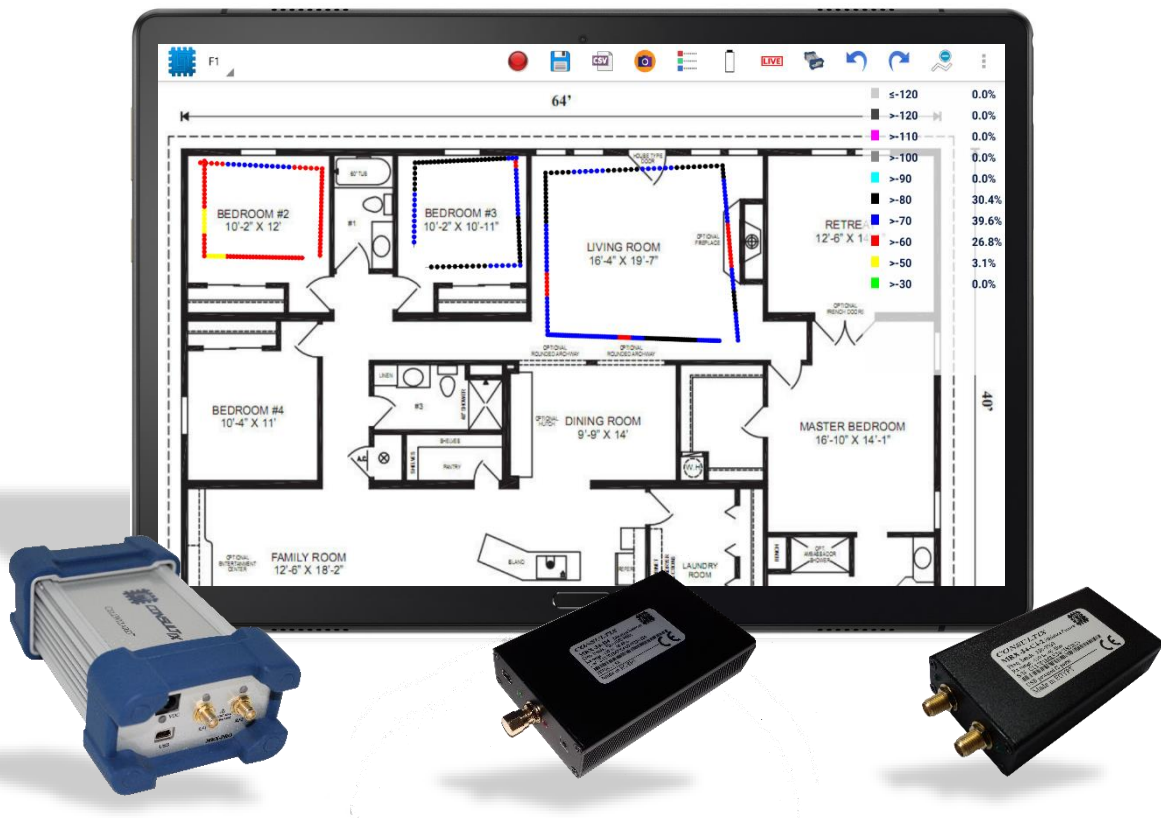# Consultix Android WalkView™ (Indoor)

Android-based Software for CellWizard™ Receivers

User Manual

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Notice

The information in this manual is subjected to be changed without notice. Every effort has been made in the preparation of this manual to ensure the accuracy of the contents, but all statements, information and recommendations in this manual do not constitute the warranty of any kind, expressed or implied.

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Introduction

Overview

WalkView is an Android-based solution for Consultix CellWizard receivers' family, a comprehensive, efficient and simple-to-use data acquisition S/W tool that turns Consultix receivers together with a tablet into a fully-fledged walk test or a drive test system that maps measurements, provides complete archiving of results and presents the findings in different reporting file formats including the open CSV format for further processing in tools such as Map Info® or iBwave®….etc. The WalkView accepts most floor layout formats such as BMP, JPG, PNG ...etc.

The WalkView allows simple archiving and categorization of different projects, divided into different sites, sub-missions and sessions.

