

Stick Reader

SDL 440S



USER MANUAL



Links to printers and weighers.



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Getting started

The SDL440S stick reader comes complete with everything you need to get started.

- SDL stick reader
- Shearwell SDL Connect software
- Battery pack and four rechargeable AA batteries
- Mains battery charger
- Car adapter for battery charger



Turn the stick reader on and off

Press and release the green button once. The LCD screen will light up and display the start-up screen (version number and the battery level).

Turn off the stick reader by pressing and holding the green button for at least two seconds until the LCD screen shuts off. If the stick reader is left idle for five minutes it will turn itself off to conserve battery power. Shutdown time can be changed on the computer with **SDL Connect > Stick Configuration**

Warning: The Shearwell label above the display should NOT be removed! The serial number, product codes and Bluetooth address are printed on the back. Removal of the label will void any warranty.

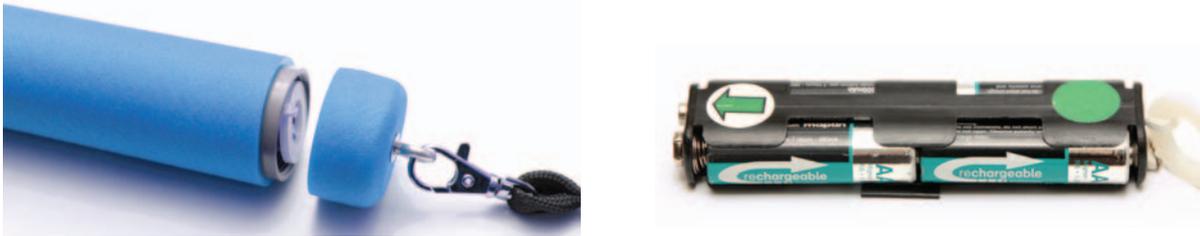
Battery information

The stick reader comes with four AA rechargeable batteries. Standard AA batteries can also be used.

Inserting batteries

Note: You will not lose your data when you remove the battery pack.

1. Open the stick reader by unscrewing the end of the red or blue handle. Use the white loop to pull out the battery pack.
2. Insert the batteries into the holder ensuring the positive and negative markings (+ / -) on the batteries match up with the (+ / -) on the holder.
3. Insert the battery pack with the green arrow and green circle facing the same direction as the green button on the reader. Ensure that the battery pack is aligned with the grooves inside the stick reader.
4. Replace the end of the reader by screwing the cap on. *Warning: Do not over-tighten the battery cap as this could damage the thread.*



Check the battery level

The battery level indicator shows very briefly on the start-up screen when the stick reader is turned on. To check the level of the batteries when the stick reader is turned on, first turn it off, then turn it back on to see the start-up screen.

The stick reader should operate for at least eight hours on a fully charged set of batteries. For the first several hours the battery indicator will show **Good**. When the battery indicator first shows **Low** you should still have one or two hours of use left, but should plan to recharge or replace the batteries soon. A sign the batteries are getting low is the stick reader is unable to maintain a Bluetooth link to a printer or weigher. When the indicator shows **Empty** the batteries should be recharged or replaced immediately.

Shearwell Version
Battery Good

Shearwell Version
Battery Low

Shearwell Version
Battery Empty

Charging the batteries

Use the supplied battery charger to recharge the batteries. The mains and car adapter for charging the stick reader batteries are labelled "Battery Charger". Place the batteries in the charger, ensuring that the positive and negative markings (+ / -) on the batteries match up with the (+ / -) on the charger. Charging the supplied batteries from flat to full should take about four hours.

The mains and car adapter for charging the printer are labelled "Printer Charger". Be careful not to confuse the battery charger and printer charger leads because you could damage them by using the wrong adapter!

WARNING: If you are using a Bluetooth printer with a stick reader be sure to use the correct adapter for each when re-charging. Shearwell Data Ltd. will not be liable for damage caused by failure to use the correct charger.

Reading tags

Turn on the stick reader. Press and release the green button once. You don't need to hold the button down. The stick reader will begin to scan for an EID. For information on Rapid Read mode see page 7.

Press to read...
Grp=A Count=0

EID found

If an EID is within range the light ring at the end of the stick reader will flash green and a short 'beep' will be heard. The EID number will show on the LCD screen and be stored in the memory. The group count will be increased by one. The stick reader is ready to scan for another EID - press the green button once to start scanning again.

940 123456789012
Grp=A Count=1

EID not found

If the stick reader scans but no EID is found the screen will display **No EID found**. The light ring will glow red and a different long 'beep' will signal a failed read.

No EID found
Grp=A Count=0

EID already stored in memory

If the same EID tag is read more than once, the screen will briefly display the message **Already saved**. The light ring will flash red and a short beep will indicate that this number is already stored in memory for this group. The second 'read' is not stored and the count is not increased.

If the same EID tag is scanned in a different group the stick reader will treat it as a new number and record it as an EID found.

123456 16 1234
Already saved...

ABCD 16 1234
Grp=B Count=3

Note: This information is for individual reading, not Rapid Read mode. Learn about Rapid Read mode in the Menu Option section on page 7.

Menu options

The menu is a list of options for changing the way the stick reader functions. The menu is only accessible when the stick reader is turned on.

1. Turn off the stick reader by holding down the green button.
2. With the stick reader off, press and hold down the green button. Continue holding down the green button to view all the menu options.
3. Release the green button to make a selection.
4. To exit the menu without making changes and return to scanning, wait for the **Cancel** option and release the green button.

Menu options

Your own stick reader may not have every option listed here.

New group?

New group

Animals are always recorded into a group. The default group is "A" but you can create different groups beyond that, named in alphabetical order. However, only one group is active at a time, so once you create a new group you can not go back to a previous group unless you erase your latest group by using the **Erase last grp** option from the menu.

Print options are available if the stick reader is linked to a Bluetooth printer. See page 26.

Erase last group?

**Are you sure?
Press to erase**

Erase last group

When a grouping of animals is no longer wanted, erase the group and all the EID numbers stored inside it will be deleted. This will result in the previous group becoming the active group.

Select **Erase last grp** from the menu. Confirm by pushing the green button again before the end of the countdown. If you do not push the green button before the end of the countdown the action will be canceled.

Erase all tags?

**Are you sure?
Press to erase**

Erase all tags

This function deletes all the EID numbers stored in memory. The stick reader software can store thousands of EID numbers but the more tag numbers in storage, the slower the process of scanning and saving each tag. Once you have exported or printed tag numbers it's advisable to delete them. Erasing all tags also allows animals to be re-scanned and their EID number saved again.

Select **Erase all tags** from the menu. Confirm by pushing the green button again before the end of the countdown. If you do not push the green button before the end of the countdown the action will be canceled.

Menu options

Disable memory?

**Memory disabled
Press to read...**

Disable memory

Disabling the memory allows tags to be scanned and the number displayed but the EID is not stored.

Select **Disable memory** from the menu. To re-enable memory after disabling it, select the **Enable memory** option from the menu.

Rapid read on?

Rapid read off?

Rapid Read mode

When set to **Rapid Read** there is no need to press the green button for every animal - the stick reader will be constantly scanning for tags. The stick reader will look for new tags continuously for up to 12 seconds. If no tags are detected in that 12 seconds, the stick reader gives a long beep, stops scanning and goes on standby to conserve battery power. Press the green button again to start scanning again.

Select **Rapid read on** from the menu to change from **Press to Read** to **Rapid Read**. Press and release the green button once and the stick reader will be constantly scanning for tags. Press the green button a second time to stop scanning. To disable rapid read mode and return to individual read, select **Rapid read off** from the menu. Note that the stick reader remembers the last mode selected when it was turned off and will start in that mode when next turned on.

Cancel?

Cancel

This option will close the menu without any changes to the settings.

Link to weigher?

Link to weigher

This option is available if the stick reader is configured to link to a Bluetooth weigh head. See page 37.

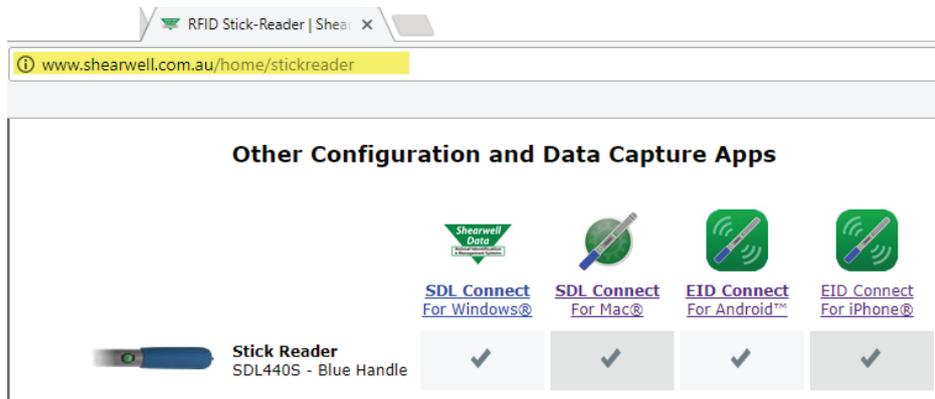
Print options are only available if the stick reader is linked to a Bluetooth printer. See page 26.

SDL Connect download

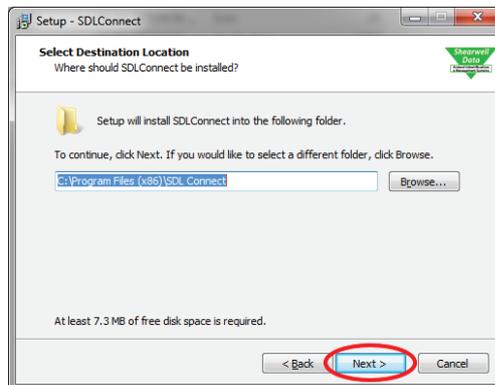
The software program for connecting your stick reader to your computer is called **SDL Connect**. Install this software on your computer from the CD or the Shearwell website before you start scanning tags. Being able to connect your stick reader to your PC is useful even if you are only planning to link your stick to a mobile printer. Changing configurations and keeping the date and time correct are all done through the computer software.

Download the program from the Shearwell website:

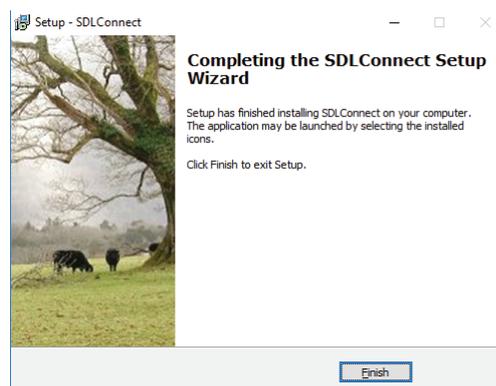
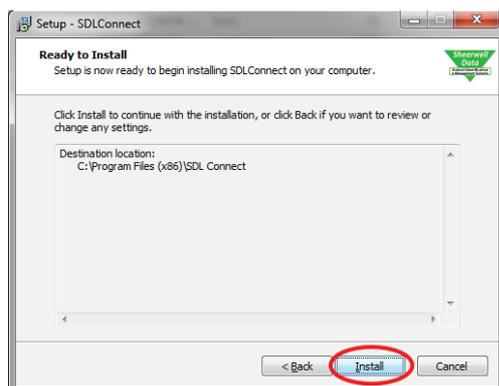
- » Go to www.shearwell.com.au/home/stickreaders
- » Scroll down to find the SDL programs and mobile apps.
- » Select SDL Connect for your operating system to start the download.
- » When the program is finished downloading, double-click to launch the installer.



1. Allow the app to make changes to your computer. Select the language you prefer for the installation.
2. On the Welcome screen click Next.
3. On the **Select Destination** screen - leave as is, click on **Next**.



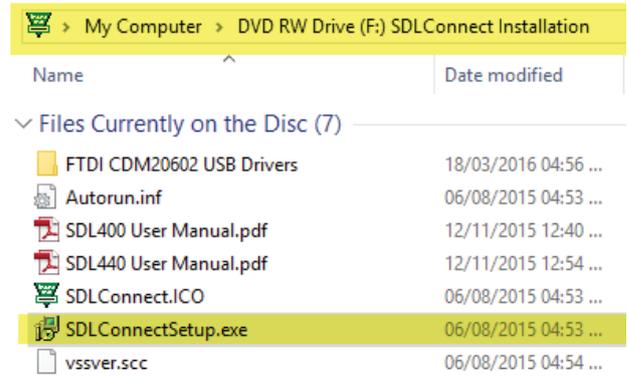
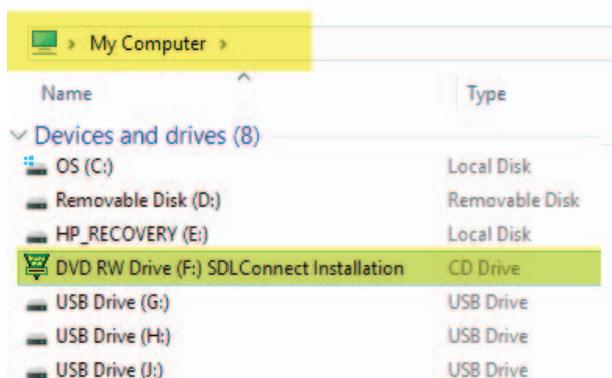
4. On the **Ready to Install** screen, click on **Install**.
5. Click **Finish** to exit the setup program. An **SDL Connect** icon is now on your computer desktop.



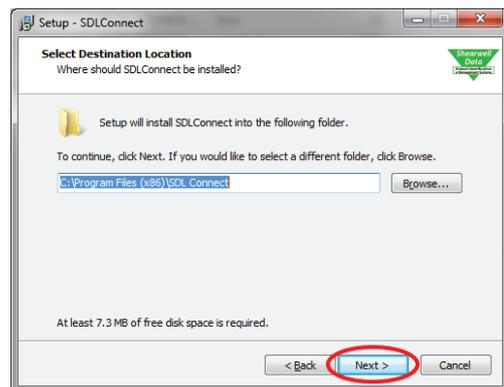
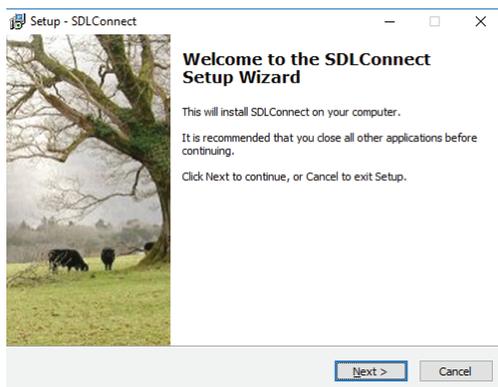
SDL Connect install from a CD

We recommend all other programs on your computer be closed before you start the installation process.

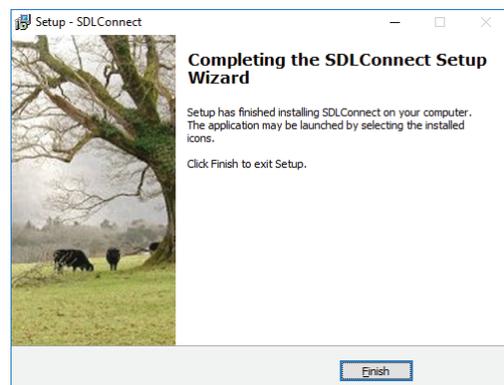
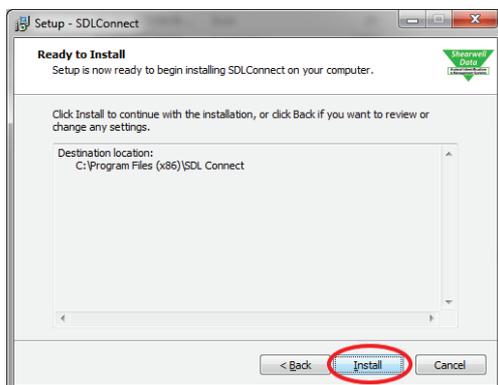
1. Insert the **SDL Connect** software CD into your computer. Open the CD with Windows Explorer to view the files and select **SDLConnectSetup.exe**



2. Allow the app to make changes to your computer. Select the language you prefer for the installation.
3. On the Welcome screen click Next.
4. On the **Select Destination** screen - leave as is, click on **Next**.



5. On the **Ready to Install** screen, click on **Install**.
6. Click **Finish** to exit the setup program.



An **SDL Connect** icon is now on your computer desktop as a link to open the program.

