



# Operational Manual

eSkan SADL handheld scanner



9/2/2013  
Excellent ID

## Thank You!

We are grateful you chose Excellent ID for your SADL scanner needs. We believe this easy-to-use scanner will provide dependable scanning to keep your operations at peak efficiency.

## Models covered by this manual

The models listed below are covered by this manual:

- eSkan150: USB SADL scanner
- eSkan250 USB and WI-FI SADL scanner

## Type approval



Radio equipment type approval certificate number: TA-2009/1314

This product is certified to operate within the South African borders in Industrial and commercial environments and it is also tested not to interfere with other electronic equipment.

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## UNPACKING AND CHECKING EQUIPMENT



Carefully unpack the scanner.

Included in the packaging is a 1.6meter USB cable to charge/setup and upload files to and from the scanner to a PC.

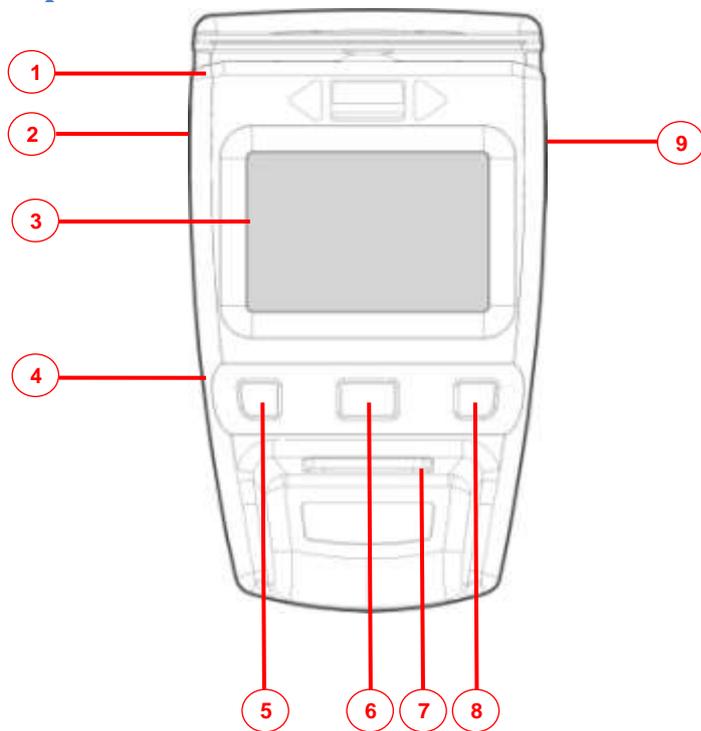
### PC SETUP SOFTWARE

Setting up the PC software falls outside the scope of this document.

Please refer to the installation manual on how to install and configure the eScan and PC software.

## ORIENTATION

### Top view



**1 Magnetic card swipe slot.**

Swipe the card from left or from right. The magnetic strip on the card must face down and toward the scanner. This slot can also be used to locate the SA driver card when scanning

**2 Left scan button (scroll up button)**

Momentarily press and release this button to scan a barcode. Release the button when an audible beep is heard. In scan mode this button has the same function as the right scan key. This button is also use as a scroll up button in the menu section.

**3 Display**

Refer to page 8

**4 Mini USB client connector**

The mini USB cable is required to configure the scanner for the first time as well as to upload saved data from the scanner in case a WI-FI network is not available.

The USB cable is also used to charge the scanner when connected to a PC.

**Note:**

*The scanner can also be charged from any 5V/100mA charger terminated with a mini USB connector.*

**5 Menu button (back button)**

This button is used to enter the menu. In the menu, this button is used to return up a level in the menu or to exit the menu.

