SPARK-E-MATE BLUETOOTH® LOGGING

PRODUCT: **Spark-e-mate** **493BTL & 493BTLi** (DRWG PC-5157-2)

MOBILE DEVICES: **PCs & Laptops, Android Devices, iOS Devices**

CUSTOMER: **Schneider Electric**

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design2000
Est. 1968

Contents

1. BLUETOOTH® LOGGING OPTION 493BTL

(AS/NZS 3000:2007 Clause 8.4)

1.1 Introduction

Spark-e-mate 493BTL (for Android and PC) and 493BTLi (for iPhone) units can log test results on a Bluetooth enabled PC / laptop, Android device or Apple iPhone using the free Spark-e-log App. Test reports for each installation can be printed and stored as a Verification Record. Existing 493 units can be retrofitted with the 493BTL or 493BTLi module at a nominal charge.

Only Spark-e-mates that carry one of these optional symbols are Bluetooth enabled.

Android devices and PCs use **Bluetooth V2.0** and iPhone 4S and newer use **Bluetooth Smart V4.0**

In this handbook T14221 we cover Logging to PCs, Android devices and iPhones.

2. BLUETOOTH® LOGGING TO A PC

For logging test results to a PC or Laptop, your Spark-e-mate must have the Bluetooth V2.0 module fitted, indicated by this symbol

2.1 Spark-e-log PC Client Software (493BTL)

First you'll need to download the Spark-e-mate Logging System for PC software (freeware) from:

www.sparkemate.com/software/log.zip

The software is in a ZIP file which needs to be extracted to your hard drive. The installation instructions are contained in the READ_ME.txt file.

Once properly installed, clicking on the Spark-e-log Bluetooth Icon on your desktop will bring up this splash screen:


Then the main Logging System window appears:
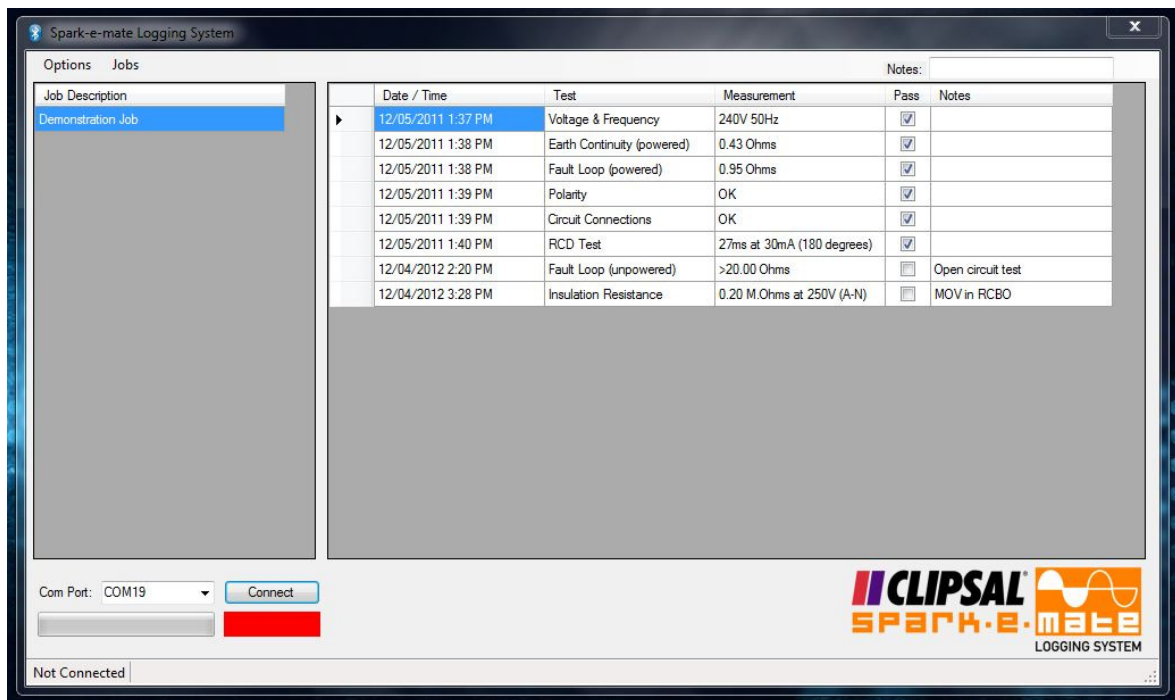
You must now **CLOSE Spark-e-log** and go to the next step of pairing.

### 2.2 Pairing your Spark-e-mate with your Computer's Bluetooth

1. Turn on *Spark-e-mate* by pressing its ON/RESET button and make sure the backlight is on.
2. On your Laptop, right click on the Bluetooth icon and select "Add a Device" from the pop-up menu while *Spark-e-mate's* backlight is still on.
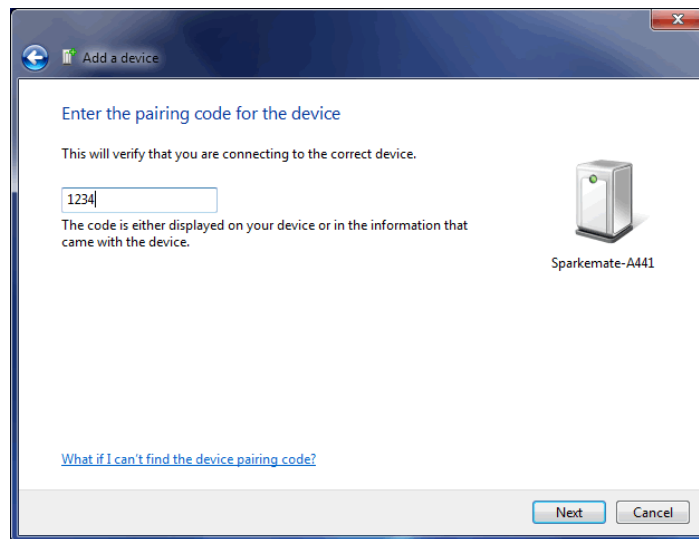.
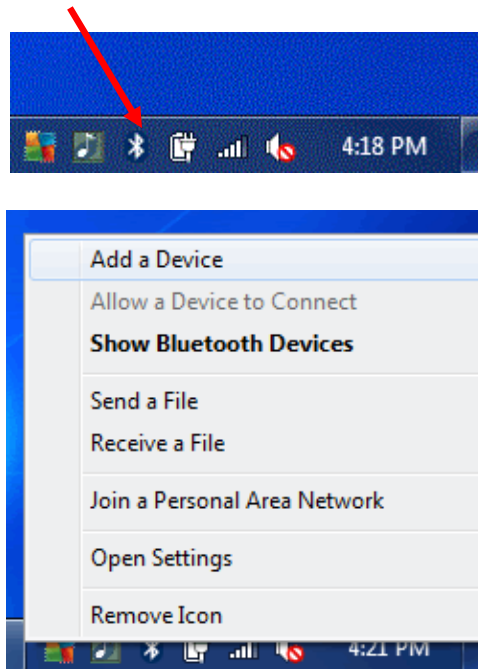
3. Wait until your Spark-e-mate shows up in your "Add a Device" window:
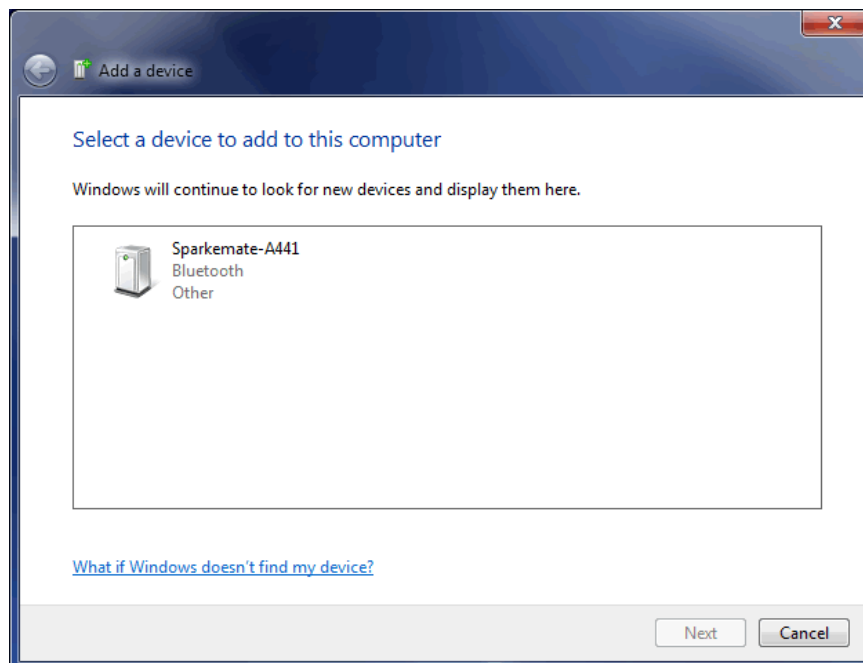
4. Select Spark-e-mate from the list and click on "Next"
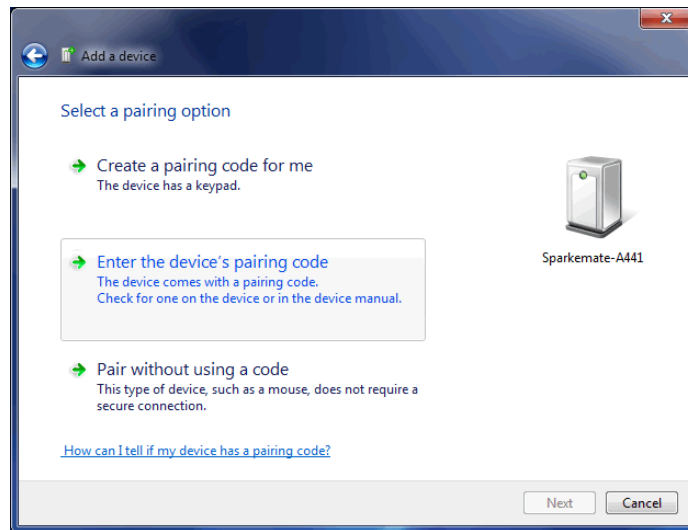
5. Select "Enter the device's pairing code" and click on "Next".