Figure 1: WalkView Software

Minimum Installation Requirements

- OTG support
- Quad-core processor or higher
- 2 GB RAM or higher
- Android 5.0.2 or later

Installation

In this section, we will outline how to configure the WalkView settings in order to customize the software layout appearance and to control the measurements as follows,

1. Download the latest version of WalkView, and tap the downloaded package to start the software installation

Please contact support@consultixwireless.com to get the latest version of WalkView.

2. Tap the application shortcut "**Consultix WalkView**", the "**Activation window**" appears as depicted in Figure 2 below,

Figure 2: WalkView Activation Window

Please contact support@consultixwireless.com to request a license.

3. Copy and paste the provided license without spaces then tap the "**Activate**" button

Note: Internet connection is required for license activation. After activating your copy, "**Activation Done**" Message should appear.

WalkView Overview

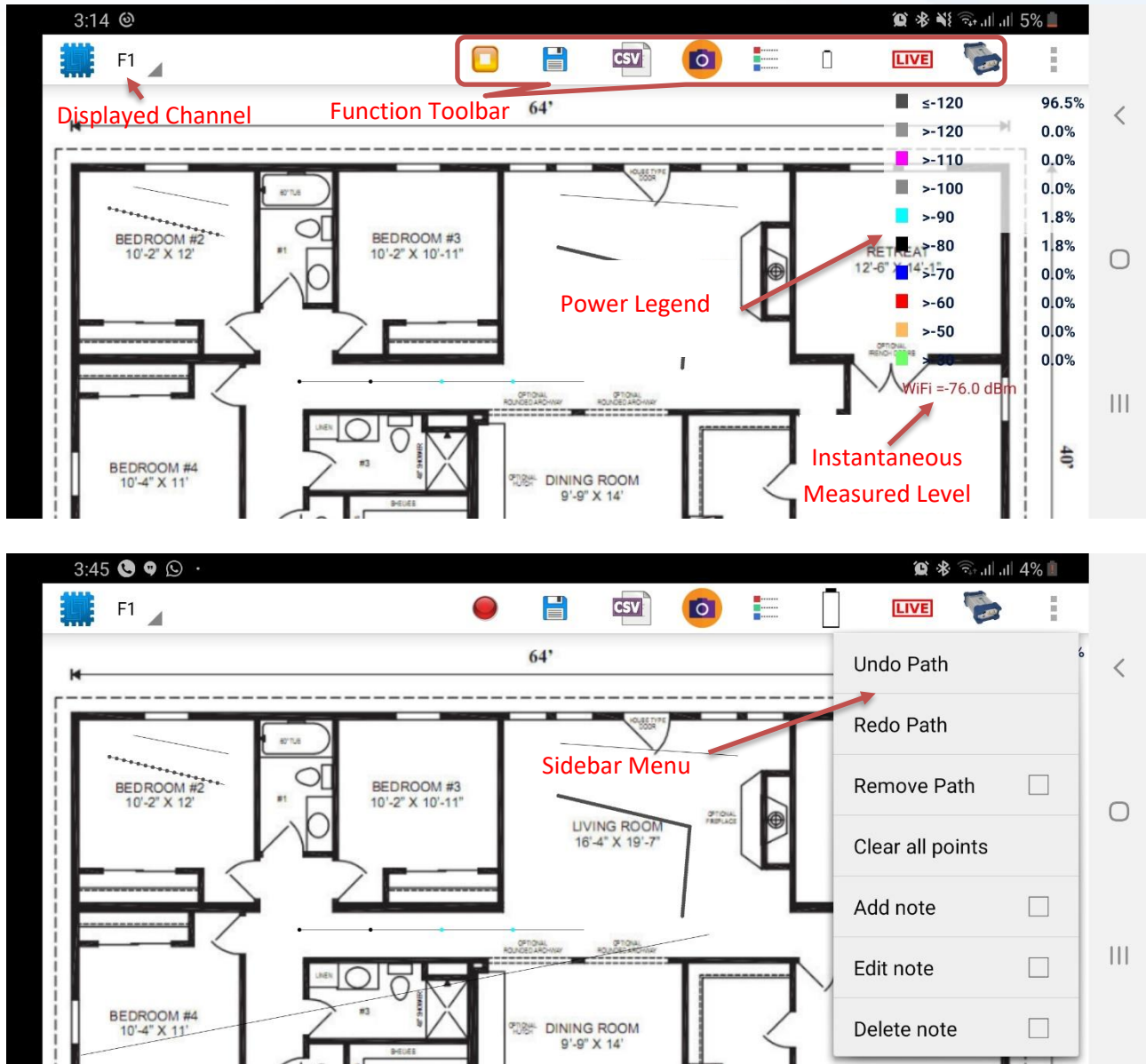## WalkView Layout

Figure 3 below shows the layout of the WalkView.

