

**TECHNICAL SUPPORT – PRODUCT WORKFLOW**

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**SDL Tool™ Digital Level Download Software Instructions****Overview**

The SDL Tool™ software is provided as a method of downloading data recorded using the Sokkia SDL30 Digital Level series instruments. SDL Tool is designed to run on Windows™ XP, ME, 98 or 2000-based desktop or laptop Personal Computers. This software applet will download .SDR or .CSV format files to either the “Desktop” or “My Documents” folder locations on a computer. CSV-formatted files may be viewed and edited using Windows Excel® or other compatible application. Complete SDL30 Digital Level file format details may be found in the SDL30 instrument manual.

**Requirements**

SDL Tool software requires Winzip® or other compatible file extraction application capable of opening .ZIP formatted files. A Windows-based computer is also required.

**Installation Instructions**

1. Download the “SDLTool.zip” file from the Sokkia website at [www.sokkia.com](http://www.sokkia.com), and save into a local folder location on your computer.

2. Unzip the contents of the “SDLTool.zip” folder to a local directory where you intend to run the software. This will place the following files into the folder you created:

**SDL\_TOOL.exe**  
**Config.csv**  
**Message.csv**

All three files are required in order to run the software properly, and all three files must be located in the same file folder. The “SDL\_TOOL.exe” file is the application executable: This is the file that you will run to start the software. The “message.csv” file contains the names of the various menu items and commands in the software. The “config.csv” file contains the configuration information for the software. An example of the files created is displayed below in Figure 1.

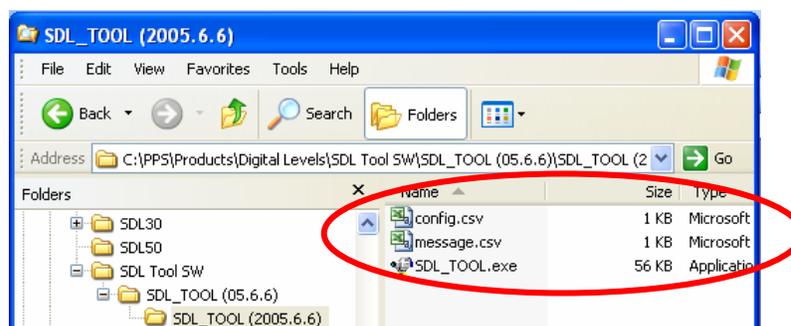


Fig. 1

**NOTE:** Be sure to retain a copy of the “SDLTool.zip” file in a secure location on your hard drive in case reinstallation is needed at a later date.

## Basic Download Instructions

### On the Instrument – Initial Steps

1. Connect a Sokkia DOC27 or similar Instrument Download Cable to the data port on the SDL30 Digital Level (see fig. 2 below).



Fig. 2

2. Connect the download cable to an appropriate data port on your PC. (The example below is of a Sokkia DOC27 cable connected to a 9-pin serial port).



Fig. 3

3. Turn on the SDL30 Digital Level by pressing the **[PWR]** button.

4. On the instrument, press the **[MENU]** button to bring up the first page of the main menu screen. The menu item "JOB" should be highlighted.



Fig. 4

5. Select the “JOB” menu item and press the **[ENTER]** button (lower large arrow button on front of SDL30). The JOB menu will now be displayed.



Fig. 5

6. In the JOB menu, the “Select” menu item should be highlighted. Press the **[RIGHT ARROW]** button two times to navigate to the menu item “Output”. Press the **[ENTER]** button to select the Output menu. You will now see the JOB Output selection menu appear.



Fig. 6

7. To select a Job for output, press the **[RIGHT ARROW]** button repeatedly until the desired job name appears on the screen.

NOTE: If you press the button too fast and skip past the desired Job, continue to press the **[RIGHT ARROW]** button. The SDL30 can contain 20 Job files. Once the last Job file is reached, the list will continue from the beginning, or the first Job. Once the proper Job is located, press the **[ENTER]** button. This will bring up the File Format Output Selection Screen.

#### On The Instrument – File Output – Format selection

8. In the File Format Output Selection Screen, you may select and output to the computer either “CSV” (Comma-Delimited Text) or “SDR2X” (Sokkia Data Recorder, type 2) file format. Press the **[RIGHT ARROW]** button to highlight the desired format. If you are sure of the comms and output settings at this point, **STOP** and proceed to the **Computer Download Steps** portion of this workflow.

