## Diamond Knowledge Base

**Centurion Version History 1.42** 

Duild	Added sums of fas Division the databases in addition to multiple above set the Oreans V2 interface
Build	Added support for Bluetooth database in addition to multiple changes to the Omega X3 interface
#0001	including more integrated Bicycle data. First release for HLE with Bluetooth database support. Fully
03/07/16	added "Bicycle" bin table type. Multiple changes to Binary file format to support Bicycle data collection
	in the binned data storage. New database type "Bicycle" (like Axle, Speed, Length, etc) which is
	processed in the same way. Changed the Data Wizard "PerVehicle" Report to switch to showing
	Bicycles/Vehicles (instead of Cars/Trucks) when Bicycle data is present. Modified the Data Wizard
	"Classification" Report to have a new section for Bicycle binned data. Fixed "Site Copy" to include
	everything in the Station, Lanes, and Imports databases (was missing some values). Added Bicycles
	to the DBView Report. Added the following to the Report Excel Generator: Support for Classification
	Data Dump Report Support for Classification Summary Report Updated the PerVehicle Summary
	Report to show Bicycles Added "Bike" to the PerVehicle Dump Added the following to the Report
	Generator: New "Bicycle Classes" option to Class Data Dump and Basic Class Report Added support
	for Bicycle class data to Class Data Dump Added support for Bicycle class data to Class Summary
	Report Added support for Bicycle class data to Basic Class Report Changed background color for
	bicycles on PerVehicle Data Dump Fixed bug with Lane Label position when switching from
	Together/Separate. Changed color of Bicycle data in the database editor to be green when showing
	bike data (either PerVehicle or Class tab). Fixed issues exporting Bicycle data (no SVM, import
	problems) Fixed issue when exporting to "New ASCII" format not clearing out the upper bin values to
	0xFFFF. Updated the CSV formats to support PerVehicle "Bike" record and the Classification "Bicycle"
	type class. Fixed Direct to Excel not always putting the number in front of the datatype. Fixed bug not
	opening some Axle Class Tables (problem related to the addition of Austroads classifying) Changes
	for Omega X3: Added support for A/D Input Signature in files. Multiple changes to the OX3 interface
	for bicycle detection. Changed colors for any vehicle and/or axle that is a bicycle during monitoring.
	TSProcess extensively changed to handle distinction between bike and vehicle axles. Can import Bike
	Only, Vehicle Only, Bike and Vehicle in to two separate sites, or Bike and Vehicle combined into a
	single site. TSProcess implemented a "min Axle Spacing" value for both Vehicles and Bicycles. Added
	viewing the signal capture graphs (both in Start Collecting menu and While collection is active)
	Changed colors so that: Vehicles are White on black Bicycles are White on Green Bluetooth are White
	on Blue Changed the calculation for vehicles that are "bikes" to be any vehicle with a Bike Axle
	Count >= Axle Count. Added the "Ask Bluetooth Scanning" questions. Added setting the Axle
	Collection Mode and USB/BT/GPS options to the MO command. Added a text file capture (Start &
	Stop) to the popup menu of the Telemetry Terminal Mode. Added new "Bicycle" tab to the Preferences
	dialog box. This new tab contains options for handling the import of bicycle data. Fixed problem
	handling some Omega import data with a second's value of "60". Fixed moving GPS Lon/Lat over from
	some kinds of Omega Import files. Added setting the Number Format in the counter for the RR3 and
	the Omega X3. Fixed bug not allowing saving of Axle Class tables and then being able to reload them.
Build	Added "Has Bike" to the individual imports. Added TSProcess ability to parse out and create a new
#0002	binary file (for importing or viewing) that contains just the Bluetooth data from a file. Modified the
03/15/16	database to support type "8" data (Bluetooth only), plus the ability to add Bluetooth to all other types
	(Datatype bit 8 set). Added "Bluetooth Data" directory option to the File Directories preference dialog
	box. Updated the following functions to support Bluetooth dataset: Site Copy Dialog Site Delete
	Dialog Added new Bluetooth data editor window. Added new Bluetooth Export function with following
	formats: New ASCII Format Binary Format CSV Format Direct to Excel Fixed "Site Delete Import"
	when deleting data from Bluetooth file. Added Bluetooth data display during the Omega X3 Start
	Collecting Process. Fixed some issues not displaying Bluetooth during normal link. Moved Bluetooth
	addresses to separate tab during Omega X3 Monitor Traffic. Fixed Bug not seeing Bluetooth values in
	Start Collecting window. Multiple changes to handle mixed sites (with both Bluetooth and regular
	PerVehicle/Classification/Volume data).

