DATREND Systems Inc.

vPad-Cal™

Test Equipment Database App for vPad Safety Analyzers

Operating Manual

vPad-Cal™

Test Equipment Database App
for vPad Safety Analyzers

Operating Manual

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To order this manual, use Part Number 6100-080

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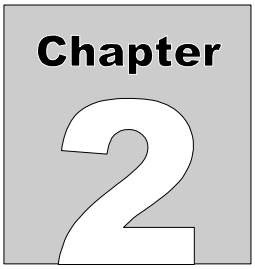
1 Specifications

vPad-Cal™ is a software application (App) which provides a basic equipment database management system for the test equipment used in the service and calibration of medical devices.

The equipment database contains the following fields:

- Control Number
- Manufacturer
- Model
- Description
- Serial Number
- Location
- Last Calibration Date
- Schedule (months)

vPad-Cal™ can be used independently, or in conjunction with vPad-Check™, providing the ability to record the test equipment used in the service or preventive maintenance (PM) of a medical device.



2 Overview

As accreditation requirements change, the need to follow the tenets of the Quality Systems approach to all aspects of medical device maintenance is becoming the norm. One of these tenets is traceability. One of the requirements of a good, traceable service, preventive maintenance and calibration program is the ability to demonstrate that the work was performed using appropriate, calibrated test instruments. vPad-Cal provides a tool to track the test equipment inventory, its calibration status, and include this information in the test record for a device through the use of vPad-Check.

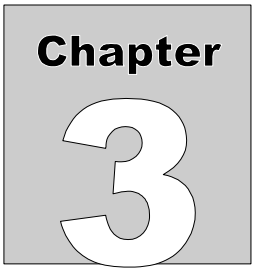
2.1 Features

2.1.1 Equipment Database

vPad-Cal contains the basic, essential equipment information required to organize and manage your test equipment inventory.

The Test Equipment List database can be populated by importing data from another source, or can be created on-line, as new pieces of test equipment are added.

Working in conjunction with the vPad-Check App, a record of the test equipment and its calibration status can be included in the test report.

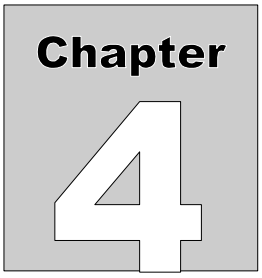


3 Installation

The vPad-Cal App is normally pre-installed on the vPad tablet, but may not have been placed on the Home screen, , of the Android tablet. Go to the Apps screen by pressing the Apps icon, , in the upper right corner of the home screen. Find the vPad-Cal icon and press on the icon for several seconds. You will be able drag and drop the icon to the Home screen.

In order to use the App it will need to be activated. When the App is started for the first time, the activation screen will be presented. Enter the activation code provided by your dealer to allow the App to run.

In the event that vPad-Cal is not on the tablet, contact your dealer and it will be provided via download.



4 Operation

This chapter explains how to use vPad-Cal with the vPad safety analyzers, in particular, with the vPad-Check App or the Apps which use vPad-Check to perform a series of actions using a Checklist/vPL file.