Figure 3: WalkView Layout

WalkView Toolbar and Menu

Each button function is depicted in the table below,

| Function Toolbar	
Icon	**Description**
	Start / Stop measurements
	Save measurements to the working folder
	Export data to .CSV file **Note**: the data coordinates will be exported according to the original picture dimensions (length & width)
	Export a snapshot of the measurements with/without the legend
	Show the dBm power legend
	Battery level indicator (updated every minute)
	Show the real-time power levels for all frequencies (Figure 27) below shows an example of using "Test Mode" to measure the current real-time power values.
	Choose a receiving device (MRX-Pro, MRX-D or Wi-Fi) i.e. The default receiving device is the MRX-D refer to the below figure shows how to choose a device **Note:** In order to measure Wi-Fi network coverage, you have to connect to the Wi-Fi access point that you are going to collect its RSSI levels.
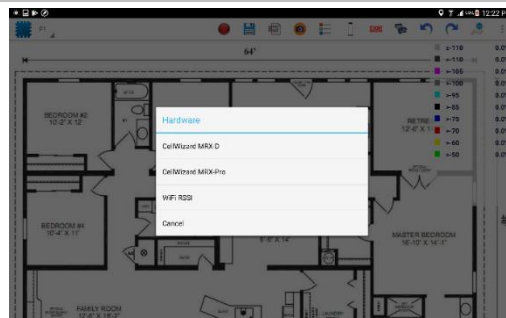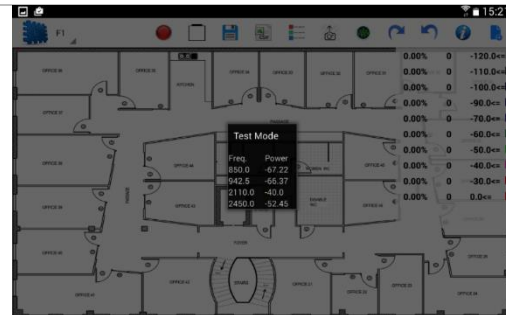
Side Menu	
Button	**Description**
Undo Path	Undo the last measurement path (from one click to the next click)
Redo Path	Redo the last measurement path (from one click to the next click)
Remove Path	Remove Path activation to delete any tapped path
Clear All Points	Clear all measured points
Add Note	Add notes (tap the icon, then tap to place a note on the floor plan)
Edit note	Edit a note (Check "Edit note" box, then tap the note to edit)
Delete note	Delete notes (Check "Delete note" box, then tap the note to delete)
Session Info	Display site & session information such as Origin Point, no. of measurement paths and frequency & offset settings

