KisDA: User Manual

Contents

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KisDA User Manual

Kistler-Datalogger **D**ownloading and **A**rchiver (KisDA) is a utility program that downloads vehicle records from a designated Kistler WIM Data Logger (i.e., 5204A) and archives them into daily archived data files. This program is usually run through a Windows Task Scheduler, but manual runs may be used for initial tests. The use of this software is simple: (1) user first sets all parameters, and then (2) use one of the three buttons to manually archive the files or run the program using Windows Task Scheduler. The files produced by KisDA are translated to Bull-CSV format through BullConverter. BullReporter is then used to process Bull-CSV formatted files, which is capable to produce a wide range of data analyses reports.

It should be noted that KisDA outputs are all translated in English units from Version 1.2, i.e., speed=mph, weight=lb, and distance=in.

1. Parameter Setup

The first step towards a successful use of KisDA is setting all of the required parameters. Selecting the "Parameters→ View/Set Settings" menu brings up the settings window shown in Figure 1. After filling up all of the parameters (don't leave any blank), the **Save** button must be pressed, which saves all of them. If the Settings window is closed without pressing the Save button, none of the parameters you made change are saved.

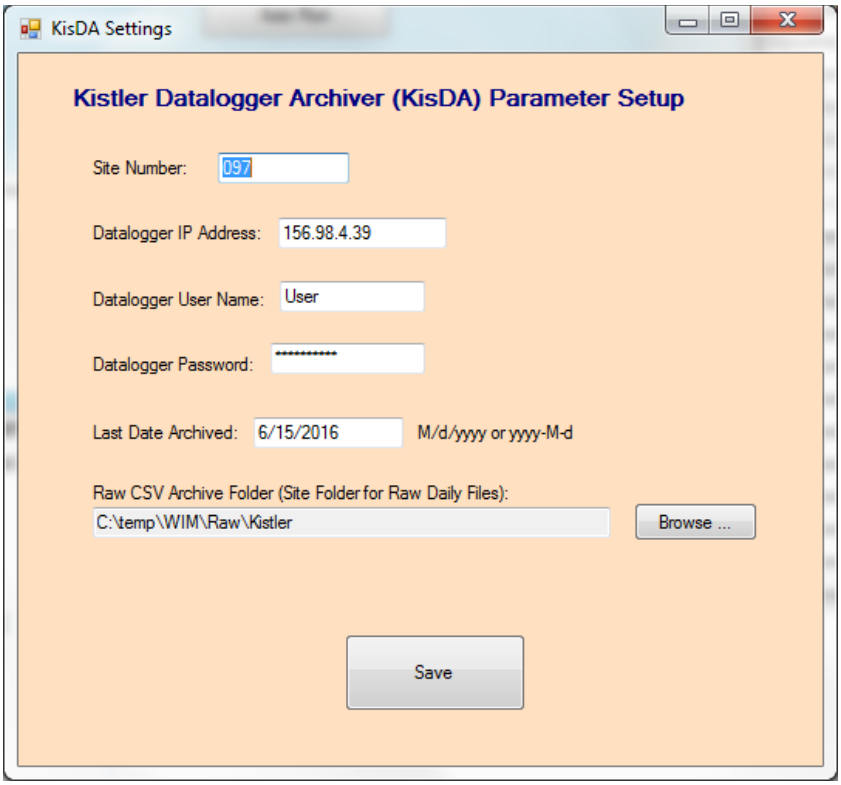
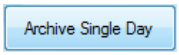


Figure 1: Parameter settings

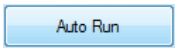
2. Three Buttons

After saving all parameters, user can choose one of three action buttons to archive DL data (Figure 2). Each button is described below.



KisDA archives a single day specified. The specified date cannot be greater than or equal to today. It must be a past date, which is a basic rule that is also applied to below two action buttons.

KisDA archives up to 10 days from the specified date or until one day before today whichever comes first.



KisDA archives starting from the next day of the "Last Date Archived" specified in the Parameter Setup and finishes the date up to yesterday. Scheduled Run basically accomplishes the same task as the **Auto Run** button but using a Task Scheduler.