6. The default pairing code is 1234.
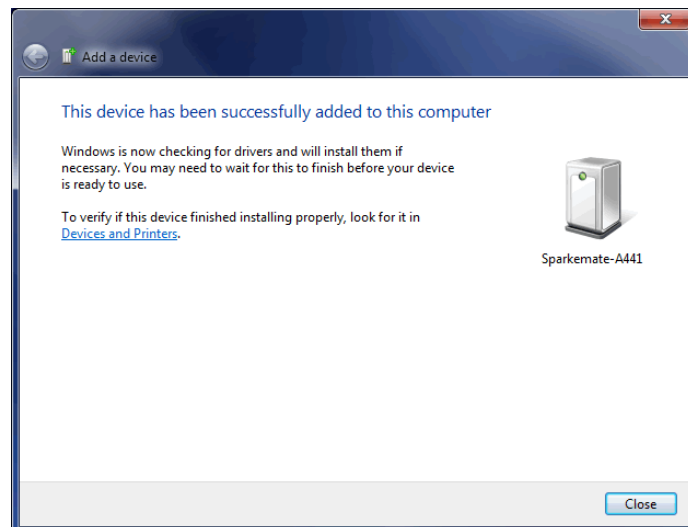
7. Click on "Close".

8. The last step in Pairing is to take note of which COM port has been assigned to your *Spark-e-mate*. Right click once more on the Bluetooth toolbar icon:

9. Select "Show Bluetooth Devices" from the pop-up menu:

10. Right click on the Spark-e-mate icon and choose "Properties".

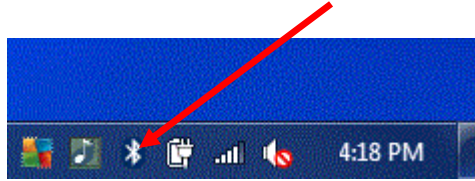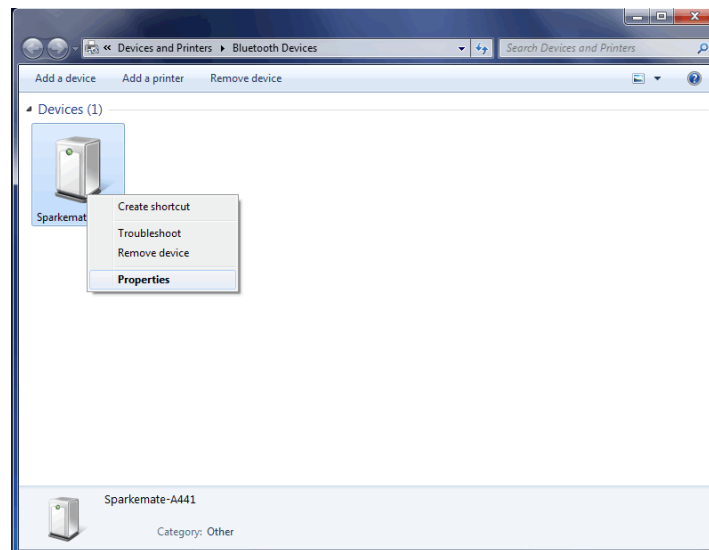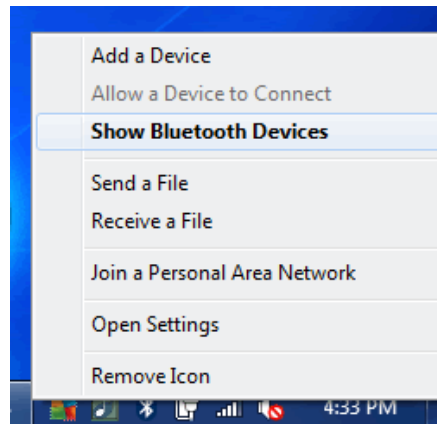11. Choose the "Hardware" Tab ("Services" Tab in VISTA) from the Properties window and <u>take note of the assigned COM port.</u> In the example below COM 7 has been assigned but the COM port may be <u>different for your computer</u>.
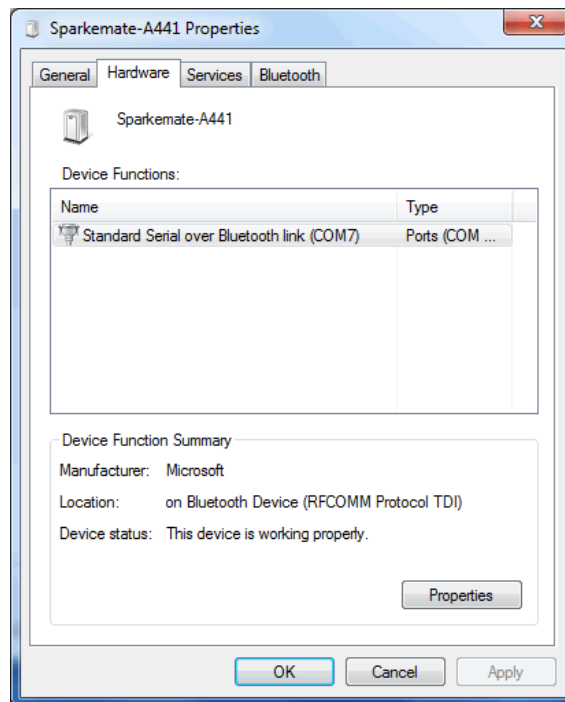
12. Click "OK". Spark-e-mate is now paired to your computer and this process should NOT need to be repeated.

2.3   Establishing the Bluetooth wireless Connection

1 Go to your laptop, make sure your Laptop <u>Bluetooth is turned on</u> and click on the Spark-e-log shortcut on your desktop to start the Spark-e-log Logging System.

Then the main Logging System window appears:
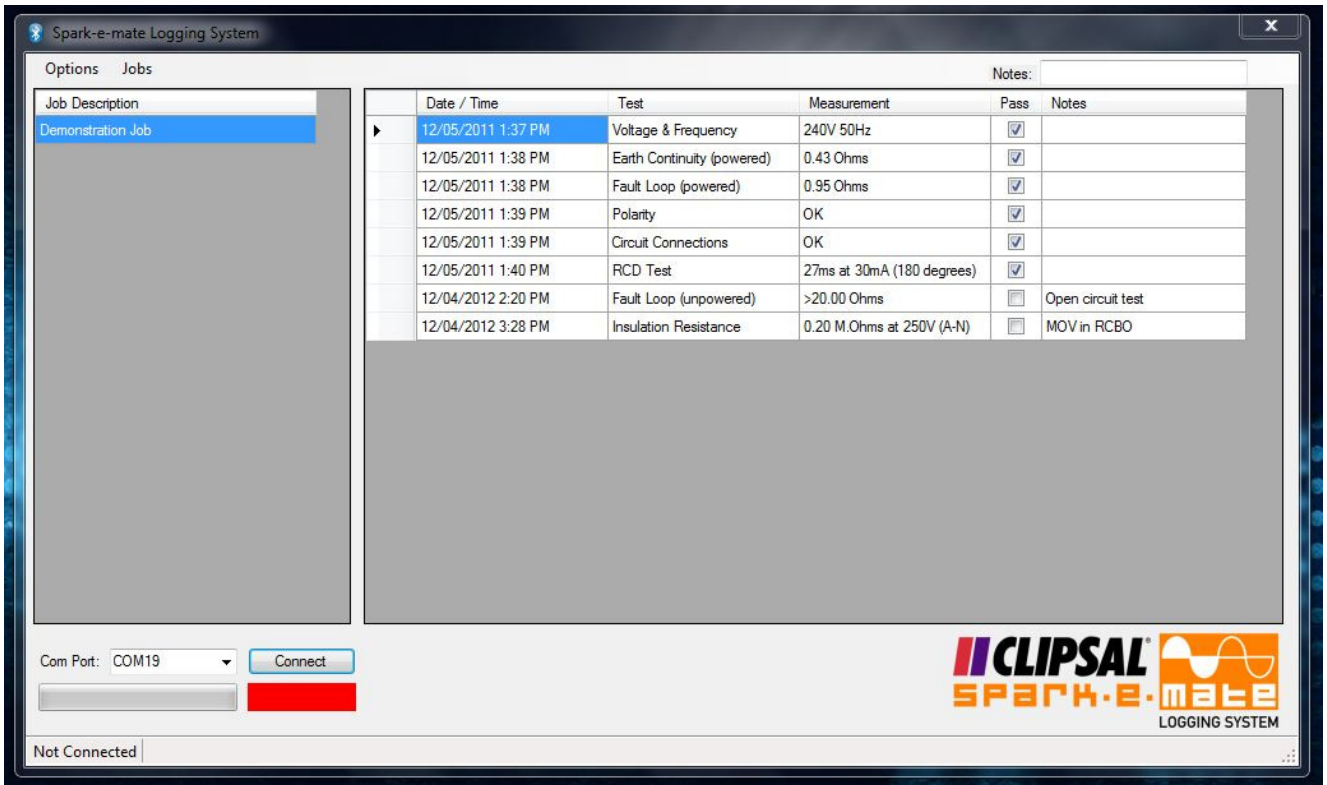
2 Turn on *Spark-e-mate* by pressing its ON/RESET button.
3 Choose the correct COM port and click the Connect button while Spark-e-mate's
   <u>backlight is on</u>.
4 Within 30 seconds the CONNECTED Icon should flash green and the *Spark-e-mate*
   Bluetooth Connected symbol appears.
5 You are connected ready to log results.
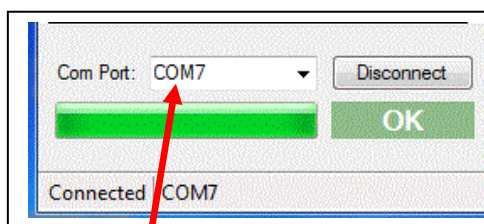
COM port 7
example only. It
may be different
for your
Computer

Bluetooth
Connected
Symbol

2.4   Creating New Jobs

The first thing to do is to create a new job by clicking on the "Jobs" tab. You can then name and number it, and pin notes to each test. Jobs and test results are automatically saved until you manually delete them using the "Delete Job" tab.