Getting Started

1. On Consultix WalkView Main Window, tap Consultix Logo at the upper-left corner then choose "**Settings**" to configure the WalkView settings as depicted in Figure 4 below
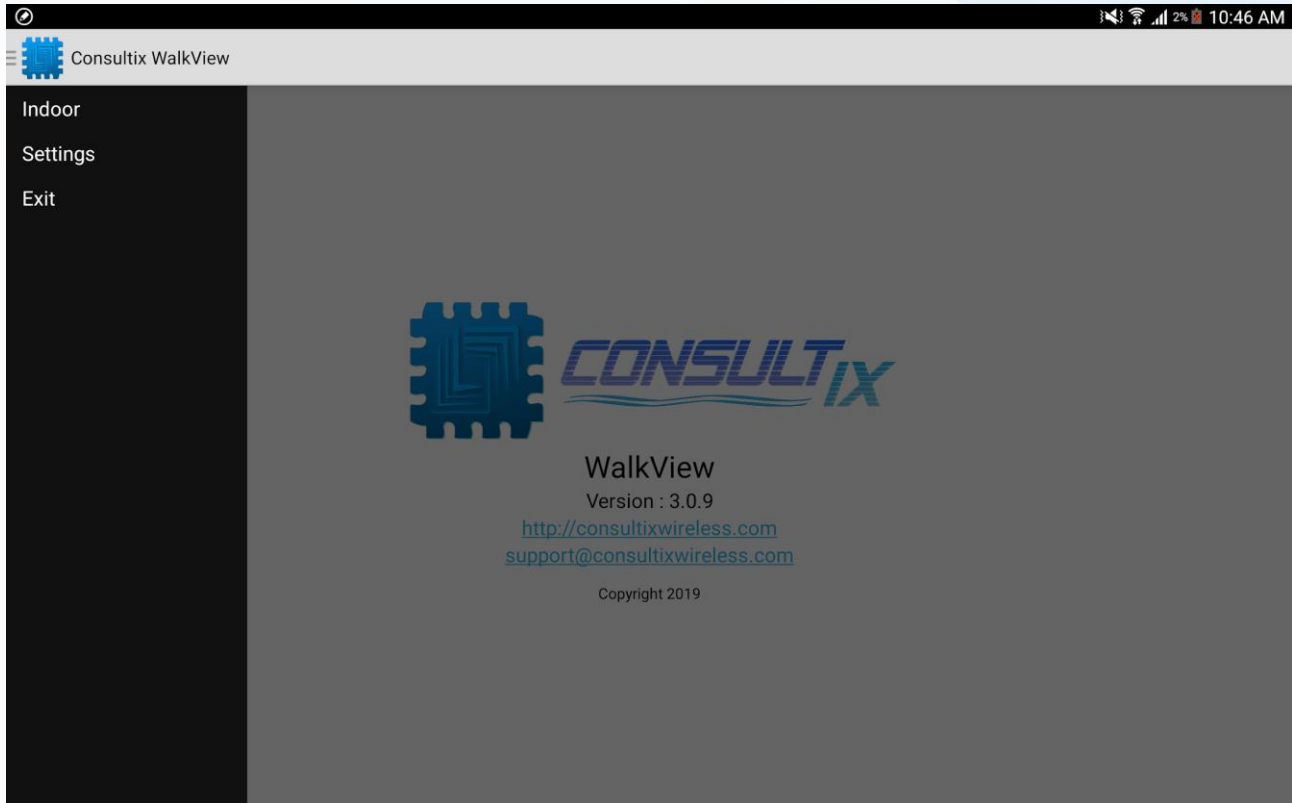

Figure 4: WalkView Main Window

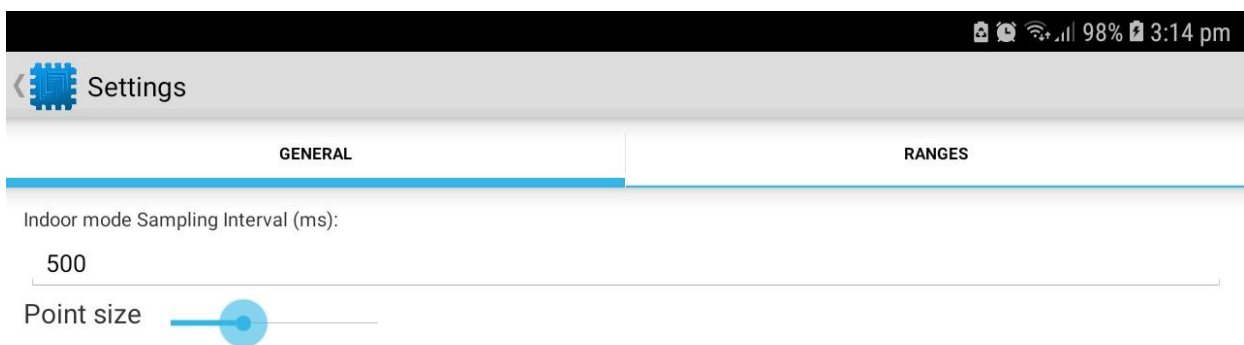Figure 5 below depicts the WalkView "Settings" Window,