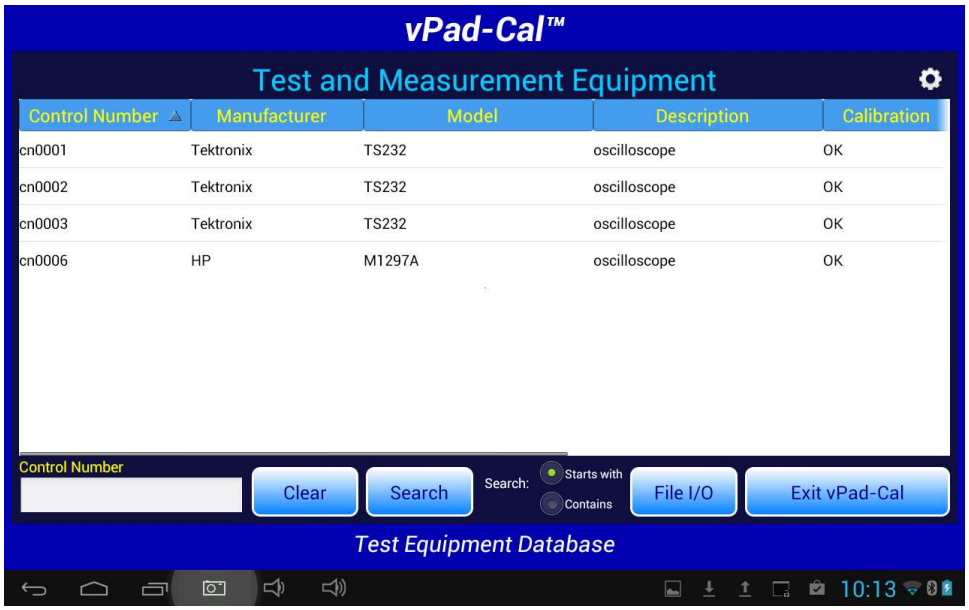
4.1 Startup Screen

Press the vPad-Cal icon,

, to start the App. A splash screen will be displayed for a few seconds, showing the product name and the software version.

4.2 Equipment Manager

vPad-Cal app starts on the **Test and Measurement Equipment** screen, with a display of the Test Equipment List. Across the top of the list, columns display the name of the parameter in the column. The list will be sorted by one of the parameters. The sort parameter will be indicated by the display of the sort icon, ▲ or ▼ , depending whether it is in ascending or descending order respectively.



4.2.1 Test and Measurement Equipment List

The equipment database or **Test and Measurement Equipment List** (the **Equipment List**) contains 10 parameters which are displayed on the screen in a vertical/horizontal list box. The parameters/ database fields are:

- Control Number
- Description
- Serial Number
- Manufacturer
- Model
- Location
- Last Calibration Date
- Schedule (months)

4.2.1.1 Scrolling

The parameters are displayed in columns on the screen, in the order last used. Since all the columns can not fit on the screen at once, other columns can be made visible by scrolling the list view horizontally using a swipe motion (left to right, or right to left) until the parameter of interest is available.

In the list view, each row represents one device. Additional devices can be displayed by using an up or down swipe motion to scroll through all of the available devices. If there are a lot of devices in your database, it may be faster to use the **Search** feature to find or get close to the device of interest.

Each of the columns has a name, shown in the title bar of the list view. Touching the name in the title bar will select that column for sorting. A sort direction icon will appear beside the name of the column, ▲ for ascending (start at 'a' or '0') or ▼ for descending (start at 'z' or '9'). Selecting a column name will also select that column as the **Search** parameter.

4.2.1.2 Settings

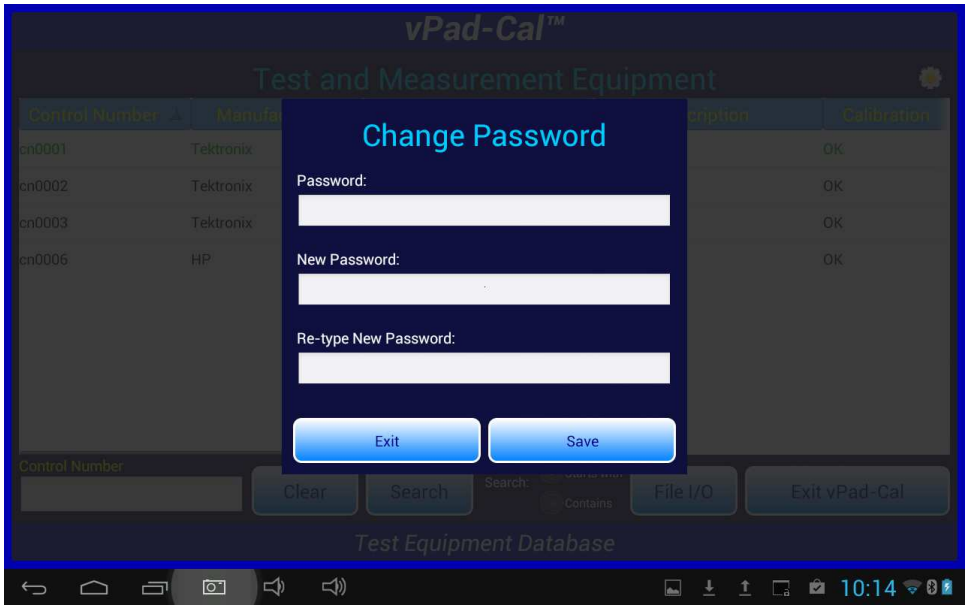
While in the **Equipment List**, there are certain **Settings** that control some aspects of the displayed information. The settings icon, , is at the upper right corner of the display.

Under **Settings** you can set the following:

Date Format:	USA (mmm/dd/yyyy) Europe (dd/mmm/yyyy) ISO (yyyy/mmm/dd)
Password:	Change Password

To access the **Date Format** selections, scroll down on the **Settings** window and select the desired format.