2.5   Logging your Test Results

Whenever the LOG symbol appears, you can press the LOG button to send the displayed test result to your computer. Both Spark-e-mate and your computer will beep to indicate successful data transfer. The test result appears and is saved in the Logging System window.

LOG button for sending test result to Laptop

Press the LOG button to send result to Laptop
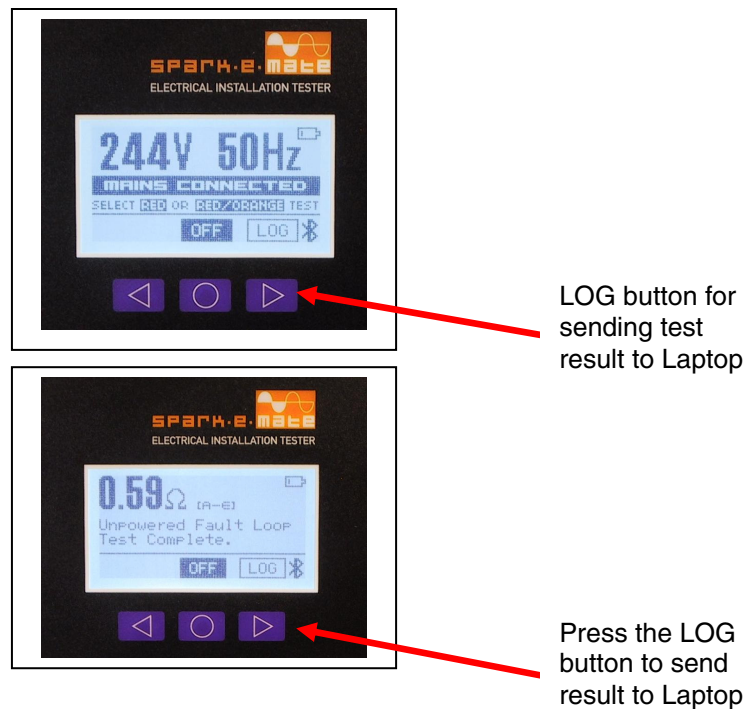
2.6   Printing your Test Results

Bring up the required Job and click on the Spark-e-log "Jobs" then "Print Test Report" to print the Test Report:

Energisation or Re-verification of an Installation

(AS/NZS 3000:2007 Clause 8.4)

Date of energisation and original verification details are to be recorded and available on site in this accessible record . This also facilitates the process of re -verification at a later date .

ELECTRICAL INSTALLATION & VERIFICATION RECORD		INSTALLATION: Demonstration Job
DATE OF ENERGISATION: / /		
Testing Organisation & Department		

Test Equipment	Model Number	Serial Number	Manufacturer	Date of Purchase or Last Calibration
Spark-e-mate Electrical Installation Tester	Clipsal Cat . No. 493	A000001	Design 2000 Pty Ltd	12/04/2012

Test Date and Time	Test	Measurement	Notes	Result Refer to AS/NZS 3000 Section 8
12/05/2011 1:37:46PM	Voltage & Frequency	240V 50Hz		Pass
12/05/2011 1:38:23PM	Earth Continuity (powered)	0.43 Ohms		Pass
12/05/2011 1:38:55PM	Fault Loop (powered)	0.95 Ohms		Pass
12/05/2011 1:39:04PM	Polarity	OK		Pass
12/05/2011 1:39:12PM	Circuit Connections	OK		Pass
12/05/2011 1:40:29PM	RCD Test	27ms at 30mA (180 degrees)		Pass
12/04/2012 2:20:13PM	Fault Loop (unpowered)	>20.00 Ohms	Open circuit test	Fail
12/04/2012 3:28:28PM	Insulation Resistance	0.20 M.Ohms at 250V (A-N)	MOV in RCBO	Fail

Other Comments

Tested by	Signature	Dated / /

1 of 1

There are a few blank fields that you will need to complete by hand.
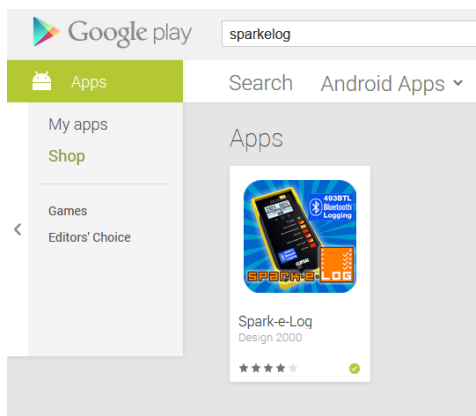
3. BLUETOOTH® LOGGING TO AN ANDROID DEVICE

For logging test results to an Android device, your Spark-e-mate must have the Bluetooth V2.0 module fitted, indicated by this symbol

3.1 Spark-e-log Android App (493BTL)

First you'll need to install the free Spark-e-mate Logging System App from the Google Play store by searching for "sparkemate" or "sparkelog":

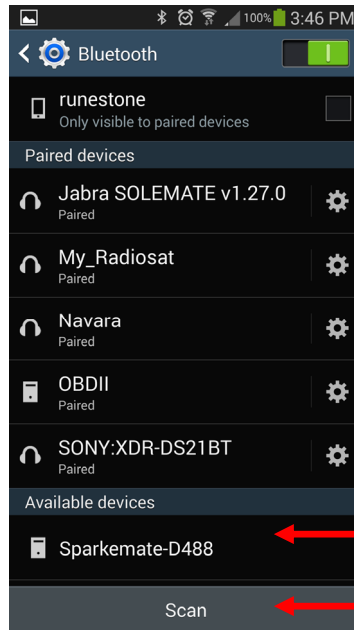## 3.2 Pairing your Spark-e-mate with your Android Device

1. Go into the settings screen on your Android device and make sure Bluetooth is turned on (the sliding switch should be green):

**Tap on Bluetooth to see paired devices**
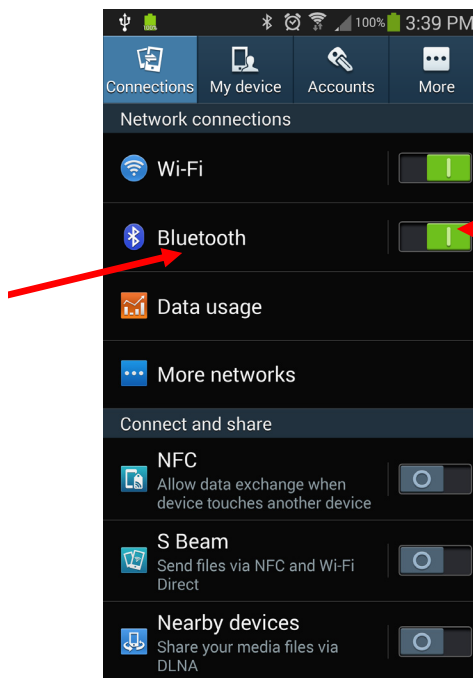
Bluetooth is on

2. Tap on the word "Bluetooth" in the above settings menu and you will see all of your currently paired Bluetooth devices (next page):

Spark-e-mate is available for pairing

**Scan to find Spark-e-mate**

3.   Turn on Spark-e-mate then press "Scan" in the above screen to find your Spark-e-mate and list it under "Available devices".

4.   Press the Spark-e-mate entry in "Available devices" and the pairing process will begin. When you are asked to enter a pairing PIN code, enter "1234" and click "OK":
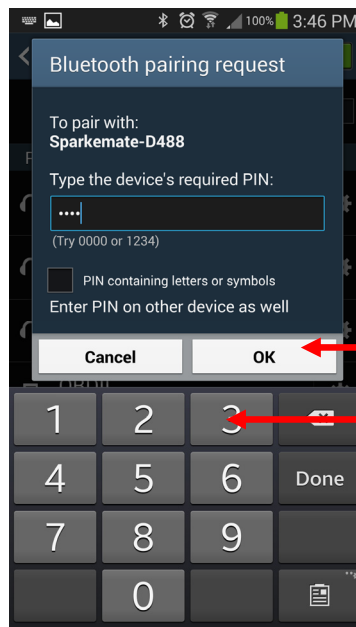
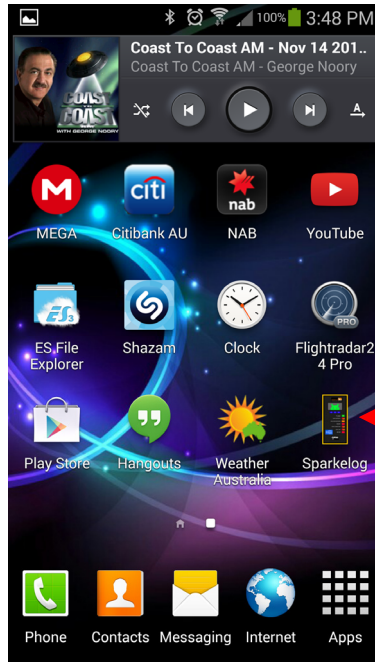**Press OK after PIN**

PIN is 1 2 3 4

5.   Your Spark-e-mate will then be shown in the list of paired devices:
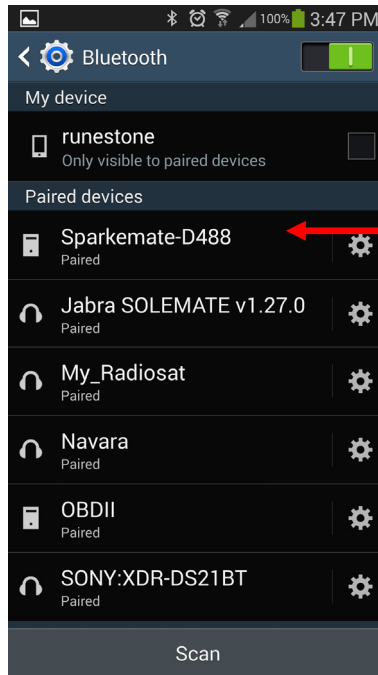
**Spark-e-mate is paired with the Android phone**

3.3   Establishing a Bluetooth Connection

1.   Find the Spark-e-log Tile within your installed Apps and press it:

Spark-e-log Tile

2. Spark-e-log will then start. Make sure your Spark-e-mate is turned on and it will automatically connect within a few seconds (the status icon will turn green and display "Connected"):