Figure 5: WalkView Settings

2. On **Settings > GENERAL tab**, the user can adjust some parameters as follows:
   - **Capture Interval**: The time interval between two measurement points in milliseconds.
   - **Point size**: Move the slider to adjust the measurement point size on the floor plan.
3. On **Settings > RANGES** tab, adjust the legend colors for your measurements "**Indoor Color**" according to the received power ranges as desired.
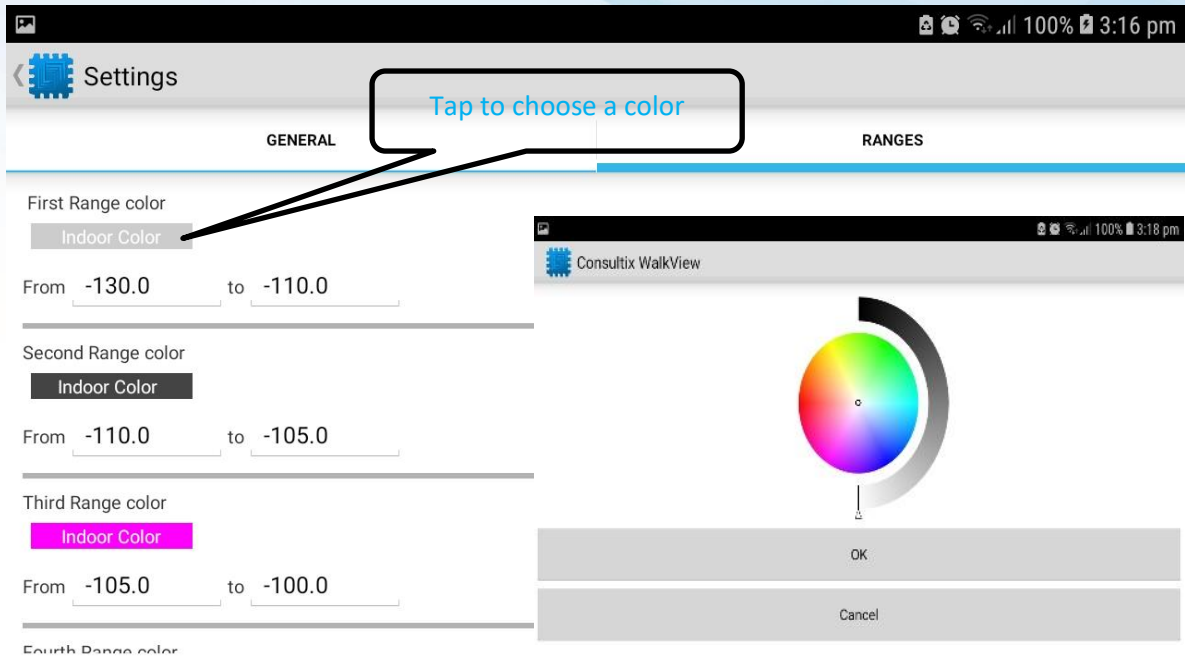4. Tap the colored box to pick a color then tap **OK** as depicted in Figure 6 below,

Figure 6: WalkView Power Ranges

After configuring the WalkView settings as desired, tap the **back** button from the Android device to save your configuration

Prepare your Test

In this section, the user will be able to categorize the workspace by creating a working folder for the whole project and creating the 1st site then adding measurement sessions for this site.

1. On WalkView Main Window, tap Consultix Logo at the upper-left corner the press indoor to navigate to the workspace
2. Create a new working folder this is where all the measurement data will be saved as depicted in Figure 7 below,
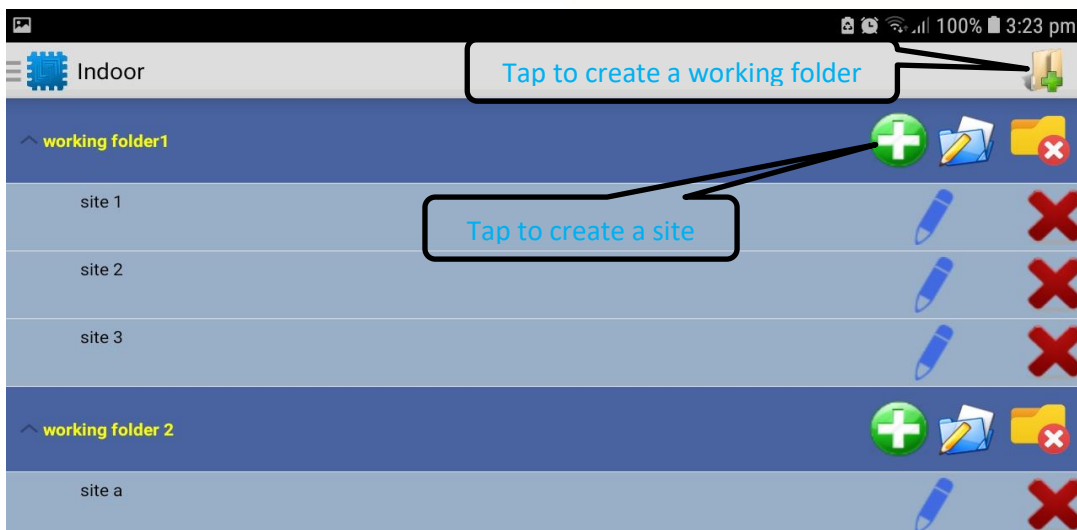

