•

```
© W. A. Benjamin Electric Co. 2016,2017,2018,2019. All rights reserved worldwide. Last Update: January 2019
```

The Copyright © terms and conditions should read:

Use or distribution of copyrighted materials without the written authorization of the owner is not permitted. W. A. Benjamin Electric Co. does not endorse any product other than those listed as supported or publications contained within any of these pages and provides no warranty, expressed or implied, regarding quality, accuracy, confidentiality, or validity for the data and/or information provided herein.

### SUPPORTED CONTROLLERS:

```
JESE Ltd. RDM TRI MK2
JESE Ltd. RDM TXI MK2
JESE Ltd. RDM TRI MK1
Goddard Design DMXter4<sup>tm</sup>
Goddard Design DMXter4A<sup>tm</sup>
Goddard Design miniDMXter<sup>tm</sup>
```

Use of this version of Integrity may require updates to the firmware used by your controller. If you get messages suggesting this, please contact your controller supplier.

### INSTALLATION INFORMATION:

Ensure that the RDM Integrity software is installed <u>before</u> any Controllers are connected to your PC. This will ensure that the device drivers for your operating system and hardware are pre-installed first, enabling the correct drivers are loaded on demand.

Either run the downloaded "RDM Install.exe" or from the supplied CD run the "RDM Install.exe". Follow the instructions presented during the install process. The installation program automatically registers the all of the required components for RDM Integrity to run on your Windows operating system. The package supports the following platforms:

```
Windows XP - SP3
Windows XP 64-bit
Windows 7 32-bit
Windows 7 64-bit
Windows 8 64-bit
Windows 8.1 64-bit
Windows 10.0
```

## LATEST VERSION AND UPDATES:

A summary of the latest user features can be found as a pdf file at the following url

https://www.jese.co.uk/download.php?view=docs/RDMI-Features.pdf

The RDM Integrity application will periodically poll the web service for updated versions. When newer versions become available, the user will be notified and given the option to download a new version if they have an active support subscription for the connected controller.

If you have received an RDM Integrity update file that is named RDM Integrity.build.xxx, please rename the file RDM\_Integrity.zip and unzip the file into the directory where the original RDM Integrity file was saved. The naming of the update file a build.xxx allows the file to pass through most email filters that refuse zip or exe files. The xxx refers to the current release build version.

# HAVING PROBLEMS WITH AN INSTALLATION?

If you are having problems with the RDM Integrity application not installing correctly, try un-installing any previous versions, then install the most recent version.

From version 1.3.105, install packages are designed to install on either 32- bit or 64 bit Windows operating systems.

### RELEASE NOTES

MAJOR MODIFICATIONS FOR THIS RELEASE:

Version 1.3.281 19 July 2019 (Plugfest)

- Fixed mis-reported "SD Threshold Report" when not supported.
  - Fixed "Building a DISC PID" always forced broadcast, now allows any UID.
  - Port ID=0 is no longer reported as an Advisory, Expected to be allowed in the updated E1-20 spec.
- Fixed bug that caused run-time error when the Time Stamp value rolled over to hours.
- Fixed bug in Dmx Personality PID when "ACK'd" to an invalid SubDevice.
- Removed "Ignore Port 0" Advisory menu item. Port ID=0 responses are now allowed.
- E1.37-7 PID testing now supported.
- Added additional "Restore" menu options.
- Added Checkbox to allow all Long AckTimer events to be ignored. Reset when app is re-started.

- Most of the changes were from the internal release 1.3.179, please see below
- The user is notified at startup what "Flavor #" the DMXter is operating with and the user can change the Flavor #, #1 is the recommended RDM Timing settings. DMXter 4s with software lower than 4.34 may not actually change timing for Flavor #2. Please contact Goddard Design for a software update.
- You can now re-run Custom Imported PIDs by selecting them from Test Run pane.
- You can now change the Controllers RDM Timing parameters to simulate worse case Break Time and MAB Time.
- The RDM Timing is now reported correctly in the Net-View popup and from the Timings Menu you can change

RDM Timing values.