Spark-e-mate is connected with the Android phone

Press to bring up the Settings menu

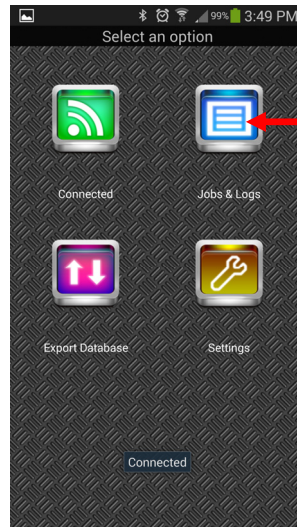**Spark-e-mate is connected with the Android phone**
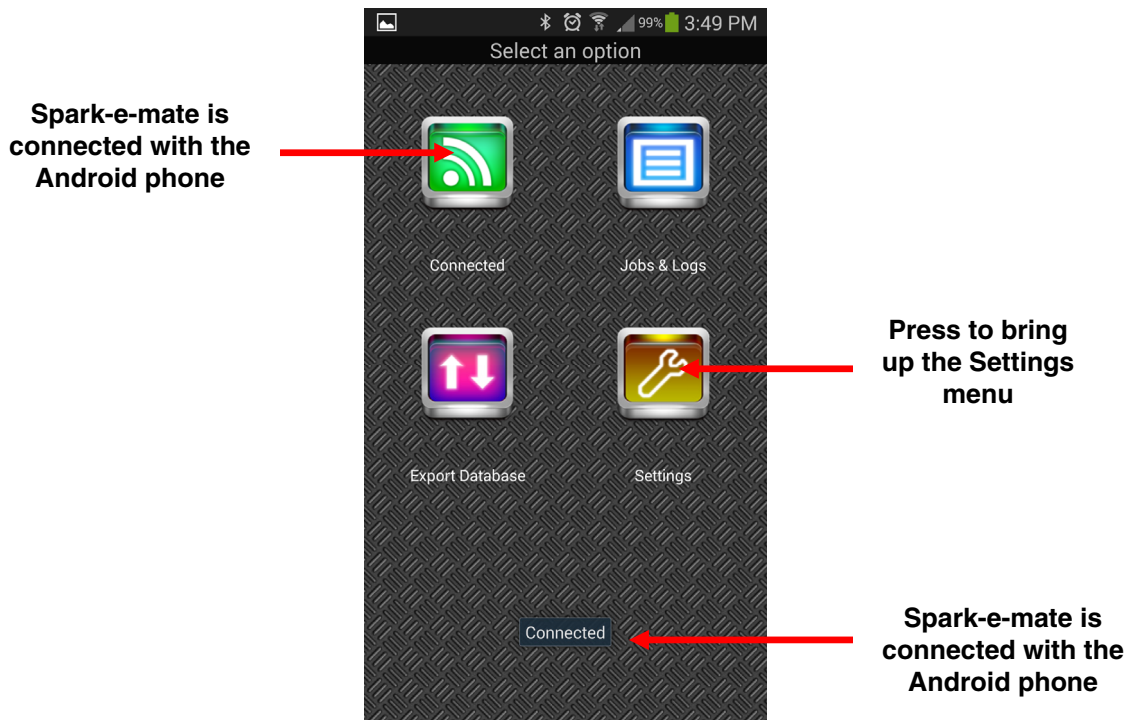
3.4   Settings Menu

Press the "Settings" button to enter a few basic things such as your email address, Company details, Spark-e-mate serial number and last calibration/purchase date:
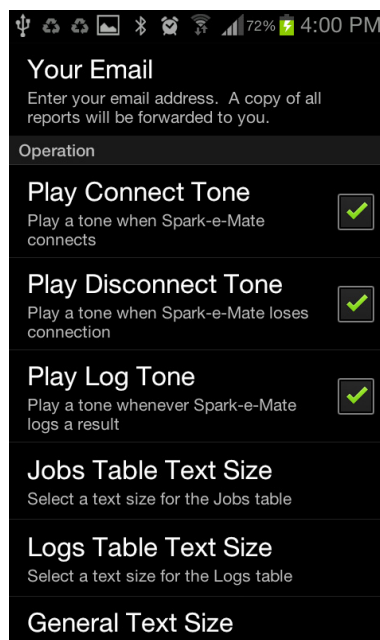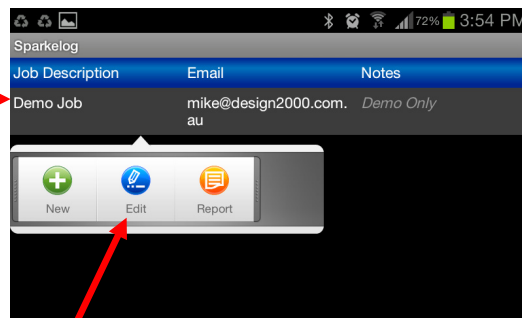
3.5 Opening Existing Jobs or Creating New Jobs

1. Go back to the main menu and press the "Jobs & Logs" button
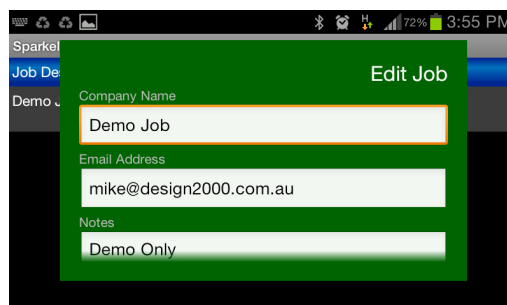
Press to bring up the Jobs menu

2. Tapping on a job entry will bring up all tests logged under that job. To add a new job, edit an existing job or produce a job test report, <u>push and hold</u> the required job entry:

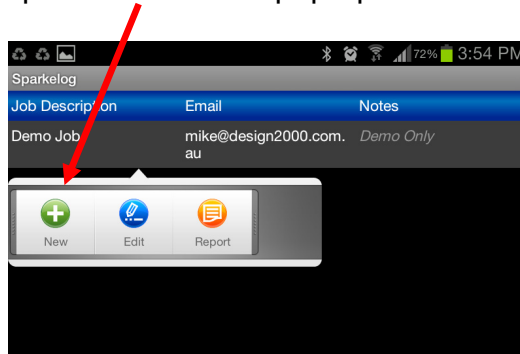**Push and hold a job entry to display the pop-up menu**

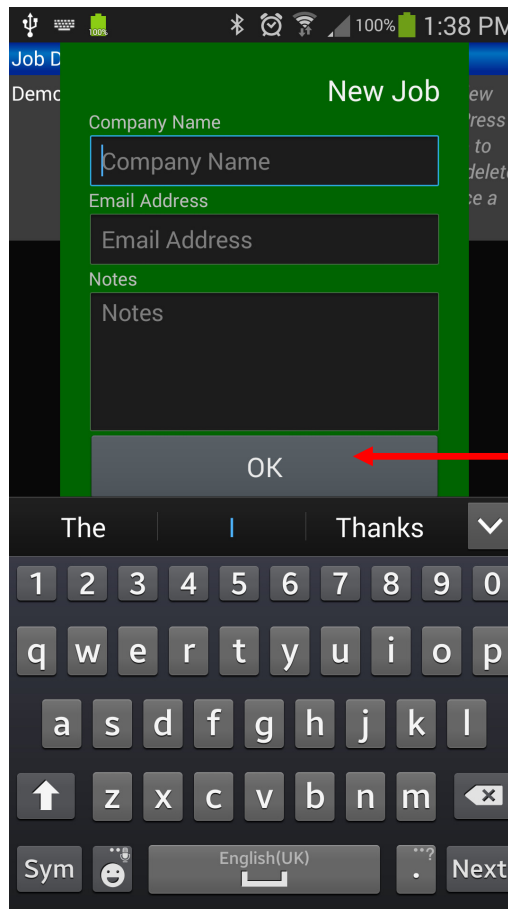3. To edit the job tap on "Edit" in the pop-up menu:

3.   To create a new job tap on "New" in the pop-up menu:

Tap to create a new job

4.   You will then be prompted to fill out the new job details.

Press OK when you have filled out the new job details

3.6   Logging your Test Results

Tapping on a job entry brings up a list of all tests logged under that job. If no tests have yet been logged for that job, such as when a new job has just been created, the log screen will be empty. You must be in the log screen before you start logging results from your Spark-e-mate so that log entries are added under the correct job.

To edit or delete a logged test, <u>push and hold</u> a log entry and choose the required action from the pop-up menu:
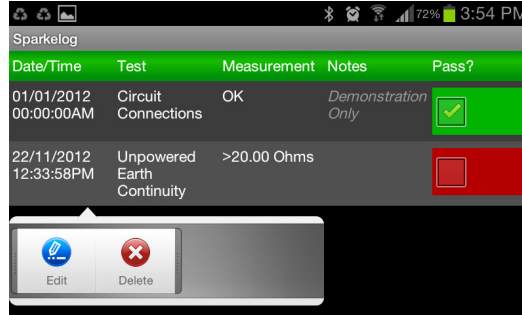
You can tell that Spark-e-mate is connected to your Android device and is ready to log when you see the Bluetooth symbol in the bottom-right corner of the Spark-e-mate display.

Whenever the LOG button appears on the Spark-e-mate display, you can press the LOG button to send the displayed test result to your Android device and store it against the currently selected job. Both Spark-e-mate and your Android device will beep to indicate successful data transfer. The test result appears and is saved in the Spark-e-log System.

LOG button for sending test result to your Android device

Press the LOG button to send result to your Android device

Please note that if you log the mains voltage and then perform a fault loop test, Spark-e-Log will automatically calculate and log the <u>P</u>rospective <u>S</u>hort <u>C</u>ircuit <u>C</u>urrent (PSC).