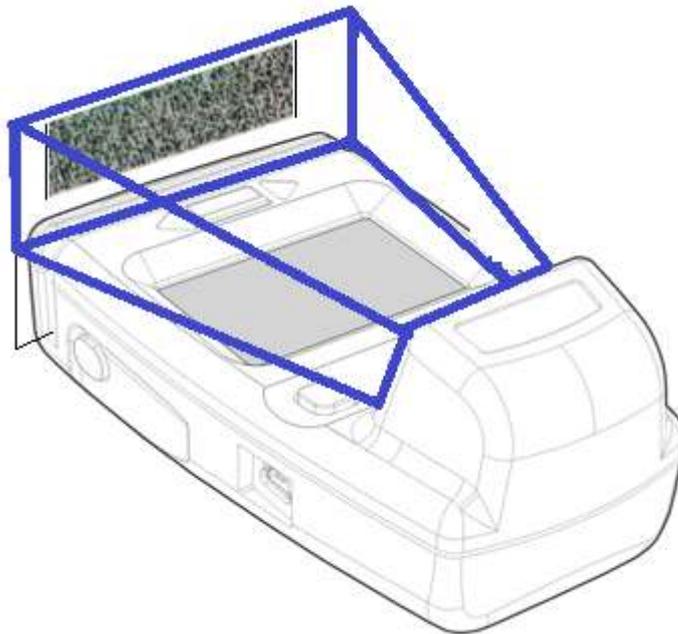
**6 On button (down button)**

This button is used to switch on the scanner. Release the ON button when an audible sound is heard. This button is also use as a scroll down button when in the menu or when more barcode decode detail must be displayed.

This button can also be used to turn on the screen backlight when scanner is in sleep mode.

**7 Scan window**

The barcode sensor is located here. Keep this window clean at all times. Ensure a clear path (obstacle free) in the blue area below, between the barcode sensor and the barcode label itself.



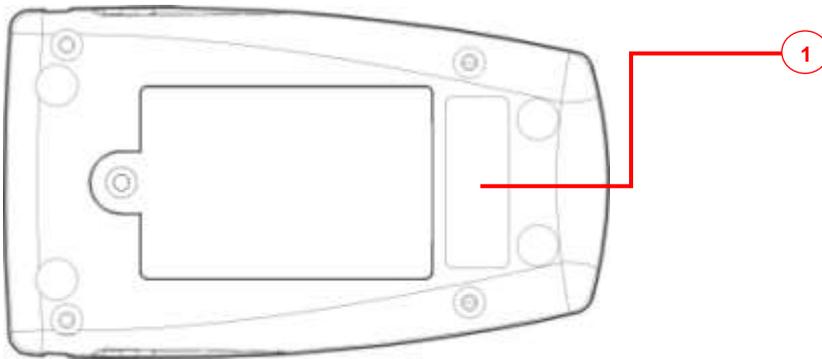
**8 Off button (select button)**

This button is used in the main screen to turn off the scanner. In the menu tree this button is used to select a function or a sub menu.

**9 Right scan button (scroll up button)**

Momentarily press and release this button to scan a barcode. Release the button when an audible beep is heard. In scan mode this button has the same function as the left scan key.

