



ADR Plus Product Line

**ADR Plus v5.53 Firmware**

Quixote Traffic is pleased to announce the release of Version 5.53 firmware for the ADR Plus Product Line. This update adds a couple of new features to the ADR Plus products: notably a way to stamp ADR data with a GPS location (which has been obtained from a separate GPS unit) and also a continuous count feature.

**Product** ..... **Firmware for the ADR Plus Product Line**  
**Version** ..... **Version 5.53**  
**Release Date** ..... **April 6<sup>th</sup>, 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 5.53 of the firmware can be installed with one of the following language files installed: American, American/Spanish, or American/Canadian French.

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 5.53 firmware is also compatible with version 1.0 and higher of Quixote’s **Z-Link** ADR data retrieval software for the Palm™ OS.

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**Note** It is recommended that this firmware should not be used with any version of TOPS older than version 3.6. The additional information stored in the ADR files may cause unpredictable results 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 5.53** firmware may no longer be fully compatible with TDP.

## Support for the StopWatch+ Add-on Module

**Version 5.53** 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 an ADR Plus unit in the field via a direct connection, you will need the following items:

- Notebook or portable PC with Peek'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 5.53** firmware update file:

**Table 1** — Additional documentation available for TOPS and related hardware

Firmware version	Filename
v5.53 firmware - American	V553-A_97-508-D.bin
v5.53 firmware - American / Spanish	V553-AS_97-508-A.bin
v5.53 firmware - American / Canadian French	V553-AC_97-508-E.bin

If you need additional assistance to perform the ADR Plus firmware update, contact the Quixote Traffic Customer Service Center using the contact information provided on page 5 of this bulletin.

## Enhancements

Several new features and functions have been added to the ADR in firmware version 5.53. Some of these are core functions while others require additional hardware (such as the WIM functions.)

**Table 2 – New features included in Version 5.53 of the ADR Plus firmware**

Feature	Description	ECR#
Support for GPS data	The ADR can store GPS coordinates in the .bin and .PVR files that are created during data runs. The coordinates can be retrieved from a GPS device by the ADR during setup. The information is stored in the file header of the .bin or .pvr file.	610, 1293
Continuous counts	The ADR now has a continuous count option. When selected, the device counts using the current study settings. At the end of the study, the ADR will only write one set of counts to the data file.	1183
ADR System Logging	The ADRs now log additional system parameters into the data file headers. The parameters that are recorded are: <ul style="list-style-type: none"> <li>• Battery Voltage</li> <li>• System Current</li> <li>• Power Status</li> <li>• Solar Panel output</li> <li>• Temperature</li> <li>• System Reboots</li> </ul>	1184
Setup Files prompt for station & ID numbers	Setup files created and copied from one ADR to another now have the option to request that the user enter a Station Number and ID Number, while retaining the critical setup information used during portable setups. The new naming convention can now be used when storing a setup file to a PCMCIA card or to CPU media. This makes the files simpler to identify.	607, 608, 1247
Enhanced ADR Setup File information	Setup Files created on an ADR can now capture, store, and reload unique configuration parameter values as part of the file. These parameters include: Daylight Savings Time setting, debounce value, class table, sensor spacing, and sensitivity settings.	1271
Auto reset of sensor boards	The ADR user interface includes a new 'Hour' option under the Engineering > Auto Reset Boards menu command. (It now includes the options: Never, Daily and Hour.) These commands tell the CPU to reset the sensor boards that are installed in the ADR hourly if the CPU detects that a sensor board has reset since the last selected interval.	1313
Programmable Baud Rates for Comm Ports 2 and 3	An ADR-3000 that is outfitted with an ADR Plus RS232 Comm Ports module can now adjust and set the baud rates for comm ports 2 and 3 using the ADR-3000 keyboard and display interface.	1314
'User Interface Over Comms' deactivates when the modem receives an incoming call	The firmware will now turn off the User Interface over a comm connection if it receives the word "RING" on the same comm port. This is an indication that the previous modem connection is no longer on-line. Previously, when the ADR did not turn off the UI over Comms, the modem was unable to answer an incoming call until the ADR timed out and stopped sending data to the modem. This typically took 10 minutes.	1355

(In order to utilize the GPS feature, a hand-held GPS device that supports an RS232 port and the NMEA protocol is required, along with a serial cable to connect the GPS device to the ADR. Please contact Quixote Traffic for additional information.)

## 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 5.53:

**Table 3 – Issues fixed in this release**

Issue	Resolution	ECR #
StopWatch variant of ADR firmware was not properly adjusting for Daylight Savings Time	Although the underlying ADR firmware was automatically adjusting for daylight savings time, the StopWatch firmware was not responding properly to the 'move the clock back an hour' event. Although the StopWatch data file ended up with an extra hour of data, the data file was valid. StopWatch has been modified to properly reset its collection time during a Daylight Savings Time clock adjustment.	1289

## 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
ADR-750 Getting Started Guide	99-221

### 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 Service Center

2511 Corporate Way  
Palmetto, FL 34221  
toll free in the U.S.: 1.800.245.7660  
tel: 1.941.845.1200  
fax: 1.941.845.1504  
email: tech.support@quixotecorp.com

\* The TOPS Installation CD also includes copies of these documents in PDF format.