3.7   Emailing and Printing your Test Results

1.   <u>Push and hold</u> the required job entry to bring up the "Report" button.
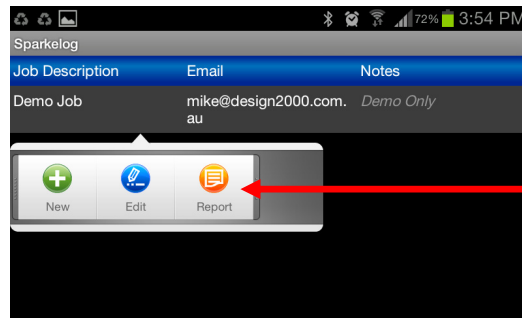
Tap on the report button to print or email the test report

2.   You are then prompted to print or email the report. Reports are generated in PDF format and are stored on your Android device in the "Sparkelog" directory (you should back-up and delete these reports occasionally to free up storage space).

Example report output:

You can customize the graphic logo shown in the report by placing a JPG-format file named "logo.jpg" (without quotes) in the "Sparkelog" directory on your Android device. The image should be exactly 600 pixels wide by 300 pixels high and 100 DPI or less.

4. BLUETOOTH® LOGGING TO AN iOS DEVICE

For logging test results to an Apple iOS device, your Spark-e-mate must have the Bluetooth Smart module fitted, indicated by this symbol

4.1   Spark-e-log iPhone App (493BTLi)

First you'll need to install the free Spark-e-mate Logging System App from the Apple App Store by searching for "sparkemate" or "sparkelog":
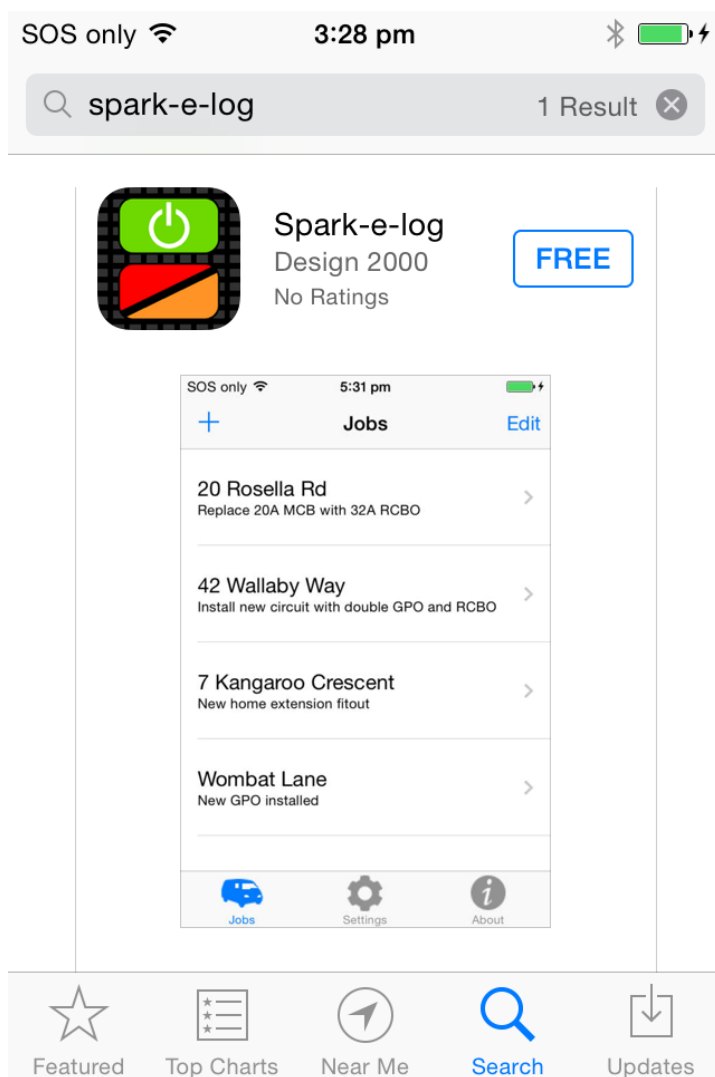
4.2   Getting ready to connect Spark-e-mate with your iOS Device

1.   Go into the settings screen on your iPhone and make sure Bluetooth is turned on:

The Bluetooth symbol appears here if your Bluetooth radio is ON

Make sure your phone's Bluetooth radio is ON
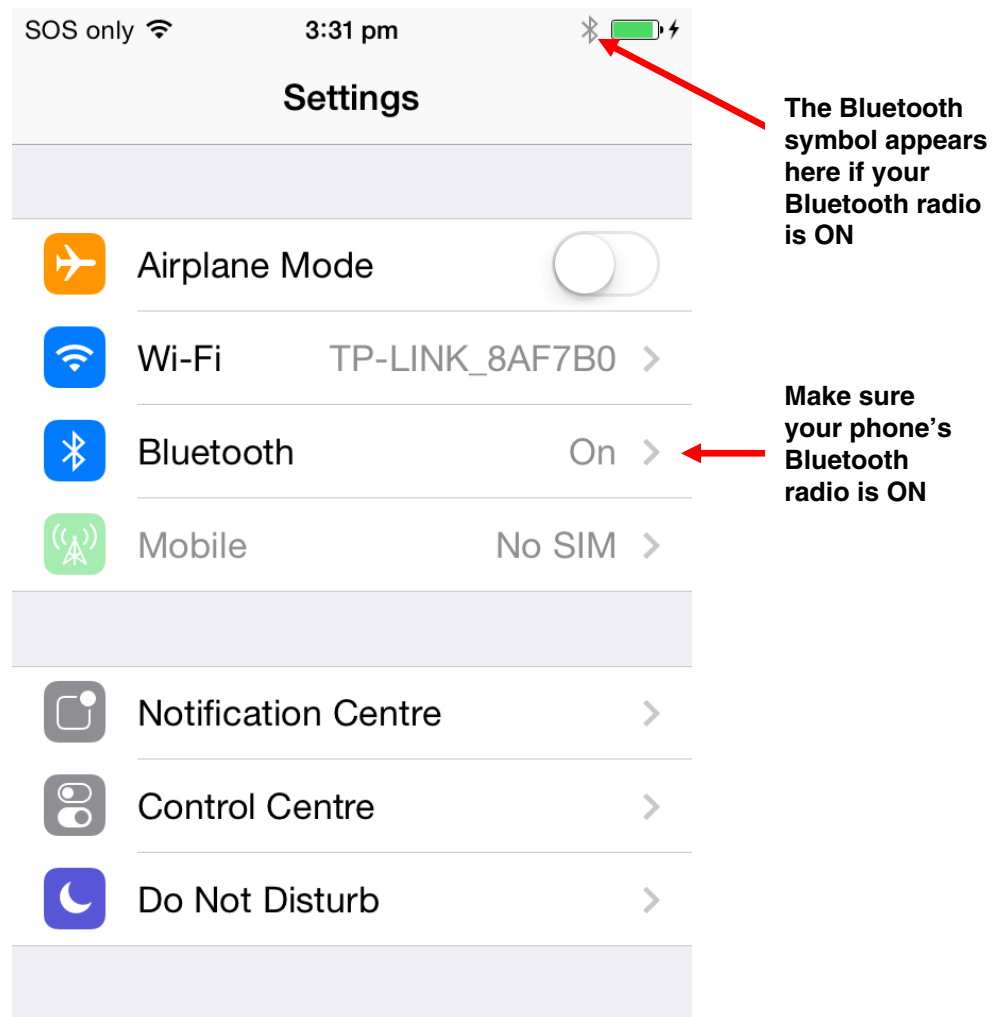
Important: Unlike previous Bluetooth technologies, the Bluetooth Smart module in the Spark-e-mate 493BTLi does **not** need to be 'paired' with your phone or have PIN codes entered before you can use it. All you need to do is install the Spark-e-log App and make sure your phone's Bluetooth radio is turned on.

If your phone's Bluetooth radio is OFF when you start the Spark-e-log App, it will let you know and guide you to the Settings screen.
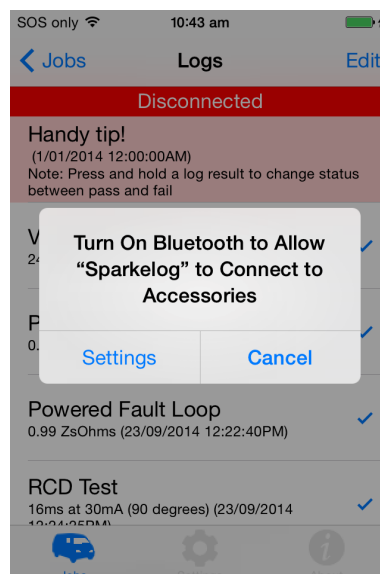
4.3   Establishing a Bluetooth Connection