- The DMXters now attempt Discovery without Interleave mode enabled, which discovers much quicker.
- Manufacturer IDs have been updated from the ESTA website.
- The directory from where the executable is run will become the default directory for logfiles and the root directory for Custom PID loading.

Version 1.3.279 Internal Release

14 June 2018

- Changed Discover Personality text to DMX PERSONALITY Out of Range.
- Changed Discover Personality Description to DMX PERSONALITY DESCRIPTION Out of Range.
- · Fixed a bug when validating a Sensor number beyond declared Sensors.
- Fixed a bug when RECORD SENSOR is declared but for a given sensor, Record Value is not TRUE, Data\_Out\_Of\_Range and Unknown\_PID are now valid responses for that Sensor #.
- Fixed a bug with ACT\_TIMER delay calculations did not convert to a floating point number correctly.
- Added a new test to validate Source and Destination UIDs are correct.
- Added a new test to GET:Device Info from SrcUID 0000:00000000.
- Added a new test to GET: Device Info the uses a different SrcUID than what was used during Discovery.
- Added new test that send a Message that is too long, Packet Overflow.
- Improved Test Results display to make it more consistent for all messages.
- Fixed bug with DMX Startup Mode Restore Original values after broadcasts.
- Fixed bug with Selftest Descriptions when not provided but PERFORM SELFTEST was declared.
- Fixed a spelling error on Selftest form.
- Fixed bug with not shutting down correctly when ART-NET enabled.

Version 1.3.278

30 April 2018

• Fixed a Range Check Error after the JESE controller was updated.

Version 1.3.277

27 April 2018

- Improved the display of received data that exceeded 60 bytes.
- Improved the RAW data display if the data exceeded 60 bytes.
- Imported and User PIDs that return ACK\_OVERFLOW are now processed until and ACK is received.

Version 1.3.276

12 March 2018

- Added Delta Time to the previous selected Test in lower left status pane.
- ullet Fixed a bug with DMX Interleave functions and the Custom DMX Console form.
- Added additional functionality to the DMX Interleave form. User can set the "Test" level instead of 0-100%.
- Improved the Tests pane displaying of the last test run above the bottom of the display box.
- When resending a Test from the Tests pane the select line corresponds to the last test run or the start of the group of tests run.
- Added a Format Stress test to Device Info with a Packet Length of 231.
- Fixed bug with defining Custom User PIDs.
- Added better text report when the response CC is invalid.

Version 1.3.275

05 JANUARY 2018

• Released

Version 1.3.274

30 NOVEMBER 2017

- Fixed bug with Sensor Recorded values not being Byte Swapped.
- Added Autotest Pass/Fail summary with the option to save to a file.
- Added Time Stamps to the Startup Log
- Added Additional Device Info Validation during Startup Load.
- Test for Personality mismatch with Device Info Personality Count.
- Added additional Slot Description Validations.
- Linked the RDM Integrity PID Editor to RDM Integrity if RDM Integrity is licensed.

Version 1.3.263-273 18 NOVEMBER 2017 LDI

- A number of Cosmetic improvements.
- Added a Text Grid to the bottom of the main page to show additional details regarding the Responder under
- Added a Repeat checkbox to the Build PID Run button. The repeat rate is set with the Timing/Run Repeat Delay menu.
- Added a "Stop On Fault" checkbox to the Build PID Run function.
- Added a force "Checksum" error to the Build PID Run function.
- Added additional menu options to Auto Test with/without DMX Interleave enabled.
- Added the dropdown box to select desired DMX Data pattern to use when interleave is enabled.
- Added the "Ack Overflow" menu options to test all PIDs the can respond with Ack Overflow.
- Responder Software Version Label is visible in the lower status bar.