Install the software - Mac

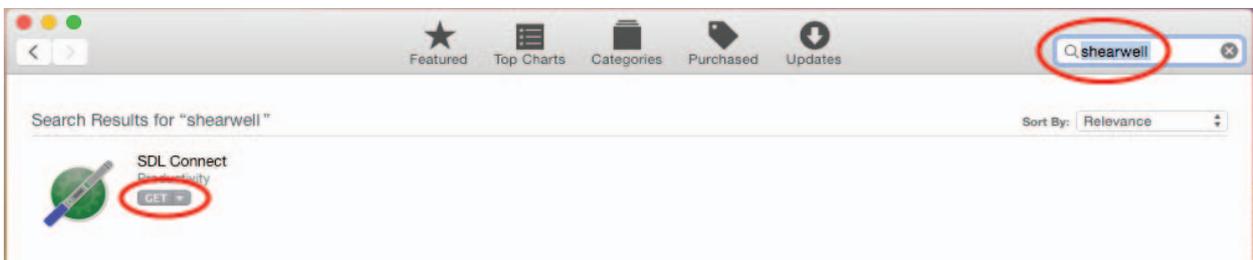
The software for connecting your stick reader to your computer is called **SDL Connect**. It works on Mac OS X 10.9 or later. The software allows you to transfer information between the stick reader and your computer. Being able to connect your stick reader to your computer is useful even if you are only planning to link your stick to a mobile printer. Changing configurations and keeping the date and time correct are all done through the computer software.

Note: Your stick reader must be fully charged to make a Bluetooth connection.

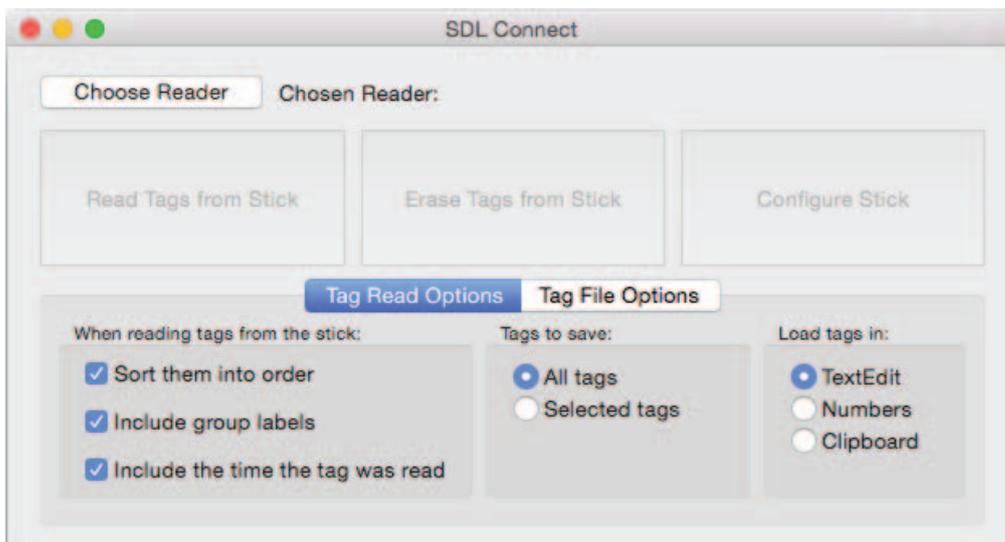
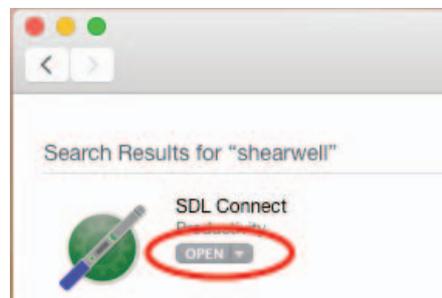
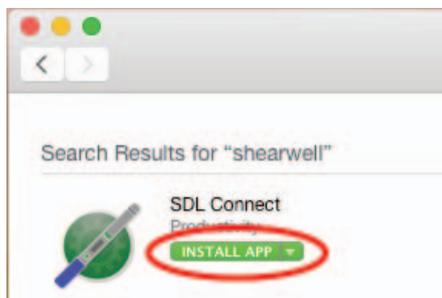


Install from the App Store

1. Click on the App Store icon to open.
2. In the search box type in **Shearwell**. Hit the **<Enter>** key or click the magnifying glass icon to search.
3. Find **SDL Connect** in the search results. Click **Get**.



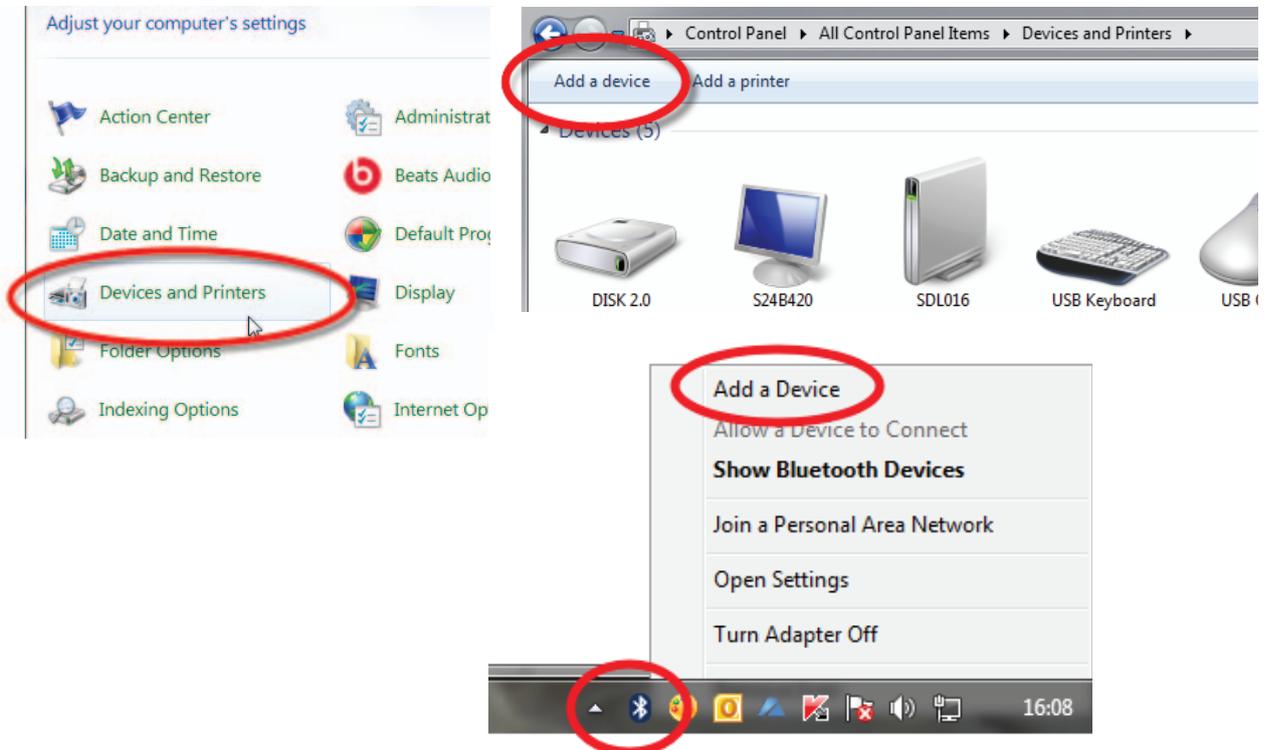
4. Click **Install App**.
5. Enter your Apple ID and password if prompted. The program will be installed on your computer.
6. Click **Open** to start using the program.



Make a Bluetooth connection - Windows 7

Windows 7

1. Turn on the stick reader.
2. In the Control Panel open **Devices and Printers**. Select **Add a Device**. Or click the Bluetooth icon on the bottom right-hand corner of your computer screen and select **Add a Device**.



3. Your PC will start searching for Bluetooth signals. When it's finished scanning, the window will show a list of available devices.



4. Look on the back of your stick reader for a label with its Bluetooth name - it will start SDL440S, followed by another four digits. For example: SDL400S 1234



Make a Bluetooth connection - Windows 7

1. Find your stick reader's Bluetooth name on the screen and select it. Right-click with the mouse and click **Pair**.

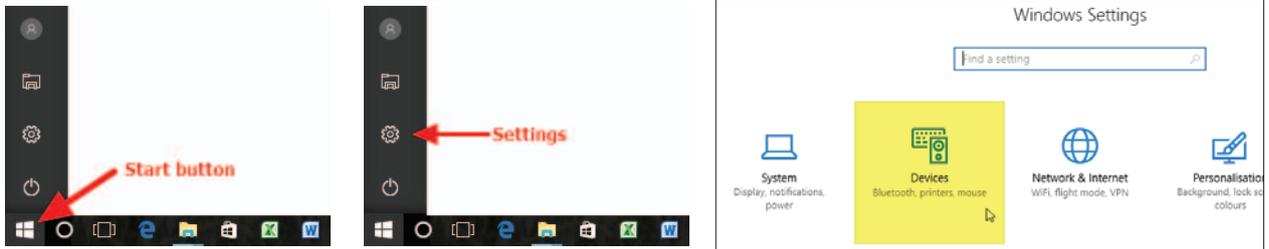


2. Allow time for Windows to install the software drivers.
3. When the stick reader has been successfully paired click on the link to **Devices and Printers**
4. Look on the **Services** tab. Make a note of the Serial (COM) port number which will be required when you connect to the stick reader software.

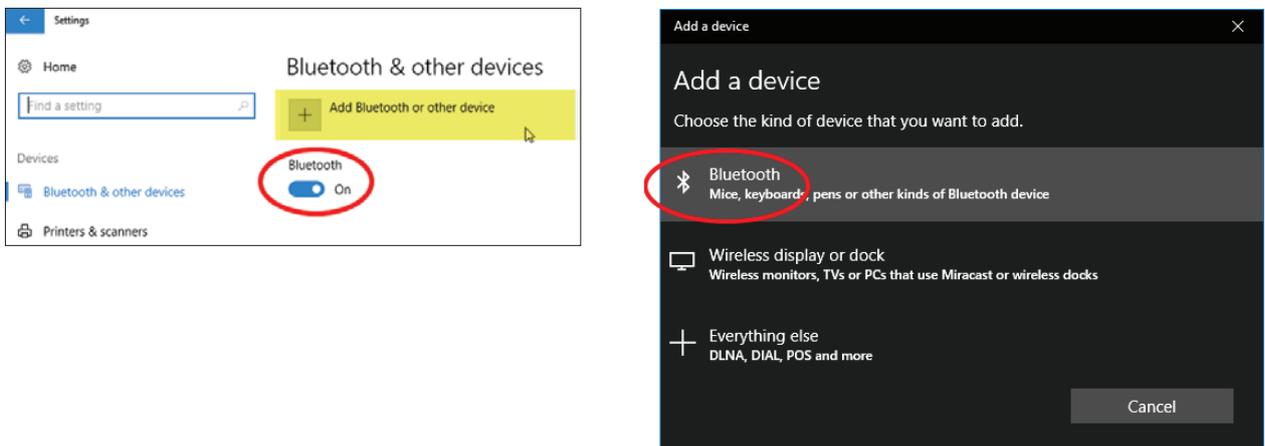


Make a Bluetooth connection - Windows 10

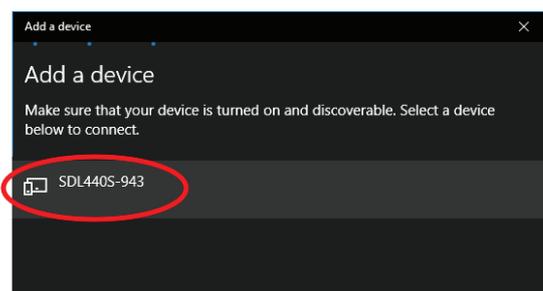
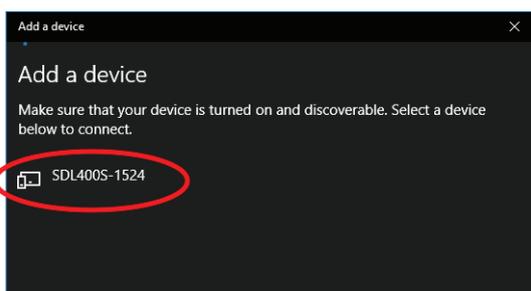
1. Turn on the stick reader.
2. Click with your mouse on the Start button. Select **Settings**.
3. Click on **Devices**.



4. Make sure Bluetooth is turned on. Click on **Add Bluetooth or other device**.
5. Select **Bluetooth (Mice, keyboards, etc.)**

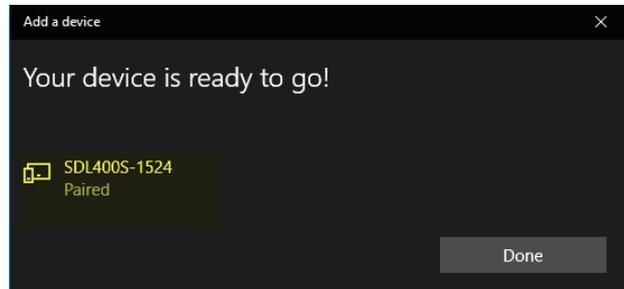
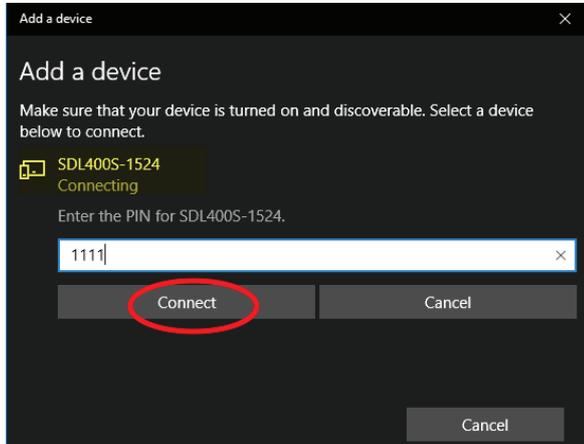


6. Your PC will start searching for Bluetooth signals. When it's finished scanning, the window will show a list of available devices.
7. Look on the back of your stick reader for a label with its Bluetooth name - it will start SDL440S for a blue-handled stick reader, or SDL400S for a red-handled stick reader, followed by another four digits. For example: SDL440S 1234

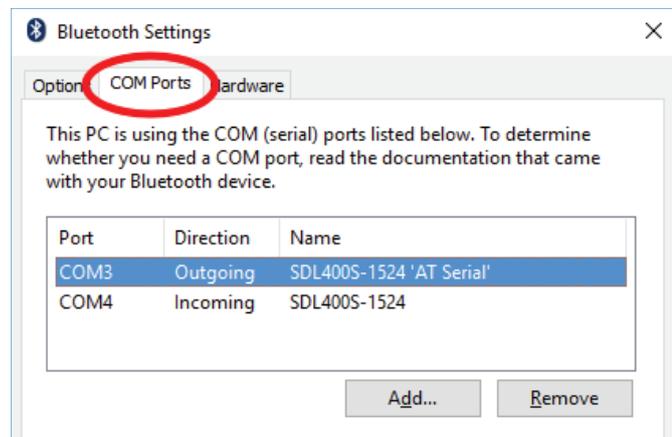
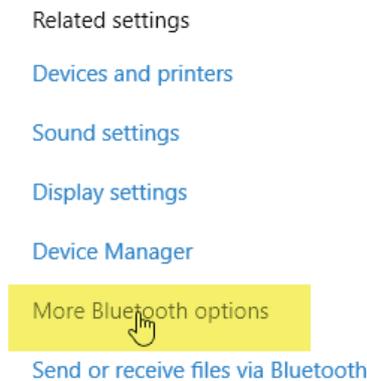


Make a Bluetooth connection - Windows 10

1. Find your stick reader's Bluetooth name on the screen and select it. Click **Pair**.
2. For a red-handled stick type in the pairing code **1111**. Click **Connect**.
3. Allow time for Windows to install the software drivers. The stick reader will be show as "Paired" when it is successfully connected. Click **Done**.