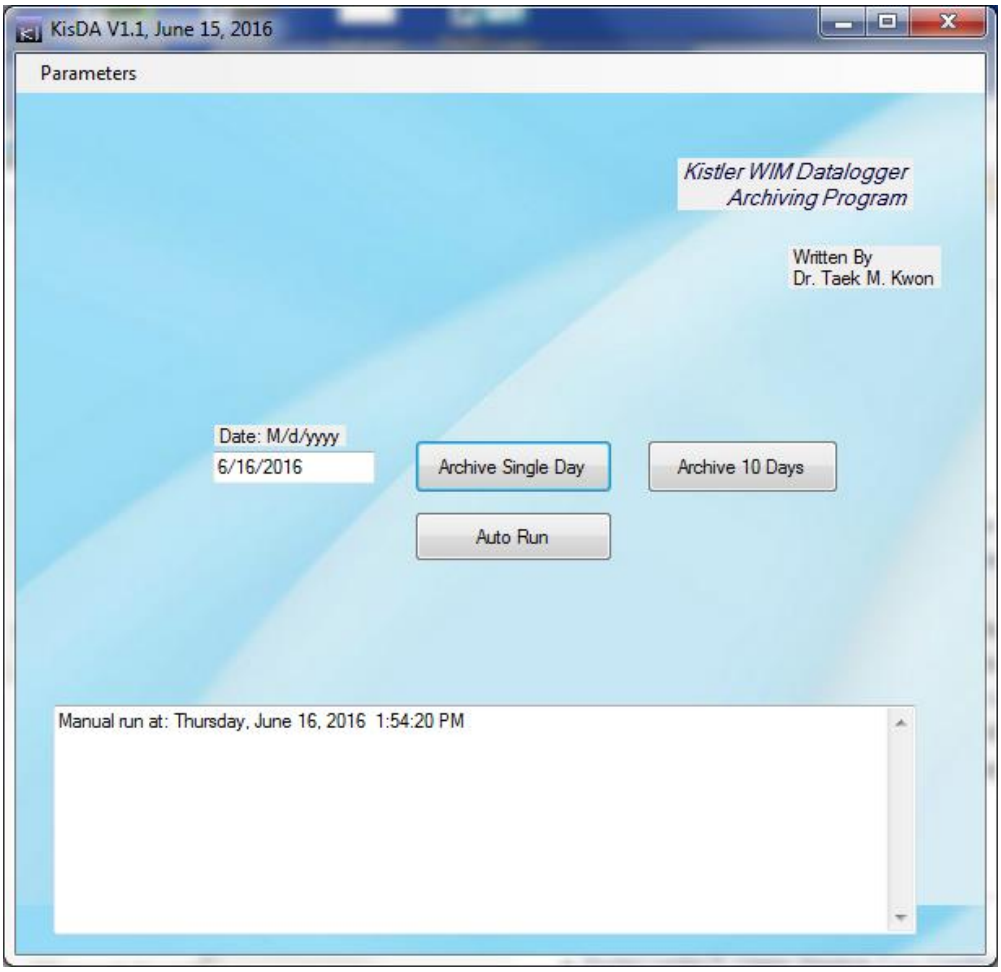


Figure 2: KisDA main screen

3. Task Scheduled Runs

A normal way of running KisDA would be through Windows Task Scheduler. This section describes how to set the Task Scheduler up for KisDA using the Windows 7 Task Scheduler. A similar process is applied to Windows 10.

(1) Open "**Task Scheduler**"
(2) Press "**Create Task …**" from **Action** menu.
From **General** tab, type in
Name: Kistler archiving (or a better name)
Select: Run whether user is logged on or not
Check Mark: Run with highest privileges