Figure 7: WalkView Session Manager

Note: When creating a new working folder, all measurement files will be saved in the following path,

Internal Storage> Consultix > WorkingFolders

If you want to add/delete/edit many working folders and sites, you can do that in the "Session Manager" window.

3. Create a new site as depicted in Figure 7 above
4. Configure the site parameters as following:
   - **Site Name:** Give a name to your site (Choose a relevant name)
   - **Site Image:** Tap to import the site layout/floor plan in an image format JPEG, BMP...etc.
     Note: Conveniently, the user can tap the "Image" button to load the floor plan.
   - **Length:** Type in the site length in meters
   - **Width:** Type in the site width in meters
   - **No of Channels:** Type the number of scanning channels for this site.
   - **Channel.1... Channel x:** Enter the desired frequencies you are going to measure
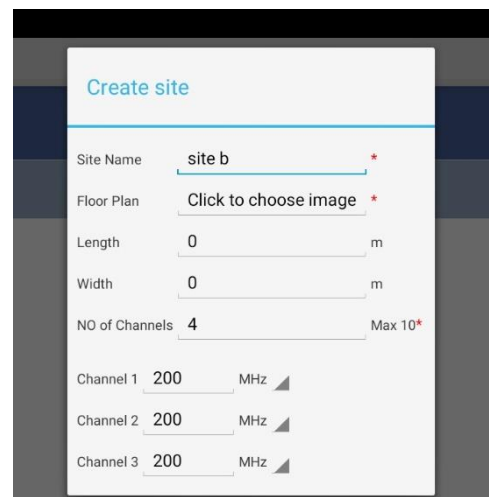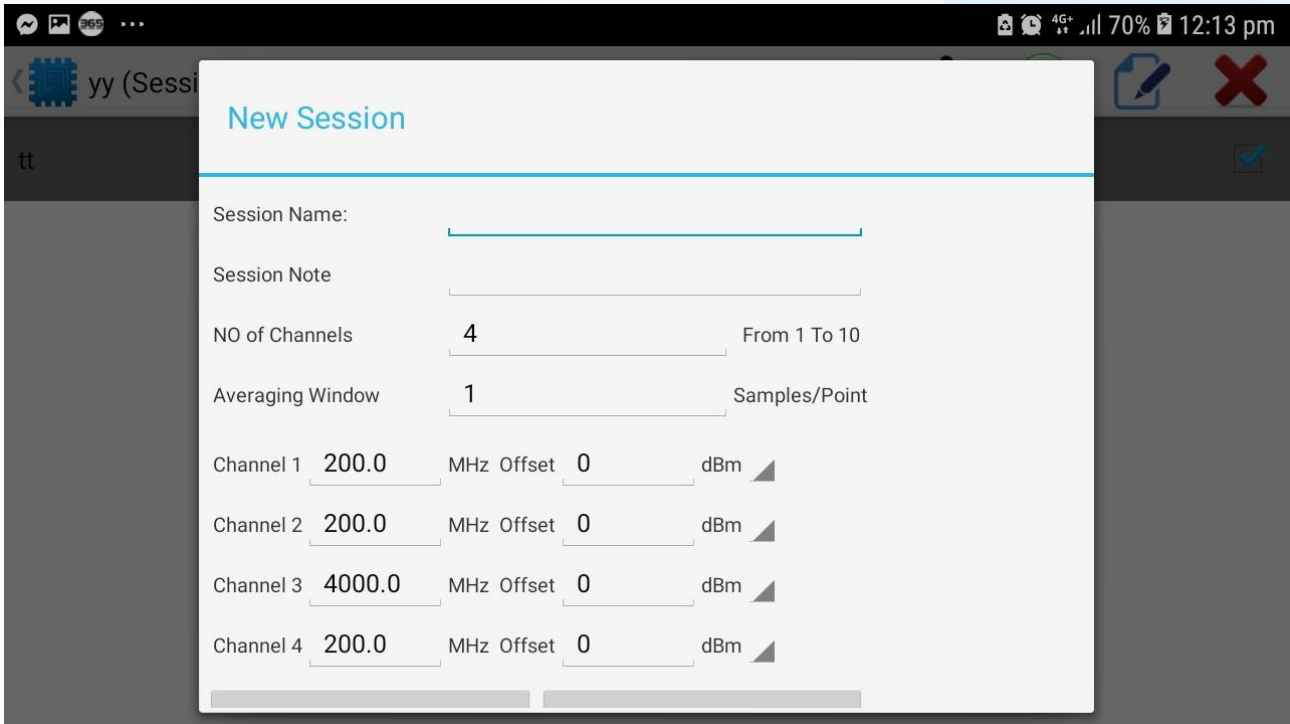