Build	Fixed creating initial Per-Vehicle directories for database. Fixed bug on selecting the Per-Vehicle
#0003	database from DBView.
03/16/16	
Build	Added Report Generation for Bluetooth data: Bluetooth Data Dump Added Report Export Generation
#0004	for Bluetooth data: Bluetooth Data Dump Added some summary info (total of each type) to the bottom
03/18/16	of the Bluetooth Data Dump Report Export to Excel. Fixed a bug in not importing stored GPS
	Addresses. Added new Flag Field type 0x06 (GPS Location in standard file type). When this flag is
	found in the import file, it auto-sets the station to this location. Fixed but with New Reports not
	displaying correctly when Bluetooth data is brought into the database.
Build	Added "Bluetooth Travel Time 1 Report" which analyzes up to 100 different sites and creates a report
#0005	on it. Added new suite of counter connection to "TT-200-DL" devices (which is a Data logger attached
	to a TT-200 Loop Detector). Fixed a bug in 7-character response from the IFA command with v3.10
	counters (has an extra '0' at the end). Added new functionality to TSProcess for handling Loop-Loop
	configurations (from TT-200 counters, or any data with sensor mode 4 for Pres (OC-Pres) style of
	input). Changed PerVehicle reports to use the following for Pres-Pres axle class:
	< 20' long – Class #2
	< 50' long – Class #4
	All others – Class #9
Build	Changed to support Omega X3 V1.11 firmware and always using the A/D system to process road
#0006	tube axle strikes (AxleCollectMode=0 is for O.C. Input). Changed the sampling rate to 1140hz for
	Omega X3 (now shows 0.88ms per sample on all charts).
Build	Increased the number of COM ports you can select in the Terminal Window. Added a "COM Ports
#0007	(found)" bar to the Open Terminal window. This is linked to the "COM Ports (all)" bar so that users can
	select from either list box and have the Telemetry Window open to that port. Modified all COM port
	selection bars that list found ports to now include the full name of the COM Port (instead of just the
	Com Number). Increased Comport Selection boxes, now shows upto 255 COM Ports. Changed CC &
	Parks to include the Telemetry->Open Terminal Window option. Added a "Port Assign" page to the
	Preferences->Communication Option page which allows setting up ports as fixed for all identical
	devices. Fixed allowing right click on Piezo/Tube images showing the option for Signal Capture when it
	wasn't actually enabled (PopupMenu=NULL) Modified TSProcess to correctly identify "O.C. Input
	Data" from Omega X3 counters when Axle Collection type = 0 and firmware >= 1.11 Added some
	analysis to Bluetooth Travel Time 1 Report. Parking System Changes: Added ability to select SOIP for
	all counter connections (and added a new SOIP Address box for entering the IP address @ port).
	Added new "Type of Device" selection for counters which includes:
	- Diamond (UPP)
	- ROSIM (WAP-348x) System now opens unique COM and Winsock port for each device that has a
	unique address (not MAC addressable devices from common port). Increased selectable "Outflow
	Lanes" from 1-8 to 1-16. Added parsing for WAP-348X data flow.
Build	Fixed some bugs in linking to counters in the new Parking Lot monitor system when connecting by
140000 I	COID on by COM part. Completely charged the II fall and the ID-III function of the Device of the
#0008	SOIP or by COM port. Completely changed the "Link" and the "Poll" function of the Parking Lot
	Monitor. They now work with direct COM, SOIP, and they also bypass the older Centurion functions
	Monitor. They now work with direct COM, SOIP, and they also bypass the older Centurion functions and use the telemetry functions instead. Fixed not showing error in Parking Lot when no connection is
	Monitor. They now work with direct COM, SOIP, and they also bypass the older Centurion functions