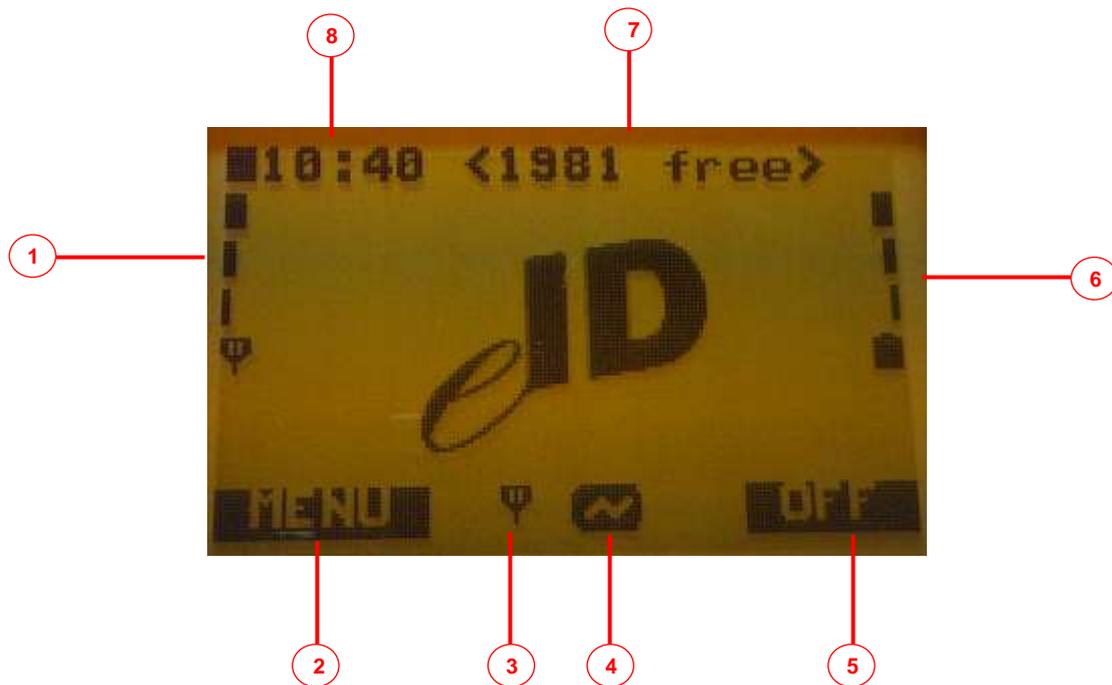
## Bottom view



### **1 Unit serial number**

Each scanner has a unique serial number. The first number after the eID indicate USB(1) or WI-FI(2)

## Display



### 1 **WI-FI signal strength indicator**

The antenna icon and each of the 4 bars represents 20% signal strength. If only the antenna icon is displayed with no bars, the signal strength is less than 20%. The icon and 2 bars represent signal strength of 60%.

### 2 **Left function configurable**

Function for the far left blue key. This function can change for each menu displayed. This function is not always available; it all depends on the scanner configuration. A custom script can change the function of this button.

### 3 **WI-FI connection status icon**

This icon indicates the status of the wireless link. There are 6 possibilities:



- *No icon*: WI-FI radio is not fitted (eSkan150) or not enabled (incorrectly setup)



- *Small filled square*: WI-FI radio is turn off. No data to be uploaded.



- *Small hollow square*: WI-FI radio is searching for an access point or a router.



- *Small square colon*: WI-FI radio found router and is searching for an IP address.



- *Antenna*: WI-FI radio is connected to router and IP address was allocated.



- *Lightning*: Scanner is connected to the server and is uploading data.

#### 4 **USB connection status indicator**

This icon indicates the status of the USB connection. There are 3 possibilities:



-*No icon*: No valid USB connection is present.



- *usb icon*: Scanner is connected to a valid USB host.



- *Tilde icon*: Scanner is connected to a USB charger.

#### 5 **Right function configurable**

Function for the far right blue key. This function can change for each menu. A custom script can change the function of this button

#### 6 **Battery capacity remaining indicator.**

The battery icon and each of the 4 bars represents 20% charge level. If only an  icon is displayed, only 5% battery capacity remains and unit will switch off soon. In the above screen, the battery is 80% charged, 3 bars + icon.

#### 7 **Available file storage indicator.**

This indicator displays the amount of files that can be stored on the scanner in off-line mode. Each barcode that is scanned will be saved as a separate file. So if it displays <1981 free>, 1981 different scans (doesn't matter what type of barcode) can be stored on the device to be uploaded at a later stage.

#### 8 **Scanner clock.**

The scanner clock is synchronized with the server every time it connects to the server via USB or when uploading data over the WI-FI network. An internal battery will keep the scanner's clock up to date for months without the need to be connected to the server.

## BASIC OPERATIONS

The primary function of the eSkan150/250 is to decode and decrypt the South African drivers and vehicle license in an off-line mode without the need to be connected to a remote database.

The decoded and decrypted information obtained from the scanned barcode will then be displayed on the scanner display.

The information will stored also be stored in its internal memory for uploading later if a WI-FI network is not immediately available.

*Note:*

*The operations below are based on eSkan software version 3.0.37 or later.*

### Scanner on/off

The red button on the scanner is used to turn the device on. To turn the device off, press the far right blue key but only if the OFF function on the display bottom right corner is visible.

The 2 blue keys can be pressed simultaneously to force an emergency shutdown.

The scanner boot-up sequence is complete when the battery capacity is visible in the right hand side of the display. Only then the scanner is ready to scan a barcode.

*Note that the scanner will switch off if not used for 5 minutes to preserve the battery*

### Charging

The internal battery can only be charged using the scanner USB port.

The table below illustrates how long the eSkan battery will take to charge from empty to full under different charging conditions.

| Charging source | Scanner status | Duration |
|-----------------|----------------|----------|
| PC              | on             | 5½ hours |
| PC              | off            | 24 hours |
| USB Charger     | on             | 2½ hours |
| USB Charger     | off            | 24 hours |

From the above table it is obvious that the scanner must be switched ON to fast charge the battery.