Figure 8, Creating a new Site

5. After creating your site, tap the site that you created to enter "**Sessions**" window.
6. In "**Sessions**" window, the user can create a session (or multiple sessions) according to the measurement scenario as depicted in Figure 9 below,

Figure 9: Creating a new session

7. Give a name to your session, type in the session note, set the frequencies that you are going to measure, set dB offsets (if required) for each frequency respectively and tap the "**Create**" button.
Note: You can set power offsets for all frequencies according to your measurement setup. ex. when using 3 dB Attenuator at receiving end (or you want to offset your antenna gain), set the offset to be 3 at all frequencies

After creating the session, tap the session name then tap the "**Run**" button. The floor plan is displayed and you are ready to start CW measurements as depicted in Figure 10 below,
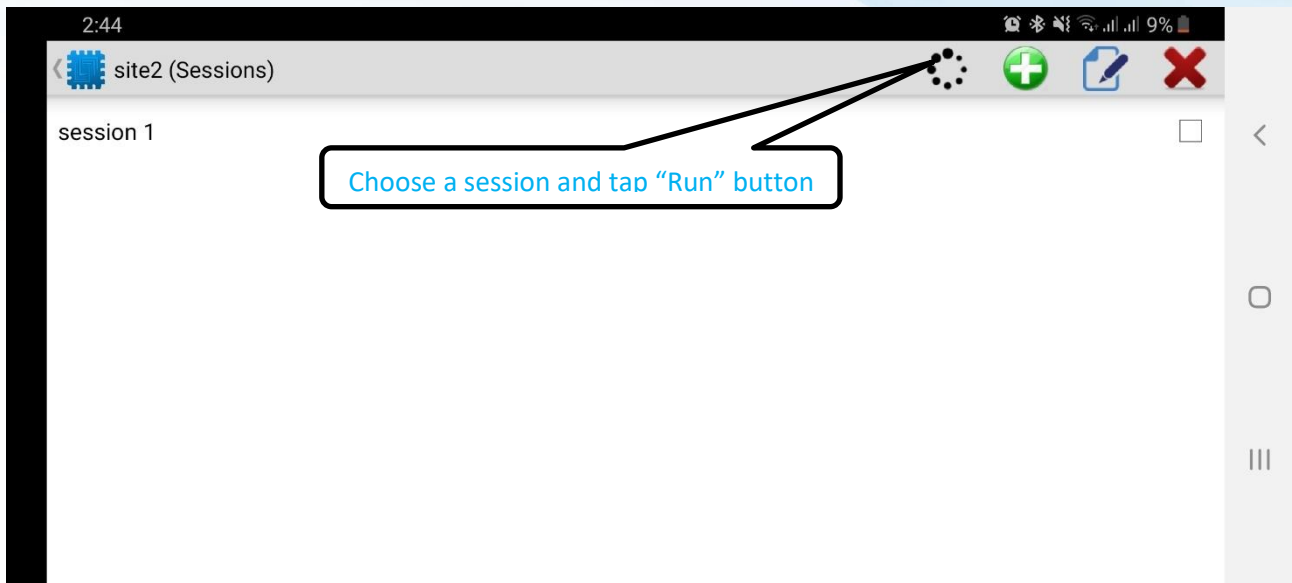