1.   Find the Spark-e-log App icon on your installed Apps screen and press it:

Spark-e-log icon

2.   Spark-e-log will then start. Make sure your Spark-e-mate is turned on.

Tap on a job to show the test results logged for that job
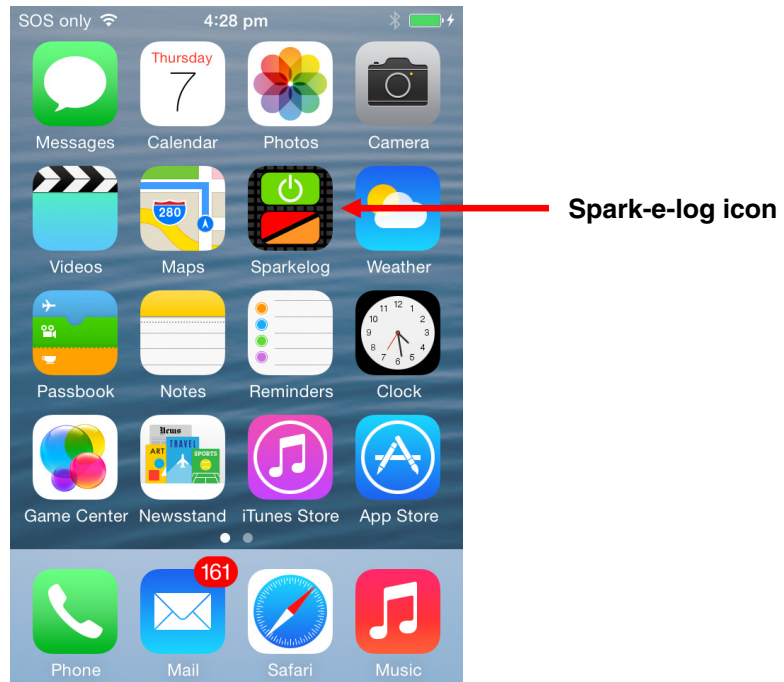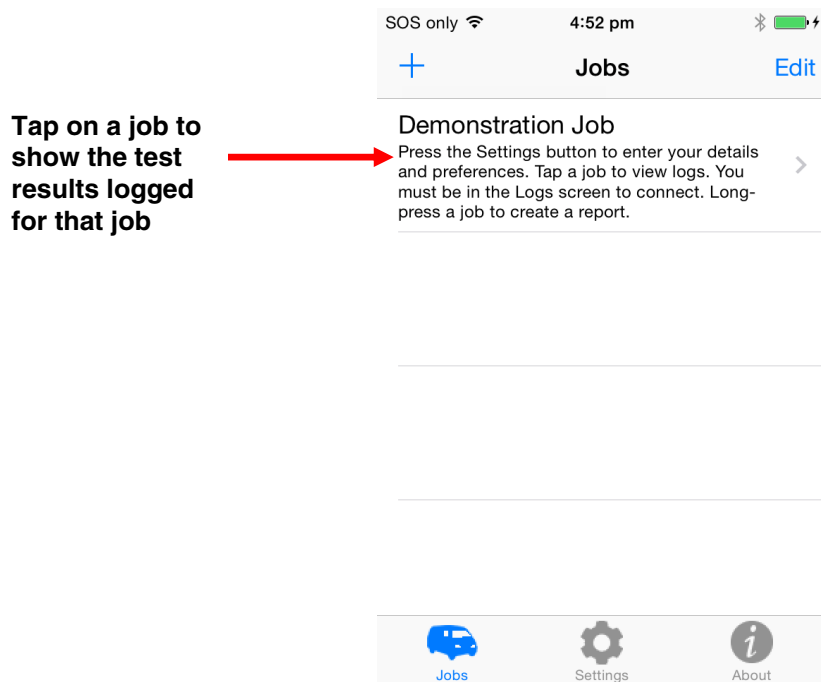
When first installed, the Spark-e-log App comes with a single demonstration job entered into its database as shown above.

Let's quickly test the Bluetooth connection. Press the demonstration job to bring up a list of example logs (test results) under that job:
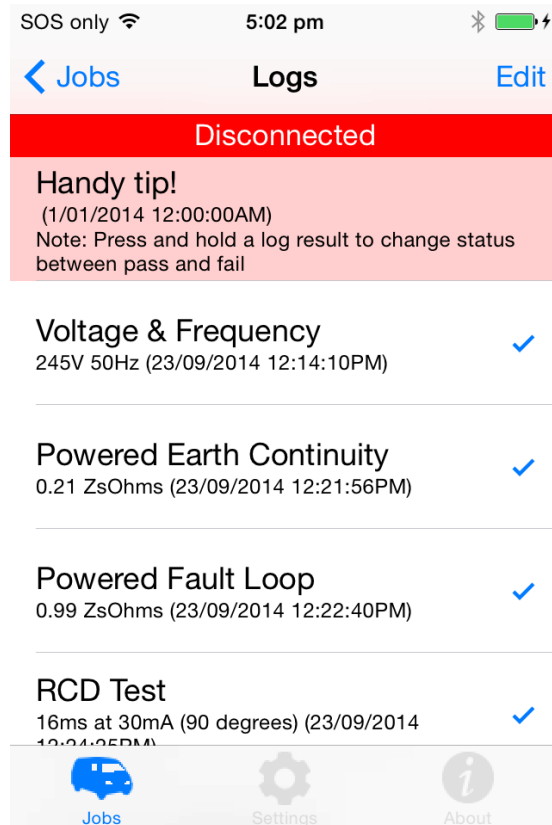
After a few seconds your Spark-e-mate will connect to your iPhone and you will hear a sound with the "Connected" message displayed:

Press here to navigate back to the Jobs screen
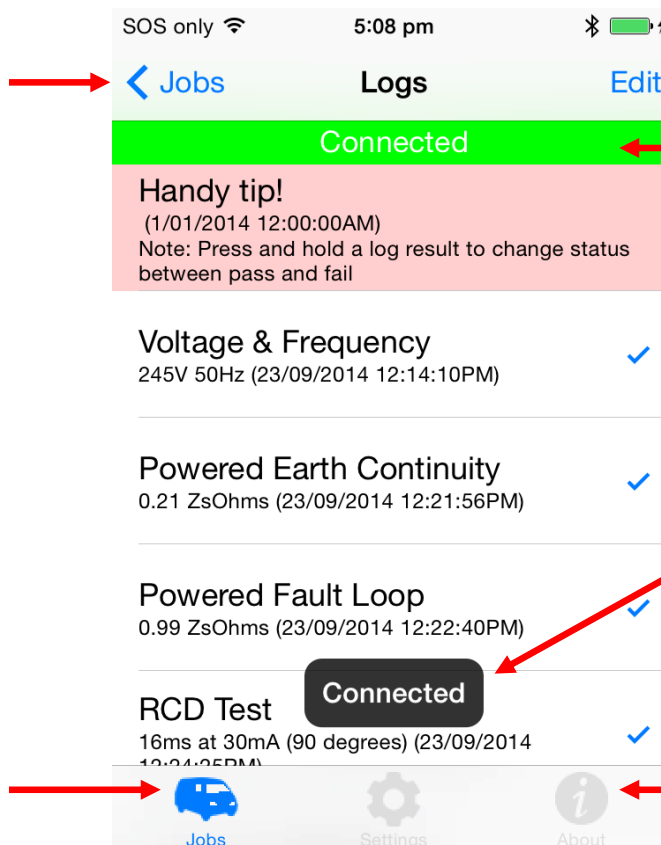
The status line at the top of the Logs list will change from a red "Disconnected" to a green "Connected" message

A pop-up message will appear whenever Spark-e-mate connects or disconnects

You can also press here to navigate back to the Jobs screen

If a button is shaded light grey it is disabled and can't be pressed.

It's important to remember that **you must select a job and be in the Logs screen before Spark-e-mate will connect.** If you navigate away from the Logs screen Spark-e-mate will disconnect.

4.4   Settings Menu

Before we start logging and reporting, it's time to let Spark-e-log know about yourself and your Spark-e-mate.

Navigate back to the Jobs screen, then press the "Settings" button to enter a few basic things such as your email address, Company details, Spark-e-mate serial number and last calibration/purchase date:

Dark grey buttons are active and can be pressed

Press to bring up the Settings screen
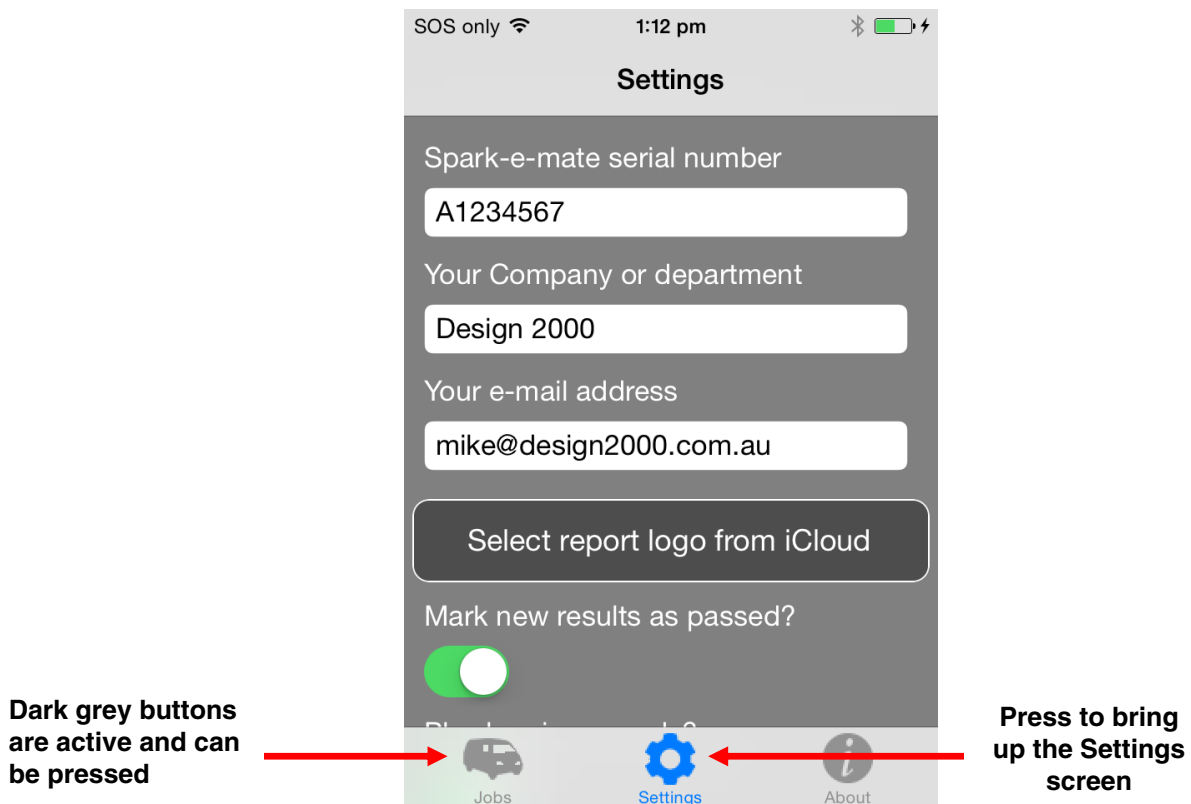
- Your serial number can be found on a sticker on the back of Spark-e-mate.

