



ADR Plus Product Line

ADR Plus v5.55 Firmware

Quixote Traffic is pleased to announce the release of Version 5.55 firmware for the ADR Plus Product Line. This update includes several modifications to improve overall operation. In particular: Tube-Tube and WIM-Loop-WIM processing was improved, the speed of data uploads and downloads was improved, and the saving and restoration of setup files was made more robust. In general, the Version 5.55 adds overall improvements to ADR reliability and stability.

Product **Firmware for the ADR Plus Product Line**
Version **Version 5.55**
Release Date **July 8th, 2005**

Product Compatibility

This firmware upgrade is compatible with all **ADR-1000 Plus**, **ADR-2000 Plus**, and **ADR-3000 Plus** automatic data recorders. This firmware will *not* work with the older ADR-1000, ADR-2000, and ADR-3000 units (i.e. non-“Plus” units.) This update is not typically performed as a field upgrade. It is normally installed during manufacturing or during factory repair work. Version 5.55 of the firmware can be installed with one of the following language files installed: American, American/Spanish, or American/Canadian French.

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This product is compatible with **TOPS™**, Quixote Traffic’s Windows-based ADR data retrieval software. The update requires version 3.6 or higher of the TOPS software. ADR Version 5.55 firmware is also compatible with version 1.0 and higher of Quixote’s **Z-Link** ADR data retrieval software for the Palm™ OS.



Note It is recommended that this firmware should not be used with any version of TOPS older than version 3.6. Additional information stored in the ADR files as of the version 5.53 firmware may cause unpredictable results when used with older versions of TOPS.

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Protocol Support

This version of the firmware supports the standard Quixote ADR protocol. It can be used with any software package that is compatible with this protocol.



Note ADR Plus devices running **Version 5.55** firmware may no longer be fully compatible with TDP.

Support for the StopWatch+ Add-on Module

Version 5.55 firmware also supports Quixote Traffic's StopWatch+ add-on module for the ADR 3000 Plus. StopWatch+ expands the functionality of an ADR-3000 Plus; retaining the full historical data collection features of the standard ADR-3000 Plus while adding simultaneous real-time data gathering capabilities. These new functions can be used to assess the performance of roadway systems during emergency and disaster situations. For more information about StopWatch+, including how to purchase the package, contact your nearest Quixote Traffic distributor. For the nearest distributor in your area, call 1-800-245-7660.

Updating the Firmware in an ADR Plus Unit

To update the firmware in an ADR Plus unit in the field via a direct connection, you will need the following items:

- Notebook or portable PC that has Quixote Traffic's **ADR Firmware Upload Utility** installed
- DB-9 to CPC-8 direct-connect serial cable (p/n 81-321) (**ADR-1000 Plus and ADR-2000 Plus**)
or
DB-9 to DB-9 direct-connect serial cable (p/n 81-296A) (**ADR-3000 Plus**)
- the ADR **Version 5.55** firmware update file:

Table 1 — Additional documentation available for TOPS and related hardware

Firmware version	Filename
v5.55 firmware - American English	V555-A_97-508-D.bin
v5.55 firmware - American / Spanish	V555-AS_97-508-A.bin
v5.55 firmware - American / Canadian French	V555-AC_97-508-E.bin

If you need additional assistance to perform the ADR Plus firmware update, contact the Quixote Traffic Technical Service Center using the contact information provided on page 4 of this bulletin.

Enhancements

Several new features and functions have been added to the ADR in firmware version 5.55. Some of these are core functions while others require additional hardware (such as the WIM functions.)

Table 2 – New features included in Version 5.55 of the ADR Plus firmware

Feature	Description	ECR#
Improved accuracy for WIM-Loop-WIM arrays	We improved the accuracy of the W-L-W array processing.	1675
Improved accuracy for Tube-Tube arrays	We improved the accuracy of the T-T array processing.	1690, 1736
SW58P WIM card calibration factors saved to Setup files	The Basic and Current Calibration factors for an SW58-P WIM sensor card are now stored and retrieved from an ADR setup file.	1690
Shutdown counter	The ADR can now be configured to count the number of times the unit has a shutdown event and record that to a daily log file.	1735
Improved 'Tailgating'	We have improved the overall performance of the tailgating algorithm.	1736
Improved file transmission times	The size of the data blocks that the ADR uses to send and receive files have been increased. On a good quality transmission line, this can decrease the time required to transmit files significantly.	1758

Issues Addressed in this Release

The following are known issues that existed in previous releases of the ADR Plus Firmware which have been rectified in Version 5.55:

Table 3 – Issues fixed in this release

Issue	Resolution	ECR #
Event processing reliability	An issue with the reliability of ADR event processing has been corrected.	1589
Cold boot default values were not always appropriate	The following changes have been made to cold boot defaults: Maximum Inter axle distance is 30 feet for ADR-1000s and 40 feet for ADR-2000s and ADR-3000s. Maximum vehicle length is now set to 80 feet for ADR-1000s, and 110 feet for ADR-2000's and ADR-3000s. Axle Debounce is set to 40ms for ADR-1000s and 30ms for ADR-2000/3000s.	1738
Unable to save a setup if unit is armed and recording.	A setup file can now be saved even while an ADR unit is 'Armed and Recording.'	1766
User interface after loading a setup file did not match current configuration	The user interface has been updated so that it will correctly display all of the updated configuration settings after a Setup file has been loaded.	T554X-A

Additional Guidance

These are some other sources of information on the ADR Plus series of automatic data recorders.

Documentation

These documents are available for the ADR Plus products and other related products available from Quixote Traffic.

Table 4 — Additional documentation available for ADR Plus products and related hardware

Document	Part Number
ADR Plus User's Manual	99-133
StopWatch+ Release Notes	99-348
TOPS Installation Manual [*]	81-896
TOPS Operating Manual [*]	81-897
TOPS v3.6 Release Notes [*]	99-291
ADR-1000/ADR-2000 Getting Started Guide	119c/507

Technical Support

In order to receive customer support on your ADR unit, you must register it with Quixote Traffic. This contact information will connect you with the ADR technical support staff of Quixote Traffic Corporation, should you require additional help concerning this firmware update.

Quixote Traffic Corporation - ADR Technical Support

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^{*} The TOPS Installation CD also includes copies of these documents in PDF format.