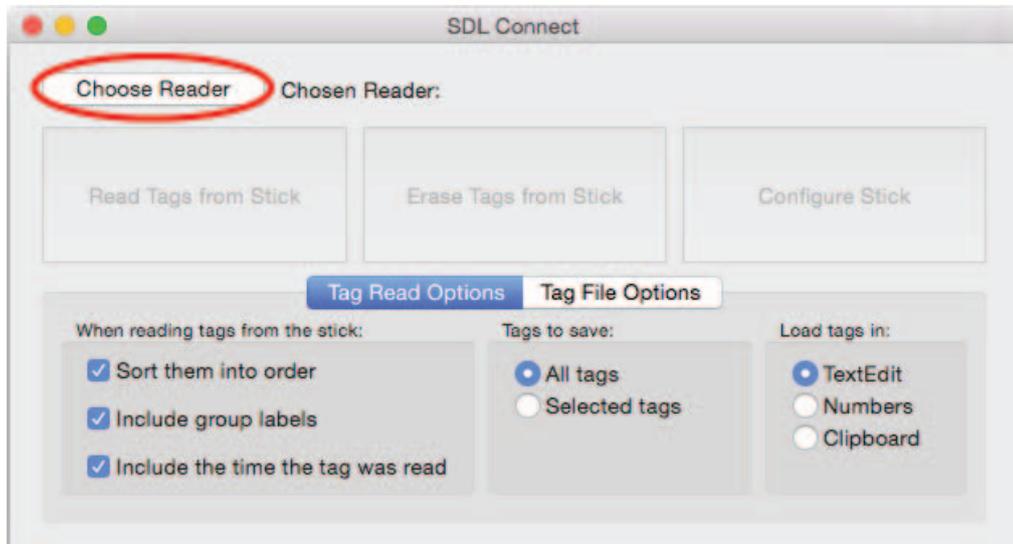


4. When the stick reader has been successfully paired click on the link to **More Bluetooth Options**. Look on the **Com Ports** tab. Make a note of the Outgoing Serial (COM) port number which will be required when you connect to the stick reader software. Click **Cancel** to exit.

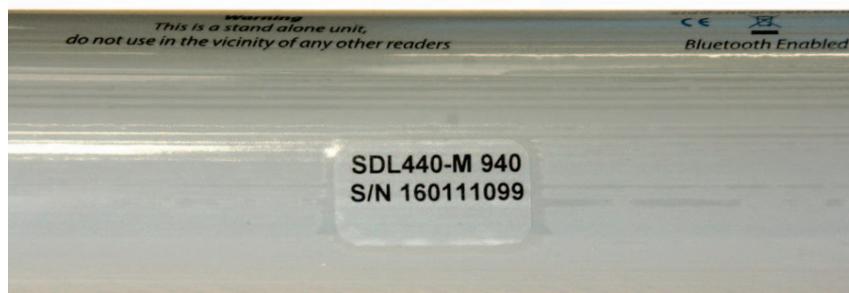


Make a Bluetooth connection - Mac

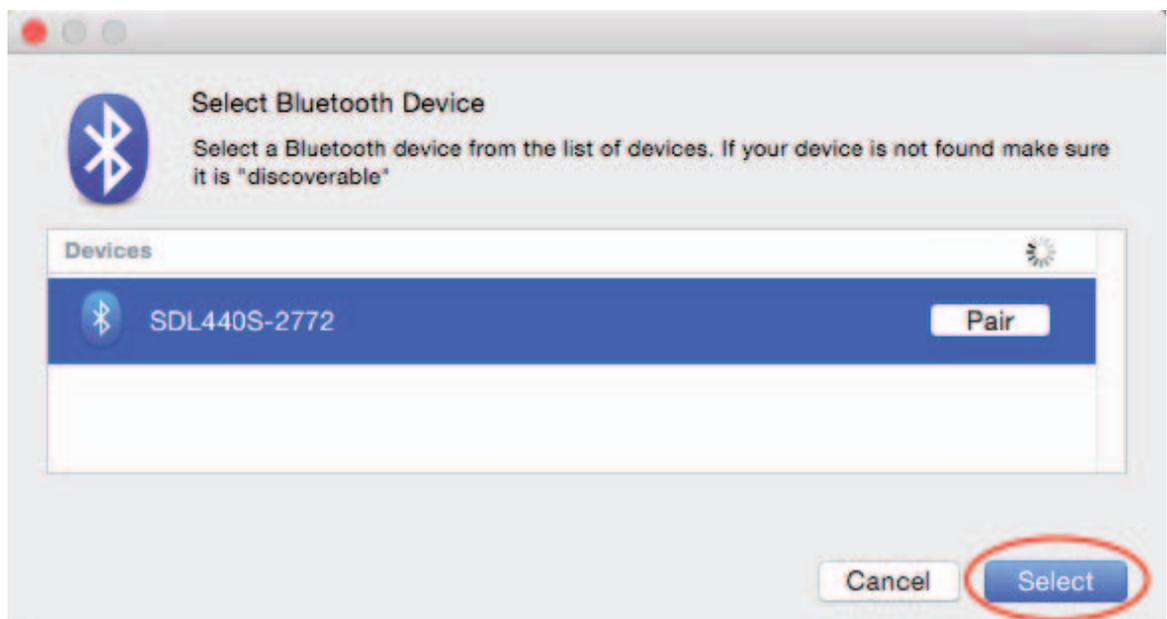
1. Turn on the stick reader.
2. Open **SDL Connect** on your computer.
3. Click on **Choose Reader**.



4. Look on the back of your stick reader for a label with its Bluetooth name - it will start SDL440S, followed by another four digits. For example: SDL440S 1234

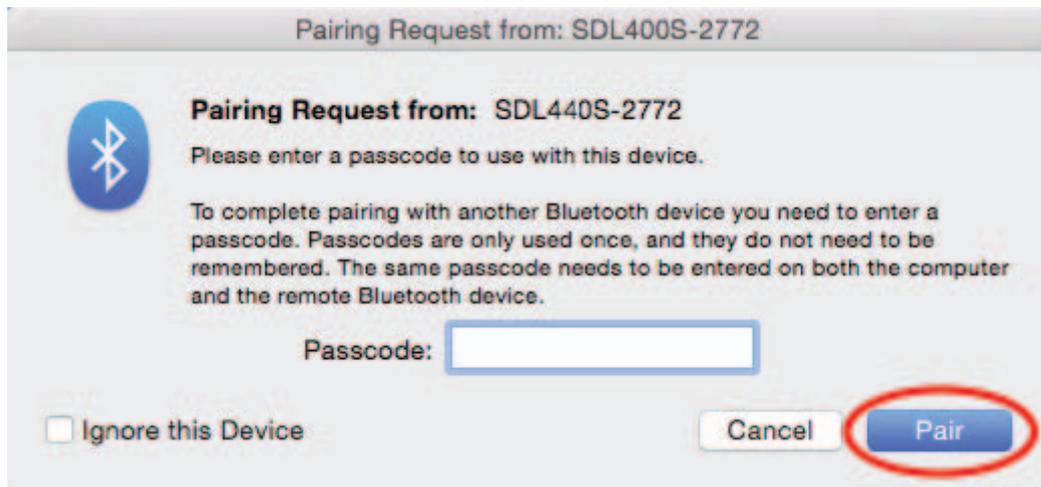


5. Click on your stick reader's Bluetooth name on the screen. Click **Select**.

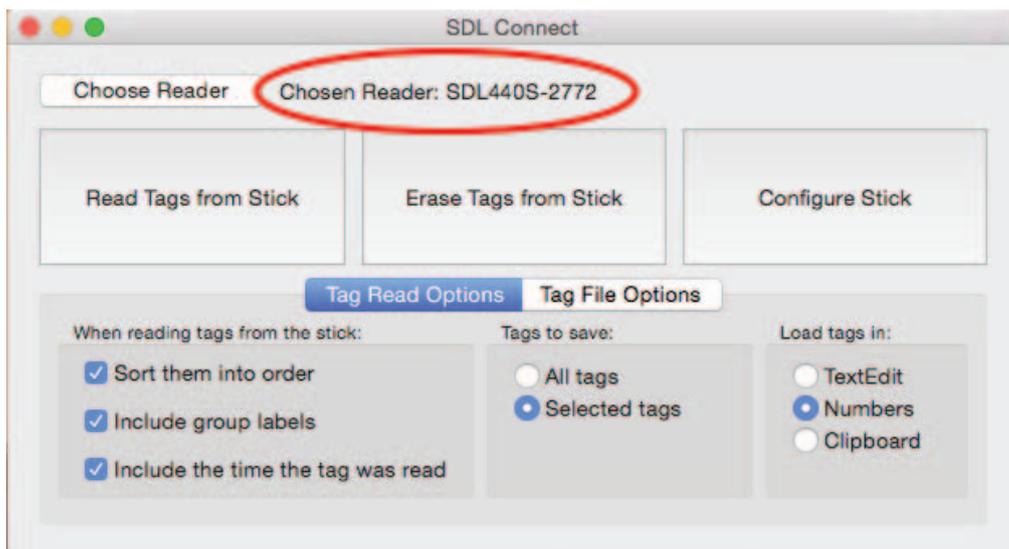


Make a Bluetooth connection - Mac

1. If you are asked for a passcode leave it blank. Click **Pair**.

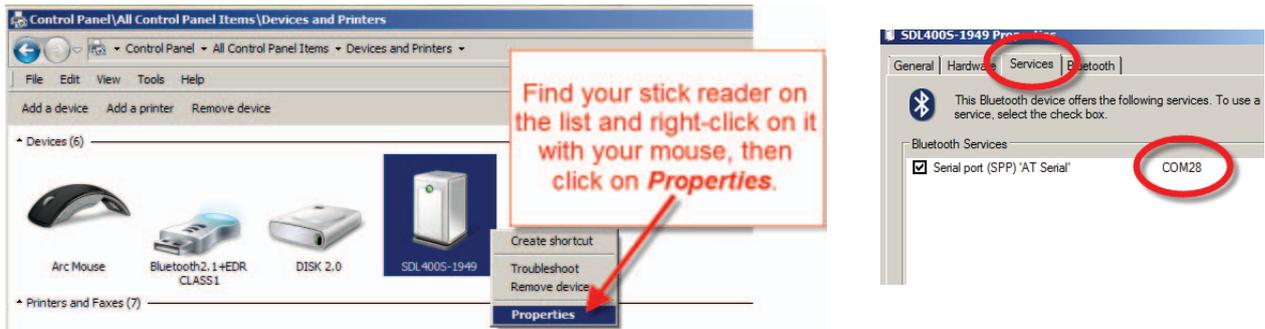


2. The stick reader connection will show on the **SDL Connect** screen.

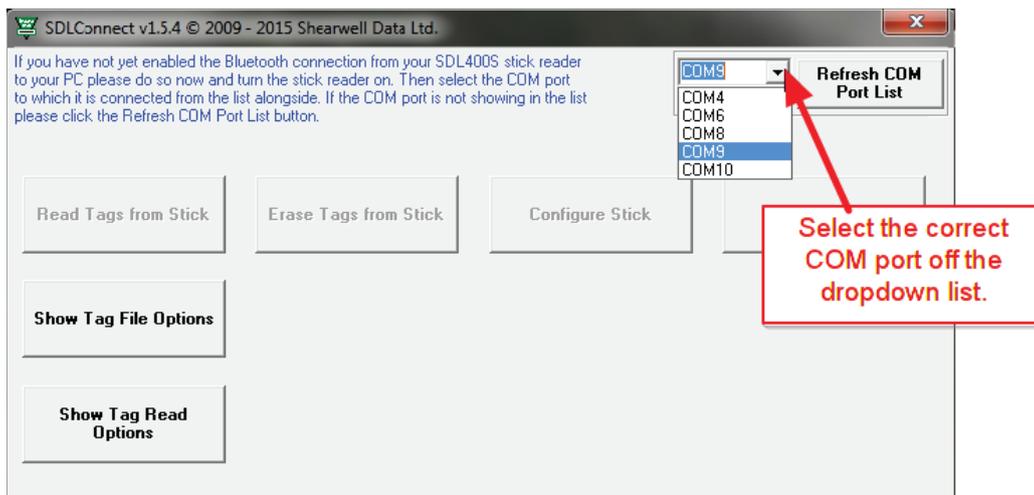


Open SDL Connect - Windows

1. Switch on the stick reader and check the battery level is good. Establish the Bluetooth link with the computer before you open **SDL Connect**.
2. If you forgot to record your COM port number earlier, go to **Control Panel>Devices and Printers**. Find your stick reader's Bluetooth name on the list. Right-click with your mouse on the stick reader's name. Left click your mouse on **Properties**. Look on the tab called **Services** to see the COM port number. Write it down!



3. Double-click the **SDL Connect** icon on your computer desktop to start. The software will open.
4. Click on the COM port dropdown list on the right side of the screen. Select the COM port number you recorded earlier. When a successful connection is made the buttons that were greyed out will become active. The stick reader software has now been successfully installed and you will not need to enter your COM port number again.



Open SDL Connect - Mac

1. Switch on the stick reader and check the battery level is good.
2. Click on the **SDL Connect** icon if there is a shortcut on your desktop.



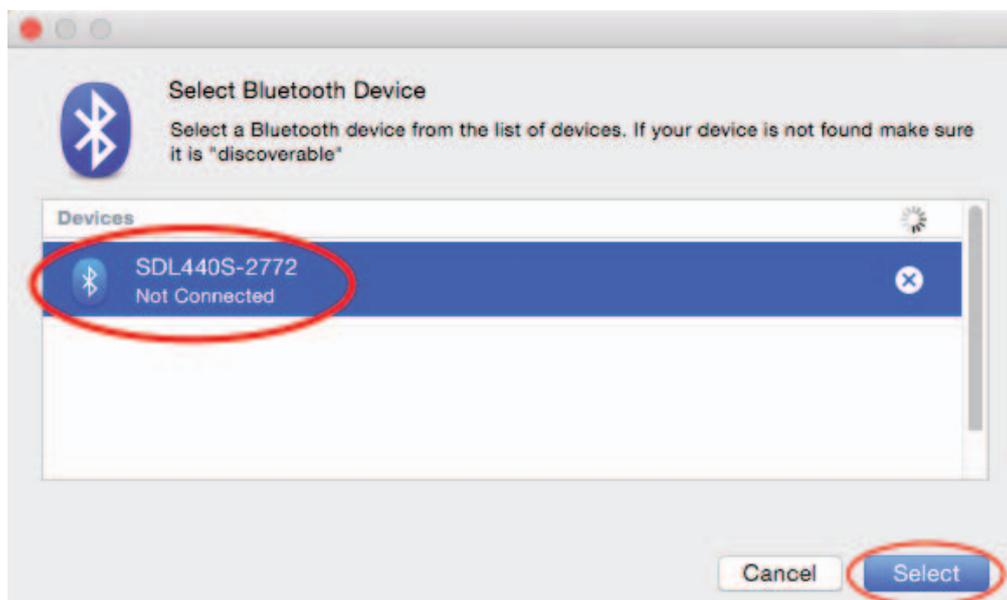
3. If there is no desktop shortcut, open **Finder**, click on **Applications** and select **SDL Connect**.