- To select a logo to appear on the first page of the PDF report, place the image (in any file type and resolution) on your iCloud drive and press the "*Select report logo from iCloud*" button. The contents of your iCloud drive will then be shown from which you can select the image by tapping it. A "*Success*" message will be displayed once the image has been imported and converted.
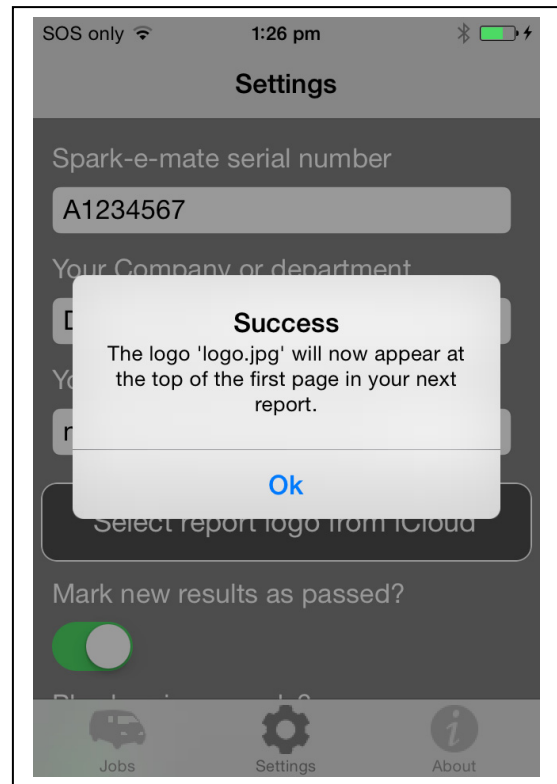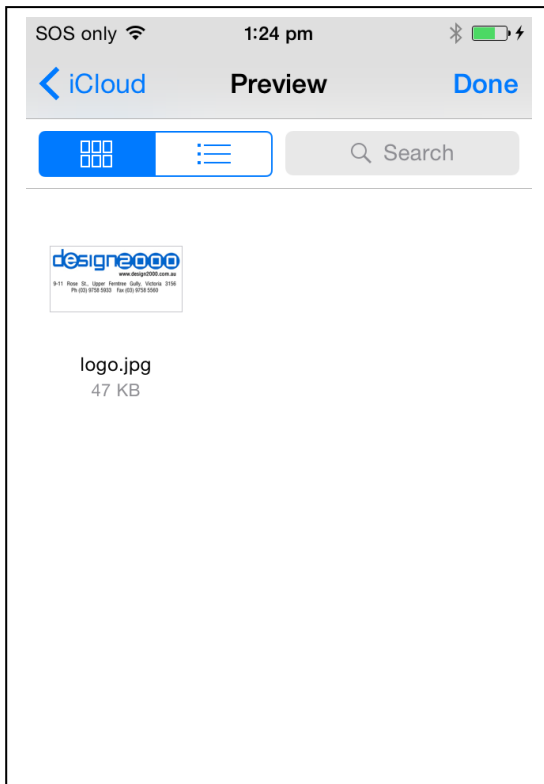
- To use Spark-e-log without sounds, slide the "Play Sounds" option across so that it is no longer green.

- If the "Mark All New Logs As Passed" option is enabled (green) then all new tests you log will be automatically marked as "Passed" and you must manually change them to
- "Failed" if needed, otherwise they will always be marked as "Failed" and you will have to manually set each result to "Passed" as required. Note that Spark-e-log will always mark simple GO/NO GO tests such as "Circuit Connections" as passed even if this option is disabled. **It is always your responsibility, not Spark-e-log's, to interpret any result and mark it as passed or failed after consulting with current AS/NZS 3000 Standards.**

- If your Spark-e-mate is new, enter the date of purchase as the last calibration date.

- Any changes you make to the settings are automatically saved when you leave the screen.

4.5   Editing or Deleting Jobs and Creating New Jobs

1.   Go back to the Jobs screen and press the "Edit" button:
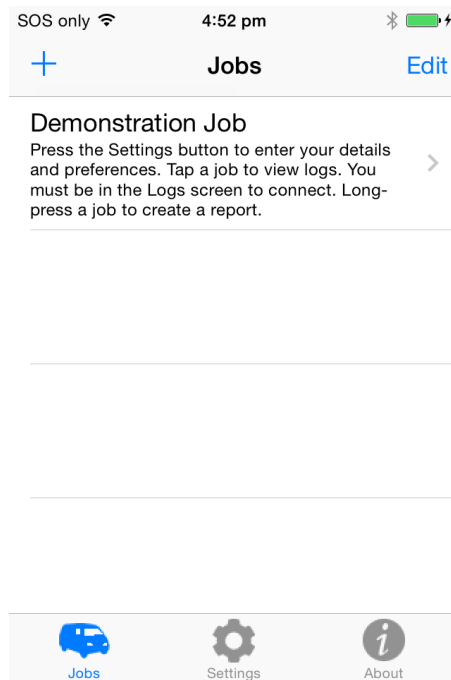
Press the Edit button to make changes to job entries

2.   The Edit screen will appear:
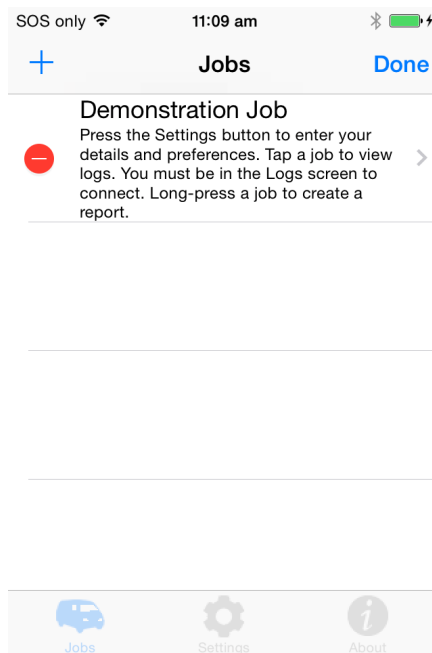
3.	To edit the job simply tap the job entry and you'll be able to change the Job Name and your customer's Email Address. You can also add or edit any optional notes associated with that job:

Press Done to save your changes or press Cancel to ignore any changes

Tap on a text box to move the cursor so you can edit that text

Scroll the edit area above the keyboard up with your finger to see the Notes

4.	To delete a job tap on the red "-" circle in the edit screen:

Tap here to delete a job…

…then tap here to confirm the deletion

…or tap here to cancel the deletion

5. To add a new job tap the "+" button:

Tap to create a new job

Press Done to save your changes

Enter the Job Name and your customer's Email

Scroll the edit area above the keyboard up with your finger to see the Notes
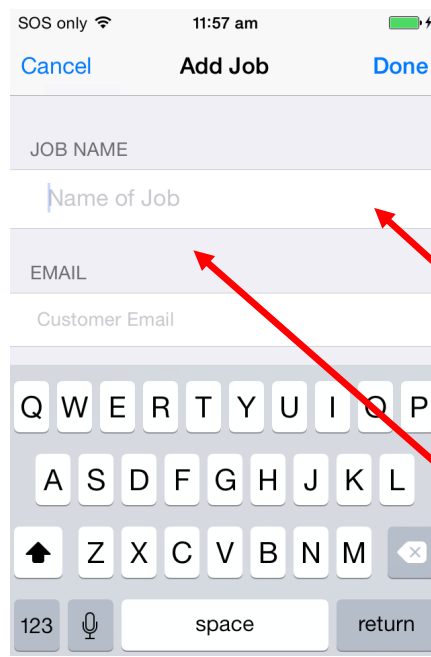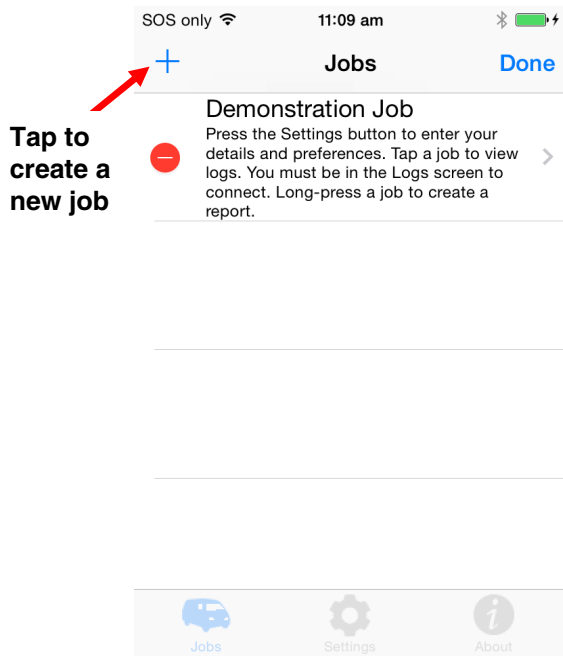
6. After pressing "Done" the new job will appear in the Jobs list. Press "Done" again to exit the Edit screen:

Press Done to exit the Edit screen…

The new job is added to the Jobs list

…you can now tap on the new job to go into its Logs screen
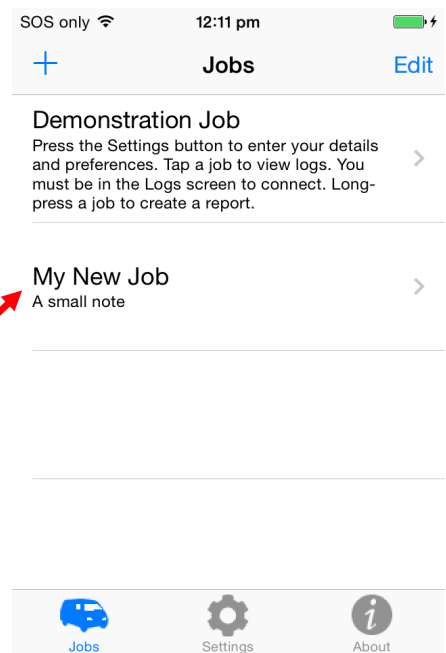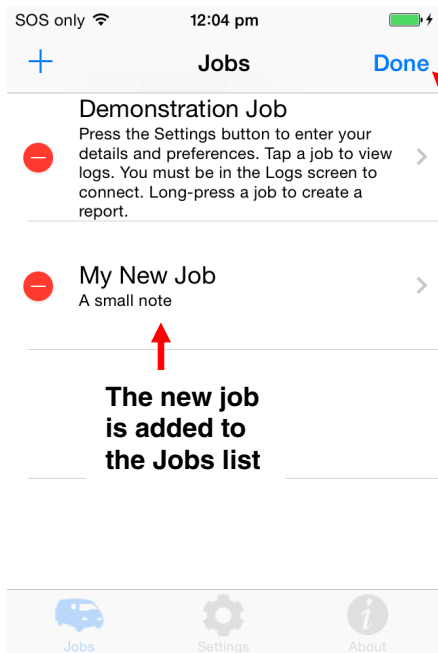
4.6   Logging your Test Results

Tapping on a job entry brings up a list of all tests logged under that job. If no tests have yet been logged for that job, such as when a new job has just been created, the log screen will be empty. You must be in the log screen before you start logging results from your Spark-e-mate so that log entries are added under the correct job.