## Barcode scanning

### Introduction

All the license holder information in the front of the card is encoded and encrypted in the barcode.



The primary objective is to scan the barcode with the eScan to retrieve all the information stored inside the barcode.

### Best practice

The following factors will influence the speed and ability to read the barcode:

#### 1 Type of the barcode

The more complex the barcode, the more difficult it is to decode it. The driver license barcode contain more information than the vehicle disk license, so the scanner will decode the vehicle disk quicker and easier.

#### 2 Quality of the barcode

The scanner will find it more difficult to decode a barcode if the barcode is dirty or when the barcode is covered with a transparent layer. Always ensure the barcode to be scanned is clean.

#### 3 Steadiness of barcode while scanning

The barcode and the scanner must be kept as steady as possible during a scan. Do not swipe the barcode passed the scanner. The magnetic strip card must be swiped; the barcode scanning is a photo that is captured, so steadiness is most important.

#### 4 Distance between barcode and scanner

The scanner takes a picture of the barcode for decoding, so the focus distance between the scanner and the barcode is limited. The minimum distance to decode a barcode is when the license is inserted in the magnetic stripe slot. The maximum distance is 5cm from the scanner.



Minimum scan distance



Maximum scan distance

## 5 Angle of barcode while scanning

If the barcode is covered with a transparent layer like the SADL, it helps if the card is positioned at a slight angle to minimize reflections back to the scanner.

## 6 Ambient light

If scanning outdoors, best practice is to block direct sun from the scanner and barcode. Strong light is reflected back to the scanner so it struggles to decode a barcode image. The operator must try and shadow the scanner and barcode using his hand or body.

## Procedure

### 1 Placement

Place the barcode in front of the scanner with the barcode facing towards the scanner



### 2 Scan

To activate the scan process, momentarily press one of the two yellow side buttons

### 3 Processing and save

After a successful barcode scan, the results will be displayed on screen. Use the red button to scroll down for more info. The scan data is saved in memory.



### 4 Next scan

At any time press the yellow button to continue scanning, no need to be in the main menu.

### 5 Data uploading

With an eSkan250, as soon as data is stored in memory the WIFI will start uploading files to the server in the background. No user intervention required to start the upload process. The eSkan250 will also upload data via USB if it is connected to a PC.

With an eSkan150, data will be uploaded once scanner is connected to a PC.

## Uploading data

### Connection

The scanner must be connected to a PC via USB or via the WI-FI network to upload saved data.

The  icon indicates a valid USB connection while the  icon indicates a WLAN network connection.

For USB uploading the  icon must be visible on the scanner. If not, the PC doesn't recognize the scanner so contact your system administrator.

The WI-FI connection is slightly more complex. Refer to page 5 for an explanation for the different WI-FI icons. The  icon show a valid connection to the WI-FI network and scanner is ready to upload data.

The  icon indicates a connection to the server software and data is busy uploading. The "free" number should increment during this process until this icon return back to an  icon. This icon will stay until more data is available to be uploaded.

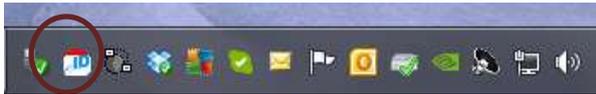
*Note that the scanner will switch off the WI-FI after 30 seconds if no files need to be uploaded. On the next scan, the WI-FI will immediately turned on again. This is to preserve the battery life.*

## POP-UPS

### Enabled

If the popups is enabled on the operator PC, the software will generate a pop-up image every time it receives data from the eSkan. The type of popup depends on what is scanned by the eSkan.

To see if the popups service is active, look for the “eID logo with the red hat” on the left in the taskbar as illustrated below. If no icon, contact your LAN administrator.



### Popup size and location

If the popups are enabled, the following popup will appear in the desktop screen when scanning a driver’s license.



The popup will stay on the desktop or disappear after a few seconds; all depends on the configuration setup.

The operator can move or resize the popup and the settings will be stored once closing the popup. The next popup will be the size and location of the last popup that was closed by the operator.

### Additional functions

If the operator right click on the popup image, to following sub-functions are available:

- Keyboard wedge
- Save

The top group in the menu on a right click can be used for keyboard wedge functions. The bottom group is used for print and save functions.

## NOTES:

❖ END OF DOCUMENT