If the action is to **Change Password**, a screen will be displayed prompting for the new password.



Enter the existing password in the topmost field on the menu. If you are setting a password for the first time, enter the default password **1234**. Enter the New password twice to ensure it is consistent. **Save** the new password to continue.

4.2.1.3 Edit/Create Details

Touching a device row will display the **Equipment Details** screen for that particular device.

Note: You must be logged in with your password to edit/create the equipment details in this format. See **Password**, below.

On this screen, all of the information about the device is displayed. In the **Edit/Create** mode, it is possible to update information on a device and **Save** it. If you change the **Control Number** and **Save** it, a new record will be created with the new **Control Number** and all of the remaining fields will be copied, including the **Serial Number**. If this was meant to be an edit of the **Control Number**, then the original record should be **Deleted**.

While on this screen you can also create a **New** record, **Copy** an existing record, or **Delete** the record on the screen.

New: This will clear all of the fields except the **Schedule**, which will contain the default setting of 12 months. Enter the information for the new device. Dates can be entered using the icon which will present a date selection function as shown in the previous Figure. Use the + and - controls to select the date and then touch the close icon, , to accept the date. The date on the Details screen will automatically be formatted according to the **Date Format** setting.

When completed, press the **Save** button and the **New** record will be inserted into the database. There will an Android 'toast' message which will appear at the bottom of the screen, which should read **"The record has been inserted successfully"**, or an alternate message if there was a problem.

When the record has been added, the vPad display will remain the same, allowing other actions to be performed with the information on the screen. When finished with all desired actions, press the **Exit** button to return to the equipment listing screen.

Copy: Pressing the **Copy** button will copy all of the fields, except **Control Number**, and **Serial Number**, to a 'new' device entry. This is particularly useful if you are creating multiple new entries for more than one similar/'identical' devices (e.g. four oscilloscopes of same make/model). Enter the information for one device and then copy the core details using this **Copy** function. Be sure to **Save** the information after each device entry is completed.

This can also be helpful if you are creating a 'new' device entry which is virtual identical to another , existing device. For instance a new multimeter: find a similar multimeter using the **Search** feature, open an identical model and Copy the data. Make small changes, as necessary, then **Save** and **Exit**.

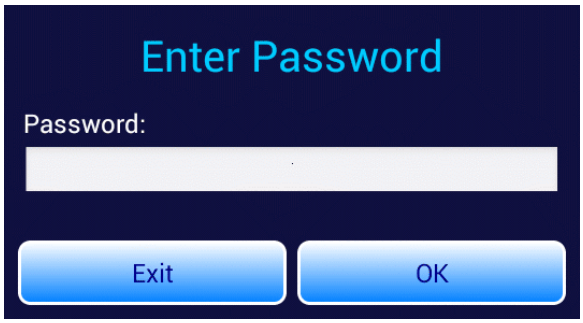
Delete: Pressing the **Delete** button will remove the displayed record from the equipment listing database. The information will remain on the screen in case it might be useful for a **New** or **Copy** function. When **Delete** is pressed, the deleted record will no longer appear in the equipment listing.

Save: **Save** will process each of the transactions (**New**, **Copy**, **Delete**, **Save**) that are performed. If **Save** is not pressed, the transaction will not be completed. For instance, if **Copy** is pressed and data is entered, then **New** is pressed; the **Copy** transaction will not be **Saved**. Save must be pressed after the **Copy** data is entered.

Exit: When **Exit** is pressed the user is returned to the equipment listing, which will reflect all of the changes made.

4.2.1.4 Password

To be able to modify or create equipment entries, you must first log in. To log in, simply touch on any row and a password dialog box will be presented. If a user-defined password has not been set per Section 4.2.1.2, then enter the default password **1234**.



Simply enter the required password and then press **OK**. You will be returned to the **Equipment List** and will now be able to enter the **Equipment Details** screen. As long as you remain logged in, you will not need to input the password again. When you close the App, you will be logged out and will need to re-enter the password if you restart vPal-Cal and then choose to edit an equipment entry.

4.2.1.5 Search

As previously mentioned under Section 4.2.1.1, it is possible to **Search** the equipment database by any of the parameters displayed on the screen. The currently selected 'sort' column (parameter) is automatically selected as the **Search** parameter. To change the search context, select the column of interest.