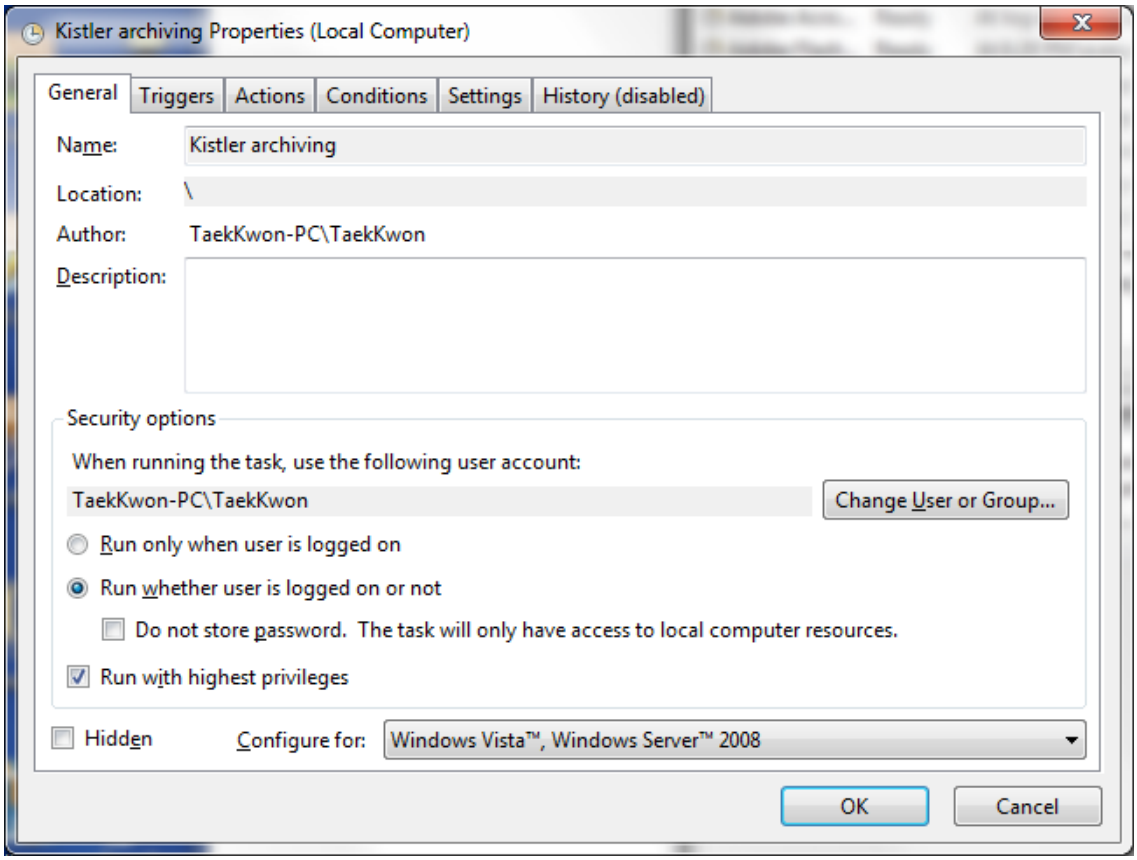


Figure 3: General tab setting

(3) Open **Actions** tab and press **Edit** button. Set **Program/script** to KisDA.exe by browsing the program location and add "-auto" in the “Add argument (optional)” textbox. An example is shown in Figure 4.