Version 1.3.262

18 SEPTEMBER 2017

• Fixed bug when STATUS MESSAGES GETs returned ACK.

Version 1.3.261

12 SEPTEMBER 2017

- Added validation test to ACK TIMER delay bytes to ensure they are
- Add the ability to load and run a suite of custom PIDs that were created using the New RDM Integrity Custom PID Editor application.

Located under the Manufacturer PIDs menu.

Version 1.3.259-260

01 SEPTEMBER 2017

• Internal Release for minor bug fixes.

Version 1.3.258

10 AUGUST 2017

 Added the ability to re-run tests and compare against a "Reference set of tests for Pass/Fail changes. Located in the "Tests" pane popup menu. 01 AUGUST 2017

Version 1.3.257

- Added "Personality Scan Stress Test". • Added Manu ID Table Date menu under the Help menu to indicate the last
- date the Manufacturer ID table was downloaded from the ESTA website.
- Added The "Import Custom PID" feature under the Manufacturer Pids menu, That lets you import a TAB delimited txt file that defines and runs a suite of custom PIDs

Version 1.3.256

01 JULY 2017

• Fixed minor Text Bugs

Version 1.3.255

19 JUNE 2017

- Clear All Stress Test and Additional checkboxes after loading a new responder.
- Improved the Result Text when NO Sub-Devices are supported and "Searching for Sub-Devices" is enabled.

Version 1.3.253-254

16 JUNE 2017

Fixed a bug with Manual Registration Key entry.

Version 1.3.251-252

13 JUNE 2017

Fixed a bug with "Extra Bytes on the wire" result Text. Corrected a cut/paste bug with GET "Device Lable" Advisory result.

Version 1.3.250

12 JUNE 2017

 Added Eckart Steffens to the acknowledgement list of individuals that contributed to making RDM Integrity great.

09 JUNE 2017

- Fixed a bug that reported incorrect text when a malformed message was sent stating a properly formed message was sent.
- Fixed a bug when Slot Info was returned with a PDL=0 or the Slot Offset 0 was not returned in a valid response.

Version 1.3.248

10 MAY 2017

 Added Discovery Status popup for JESE Controllers like the one used for Goddard DMXters.

Version 1.3.244-247

08 MAY 2017

• Cleaned up a lot of "Result" text. Changed the behavior of the Checksum stress to work like the other stress tests. The "Checksum" stress can be used with the Build a PID manual tests.

Version 1.3.243

26 APRIL 2017

- ullet Add "Long Discovery Wait" menu for DMXter discovery through a splitter. Version 1.3.241-242 10 APRIL 2017
  - Changed Proxy Device Count Advisory to Failure/Low id the Root supports the PID and the SubDevice returns UnknownPid instead of UnSupportedCC.
  - Fixed Advisory being issued when "Ignore Device Lable" occurred.

Version 1.3.203-240

7 APRIL 2017

- Added Checksum Stress Test, sends an invalid Checksum value with each message.
- "Stop On" Line #, acts as a breakpoint to allow the tests to run until the target line # so that a sequential test/failure condition can be duplicated.
- "Single Step" allows the run/stop of each test in a sequence to be run so as to be captured externally by a sniffer or scope.
- The "AckOverflow" menu tests all parameters that are allowed to respond with an Ack Overflow.

Version 1.3.202

1 FEBRUARY 2017

- Added an Auto-Repeat checkbox associated with the Build a Packet Run button. The repeat rate is set under the Timings menu.
- Added very strict tests for finding and validating Manufacturer Specific PIDs.
- Display of the Test Run Timestamps can be hidden or shown if captured.
- Cleaned up some behind the scenes code.
- Auto Test will allow sequential testing of all personalities and store each RDM file to a file named ManuID\_SERIAL\_Personality #, example 08D8\_10006000\_1, 08D0\_10006000\_2. Click and grab a cup of coffee
- The Reset tests now waits a delay time and tries a GET:Device INFO to verify the responder successfully restored after the reset condition.
- If the user chooses to hide one of several dialogs and wants to restore them there is a menu selection under the Help menu.
- The file menu has been changed to make it easier to save the different files or all of them with a single click. The file name defaults to the ManuID Serial, however the user can change them if desired.