4. If the stick reader has gone to sleep click on **Choose Reader** to check the Bluetooth connection.

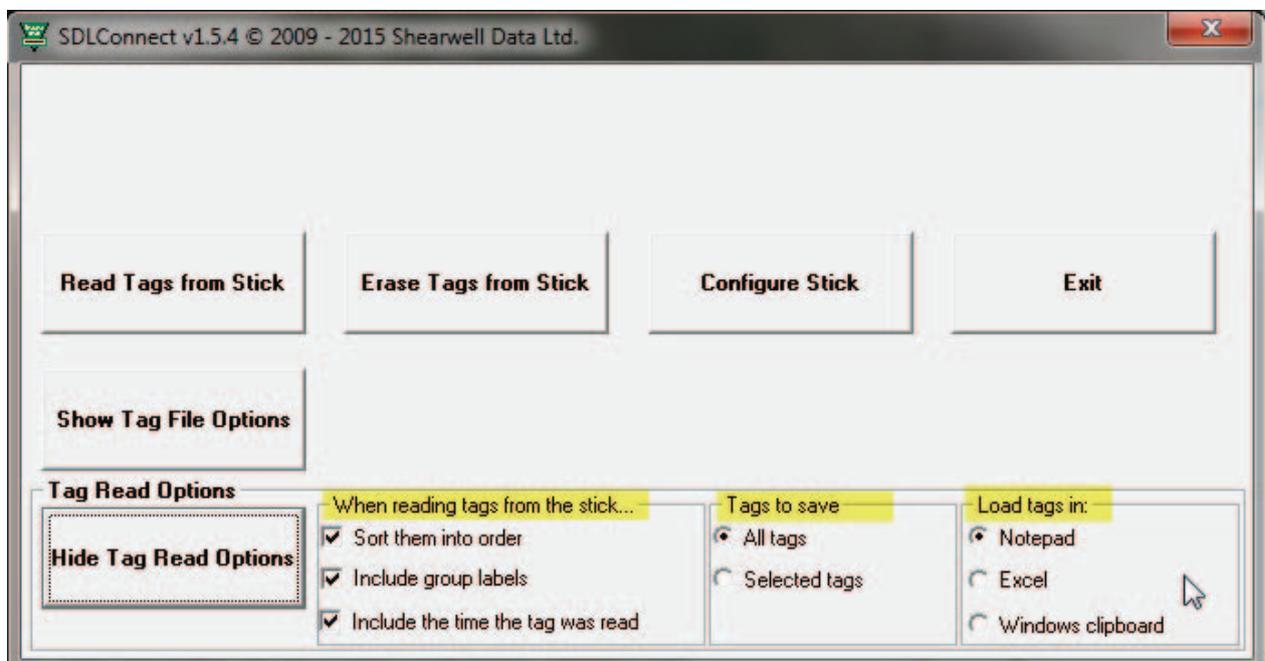
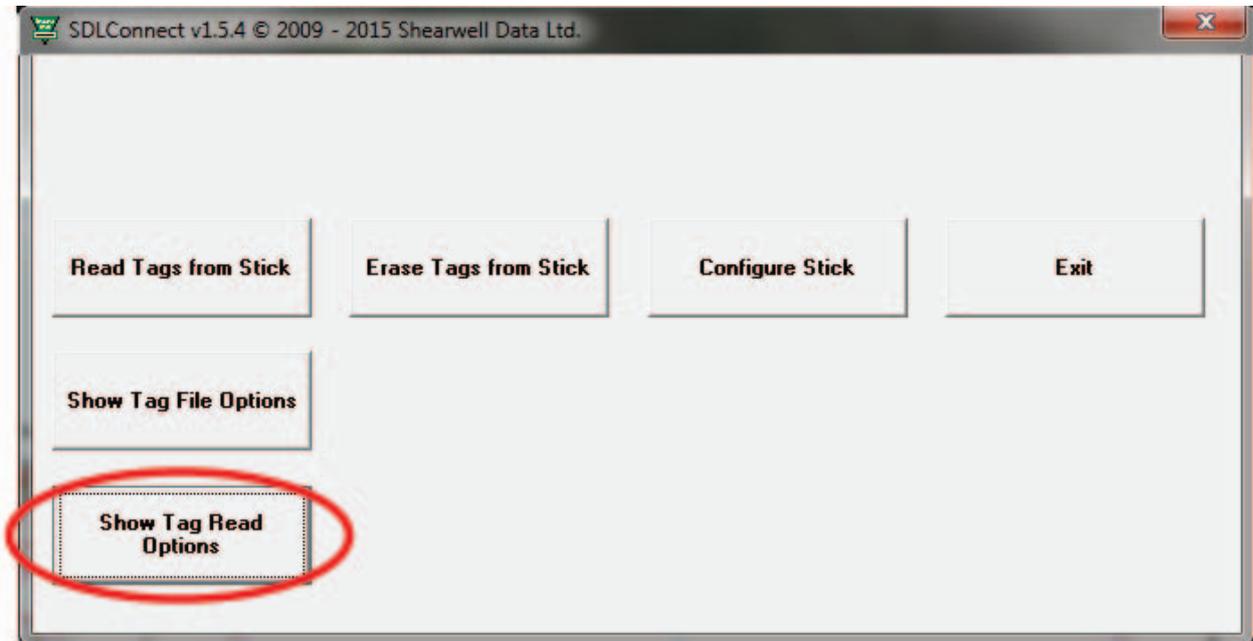


5. If your stick reader is not connected, highlight it and click **Select**.



Options for downloading - Windows

EID numbers stored on the stick reader can be downloaded into your computer using the supplied software. Before you start, click on **Show Tag Read Options** to set your preferences. Click **Hide Tag Read Options** to close the option screen.



Tag read options

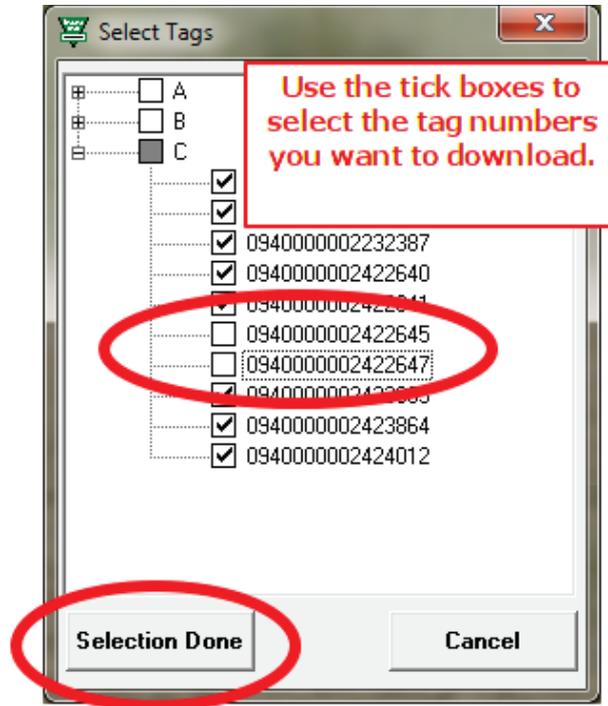
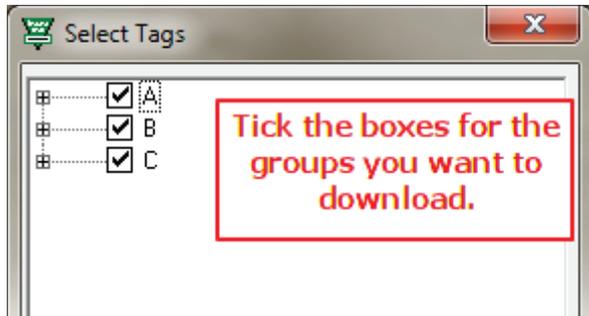
When reading tags from the stick...

- **Sort them into order** means arranging the numbers from lowest to highest tag number.
- **Include group labels** means show the group (Ex. Group A, Group B, Group C, etc.).
- **Include the time the tag was scanned** means show the date and time each tag was scanned.

Options for downloading - Windows

Tags to save

- **All tags from stick** means show all the groups and all the tags.
- **Selected tags from stick** means you can select a specific group and then select which tag numbers in that group.



Load tags in:

- **Notepad** means a text file that can also be saved as a CSV (comma separated values) file that is easily imported into a spreadsheet or a database application.
- **Excel** means as a spreadsheet in Microsoft Excel. *Note: The program detects whether Excel is installed on your computer. If it is not installed then Notepad is the default.*
- **Windows Clipboard** means the selected tag numbers are copied and ready to paste into a holding register or animal movement document. Numbers on the clipboard can be pasted into any Windows program.

MS Excel format

Tag or EID	Group	Date/Time
UK0244220 12474	A	2013-09-17 7:22:45 AM
UK0244220 12475	A	2013-09-17 7:22:45 AM
UK0244220 12476	A	2013-09-17 7:22:43 AM
UK0244220 12685	A	2013-09-17 7:22:44 AM
0940000002138896	B	2013-09-17 7:24:14 AM
0940000002152586	B	2013-09-17 7:24:15 AM

Notepad format

```

Tag import 2013-09-17 7:26:31 AM for group B
File Edit Format View Help
0940000002138896, B, 2013-09-17 7:24:14 AM
0940000002152586, B, 2013-09-17 7:24:15 AM
0940000002153680, B, 2013-09-17 7:24:16 AM
0940000002423925, B, 2013-09-17 7:24:18 AM
0940000002168955, B, 2013-09-17 7:24:19 AM
Total for group B: 5
    
```

Windows clipboard format

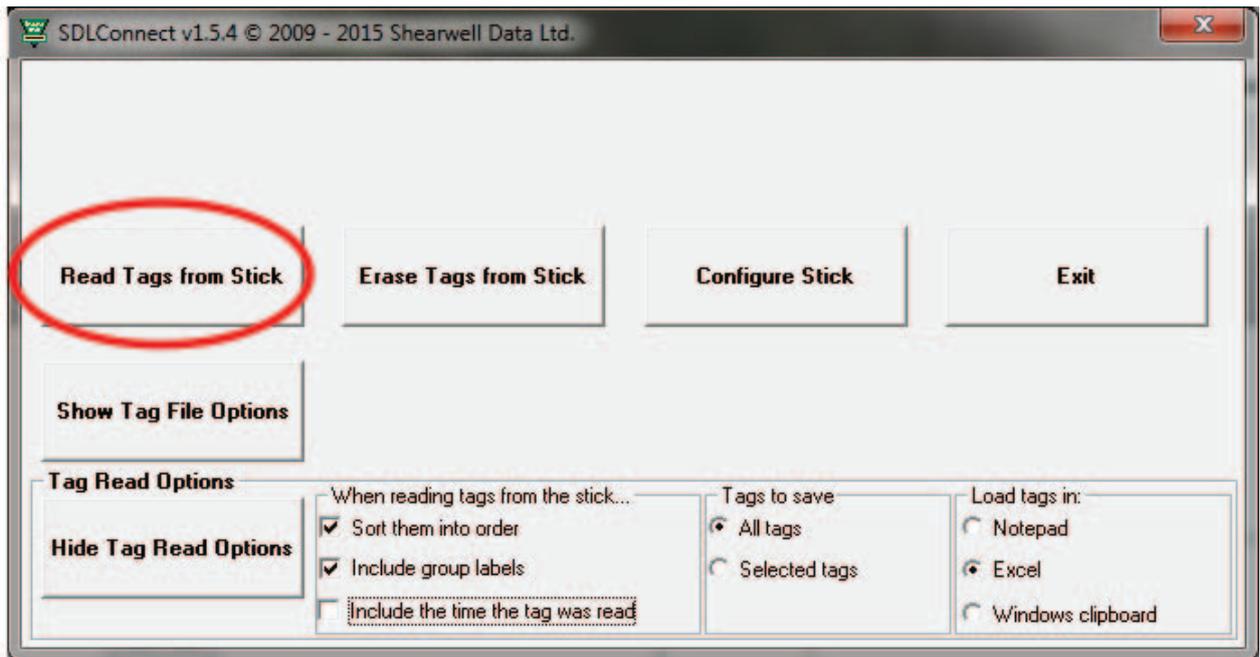
```

0826024422015281, A, 21/02/2014 9:26:45 AM
0826024422019012, A, 21/02/2014 9:26:45 AM
0826024422019027, A, 21/02/2014 9:26:43 AM
0826024422019077, A, 21/02/2014 9:26:45 AM
0826024422030386, A, 21/02/2014 9:26:44 AM
Total for group A: 5
Total: 5
    
```

Download tags from stick - Windows

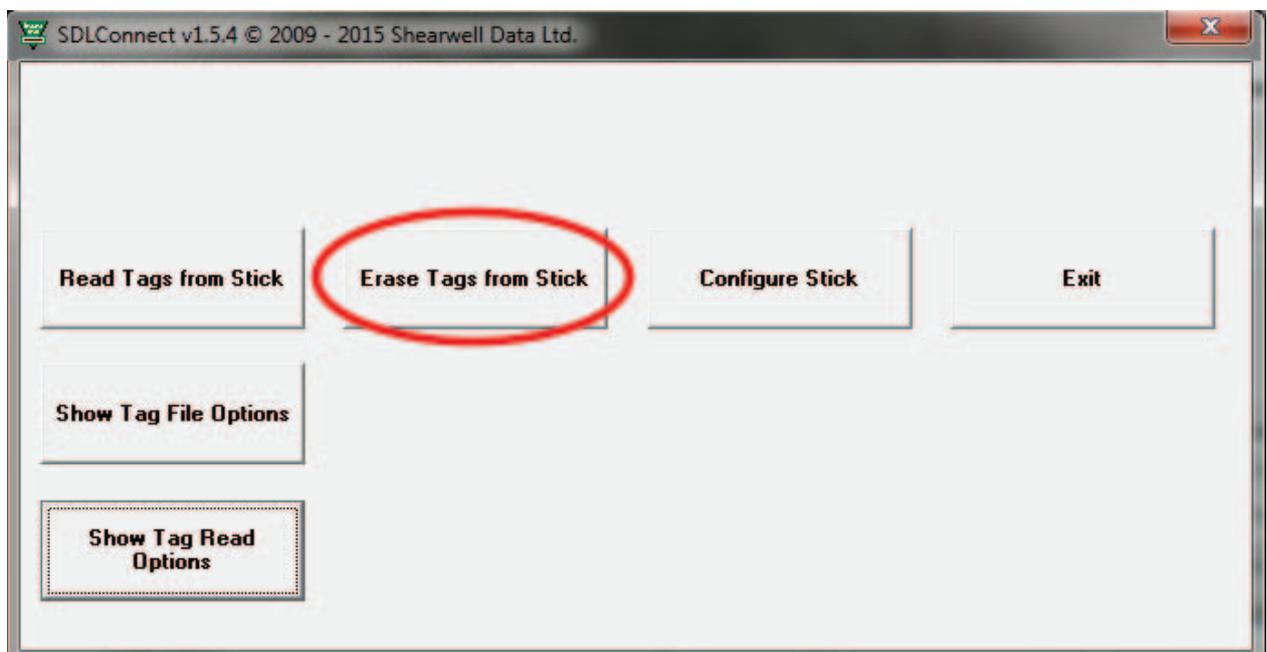
Download EID numbers

1. Turn on the stick reader and ensure it has a Bluetooth link to your computer.
2. Click on the **SDL Connect** shortcut icon on your desktop. The software will open and the blue light on the stick reader will flash as they connect.
3. Select options for downloading by clicking on the **Show Tag Read Options** button.
4. Click **Read Tags from Stick**.
5. If viewing the numbers in an Excel or Notepad format you can save the data. Go to **File > Save As**, name the file and select a location.



Erase tag numbers from the stick reader

Downloading tags into the computer does not remove the numbers from the stick reader's memory. To erase tags, you can click on the **Erase Tags** button, and then click **Yes** to confirm. You can also erase tags on the stick reader itself - select **Erase Tags** as a menu option when you turn on the stick reader.



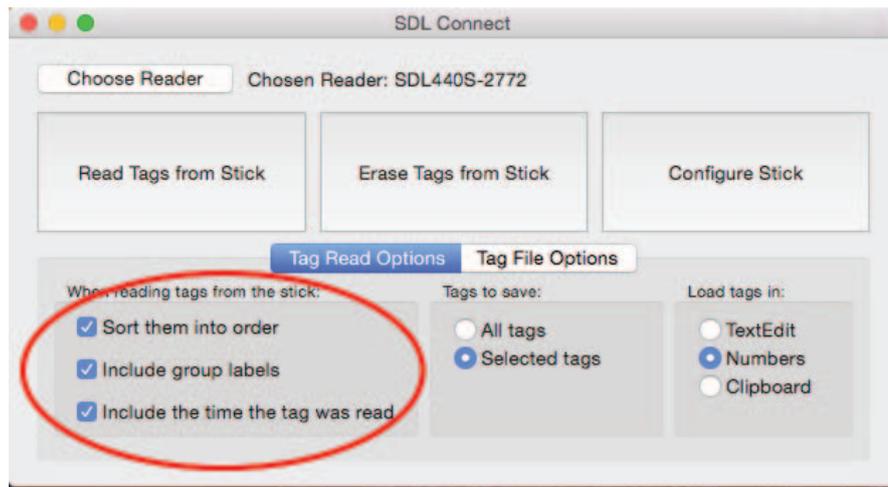
Options for downloading - Mac

EID numbers stored on the stick reader can be downloaded into your computer using **SDL Connect**. Before you start click on **Tag Read Options** to set your preferences.