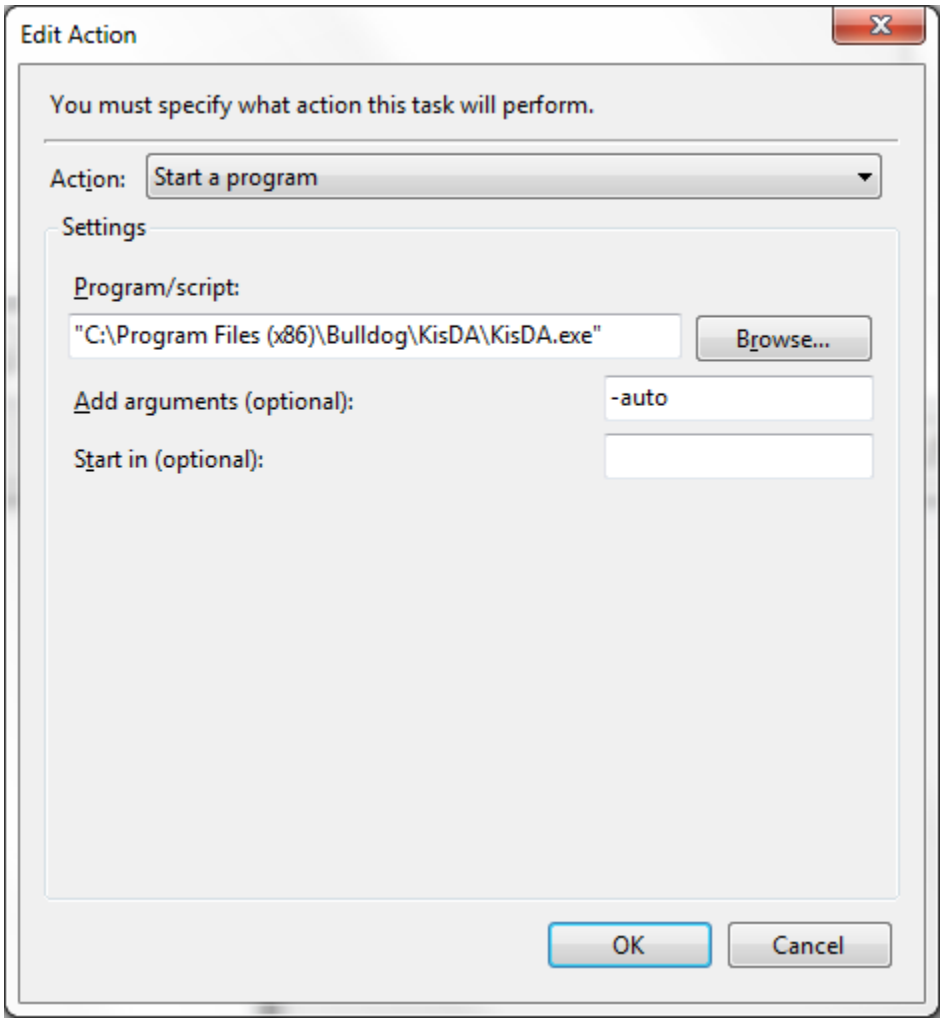


Figure 4: Edit Action setting

(4) Open **Triggers** tab, and press **New** button if it is the first time you are creating the trigger or press **Edit** button if the trigger was already created. Set the Trigger to run once a day, and set the time to like 2:00AM, so that it downloads the data when you are not using your computer.

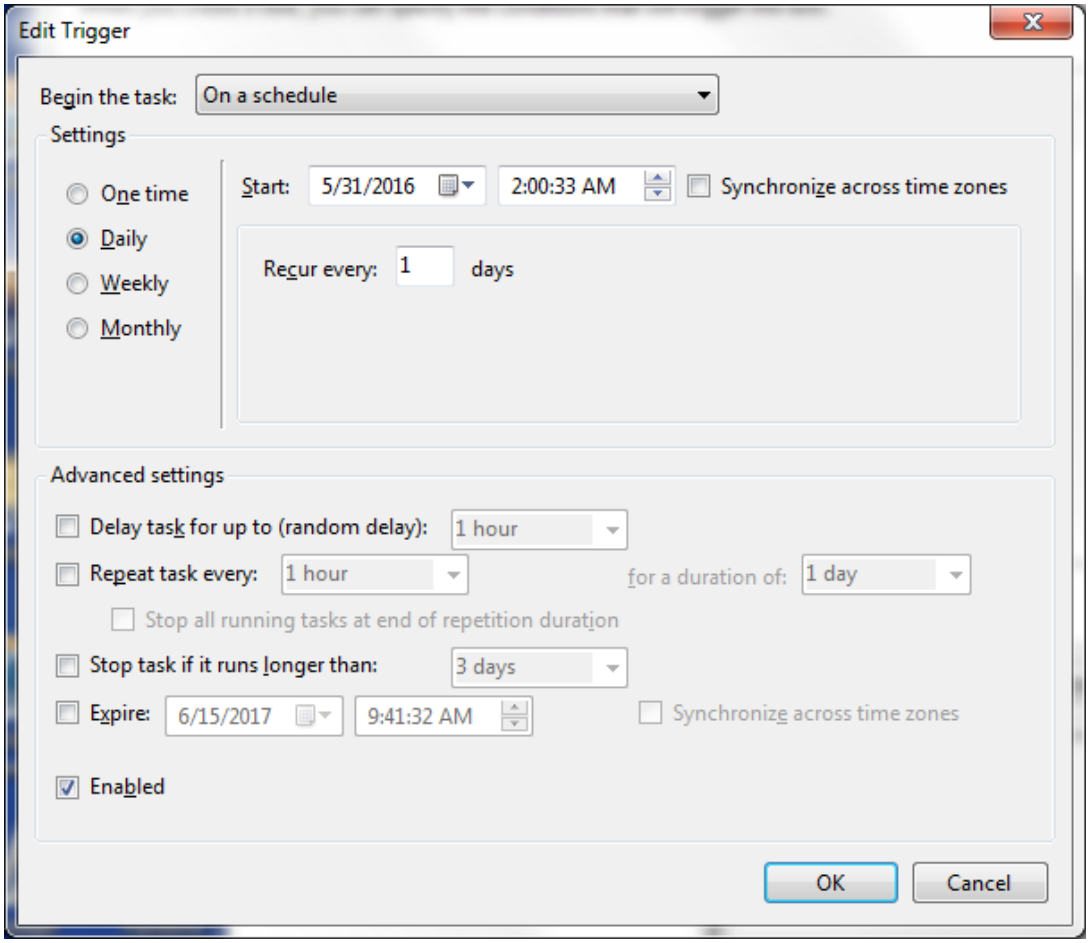


Figure 5: Edit Trigger settings

Other tabs should be reviewed and configured based on your preference. Press OK button to finish up scheduled runs.