You can tell that Spark-e-mate is connected to your iPhone and is ready to log when you see the Bluetooth symbol in the bottom-right corner of the Spark-e-mate display.

Whenever the LOG button appears on the Spark-e-mate display, you can press the LOG button to send the displayed test result to your iPhone and store it against the currently selected job.

The Bluetooth symbol indicates that Spark-e-log is connected

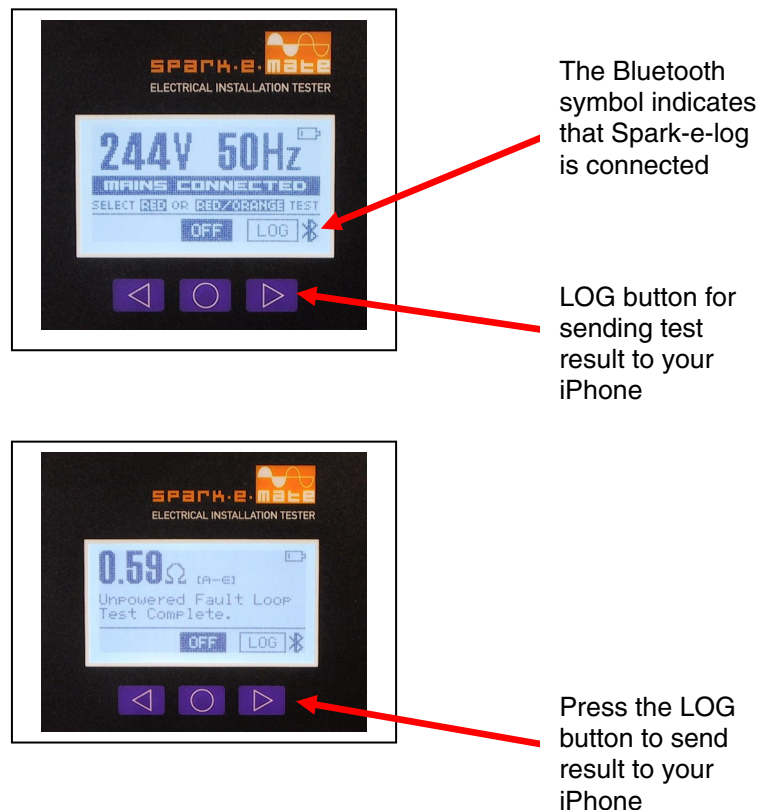LOG button for sending test result to your iPhone

Press the LOG button to send result to your iPhone

Both Spark-e-mate and your iPhone will beep to indicate successful data transfer. The test result appears in the Logs screen and is saved in Spark-e-log's database.
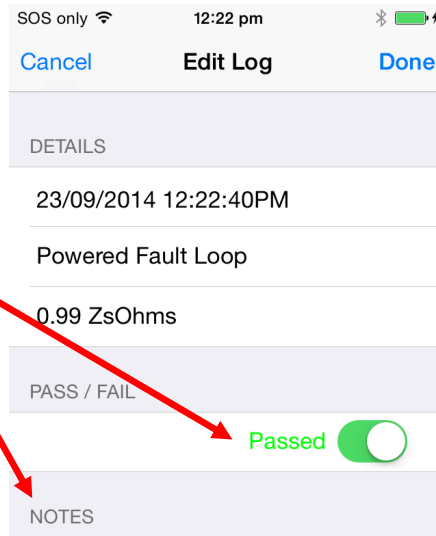
Please note that if you log the mains voltage and then perform a fault loop test, Spark-e-Log will automatically calculate and log the Prospective Short Circuit Current (PSC).

To edit or delete a logged test, press the "Edit" button. The editing process is exactly the same as when we edited a job:

In the Edit Log screen you can add notes to that test result and also mark it as Passed or Failed.

The actual test result cannot be changed.

If a result is not wanted, you should delete it, take another test, then log a new result.

SOS only	12:22 pm	
Cancel	**Edit Log**	Done

DETAILS

23/09/2014 12:22:40PM

Powered Fault Loop
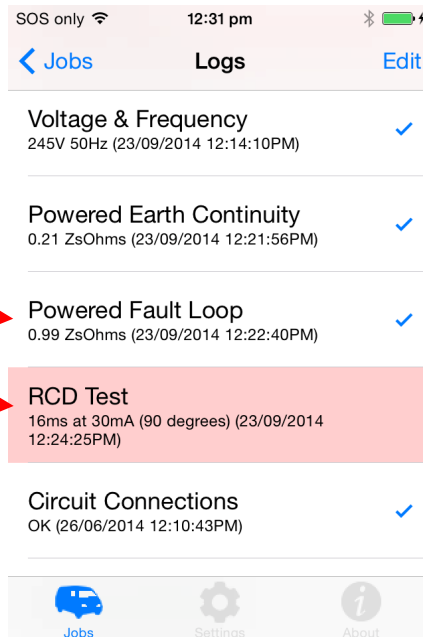
0.99 ZsOhms

PASS / FAIL

Passed ⬤

NOTES

Tip: A quick way to mark a log result as Passed or Failed is to push and hold a log entry for one second.

Push and hold a Log entry for one second to toggle it between Passed and Failed.

Passed results have a tick next to them.

Failed results have a red background.

SOS only	12:31 pm	
‹ Jobs	**Logs**	Edit

Voltage & Frequency
245V 50Hz (23/09/2014 12:14:10PM)   ✓

Powered Earth Continuity
0.21 ZsOhms (23/09/2014 12:21:56PM)   ✓

Powered Fault Loop
0.99 ZsOhms (23/09/2014 12:22:40PM)   ✓

RCD Test
16ms at 30mA (90 degrees) (23/09/2014 12:24:25PM)

Circuit Connections
OK (26/06/2014 12:10:43PM)   ✓

Jobs   Settings   About

4.7 Emailing and Printing your Test Results

1. <u>Push and hold</u> the required job entry for one second to generate a report:
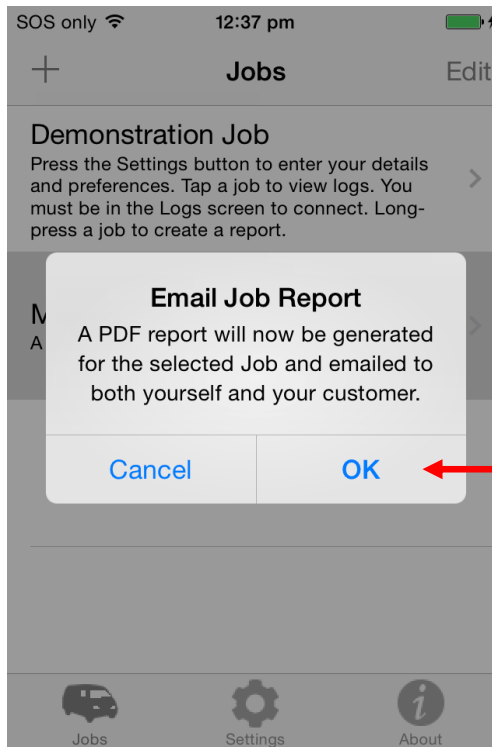
Press OK to generate and email the test report to yourself and your customer

- Spark-e-log generates the report in PDF format and attaches it to an email. It will send a copy to yourself using the email address you entered into the Settings screen (see *4.4 Settings Menu*) and another copy to your customer using the email address you entered for that job (see *4.5 Editing or Deleting Jobs and Creating New Jobs*):
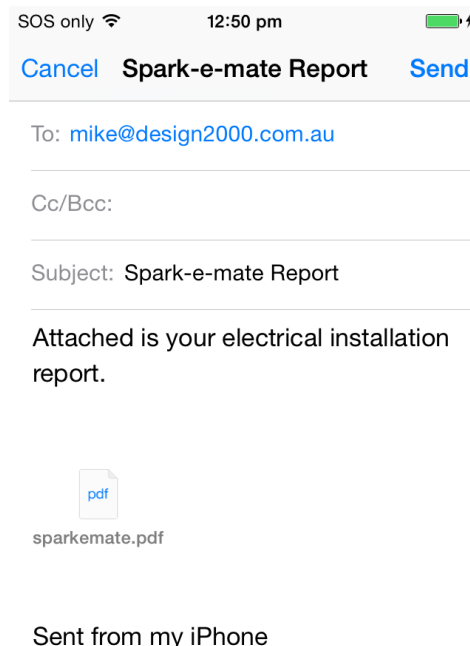
Make any required changes to the email subject or message text then press Send

Example report output:

Energisation or Verification of an Installation

(AS/NZS 3000:2007 Clause 8.4)

Date of energisation and original verification details are to be recorded and available on site in this accessible record. This also facilitates the process of re-verification at a later date.

ELECTRICAL INSTALLATION & VERIFICATION RECORD		INSTALLATION: Demonstration Job	
DATE OF ENERGISATION: / /			
Testing Organisation & Department	Design 2000		

Test Equipment	Model Number	Serial Number	Manufacturer	Date of Purchase or Last Calibration
Spark-e-mate Electrical Installation Tester	Clipsal Cat. No. 493BTL	A1234567	Design 2000 Pty Ltd	28/10/2013

Test Date and Time	Test	Measurement	Notes	Result
23/09/2014 12:14:10PM	Voltage & Frequency	245V 50Hz		Pass
23/09/2014 12:21:56PM	Powered Earth Continuity	0.21 ZsOhms		Pass
23/09/2014 12:22:40PM	Powered Fault Loop	0.99 ZsOhms		Pass
23/09/2014 12:24:25PM	RCD Test	16ms at 30mA (90 degrees)		Pass
26/06/2014 12:10:43PM	Circuit Connections	OK		Pass

*** *End of Document T14221* ***