Tag read options

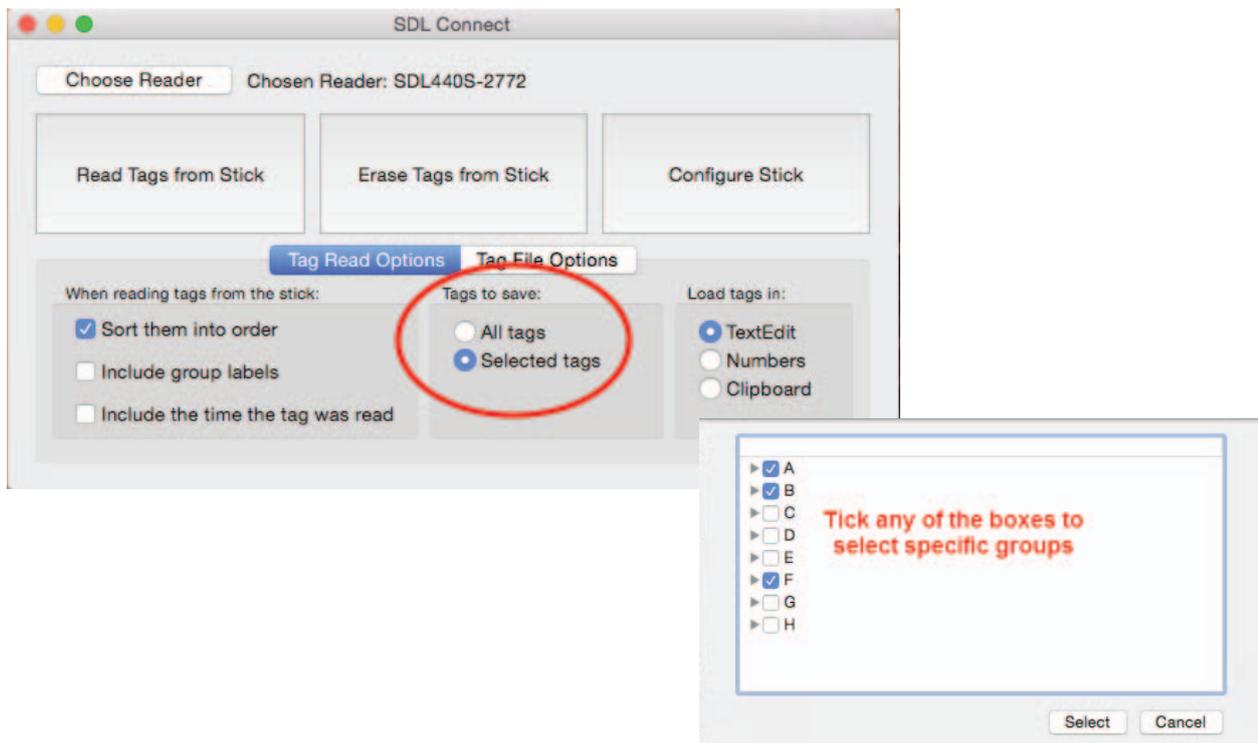
When reading tags from the stick...

- **Sort them into order** means arranging the numbers from lowest to highest tag number.
- **Include group labels** means show the group (Ex. Group A, Group B, Group C, etc.).
- **Include the time the tag was scanned** means show the date and time each tag was scanned.



Tags to save

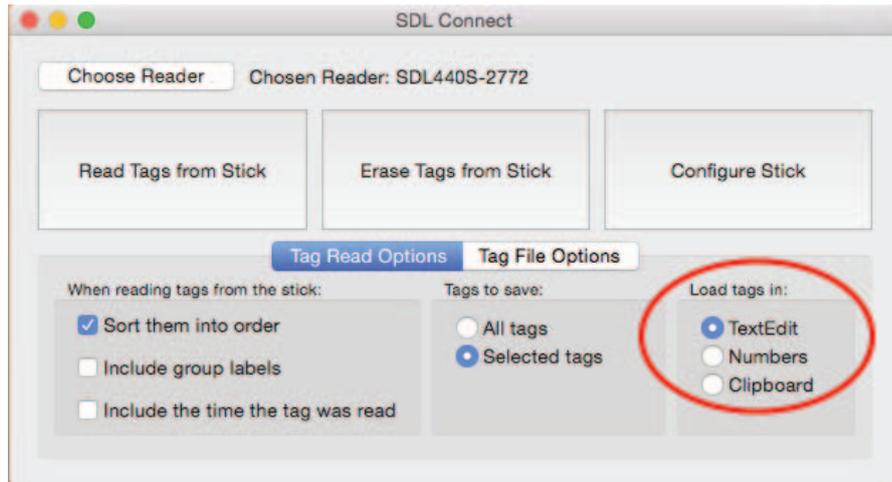
- **All tags from stick** means show all the groups and all the tags.
- **Selected tags from stick** means you can select a specific group, open the group, and then select individual tag numbers in that group.



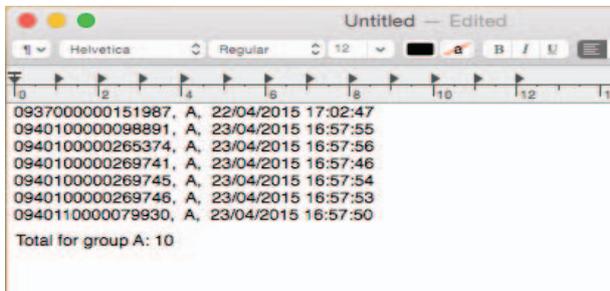
Options for downloading - Mac

Load tags in:

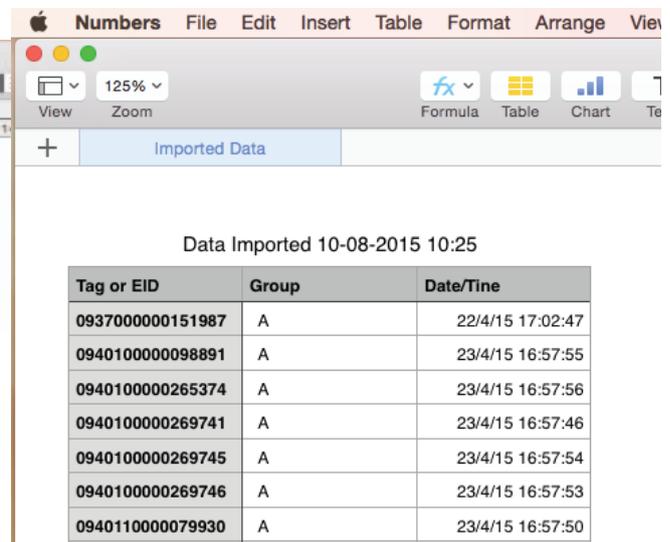
- **TextEdit** means a text file that can also be saved as a CSV (comma separated values) file that is easily imported into a spreadsheet or a database application.
- **Numbers** means as a spreadsheet in iWorks. *Note: The program detects whether Numbers is installed on your computer. If it is not installed then TextEdit is the default.*
- **Clipboard** means the selected tag numbers are copied and ready to paste into a holding register or animal movement document. Numbers on the clipboard can be pasted into another program.



TextEdit format



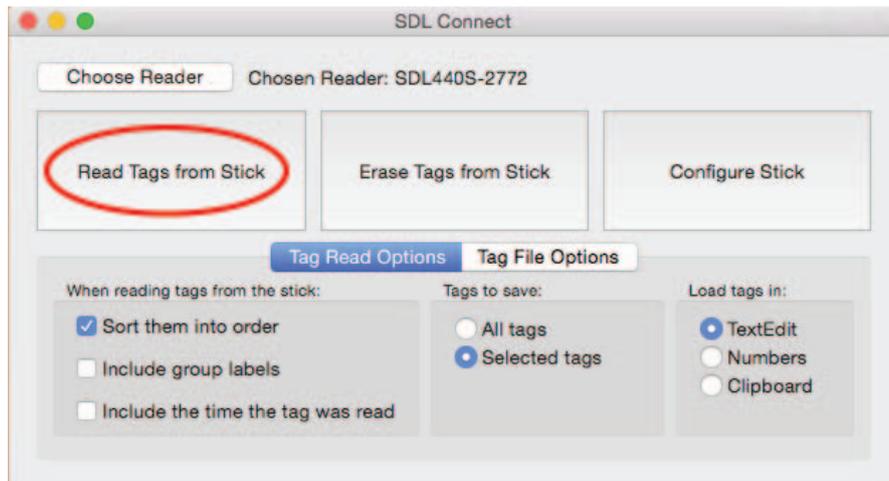
Numbers format



Download tags from stick - Mac

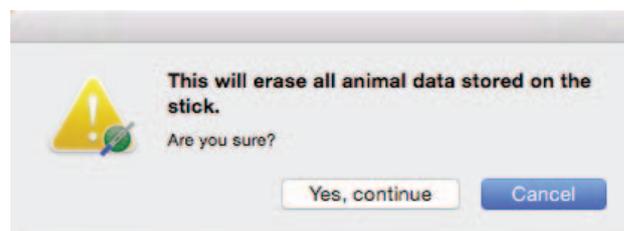
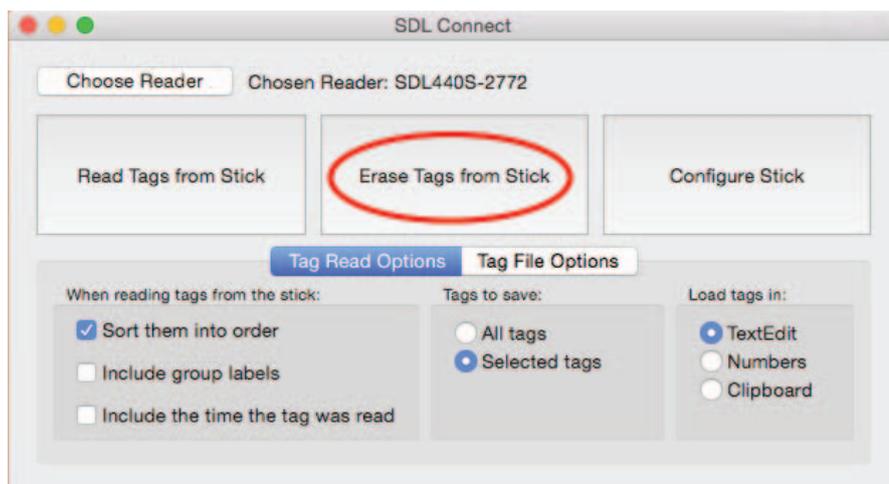
Download EID numbers

1. Turn on the stick reader and ensure it has a Bluetooth link to your computer.
2. Click on the **SDL Connect** shortcut icon on your desktop to open the software.
3. Select options for downloading by clicking on the **Tag Read Options** button.
4. Click **Read Tags from Stick**.
5. If viewing the numbers in a TextEdit or Numbers format you can save the data. Go to **File > Save As**, name the file and select a location.



Erase tag numbers from the stick reader

Downloading tags into the computer does not remove the numbers from the stick reader's memory. To erase tags, you can click on the **Erase Tags** button, and then click **Yes** to confirm. You can also erase tags on the stick reader itself - select **Erase Tags** as a menu option when you turn on the stick reader.



Configure the stick reader - Windows

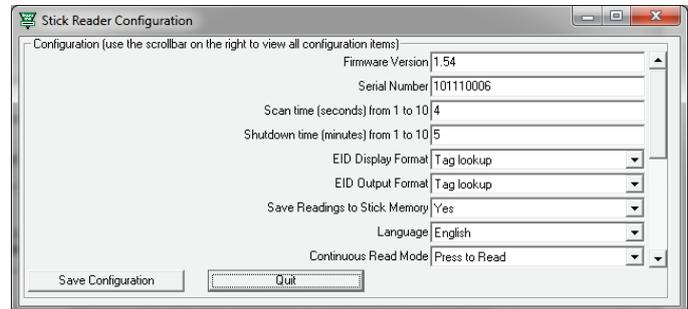
To save your changes click on **Save Configuration**. To cancel and exit click on **Quit**.

Firmware Version

This is the current software version number on the stick reader.

Serial Number

This is the stick reader's serial number. This is also printed on the Shearwell label on the back of the stick reader.



Scan time (seconds) from 1 to 10

This is the length of time the stick reader will search for an EID tag before giving a failed read signal. Type in a scan time from 1 to 10 seconds. The default time is 4 seconds.

Shutdown Time (minutes) from 1 to 10

This is the length of time the stick reader will be inactive before it shuts off automatically. Type in a shutdown time from 1 to 10 minutes. The default time is 5 minutes.

EID Display Format

This is how EID numbers are shown on the stick reader's display screen. This also controls how EID numbers will appear in print-outs. **Tag Lookup** is the format when a tag (bucket) file is loaded. For more information see page 22 - **Tag File Options** and page 26 - **EID Options**.

EID Output Format

This is the format for information the stick reader sends to any connected Bluetooth device, such as a printer or weigh head. Instructions for linking those devices will indicate what format they require. **Tag Lookup** is the format when a tag (bucket) file is loaded. For more information see page 22 - **Tag File Options** and page 26 - **EID Options**.

Save Readings to Stick Memory

This is the same as **Disable Memory** on the stick reader menu. Select **No** to disable the memory; select **Yes** to enable the memory.

Language

Select a language for the display. The computer must also have the **Control Panel > Region and Language** options set to the same language.

Continuous Read Mode

This is the same as the Rapid Read option on the stick reader's menu. The stick reader will scan continuously for EID tags without the user pushing the green button for each animal. If no tags are found, the stick reader will stop scanning after 12 seconds. **Press to Read** means the stick reader scans for a tag only when the green button is pushed; when a tag is read the green button must be pushed again to scan for another tag.

Continuous Read Timeout (seconds) 1 to 30

This is the length of time the stick reader will scan for tags in Continuous Read mode. If no tags are detected in this time then the stick reader will give a long beep and stop scanning. The default time is 12 seconds. Type in a scan time from 1 to 30 seconds.

For printer options see page 28

Configure the stick reader - Mac

Details

Firmware Version

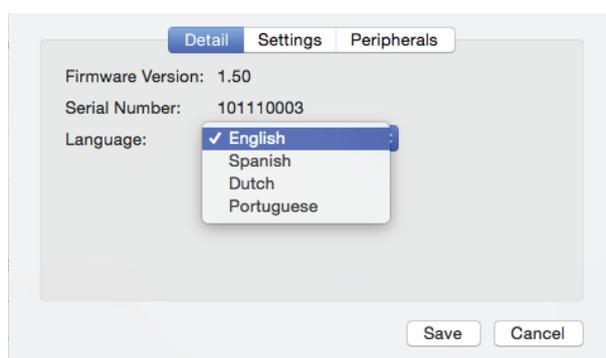
This is the current software version number on the stick reader.

Serial Number

This is the stick reader's serial number. This is also printed on the Shearwell label on the back of the stick reader.

Language

This will set the language on the stick reader screen.



Settings

Scan time (seconds) from 1 to 10

This is the length of time the stick reader will search for an EID tag before giving a failed read signal. Type in a scan time from 1 to 10 seconds. The default time is 4 seconds.

Shutdown Time (minutes) from 1 to 10

This is the length of time the stick reader will be inactive before it shuts off automatically. Type in a shutdown time from 1 to 10 minutes. The default time is 5 minutes.

EID Display Format

This is how EID numbers are shown on the stick reader's display screen. This also controls how EID numbers will appear in print-outs. **Tag Lookup** is the format when a tag (bucket) file is loaded. For more information see page 22 - **Tag File Options** and page 26 - **EID Options**.

EID Output Format

This is the format for information the stick reader sends to any connected Bluetooth device, such as a printer or weigh head. Instructions for linking those devices will indicate what format they require. **Tag Lookup** is the format when a tag (bucket) file is loaded. For more information see page 20 - **Tag File Options** and or **EID Options** in the Windows manual.

Save Readings to Stick Memory

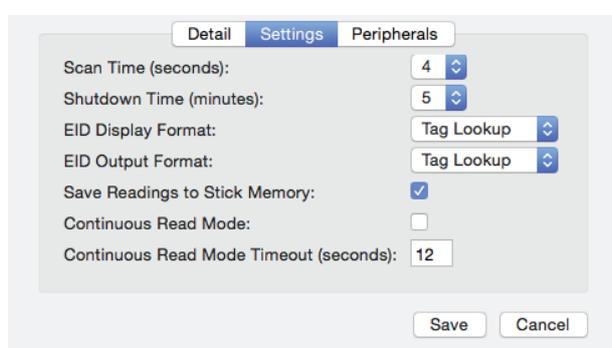
This is the same as **Disable Memory** on the stick reader menu. Select **No** to disable the memory; select **Yes** to enable the memory.

Continuous Read Mode

This is the same as the Rapid Read option on the stick reader's menu. The stick reader will scan continuously for EID tags without the user pushing the green button for each animal. If no tags are found, the stick reader will stop scanning after 12 seconds.

Continuous Read Timeout (seconds) 1 to 30

This is the length of time the stick reader will scan for tags in Continuous Read mode. If no tags are detected in this time then the stick reader will give a long beep and stop scanning. The default time is 12 seconds. Type in a scan time from 1 to 30 seconds.



Link to a mobile printer

The stick reader is fully compatible with a thermal Bluetooth printer. The mobile printer recommended and supplied by Shearwell is an Able Systems AP1300BT.