Version 1.3.198-201

31 JANUARY 2017

Version 1.3.197

18 JANUARY 2017

• Started Adding E1.37-5 and E1.37-7 PIDS

Internal revisions and test code

• Change the IP&DNS checkboxes to E1.XX-Y checkboxes

Version 1.3.195-196

1 DECEMBER 2016

• Internal tests

Version 1.3.194

21 NOVEMBER 2016

- Added additional text verification to Device Label.
- Changed the internal url link to download updates.

Version 1.3.193

17 NOVEMBER 2016

- Added Error detection within the Startup Log for the Device Info response.
- Now both Fault type errors and Timing type errors are recorded and identified, before Timing Errors had priority over other errors and masked their existence.

Version 1.3.192

7 NOVEMBER 2016

• Added a new test for "Ack Overflow" functionality per spec E1.20 section 6.3.2.

Version 1.3.191

1 NOVEMBER 2016

- Fixed some Text.
- Fixed bug with Slot Info –ACK\_OVERFLOW starting up asking for Slot Description interlaced when ACK OVERFLOW occurred.

- Added additional "Slot" PID tests directed towards SubDevices.
- Added [Timestamp] to Tests Run data.
- Added Manufacturer's ID Table to cross-reference MID given within the SRC UID.
- Added DMX Interleave with 0x55(85) as well as 0xFF(1s) and 0x00(0s) levels.
- Supply Default Filename for all "Save" operations.
- Changed Save Menu names, added "Save All Files".
- Added DMX Ramp function, still needs a little work.
- Added "AutoTest" menu item to run through all personalities and save the RDM files.

Version 1.3.190

31 OCTOBER 2016

• Internal Test release.

Version 1.3.189

31 OCTOBER 2016

- Added addition data to the startup log, PDL and PD.
- Adjusted the Tests Run pane to better show last test run text.

Version 1.3.188 25 OCTOBER 2016

- Added "Save NetView Data" to File Menu.
- Added "Save Statistics Data" to File Menu.

Version 1.3.187

18 OCTOBER 2016

- Added "Scanning Data" to the Startup Log.
- Added the Source UID to the Startup Log.
- Added "Margin of Error Tolerance" value to the result text if a timing error is detected. Also the displayed reference value is now the spec value before the tolerance is applied.

Version 1.3.186

17 OCTOBER 2016

- Fixed a bug "Hide Expired Subscription" checkbox.
- Improved Result Text when UCC returned.

Version 1.3.180

20 SEPTEMBER 2016

Changed the USB DLL from statically loaded to dynamically loaded.

Version 1.3.177-179 09 SEPTEMBER 2016

• Internal releases.

Version 1.3.176

06 AUGUST 2016

Fixed bug with Show Timing Checkbox.

Version 1.3.175

XX JULY 2016

• Internal Testing

Version 1.3.174

XX JULY 2016

- Fixed a couple of text format errors.
- Fixed a compare bug with several IP&DNS tests

Version 1.3.173

13 JULY 2016

• Fixed a couple of text format errors.

Version 1.3.172

12 JULY 2016

- Added additional diagnostic information during the Initial and Runtime data loading in case there is a failure from the Responder.
- Completed the testing of the Dimmer Info, Maximum and Minimum Level tests.

Version 1.3.168-171 01 JULY 2016

• Internal test release, testing Dimmer Info, Maximum and Minimum Level tests.

Version 1.3.167

27 JUNE 2016

- Internal test release
- Changed the Minimum/Maximum bit Mask bit order.

Version 1.3.166

24 JUNE 2016

- Internal test release
- Changed the Minimum Level tests to allow 1-16 bit values based on Dimmer Info Levels.