While on the main **Equipment List** screen, touch in the **Search** text box. The column to be searched is indicated above the text box, and will change as different columns are selected. Once the text box is touched, a keyboard will appear to allow entry of the value for which to search. Before starting **Search**, select the search method: 1) **Starts with**; or, 2) **Contains**. Enter the search value and touch the **Search** button. In the **'Starts with'** mode, the **Equipment List** will show the closest (or exact) match in the list. This search is case sensitive. In **'Contains'** mode, the **Equipment List** will contain any devices which have the search value anywhere in the parameter of interest. This search is not case sensitive.

The last **Search** value will remain in the text box until changed by the keyboard or the **Clear** button is pressed. If you have made a **Contains** search and wish to restore the list to include all equipment, **Clear** the search box and press **Search**.

4.2.2 File I/O

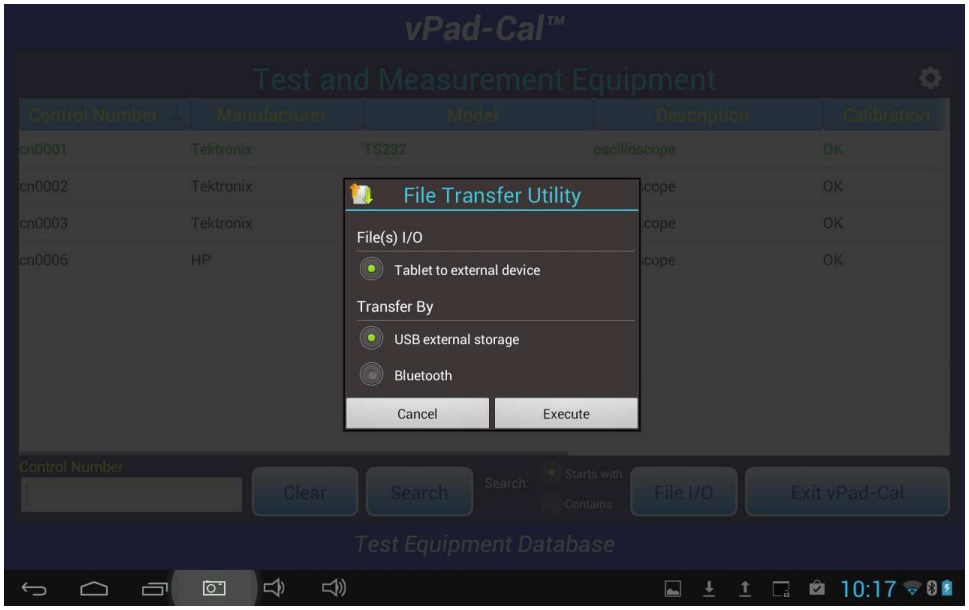
The Equipment List is stored in a SQL database on the tablet. This database may be generated on-line as equipment is encountered, but it also may be imported from another source such as an asset management system, or a home grown equipment tracking system. Once the equipment data exists on the tablet, it may be changed as the equipment is serviced and errors are corrected. The modified database may be exported to a PC to update the existing programs on the PC.

File I/O is facilitated with the File I/O transfer utility. The file format for transfer in either direction is the CSV file. The exported equipment file contains all of the fields identified in Section 4.2.1.

When the File I/O button is touched, a dialog box will appear to allow selection of whether the file is to imported or exported. If you select **Import**, the program will look for a **CSV** file called CALEquipment located on the USB drive or in the tablet's Bluetooth folder. If it is found, the program will integrate its contents into the **Cal** database.