Printer on and off

Press the power button once to turn the printer on. The printer turns itself off automatically if it has not been used for a few minutes. You can turn the printer off manually by opening the cover and double-clicking the power button.

Battery charging

The battery can be recharged using either the mains charger or the car charger supplied. Charging the printer battery from flat to full should take about three hours.

Indicator light

Steady green = Normal operation

Long green, short red = Battery is low

Short green, long orange = Battery charging

Blinking red = Error

WARNING: Use the correct adapter for charging the printer. Do not confuse the stick reader battery chargers with the printer chargers. The mains and car charger for the printer are labelled **Printer Charger**.

Paper roll installation

To insert a new roll of paper, slide the catch down and away from the paper slot. The cover for the paper container will release and open. Remove the old paper core and insert a new roll of paper.



Link to a mobile printer

Printer and stick reader combination

When a stick reader and printer are purchased as a bundle they will come from Shearwell with the Bluetooth link already established. A label on the underside of the printer confirms your stick reader is linked. Print options will not be displayed on your stick reader's menu if it is not linked to a printer.

New connections

To establish a new printer link, or if you wish to link an existing printer to an alternative stick reader, you must have already completed the earlier steps for installing Bluetooth and the stick reader software on your computer. (See pages 8 to 12.) Once the stick reader is linked to the software on the computer a new connection to the printer is made through the **Configure Stick** screen on the PC.



1. Turn on the stick reader.
2. Open the SDL Connect software. Click on **Configure Stick**.
3. For a Windows computer, scroll down to find the **Printer Type** field. Select AP1300BT.
4. For a Mac computer, click **Configure stick > Peripherals**
5. Turn on the printer by pressing the power button. The indicator light will glow green.
6. Press and release the power button twice, in quick succession. This will cause the printer to print out a test strip.

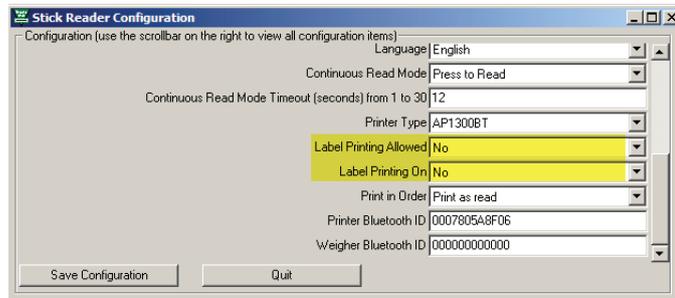


7. On the test strip, find the MAC Address. This 12 character code is the printer's Bluetooth ID.
8. On a Windows computer, open the **Configure Stick** screen, find the field **Printer Bluetooth ID** and type in the MAC Address from the test strip.
9. Click **Save Configuration**.

Your stick reader will now offer print options the next time you turn it on. See page 30 for print options on the stick reader.

Configure printer options - Windows

The **Configure Stick** window on your Windows computer software includes many of the same options as the menu on the stick reader. To save your changes click on **Save Configuration**. To cancel and exit click on **Quit**.



Label Printing Allowed

The **Print label** menu option is only available on the stick reader when the **Configure Stick** option is set to **Yes**.

Label printing is a specialized function so the default is set to **No**.

Label Printer On

If Label Printing is allowed, then the actual label printing function can be turned on or off by selecting **Yes** or **No**. This option activates the Bluetooth printer after each animal is scanned - a label of each EID number is printed after each tag is read.

Print in Order

EID numbers will be printed in numerical order.

Please note: Printing will be slower when this is selected.

Please note: **Print Order** does not work if the EID display option is set to **Tag Lookup**.

Configure printer options - Mac

The **Configure Stick** window on your Mac computer software includes many of the same options as the menu on the stick reader. To save your changes click on **Save**. To cancel and exit click on **Cancel**.

The screenshot shows a software window titled "Configure printer options - Mac" with three tabs: "Detail", "Settings", and "Peripherals". The "Peripherals" tab is active. The settings are as follows:

- Printer Type: AP1300BT (dropdown menu)
- Label Printing Allowed:
- Label Printing On:
- Print in Order: Print in order (dropdown menu)
- Printer Bluetooth ID: 000780087934 (text field)
- Weigher Bluetooth ID: 000000000000 (text field)

At the bottom right of the window are "Save" and "Cancel" buttons.

Peripherals

Printer Type

The default setting is AP1300BT. This is the mobile Bluetooth printer supplied by Shearwell.

Label Printer Allowed

Label printing is a specialized function so the default setting is unticked.

Label Printer On

If Label Printing is allowed, then the actual label printing function can be turned on or off by selecting **Yes** or **No**. This option activates the Bluetooth printer after each animal is scanned - a label of each EID number is printed after each tag is read.

Print in Order

EID numbers can be printed in numerical order or in the order the tags were read.

Note: Printing will be slower when **Print in order** is selected.

Note: **Print in order** does not work if the EID display option is set to **Tag Lookup**.

Printer Bluetooth ID

This is the MAC address of the Bluetooth printer you want to link to your stick reader. See page 27 for how to find your printer's Mac address.

Print options on the stick reader

A stick reader linked to a mobile printer will display print options on the stick menu. The format of the EID numbers depends on the settings you choose on the **Configure Stick** program on the computer.

1. Turn on the printer and make sure there is sufficient paper loaded.
2. Turn on the stick reader by pressing and holding the green button to see all the menu options.
3. Release the button to make a selection from the menu.

Print order on?

Print order on

EID numbers are printed in numerical order. To change back to print EID numbers in the order they were read select **Print order off**.

Print group?

Print Group

This prints all the EID numbers in the current group.

Print all groups?

Print all groups

This prints all the EID numbers divided into groups.
No print out will be produced if Group A = 0 animals.

Print barcodes?

Print barcode

EIDs are shown as both numbers and barcodes.

Print label?

Print labels

This option is only available when the stick reader is configured **Label Printing Allowed**. After each animal is scanned the printer prints the EID number and the matching barcode. If the EID Format is set to Tag Lookup then that number will appear underneath the barcode.

EID Tag Formats

Definitions

WYSIWYG Tags

- “What You See Is What You Get”. A ‘WYSIWYG’ tag has an electronic number (EID) that is the same as the number printed on the outside of the tag.
- UK sheep born after Jan 1, 2010 must have an official WYSIWYG tag.
- “Slaughter tags” are also WYSIWYG, although only the flock mark is visible on the outside.

Non-WYSIWYG Tags

- A tag with an electronic number (EID) that is different than the number printed on the outside of the tag.
- A tag file is for non-WYSIWYG tags - a cross-reference between the EID inside the tag and the number printed on the outside.

Stick reader EID format options

Some countries and equipment manufacturers require EID numbers to be transmitted in a specific format. The SDL400S stick reader is able to transmit EID numbers in various formats. Changes to the EID format are made through the **Configure Stick** function on the computer software.

UK WYSIWYG (Sheep)

- The stick reader set to UK WYSIWYG will display non-UK tags in decimal format.

Decimal

Displays the full 16-digit EID number

Tag Lookup

- Used with a tag file for non-WYSIWYG tags.
- The EID number programmed into the tag microchip is cross referenced to another number that will be displayed when the tag is scanned.

ISO Decimal

- The EID number is shown, minus the first 0 of the country code and with a space between the country code and the remaining 12 digits.

Full ISO

- The screen will alternate between the 15-digit EID number and six additional digits that are the retag counter, the species identifier and three reserved digits.

Hexadecimal

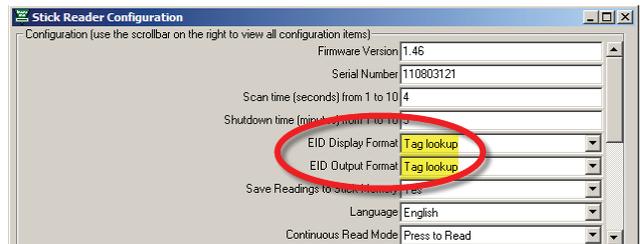
- All the information on the microchip are displayed in hexadecimal on screen , including the retag counter, species identifier and the three reserved digits.

Working with tag files - Windows

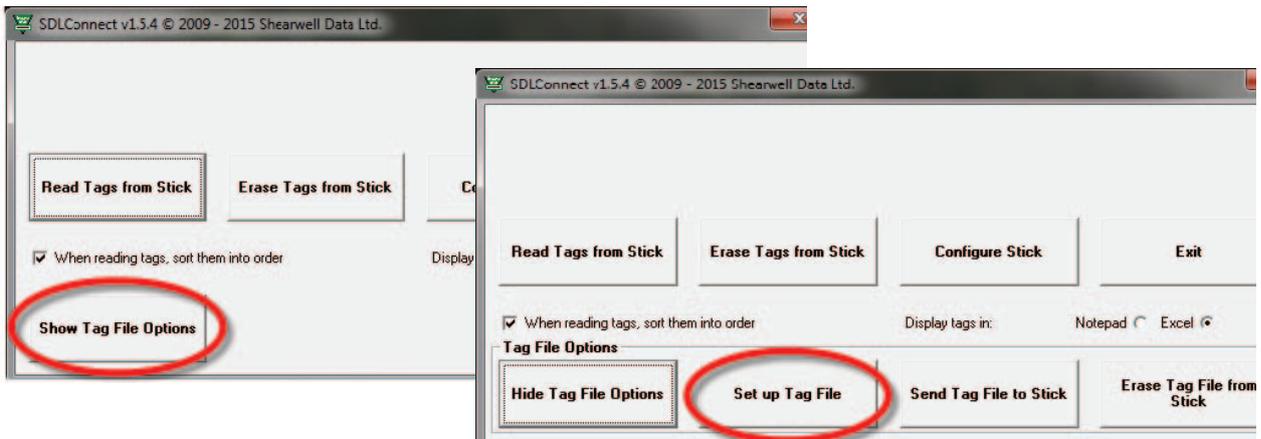
- A 'WYSIWYG' tag has an electronic number (EID) that is the same as the number printed on the outside of the tag.
- A 'non-WYSIWYG' tag has an electronic number (EID) that is different than the number printed on the outside of the tag.
- A tag file is for non-WYSIWYG tags - a cross-reference between the EID inside the tag and the number printed on the outside.
- A tag file loaded into the stick reader software allows the stick reader to display the outside number instead of the internal EID number. Your tag manufacturer will supply this file for you when you purchase non-WYSIWYG tags. Learn more about EID and tag formats on page 22 - **EID Options**

To load a tag file onto your stick reader:

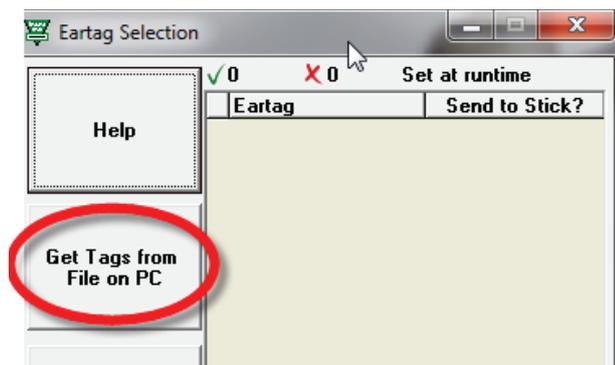
1. Turn on the stick reader.
2. Open **SDL Connect** on your computer desktop. Click on **Configure Stick**.
3. Change EID Display Format to **Tag Lookup**.
4. Change EID Output Format to **Tag Lookup**.
5. Click **Save Configuration** and **Quit**.



Note: The stick reader will still read and print WYSIWYG tag numbers even when it is configured for a tag file and the format is set to Tag Lookup.



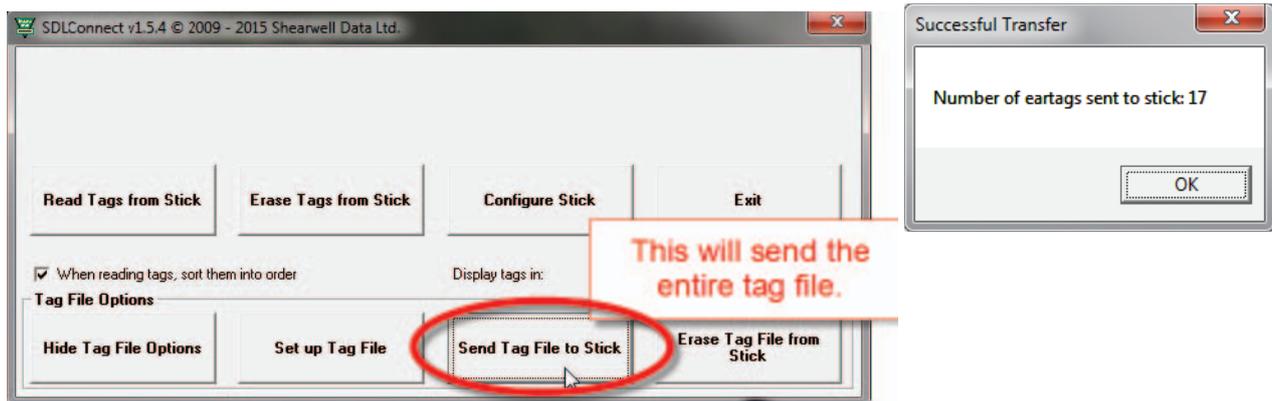
6. The tag file provided by your tag supplier must be saved on your computer.
7. Click on the **Tag File Options** button.
8. Select **Set up Tag File**.
9. Select **Get Tags from File on PC**. Find the tag file from your tag manufacturer - accepted tag formats are Shearwell, Allflex and FarmPlan. For all others please check with Shearwell Support.
10. If you do not have a tag file you can make your own text file in Notepad. Call Shearwell Support for more information.



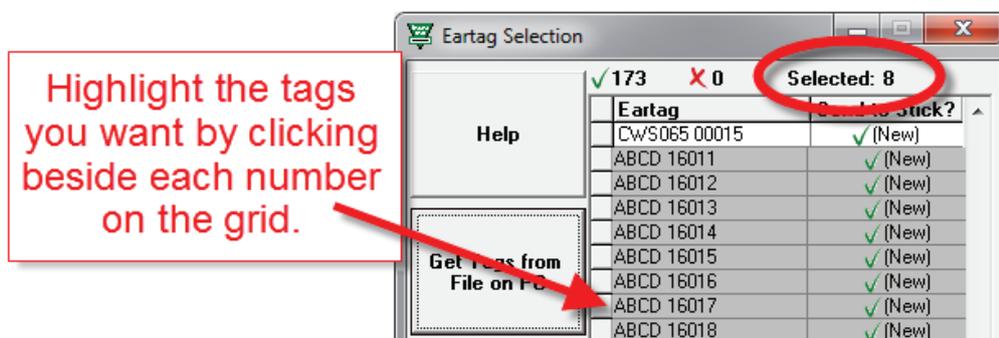
Working with tag files - Windows

Select tags to send to the stick reader

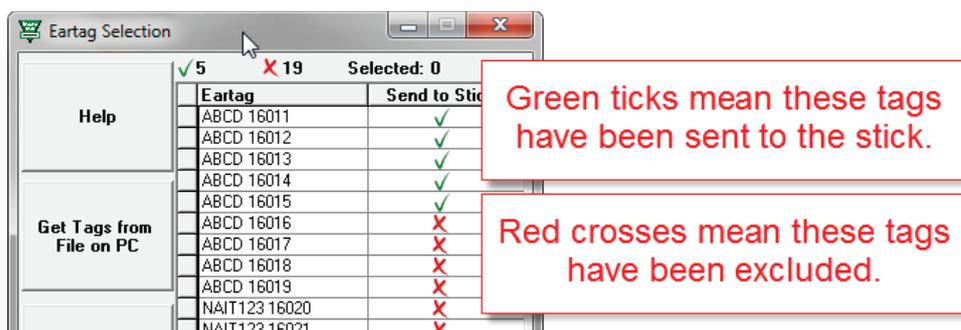
1. The tag file will open with two columns of information. The eartag column shows the name/number that will be displayed when the tag is scanned by the stick reader.
2. The **Send to Stick** column displays a green tick and **(New)** besides each name/number. **(New)** means the number has not previously been sent to the stick reader.
3. If you wish to send the entire list of tags to the stick reader click **Save & Exit**.
4. Click on the **Send Tag File to Stick** button. A confirmation screen will display the number of tags exported.



5. To send only selected tags to the stick reader highlight the tags you want on the grid. To select multiple tags hold down the control key, or hold down the shift key while selecting the first and last number in a series.