Version 1.3.165

23 JUNE 2016

- Internal test release
- Changed the Maximum Level tests to possible 0x7F5A and 0x7fA5.

Version 1.3.164

22 JUNE 2016

- Internal test release
- Added a Mask to Maximum Level based on the Dimmer Info Level.

Version 1.3.163

07 JUNE 2016

- Added Failure Priority Levels, Critical, Format, Data and Miscellaneous. Tests Run can now filter Failures based on priority.
- Fixed Copy to Clipboard from the Statistics dialog.
- Added text to the Tests Run pane when NO tests are found.

Version 1.3.162 06 JUNE 2016

• Internal test release.

Version 1.3.161 01 JUNE 2016

- Change look of the Statistics Dialog, added more configuration info.
- Now saving Timing Setup data to RDM file and Header output.

Version 1.3.160

31 MAY 2016

- Restoring several PIDs to their original values after change made during broadcast tests.
- Fixed bug with Maximum Level when not supported.
- Fixed bug when changing responders, I was not completely clearing the previous responder.

Version 1.3.159

25 MAY 2016

• Fixed bug with Reading Manufacturer Parameter Descriptions.

Version 1.3.158

19 MAY 2016

- Modified failure severity for Strings with 8 bit characters.
- Modified the Maximum Level format stress tests PDLs
- Allow for Lock PIN GET to accept Unsupported Command Class NACK.

Version 1.3.157 16 MAY 2016

• Fixed bug embedded NULL comparing response.

Version 1.3.156

12 MAY 2016

• Fixed bug when reading the SW Version of a very old DMXter. 25 APR 2016

Version 1.3.155

- Added an invalid Command Class plus Format Error Test in a single test.
- Fixed bug with Device Label and queued message response after NACK.

Version 1.3.154

22 APR 2016

• Fixed bug with Discovery Stress Tests.

Version 1.3.152-153 10 APR 2016

• Added Manufacturer PID scanning. Version 1.3.148-151 4 APR 2016

• Internal release Fixed bugs.

Version 1.3.147

5 MAR 2016

 Fixed bug that left the Maximum Level with a value of 2, not restored to the default value.

Version 1.3.146-146 4 MAR 2016

- Internal release
- Fixed a bug, when the "Enter UID" method was used not all of the app features were enabled.

Version 1.3.144

2 MAR 2016

- Fixed bug when manually sending a DUB.
- Added new Stress Test "Search for SD".
- Moved Stress Test "Skip Selftests" to the Ignore menu dropdown.

Version 1.3.138-1.3.143 25 FEB 2016

Internal releases.

Version 1.3.137

19 FEB 2016

• Improving Test Result analysis and displayed text.

Version 1.3.134-5-6 22 FEB 2016

• Internal test releases.

Version 1.3.133 19 FEB 2016

Fixed things I broke in version 132 while improving the Result text.

11 FEB 2016 Version 1.3.132

• Improved, with more detail the Result text for many PIDs.

Version 1.3.131 04 FEB 2016

• Fixed error if restoring the current Mod Freq if = 0.

Version 1.3.130 04 FEB 2016

• Fixed format error when saving as text.

Version 1.3.129

02 FEB 2016

- Added test for mismatched Xmt/Rec PID.
- Fixed a bug when Personality Description is not supported.
- Added a test for Identify Device with malformed PD/PDL.
- Added a test for when the "Message Count" field does not decrement after
- Get: Queued Message request.
- Added test for malformed PD/PDL Mute and Un-Mute Discovery Class messages.
- Added "Ignore" menu to skip tests or validating test responses.

Version 1.3.128

31 JAN 2016

• Internal test release at the Plug Fest.

Version 1.3.127 30 JAN 2016

• Internal test release at the Plug Fest.

Version 1.3.126

29 JAN 2016

Fixed bug with sub-device testing when PID not supported.

Version 1.3.125 29 JAN 2016

• Internal test release.