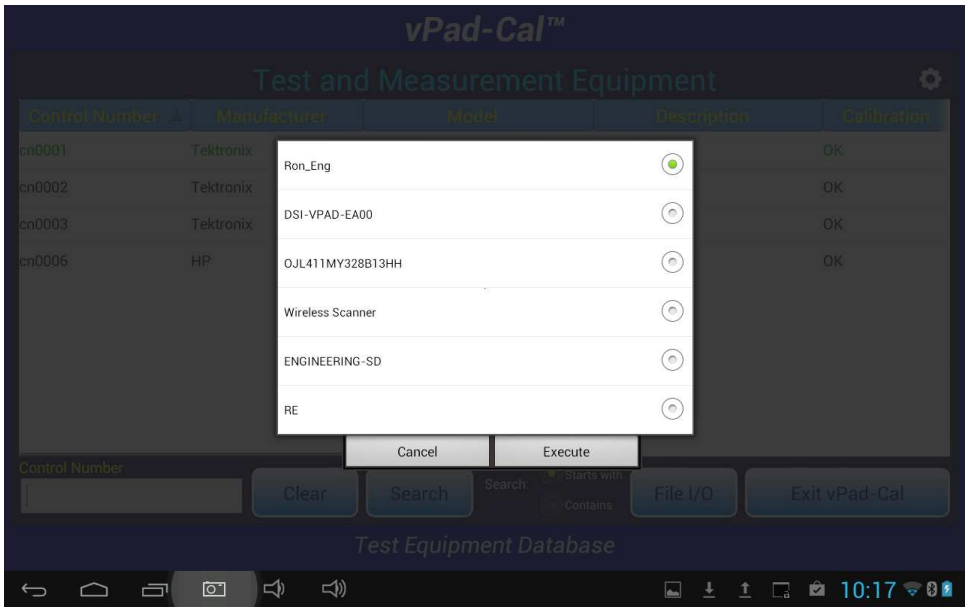
If you select **Export**, the transfer of files can be done via a USB drive or through Bluetooth transfer. Be sure the USB drive is connected before you try to transfer the file. If you select Bluetooth transfer, make sure the PC you are going to talk to has Bluetooth capability and has been paired with the tablet.

Selecting Export will result in the display of the **File Transfer Utility** screen, which allows the selection of USB or Bluetooth.



Enable the **Bluetooth** selection and press **Execute** to show a list of the paired Bluetooth devices. Select the PC which is intended as the recipient of the transfer file. The file will be transferred to the PC and stored in the default file folder, normally in:

`C:\Documents and Settings\<your name>\My Documents\Bluetooth Exchange Folder`



4.2.3 Exit vPad-Cal

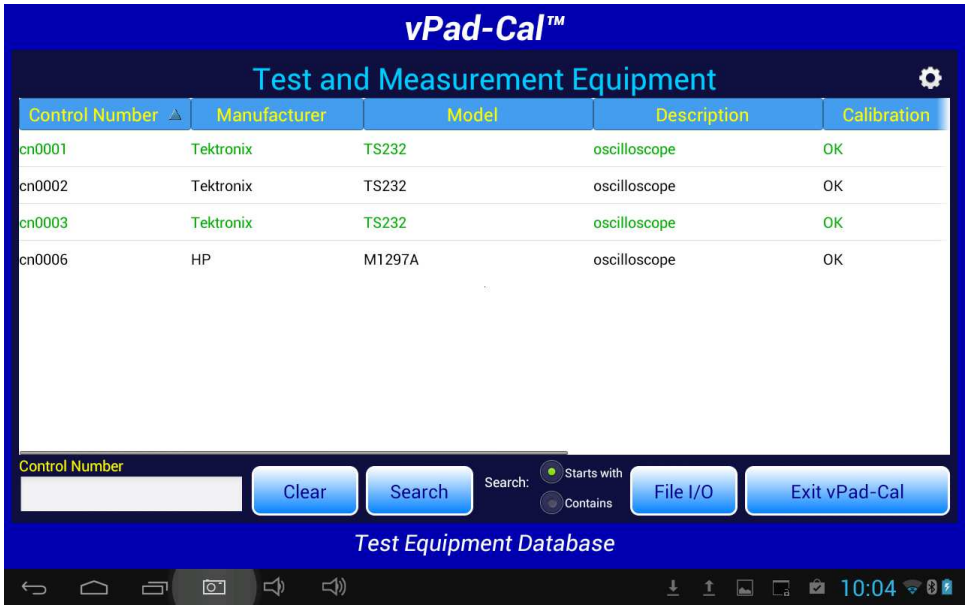
The **Exit vPad-Cal** button returns to the **Home** screen of the Android tablet.

4.3 Interaction with vPad-Check

vPad-Cal can be called in a Checklist which is being processed by vPad-Check. In the Checklist, a statement can be inserted in the form:

