition is active, SNMP trap generation for that channel will stop. If a channel is taken out of mute while an alarm condition is active, SNMP trap generation for that channel will begin.

Web page processing efficiency and priority are now enhanced:

IP communications processing loads are now balanced to maintain web page connectivity in the presence of high levels of competing IP network traffic.

The inversion flag is now properly accounted for on virtual status channels:

Virtual status channels are now properly inverted based on the settings of their corresponding ‘Invert’ checkboxes in AutoLoad Plus. The inversion, if selected, is applied as the final calculation step for each virtual status channel.

Email addresses on alarm notification messages are now properly separated by semicolons:

When ARC Plus sends alarm notification email messages, all email addresses including both master and current email lists are now separated by semicolons.

Longer TCP acknowledgement delays are now accommodated:

TCP timeouts have been extended, allowing the V3 ARC Plus Touch and SL to communicate over TCP/IP networks with longer than typical network delays.

Email notification for an ARC-16 status channel alarm condition now includes the channel’s ON label:

An Email notification from an ARC Plus reporting an alarm condition for a status channel on a connected ARC-16 unit now correctly includes the ON label of the alarmed channel.

Changes from firmware version 3.0.1.53 to version 3.0.1.60

New Features and Enhancements

Real-time operation optimized:

Real-time operating system (RTOS) characteristics have been restructured, yielding improvements in calculation efficiency, responsiveness and overall system performance. Specific improvements include increased macro execution speed, quicker response to input parameter changes on virtual channels, and faster alarm reporting to connected AutoPilot® computers.

Resolved Issues

Improved communication with Plus-X devices:

Traffic shaping and packet monitoring have been enhanced on communications links between Plus-X devices and their host ARC Plus systems. This results in increased data transport integrity and improved accuracy in detection of Plus-X device status.

A broken communications link between an AutoPilot computer and an ARC Plus Touch system now has no effect on communications with other connected AutoPilot computers:

A network failure or disconnected Ethernet cable on the link between a computer running AutoPilot software and a connected ARC Plus Touch system will now have no effect on and cause no delay in communications between the ARC Plus system and other connected AutoPilot computers.

Local alarm LED and alarm relay states now correctly reflect the status of connected systems:

When site settings for the alarm relay output and/or the front panel alarm LED on an ARC Plus Touch system are set to indicate alarms from all connected sites, the combined status of the connected systems is now correctly detected and reported.

Alarm detection will not cause an AutoPilot configuration update:

Alarm conditions detected by the ARC Plus Touch are now logged and reported without causing an unnecessary configuration update to connected AutoPilot computers.

Over-range meter values received from monitored devices are now displayed as a full-scale value:

Monitored devices, typically communicating via SNMP, can report floating point values in excess of the meter channel range. When this occurs, the channel is now set to the maximum displayable value of 9999 as an indication of channel saturation or clipping.

Reliability of modem connections has been enhanced:

Long-term modem connections, extending over several days, now run reliably with no adverse effect on overall system operation.