You have now successfully set the scheduled runs for KisDA.exe. One last step would be checking if the scheduled run actually ran and archived the data or not in the next day.

4. Archived File Columns and Error/Warning Code Description

KisDA archived files have an extension .kis and its filename conforms to the following name convention.

yyyymmdd.###.kis Example) 20160612.097.kis

yyyy=4 digit representing year
mm=two digit representing month
dd=two digit representing date
###=three digit site ID

The data is archived in a comma separated values (CSV) format with the columns described in Table 1. Error/warning code mapping is shown in Table 2.

Table 1: Columns of *.kis File Format

Col Num	Column Heading	Data Description	Example
1	VehID	Unique vehicle ID, integer	2236784
2	StartTime	Time of vehicle crossing the first sensor. hh:mm:ss	15:19:35
3	Millisec	Millisecond portion of StartTime	198
4	LaneNo	Lane number in integer	1
5	ErrWarning	String. Multiple error/warning codes are combined through "|" character. See Table 2 for defined codes.	2|72|80
6	MoveStatus	0=constant speed 1=acceleration -1=deceleration	0
7	FrontToFront	Headway. Time distance to the leading car on the same lane. Seconds	18.178
8	BackToFront	Gap. Time distance to the leading car on the same lane. Seconds	17.998
9	Duration	Time between entering the first sensor and leaving the last sensor	0.87
10	VehLength(in)	Total vehicle length including trailers. Integer	893

11	GVW(lb)	Gross Vehicle Weight. Integer	63380
12	Speed(mph)	Vehicle speed. Floating point	68.8
13	AxleCount	Number of axle of the vehicle. Integer	5
		Axle number=N	N=0,1,2,…
14	AxLW1(lb)	Weight of left wheel of axle #1	5940
15	AxRW1(lb)	Weight of right wheel of axle #1	6280
16	AxD1(in)	Distance to previous wheel	0
17	AxLW2	Weight of left wheel of axle #2	6480
18	AxRW2	Weight of right wheel of axle #2	7840
19	AxD2	Distance to previous wheel (#1)	187
20	AxLW3		
21	AxRW3		
22	AxD3		
23	AxLW4		
24	AxRW4		
25	AxD4		
26	AxLW5		
27	AxRW5		
28	AxD5		
29	AxLW6		
30	AxRW6		
31	AxD6		
32	AxLW7		
33	AxRW7		
34	AxD7		
35	AxLW8		
36	AxRW8		
37	AxD8		
38	AxLW9		
39	AxRW9		
40	AxD9		
41	AxLW10		
42	AxRW10		
43	AxD10		
44	AxLW11		
45	AxRw11		
46	AxD11		
47	AxLW12		
48	AxRW12		
49	AxD12		
50	AxLW13		

51	AxRW13		
52	AxD13		

Table 2: Error/Warning Code Mapping to Bull-CSV

*.kis ErrWarning Code	Name	Description	Bull-CSV error code
1	Out of Spec	Vehicle driving out of specifications	15
2	Vehicle Processing Error	Cannot process vehicle	14
70	Velocity above max	Driving above specified velocity	46
71	Velocity below min	Driving below specified velocity	0
72	Strong acceleration max	Strong acceleration above specified max	34
73	Strong deceleration min	Strong deceleration below specified min	34
74	High imbalance	High left/right weight imbalance	35
75	Sensor missing	Force or presence sensor signal missing	70
76	ADC overload	ADC overload	66
77	High vehicle dynamics	Highly dynamic driving behavior	67
78	Acceleration change	Strong changes in acceleration	34
79	Driving between two lanes	Driving between two adjacent lanes	68
80	Single-track vehicle	Single-track vehicle or vehicle driving on only one side of the layout	69
81	Force record missing	Force record missing	7
82	Single axle vehicle	Single axle vehicle	19
83	Stop and go	Vehicle stopped while driving through the WIM site	16
84	GVW above max	Gross vehicle weight above specified value	44
85	GVW below min	Gross vehicle weight below specified value	65
86	Axle load above max	Axle load above specified value	43
87	Axle load below min	Axle load below specified value	65
90	Undefined Kistler DL error/warning	Undefined or unknown DL error or waning messages, i.e., error or warning messages that are not included in 1, 2, 70-87.	65