6. Click on **Select Tags to Send to Stick**. Tags that have been sent will now have only a green tick beside. All tags will remain on the grid for selection next time the program is opened.
7. Tags that are NOT to be sent to the stick can be highlighted on the grid. Click on **Deselect Tags from the List**. A red cross will be visible beside the number when it is deselected.
8. Delete tags that you will never want to send to the stick reader to reduce the size of the tag file. Highlight the unwanted tags on the grid and click on **Delete Selected Tags from the List**. If you change your mind you must import the tag file again to restore those numbers to the grid.

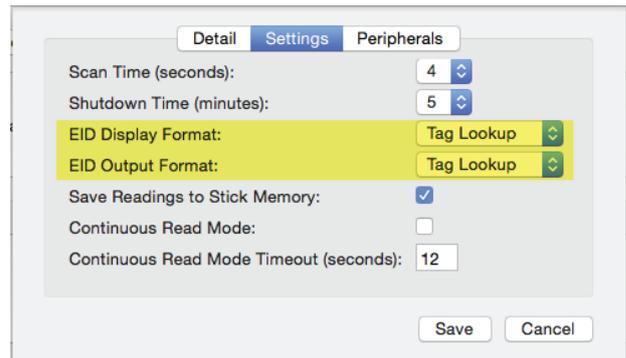


Working with tag files - Mac

- A 'WYSIWYG' tag has an electronic number (EID) that is the same as the number printed on the outside of the tag.
- A 'non-WYSIWYG' tag has an electronic number (EID) that is different than the number printed on the outside of the tag.
- A tag file is for non-WYSIWYG tags - a cross-reference between the EID inside the tag and the number printed on the outside.
- A tag file loaded into the stick reader software allows the stick reader to display the outside number instead of the internal EID number. Your tag manufacturer will supply this file for you when you purchase non-WYSIWYG tags. Learn more about EID and tag formats in **EID Options** in the Windows manual.

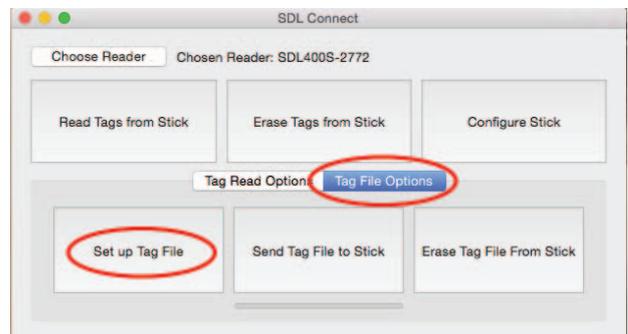
To load a tag file onto your stick reader:

- Turn on the stick reader.
- Open **SDL Connect** on your computer desktop.
- Click on **Configure Stick**.
- Change EID Display Format to **Tag Lookup**.
- Change EID Output Format to **Tag Lookup**.
- Click **Save**.

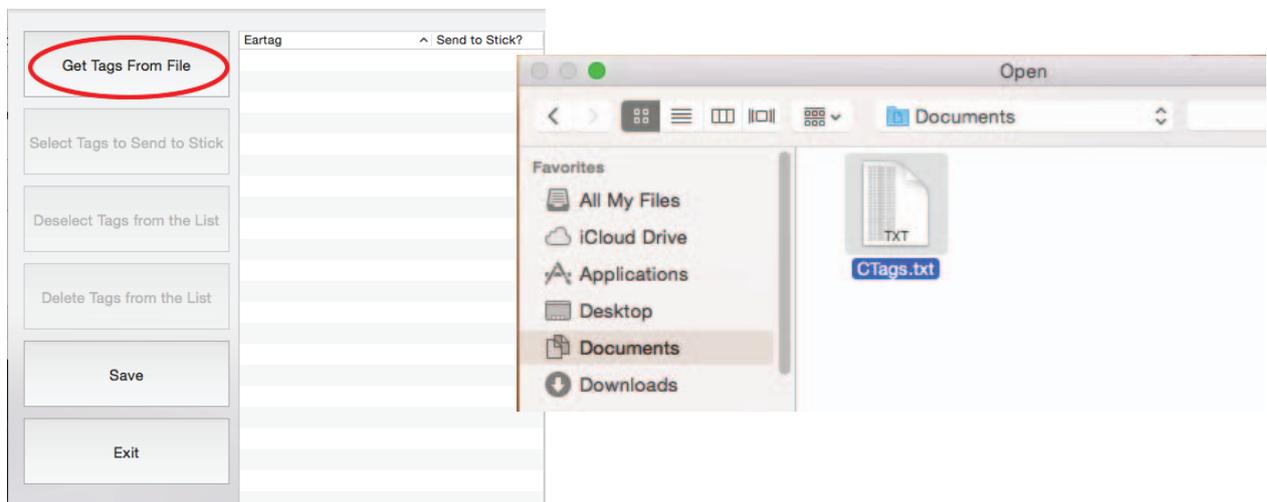


The tag file provided by your tag supplier must be saved on your computer.

- Click on the **Tag File Options** button.
- Select **Set up Tag File**.



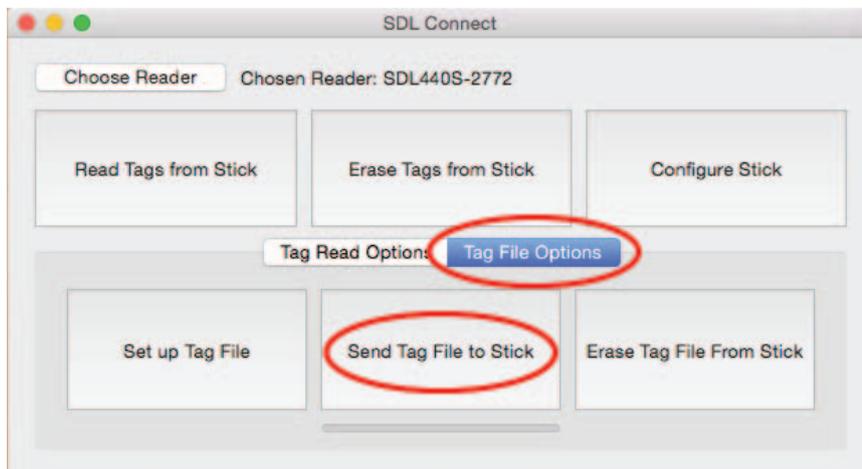
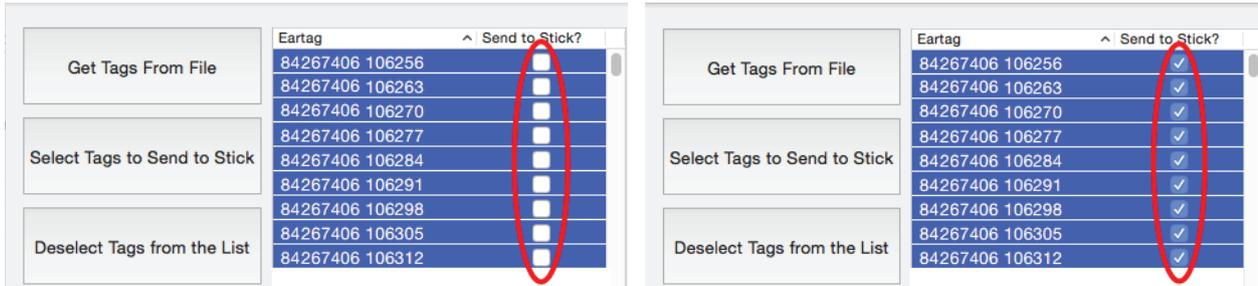
- Select **Get Tags from File**.
- Find the tag file from your tag manufacturer - accepted tag formats are Shearwell, Allflex and Farm-Plan. For all others please check with Shearwell Support.
- Select the tag file. Click **Open**. All the tag numbers in that tag file will be displayed.



Working with tag files - Mac

Select the tags you want to send to the stick reader.

1. To send all the tags:
 - Highlight the first tag on the list, hold down the shift key and highlight the last tag on the list.
 - Click **Select Tags to Send to Stick** - a tick will appear beside each selected tag.
 - Click **Save**.
 - Click Send Tag File to Stick. The blue light on the stick reader will flash blue.

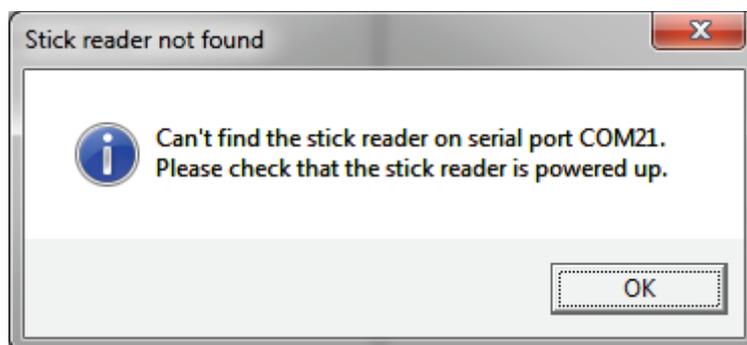
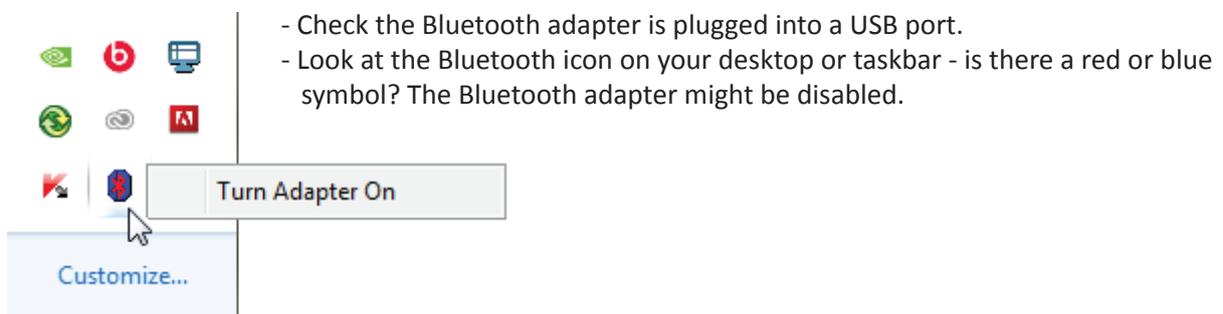
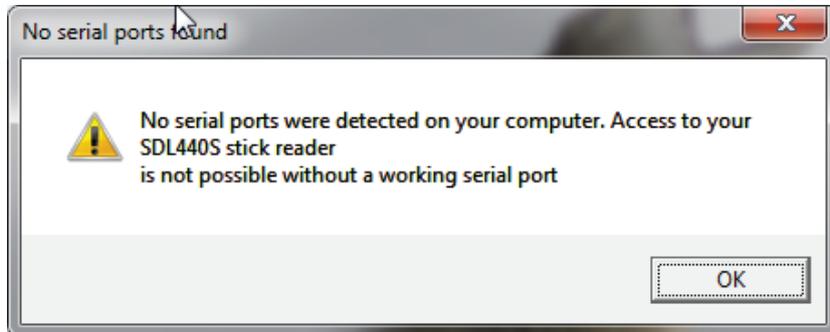


2. To send only selected tags to the stick reader highlight the tags you want on the grid. To select multiple tags hold down the command (Apple) key, or hold down the shift key while clicking the first and last number in a series.
 - Click **Select Tags to Send to Stick** - a tick will appear beside each selected tag.
 - Click **Save**.
 - Click **Send Tag File to Stick**. The blue light on the stick reader will flash blue.
3. To remove a tag file click on **Erase Tag File from Stick**. This will remove ALL tag files so be sure that none of the tags will ever need to be read again (i.e. animals are dead or sold).

Trouble-shooting

Error messages on the computer

1. No Bluetooth signal



2. No Bluetooth signal

- check the stick reader is turned on and the battery level is good.

3. Losing Bluetooth connection between the stick and the computer

- Battery level in the stick reader is getting low - insert fresh batteries or stop and recharge.

4. Wrong date and time

- Date and time are automatically sent to the stick reader from the computer software when the stick connects. A stick reader that isn't used very frequently will run down the back-up battery that runs the internal clock. To correct the date and time connect the stick reader and **SDL Connect** before you intend to use it.

If all else fails - remove the stick reader from your Bluetooth Devices and re-pair it.

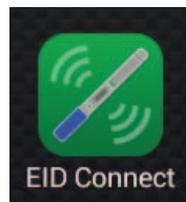
Link to EID Connect

EID Connect is a free download for your Android or Apple device. Go to the Google Playstore® (Android) or the App Store® (Apple) and search for “Shearwell”.

Help is available inside **EID Connect** by touching the menu icon and selecting **About**.

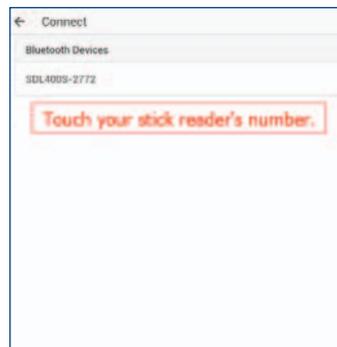
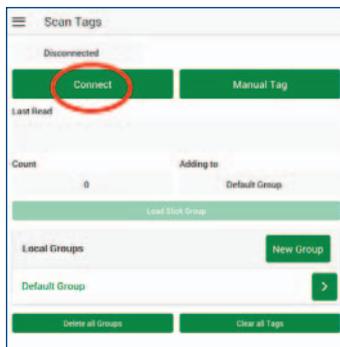
Get ready

- » Look on the back of your stick reader for a label with its Bluetooth name - it will start SDL400S, followed by another four digits. For example: SDL440S 1234
- » Turn on your stick reader.
- » On your mobile device open **EID Connect** by touching the stick reader icon.

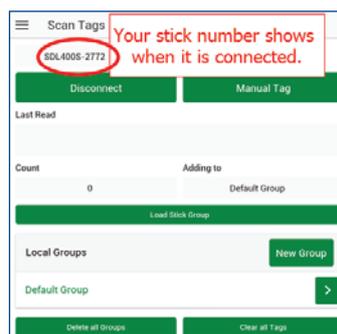
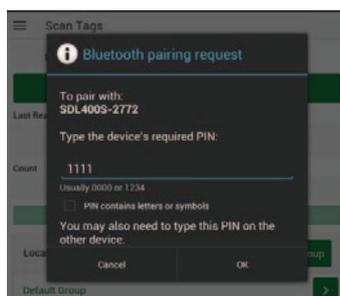


Connect to the stick reader the first time

- » Touch the green **Connect** button. The device will start scanning for the Bluetooth signal from your stick reader.
- » Find and press the stick reader’s name on the Bluetooth devices screen.



- » If you are asked for a pairing PIN enter 1111 and press **OK**.
- » The blue light on the stick reader will glow and your stick reader name will be displayed when a Bluetooth connection is made. Now you can start scanning tags or downloading tags that are already saved on your stick reader.



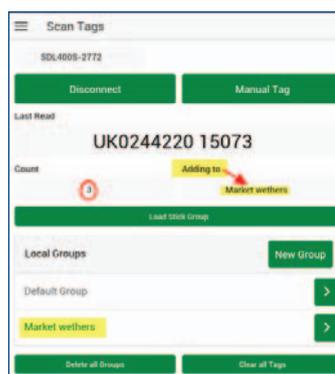
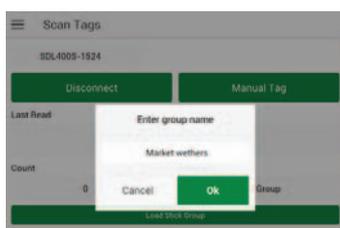
Link to EID Connect

Scan tags into a group

You can create new groups on the app, which are called **Local Groups**. Local Groups can be named anything you want. Groups of tag numbers that are saved on the stick reader are called **Stick Groups**. Stick Groups are named A, B, C, etc.