NOTE: If you are not sure of the comms settings, you can press the **[MENU]** button to access the comms settings menu. Pressing the **[ESC]** button from the comms setting screen will return you to the CSV download screen. Detailed instructions may be found in the SDL30 Instrument Operations Manual.

#### Special Detail - “CSV” File Format “STX-ETX” Setting:

If you are sending a Job file in “CSV” format, be sure to confirm the “STX-ETX” setting on the instrument. From the File Format Output Selection Screen, press the **[MENU]** button twice. This will bring up the CSV STX-ETX Setting Selection screen. To properly receive a file using the SDL Tool software, this will need to be set to “YES”. Press the **[RIGHT ARROW]** until “YES” is highlighted, then press the **[ENTER]** button to confirm.

### On the Computer – Downloading the File

9. On the PC, launch the SDL Tool application by moving your cursor over the SDL Tool icon and double-clicking with the left mouse key. (The SDL Tool application window will appear on screen as in Figure 6).

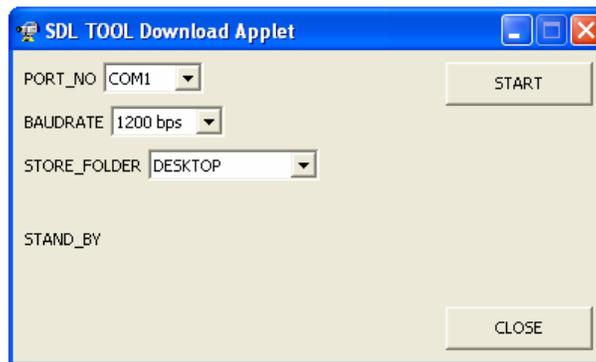


Fig. 6

10. Before starting the download process, confirm that the Baud Rate matches the settings previously checked on the SDL30. Check the Communications Port Number and set to the correct port that you have attached the download cable. Both the Baud rate and The Port Number may be changed by clicking on the small arrow to the right of the item displayed, then moving up or down the list, and clicking on the correct Port or Baud rate number. An example is provided in Figure 7 below:

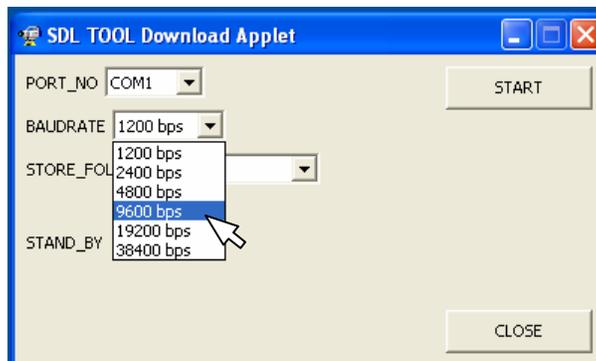


Fig. 7

11. To start the download process, click the **[START]** button on the SDL Tool software screen. Next, confirm that the instrument is ready to transmit the data, and press the **[ENTER]** button on the instrument. The SDL Tool software will then display "Receive\_Data" and data should begin streaming into the computer. You may see the data streaming into the PC during the download process, and it will look something like the screen in Figure 8 below:

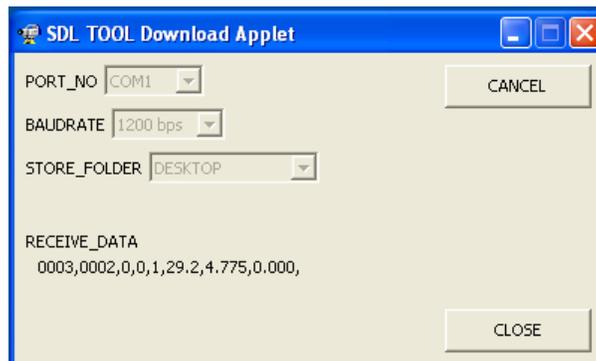


Fig. 8

12. Once the instrument has completed sending the data, the instrument will return to the Job Selection screen, and the SDL Tool software will display the status message “Complete”. The data file will have been created on your computer and will be located in either the “Desktop” or “My\_Documents” folder, depending on which is selected in the SDL Tool software. The file will appear something like Figure 9 below:

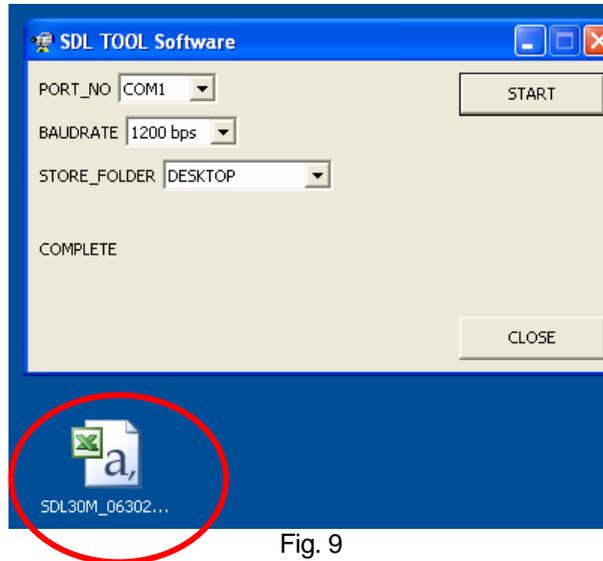


Fig. 9

NOTE: When sending either in “CSV” format or “SDR2X” format, the file structure will be a “.csv” text file that may be opened with Microsoft Excel or similar software.

13. You may now close the SDL Tool software by clicking the **[CLOSE]** button. The instrument may now be disconnected, and turned off by pressing and holding the **[LIGHT]** button, and pressing and releasing the **[PWR]** button.

14. You may view the newly created file by double-clicking on the file icon.

## PROCESS COMPLETE

A "CSV" file will appear similar to the image below:

	A	B	C	D	E	F	G	H	I
1	SDL30	1207	5471	JOB06	1	11			
2	1	1	0	1	1	13.2	5.757	1041.522	
3	2	2	0	1	2	12.5	5.735	1041.544	
4	3	2	0	0	1	29.2	4.775	0	
5	4	3	0	0	2	27.7	5.441	-0.666	
6	5	4	0	1	1	29.1	4.774	100	
7	6	5	0	1	2	27.7	5.444	99.33	
8	7	5	0	0	1	23	4.963	0	
9	8	6	0	0	2	22.7	4.81	0.153	
10	9	7	0	1	1	23	4.963	100	
11	10	8	0	1	2	23	4.963	100	
12									
13									
14									

A “SDR2X” file will have an appearance similar to the file format below:

	A	B	C	D	E	F	G	H
1	00NMSDR20	V03-05	Feb-21-00	00:00	123111			
2	10NMJOB06							
3	13CPSea level crn:	N						
4	13CPC and R crn:	N						
5	13CPAtmos crn:	N						
6	06NM1.00000000							
7	13JS10000							
8	60LVE	005471100.000000						
9	61KI0001	1041.52200						
10	62LV00001000100001							
11	63LV000113.20000005.75700000BS				0000100001000000.00000000			
12	63LV000212.50000005.73500000FS				0000100000000010.00000000			
13	62LV00002000200000							
14	63LV000229.20000004.77500000BS				0000200001000000.00000000			
15	63LV000327.70000005.44100000FS				0000200000000000.00000000			
16	61KI0004	100.000000						
17	62LV00001000400001							
18	63LV000429.10000004.77400000BS				0000100001000000.00000000			
19	63LV000527.70000005.44400000FS				0000100000000010.00000000			
20	62LV00002000500000							
21	63LV000523.00000004.96300000BS				0000200001000000.00000000			
22	63LV000622.70000004.81000000FS				0000200000000000.00000000			
23	61KI0007	100.000000						
24	62LV00001000700000							
25	63LV000723.00000004.96300000BS				0000100001000000.00000000			
26	63LV000823.00000004.96300000FS				0000100000000000.00000000			
27	058051							
28								

NOTE: The “SDR2X” file format may end with an unusual “footer”, or last element in the file. This can be removed from the file. The structure of the file is “SDR” format, but the file type will be “.csv”. You must remove the “footer”, close the file, and change the file extension to “.sdr” to create a proper SDR file.

### Technical Support Contact Information

Website: <http://www.sokkia.com>  
 Phone: 1-800-257-2552 option 3  
 Fax: 913-492-0188  
 Email: [support@sokkia.com](mailto:support@sokkia.com)