Version 1.3.124

28 JAN 2016

• Fixed bug when Personality Description is not supported.

Version 1.3.123 22 JAN 2016

- Fixed bug with Custom DMX sliders when selecting a single page.
- Added more text to DMX Fail Mode tests, restore Level did not work correctly.
- Fixed problem, if "Identify Menu" was clicked when no responders were found, caused exception.
- Fixed problem when discovery after additional responders were added to the network without restarting the application.
- Now detects LEN MISMATCH when used with a DMXters

Version 1.3.122

29 DEC 2015

• Adjusted Responder timing Min Max Tests.

Version 1.3.121

24 DEC 2015

- · Major change to the "initial load" algorithm to allow for ACK TIMER and MC>0 responses.
- Added information regarding the delivery of update files named as "RDM Integrity.built.xxx" in the section LATEST VERSIONS AND UPDATES.

Version 1.3.120

17 DEC 2015

- The "Total Tests Run" in the header output file was reporting the number of tests last, not the accumulated number of tests run.
- Restored the "Continue" button function

Version 1.3.119 17 DEC 2015

• Internal release for test

Version 1.3.118

16 DEC 2015

- · Fixed an Access Violation when multiple Responders were connected to the network. Added additional exception traps.
- Fixed a bug that did not record the Device Label correctly.

Version 1.3.117 15 DEC 2015

• Added additional verbiage regarding NULL character errors.

Version 1.3.116

14 DEC 2015

• Added Manual Registration input dialog under the Help menu.

Version 1.3.115

04 DEC 2015

- Improved Exception handling.
- Cleaned up the Handling of ACK TIMER response during initial loading.
- Added warning before executing Factory Defaults.
- Added the Test Result Summary to the Header Text output files.

Version 1.3.114

28 NOV 2015

- Internal test version.
- Fixed bug with MK1 firmware version comparison.

Version 1.3.113 24 NOV 2015

- Fixed bug with loading a saved RDM file that was stopped and not allowed to complete the entire test suite before saving.
- Moved the Proxy tests after the Discovery tests.
- Added the Managed Proxy UIDs to the NetView tree if the Proxy device set the Managed Proxy Flag in the response to the Mute PID.
- Cleared Queued Messages as indicated during the Discovery tests.

23 NOV 2015

- · Fixed a bug where padded null characters in text string field were treated as non-printable characters.
- Fixed a bug where the allowed Response Types and Nack Reasons were not being propagated forward if an Ack Timer response caused a Queued Message request to be inserted into the test suite stream.
- Fixed a bug where the Root Sub-device requested with a Queued Message did not match the Response PID Sub-device resulting in a miss reported Request Sub-device does not match Response Sub-device.

Version 1.3.111

20 NOV 2015

Added the "Last Saved" directory for User saved data and use it as the default directory path. This value is saved in the registry and used as the default when the application is restarted.

Version 1.3.110

19 NOV 2015

· Added support for the ACK TIMER response during initial loading of the Responders information. Changed the default "Save" and "Load" of data from the install directory to the User/Documents/RDM Integrity directory.

Version 1.3.109

11 NOV 2015

- Added the download link to allow updating from the JESE website Version 1.3.108
  - · Fixed bug with Sub-Devices PID support that was not supported by the Root device.

Version 1.3.107

10 NOV 2015

· Fixed bug with the SelfTest menu being enable if no Responders are connected.

Version 1.3.106

02 NOV 2015

• Fixed minor bug

Version 1.3.105

• Initial public release

## KNOWN ISSUES:

Test Minimum and Maximum split ranges does not correctly determine Pass/Fail.

If you have any issued with the RDM integrity software or package installation, please report your finding using the contact format http:/www.wabec.com/contact.

W.A. Benjamin Electric Co.

1615 Staunton Ave,

Los Angeles CA. 90021

Tel: (800) 749-7731

Web: http://www.benjaminelectric.com