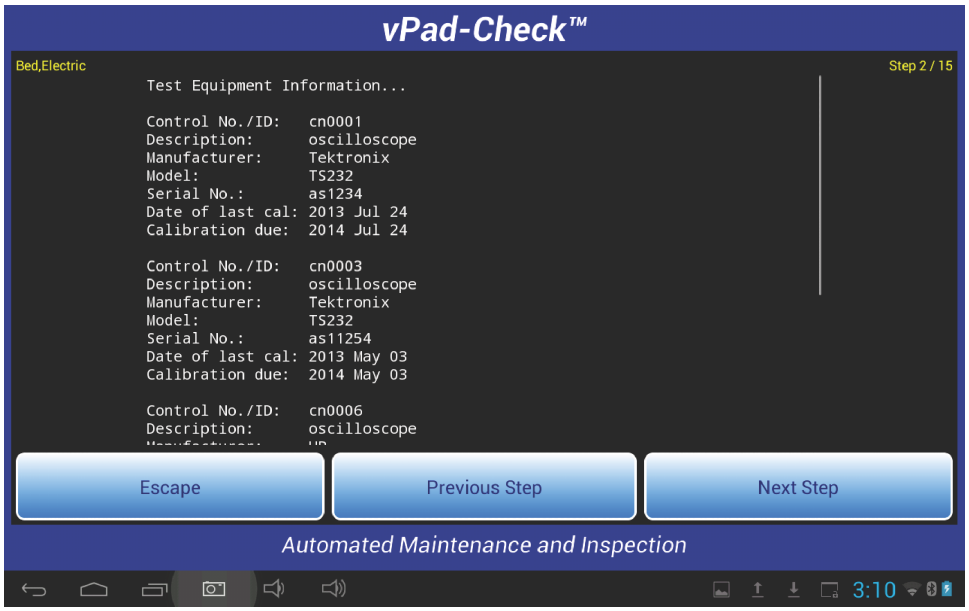
```
run  vPad-Cal
```

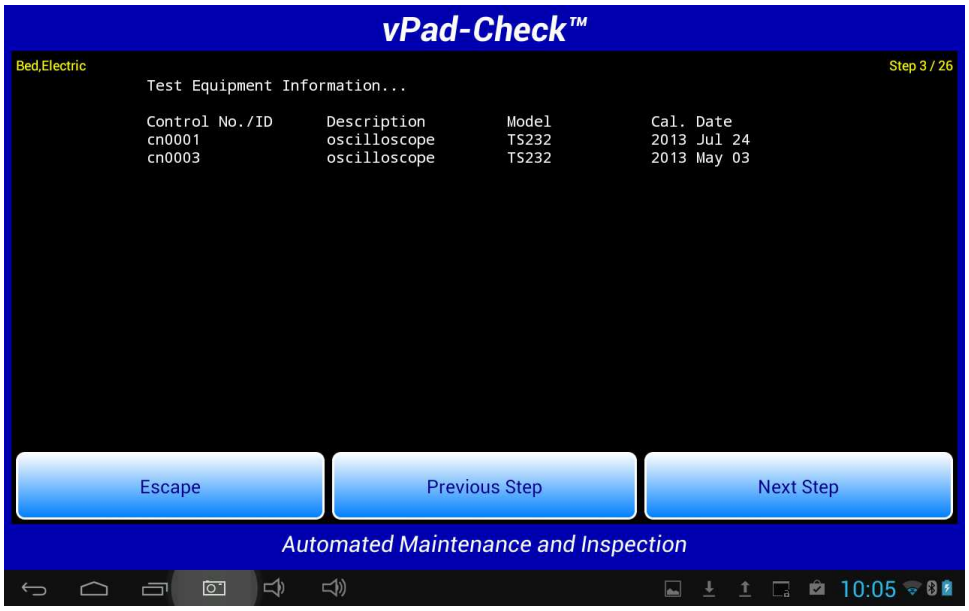
This statement will cause the vPad-Cal App to run, allowing the selection of one or more Test Instruments. The selected instruments will be highlighted green. When all relevant instruments have been selected, press the **Exit** button to return to vPad-Check.



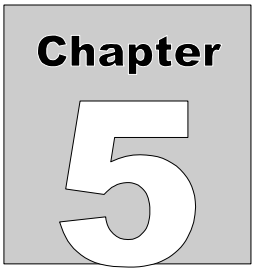
As part of the Exit process, a dialog box will be presented to allow selection of the return data format: verbose, or concise.

Verbose will return all of the data for each instrument. Concise will show only the ID., Description, Model and Cal Date for each instrument. The following screens show the data returned with the verbose and concise settings.





This information will form part of the test record for the device under test.



5 Upgrades and Maintenance

Software Applications (Apps) may from time-to-time be upgraded to provide enhanced features or improvements. Contact Datrend or your local dealer for information on these upgrades.

In some cases, the changes made to an App may be to correct operational issues that have come to the attention of DSI. These shall generally be referred to as maintenance upgrades. In other cases, the changes may be to improve performance or add features which would enhance the overall functionality of the App. The decision to apply a charge to any upgrade shall be solely at the discretion of DSI.

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