Build	Added a couple more format options for the SDR data file. Added "Ignore Bike Indicator:" to
#0009	TSProcess. Fixed corrupted error from Omega X3 file (wan't handling the flag field 0x06properly during
	import). Fixed multiple issues with the Last Study that occurred when collecting volume only data. Now
	auto-calculates totals and ADT for Volume only data fro Last Study (previously only showed for
	PerVehicle collection).
Build	Modified the Omega X3 link to go back to using the standard Airswitch circuit (now called Normal /
#0010	O.C. Input). Changed Free version to allow communication with TT-200-DL Changed Free version to
	allow processing of TT-200-DL data files.
Build	Changed so that V1.15 Omega X3's labels it as "Hide Asking Axle Collection Mode" for the bit.1
#0011	setting.
05/24/16	
Build	Added a "Length" bin export format for PRN files. Got rid of the extra blank page on Basic Volue
#0012	Report - 15 min. Changed ADT calculation on Volume Summary to match other reports. Fixed bug
05/24/16	when reading out Axle, Speed and Length bin table definitions for counters with V4.76 (or higher).
	Eliminated changing Centurion baud rates inside of CounterLink10 (it is unnecessary and screws up a
	direct RS232 port link). Fixed clearing upper bits of Advanced Settings on Omega X3 link. Added
	support for Omega X3 V1.20 changes: New "Cell Modem/RS232 Baud Rate" setting. Added
	command line otption to run TSProcess and thn exit. This is done by using TSPROCESS on the
	command line followed by the input file(s) and then the output path. Also added new "TSProcess
	Export" directory which defines the default output directory for TSProcess when run from the command
	line or when run from the File -> Process Timestamp To Output File Only command. Added
	auto-display of the Data File Wizard for Omega X3 imports (can be enabled/disabled in General
	Preferences > Import [TAB]. Added new 'Simple type interface for the Omega X3 traffic counter. Added
	window asking users if they want to use the simple' or 'advanced' link screen for the Omega X3
Build	(Avitated on early "Departe gride") check function. To start, it works only with newly downloaded data files (or
#0015	existing files on the computer: Settings controlled from a new Preferences -> Data Integrity Checking
07/27/16	dialog box Has a "Run Check Now" button to check any existing data file. Supports finding periods with
	Zero Count and finding SnMis counts that exceed a fixed percentage of the total, or SnMis count that
	exceeds fixed amount in a lane over a specified period. When Data Integrity violations occur, a pop-up
	window appears with functions to print, edit, and save the lists. Save format is Word compatible.
	Multiple changes to support the new Omega X3 V1.30 firmwaer including changes to support the new
	Cascade-IoT modem installation: Added new Modem Parameters setup screen. Multiple checks on
	the Diamond Account #, IP Address, all Firewall values to make sure they are valid before proceeding.
	File directory now shows separate column next to the "Retrieved" column that indicates files that have
	been sent to the "DDS" (Diamond Data Server). This is shown only when the Cascade-IoT modem is
	installed. Added "File Create" option box to the Settings panel (Manual or Daily). Added ability to call
	up Omega X3 traffic counters from the Direct Call Directory or the Centurion Map ( to amek SoIP links
	to the Omega X3). Added support for new firmware V1.30 "Enhanced" axle collection mode. This does
	A/D style input but stores just like "Normal" mode. Fixed bug showing the secondary voltage level.
	Fixed tab order on TSProcess and fixed bug which caused infinite loop when selecting an end time of
	"23:59:59" and an end date that is less than the actual end of the data.
Build	Added ability to mark "Enhanced" mode data from Omega X3 as all bicycles. Added a simple Hex
#0016	Editor to program, accessible from File->Hex Editor Fixed bug in not allowing update of custom
08/28/16	ILoopxxxa.bin firmware (where 'a' is the custome letter). Changed the I-Loop Firmware upload function
	to handle Loop Boards that are still in Vheicle Output mode. Fixed double buffering problem with
	CounterLink3 causing sensors to not display correctly in "Test Sensors".

Build	Added "Diamond Data Server" button and dialog box of settings for controlling the Omega X3
#0017	Cascade-IoT modem connection. Fixed bug with "Capture" mode not working right when linking
11/15/16	through Winsock connection. Disabled the search for Excel (Program now thinks Excel is installed
	always and leaves it up to the Windows API to handle opening files in this format). Added new feature
	to set which class types to export during any Classification export.
Build	Fixed "LoopLabel4" from being hidden behind loop image (making it impossible to click the image and
#0018	set loop values). Changed the position of all Start Collecting Next/Previous buttons to be manually set
12/05/16	locations (not relying on Windows to positioning for different window sizes).

http://support.diamondtraffic.com/knowledgemanager/questions/162/