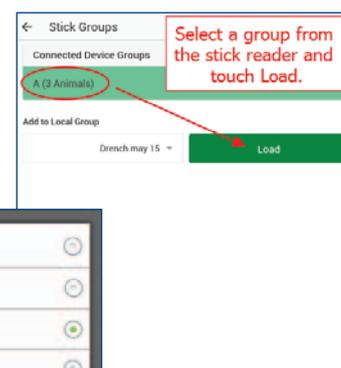
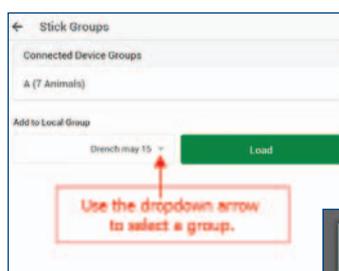
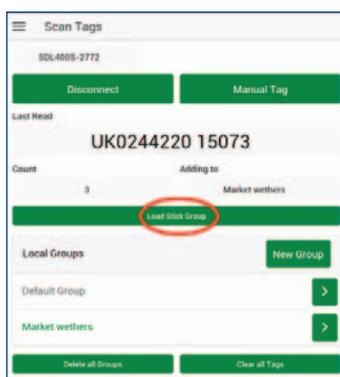
To add animals to a group on the app:

- » Touch **Connect** to connect your stick reader.
- » Select an existing group from the list or touch **New Group**. Type in a name for the group and touch **OK**. ("Default Group" is the name given to a group if you do not enter another name.)
- » Scan a tag to add each animal to the group. The last number read and the count are displayed.



Download tag numbers stored on the stick reader

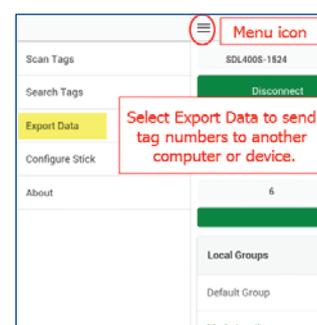
- » If you have already scanned tags into a group saved on the stick reader then touch **Load Stick Group**.
- » Use the dropdown list to select a Local Group to download tags into.
- » All the groups saved on the stick reader will be displayed at the top of the screen. Select a group then touch **Load**. The tag numbers in that stick group will be added to your app group.



Export Data

You can send tag numbers by email, Bluetooth or other means, depending on what programs you have installed on your device.

- » Touch the menu icon.
- » Touch **Export Data**. Choose a method for sending a file to another device or computer. A csv file with all your groups will be sent to the recipient.

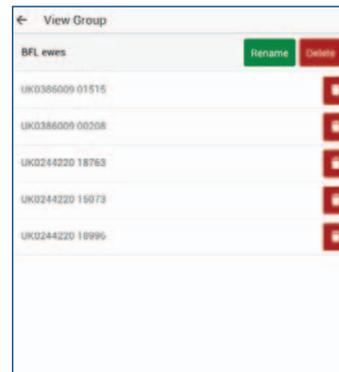
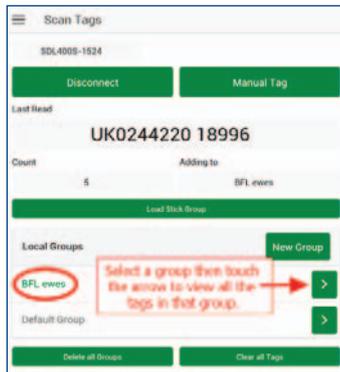


Link to EID Connect

View tags

You can view all the tags in any group, with the option to delete one or more tags.

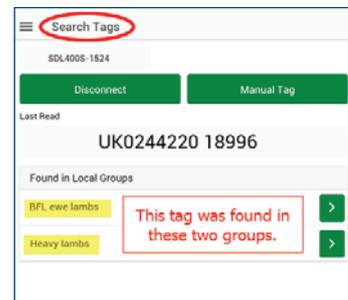
- » In the **Scan Tags** screen select the group you wish to view.
- » Touch the arrow to view the tags.
- » Touch the rubbish bin icon to delete a tag from the group.
- » Change the name of the group by touching **Rename** and entering a new name.



Search for a tag

Find a tag that is in a group on the app (Local Group).

- » Touch the menu icon.
- » Touch **Search Tags**.
- » Scan a tag or type the number in as Manual Tag (you must enter the entire number exactly as it is printed on the tag, including the space).
- » The groups that contain that tag number will be displayed. Then touch the arrow to **View Group** if you wish to delete that tag from the group.



Configure the stick reader

Some stick reader settings can be changed here.

- » Turn on your stick reader. Connect to your app.
- » Touch the menu icon.
- » Touch **Configure Stick**.
- » **Auto Connect on Startup** means the app will try to connect to your stick reader automatically whenever the stick reader is turned on.
- » **Continuous Read Mode** means the stick is constantly scanning for tags without you having to push the scan button.
- » Changing the **Display Format** and **Output Format** might be necessary if you are linking your stick reader to another device (such as a weigher) that needs the tag number in a certain format.
- » For more information on configurations see your stick reader manual.

Link to a weigher - EziWeigh7i

The SDL440S stick reader can be linked to a weigher that has Bluetooth. Devices with Bluetooth will have the Bluetooth symbol on the front.



The first step to link your stick reader to an EziWeigh7i is to find the Bluetooth ID of the weigher.

1. Push the power button to turn on the weigher.
2. Push the **Menu** button.
3. Use the bottom arrow to scroll down through the functions to **Setups...**

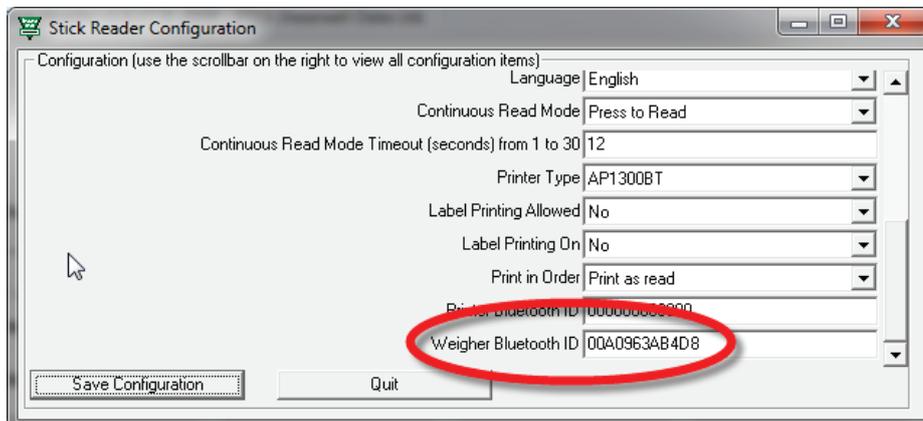
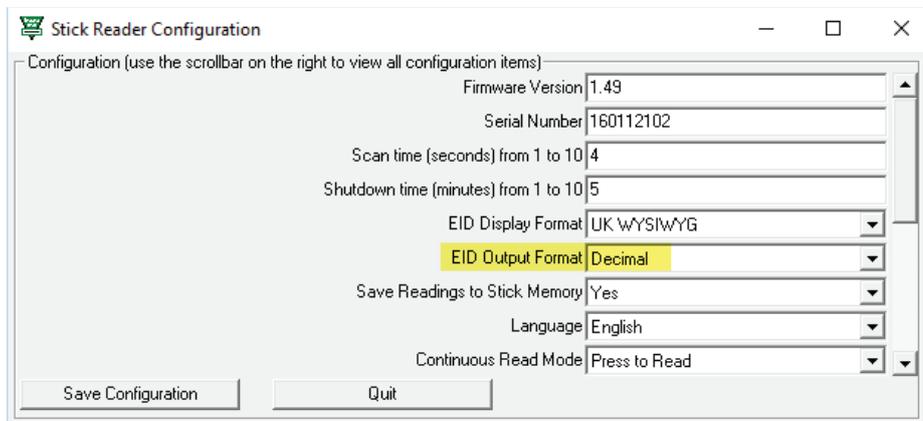


4. Push **Enter**. Use the bottom arrow to scroll down through the functions to BT Address
5. Write down the BT address on a piece of paper, leaving out the colons. The example in the photo above would be BT Address 00A0963D2FA3.
6. Press the **Escape** button twice to exit.

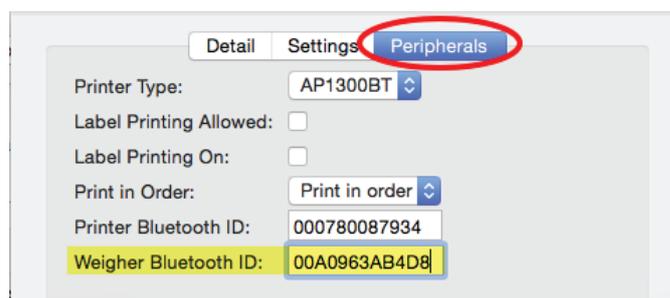
Link to a weigher - EziWeigh7i

The second step to link your stick reader to an EziWeigh7i weigher is to change the configuration on your stick reader.

1. Make sure the Bluetooth adapter is plugged into a USB port on your computer (Windows).
2. Turn on the stick reader.
3. Click on the **SDL Connect** icon on your computer desktop. The blue light on the stick reader should flash as the Bluetooth connection is made.
4. Click on **Configure Stick**.
5. For a Windows computer, scroll down to find the **Weigher Bluetooth ID** field. Type in the Bluetooth ID number for your weigher.
6. For a Windows computer, scroll down to find the **Weigher Bluetooth ID** field. Type in the Bluetooth ID number for your weigher.
7. Click **Save Configuration** and **Quit**.



8. On a Mac computer, click on **Peripherals**.
9. Change the **EID Output Format** to **Decimal**.
10. Type in the Bluetooth ID number for your weigher in the **Weigher Bluetooth ID** field.
11. Click **Save**.



Link to a weigher - EziWeigh7i

7. Turn off your stick reader.
8. Turn the stick reader back on, pressing and holding the green button to view the menu options.
9. Release the button at **Link to weigher?** The blue light on the stick reader will glow when the Bluetooth connection is made.
10. The stick reader and weigher are now linked - when a tag is scanned by the stick reader the EID number will be sent to the weigher and be displayed on the screen.
11. After your weighing session, connect your weigher to your computer and download the file. Consult the Tru-Test user manual for more information.



Link to a weigher - Te Pari

Before you start, refer to your Te Pari manual for saving files and downloading to your computer.

STEP 1: Find the Bluetooth ID of the weigher.

1. Push the power button to turn on the weigher.
2. Push the **Setup/Weigh** button.
3. Use the down arrow to scroll down through the functions to Page 2.
4. On Page 2 of 3, scroll down to **System Information**. Press the **Record/Select** button.

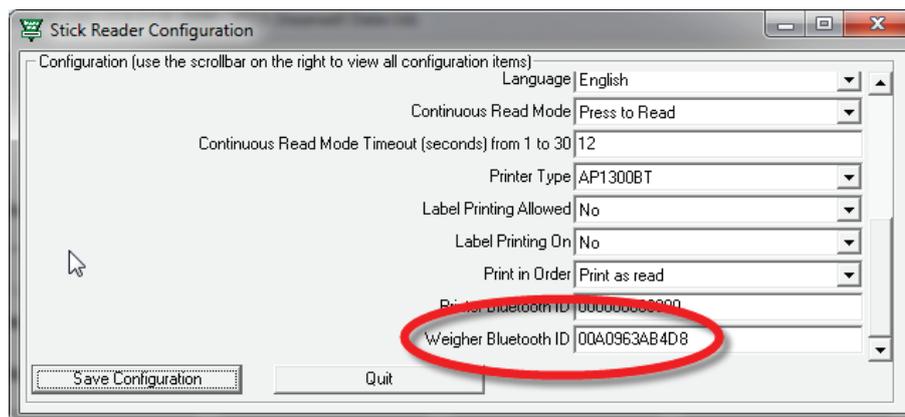
SETUP PAGE 2 OF 3	
WIFI/COM 1 MODE:	EID READ / PC CONNECT
WIFI/C1 BAUDRATE:	9600
COM 1 POWER:	OFF
COM PORT 2 MODE:	SIMPLE WEIGHT
COM 2 BAUDRATE:	9600
WIFI/C2 POWER:	ON
BLUETOOTH MODE:	EID READ / PC CONNECT
BLUETOOTH POWER:	ON
SYSTEM SETUP:	
SYSTEM INFORMATION:	

SYSTEM INFO	
FIRMWARE VERSION:	B3:01:01
BLUETOOTH ADDR:	00:06:66:6C:9B:DA
BLUETOOTH STATE:	DISCONNECTED
BLUETOOTH HOST:	00:00:00:00:00:00:00:00
BLUETOOTH PIN:	1234 . END
WIFI MAC ADDR:	00:06:66:35:
WIFI APP NAME:	SSID - ISCALE
WIFI IP ADDR:	10.10.10.1:2000
WIFI DEVICE 1:	
WIFI DEVICE 2:	
WIFI DEVICE 3:	
WIFI DEVICE 4:	
MEMORY USAGE:	125 RECORDS
FLASH MEMORY:	4M OK
MODEL	T20e

5. Find **Bluetooth Addr**. Write down the BT address on a piece of paper, leaving out the colons. The example in the photo above would be BT Address 0006666C9BDA.
6. Press the **Setup or the Stats** button to exit.

STEP 2: Change the configuration on your stick reader.

1. Make sure the Bluetooth adapter is plugged into a USB port on your computer (PC only).
2. Turn on the stick reader. Click on the **SDL Connect** icon on your computer desktop. The blue light on the stick reader should flash as the Bluetooth connection is made.
3. Click on **Configure Stick**.



4. Scroll down to find the **Weigher Bluetooth ID** field. Type in the Bluetooth ID number for your weigher. Click **Save Configuration** and **Quit**.
5. On a Mac computer, click on **Peripherals**.
6. Type in the Bluetooth ID number for your weigher in the **Weigher Bluetooth ID** field.
7. Click **Save**.

Link to a weigher - Te Pari

STEP 3: Change the configuration on the weigher.

1. Press the power button to turn on the weigher.
2. On Page 1 highlight **Weight Record**. Press the **Record/Select** button multiple times to scroll through the options; select **AUTO**.

SETUP PAGE 1 OF 3	
CURRENT FAVORITE:	CUSTOM NOT FAVORITE
SAVE/NAME FAVORITE:	SHEEP
BACKLIGHT MODE:	AUTO
SET DRAFT TYPE:	WEIGHT
DRAFTING SETUP:	
HEALTH MODE:	OFF
SET HEALTH 1 TYPE:	
CALCULATED DOSE:	
SET HEALTH 2 TYPE:	
CALCULATED DOSE:	
WEIGHT RECORD:	AUTO
AUTO ZERO:	ON
WEIGHT GAIN:	TOTAL GAIN
TARE WEIGHT:	000.0 KG

3. Use the down arrow to scroll down through the functions to Page 2.
4. On Page 2 of 3, highlight **Wifi/Com 1 Mode**. Press the **Record/Select** button multiple times to scroll through the options. Select **EID READ/PC CONNECT**. Use the down arrow to move to the next field.
5. Highlight **Wifi/C1 Baudrate**. Press the **Record/Select** button multiple times to scroll through the options. Select **9600**.
6. Highlight **COM1 Power**. Press the **Record/Select** button to select **OFF**.
7. Highlight **Com Port 2 Mode**. Press the **Record/Select** button multiple times to scroll through the options. Select **SIMPLE WEIGHT**.
8. Highlight **COM2 Baudrate**. Press the **Record/Select** button to select **9600**.
9. Highlight **WIFI/C2 Power**. Press the **Record/Select** button to select **ON**.
10. Highlight **Bluetooth Mode**. Press the **Record/Select** button to select **EID READ/PC CONNECT**.
11. Highlight **Bluetooth Power**. Press the **Record/Select** button to select **ON**.

SETUP PAGE 2 OF 3	
WIFI/COM 1 MODE:	EID READ / PC CONNECT
WIFI/C1 BAUDRATE:	9600
COM 1 POWER:	OFF
COM PORT 2 MODE:	SIMPLE WEIGHT
COM 2 BAUDRATE:	9600
WIFI/C2 POWER:	ON
BLUETOOTH MODE:	EID READ / PC CONNECT
BLUETOOTH POWER:	ON
SYSTEM SETUP:	
SYSTEM INFORMATION:	

SETUP PAGE 3 OF 3	
ID MODE:	EID ONLY
ENABLE AUTO VID:	OFF
AUTO VID START:	VID001
ENABLE PID:	NO
PID DEFAULT:	
ENABLE CODE 1:	NO
CODE 1 TITLE:	CODE 1
CODE 1 DEFAULT:	
ENABLE CODE 2:	NO
CODE 2 TITLE:	CODE 2
CODE 2 DEFAULT:	

12. Use the down arrow to scroll down through the functions to Page 3.
13. Highlight **ID Mode**. Press the **Record/Select** button to select **EID ONLY**.
14. Press the **Setup /Weigh** button to exit the setup screen. The EID field should now be visible on the front screen.
15. Open a new file or select an existing file to record this weighing session.

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