Figure 10: Running a measurement session

Starting your Test
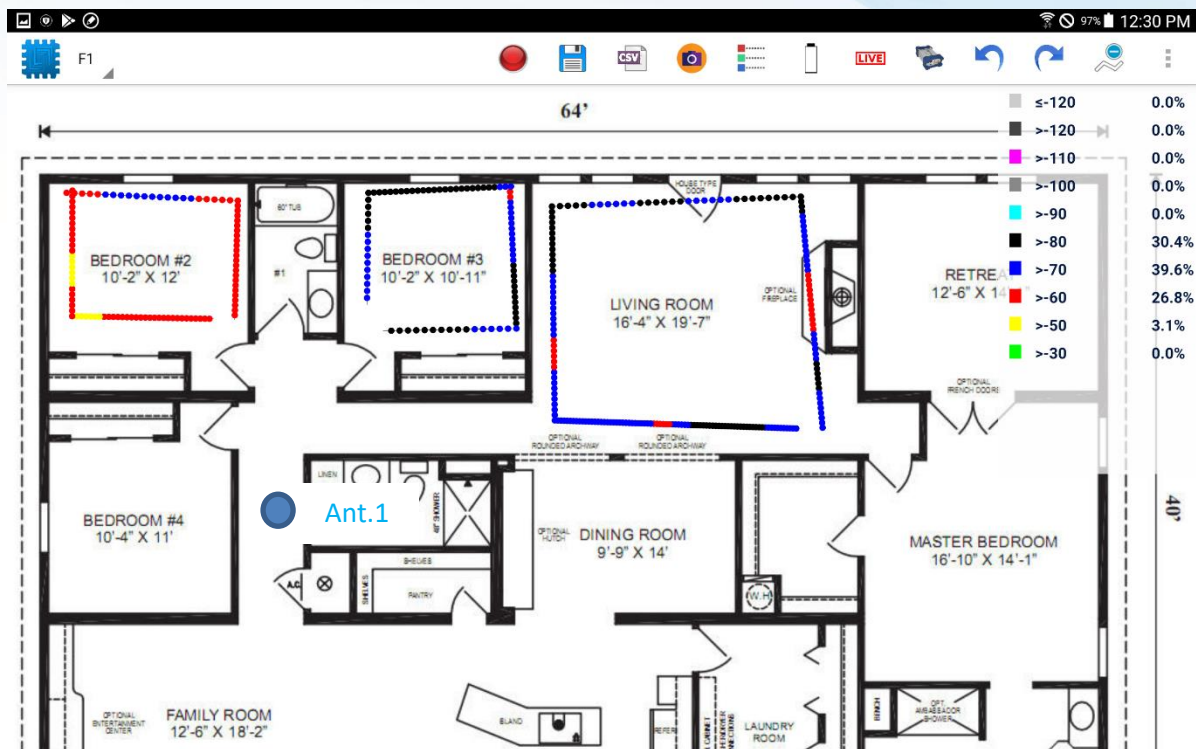
Figure 11 below shows the WalkView measurement window.

Figure 11: WalkView measurement window

After installing the test transmitter with the survey antenna at the desired location, tap start/stop

icon 🔴 to start your measurements (The button returns orange 🟧)

A pop-up message appears to enable the MRX receiver USB connection as shown in Figure 12 below. Check the box and tap **Ok**
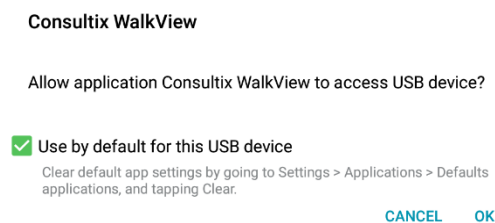
Figure 12: Enabling USB Connection

1. Tap on your current location to start your first path
2. Start moving with the MRX Receiver in the site according to pre-defined measurement routes on the floor plan.
3. As per your defined measurement routes, tap on your current location on the map or layout to correlate your measurements to the map or layout coordinates
   Note: You can zoom in/out at any point on the floor plan for accurate location pointing.

Figure 13 below shows the WalkView measurement path of the second antenna location
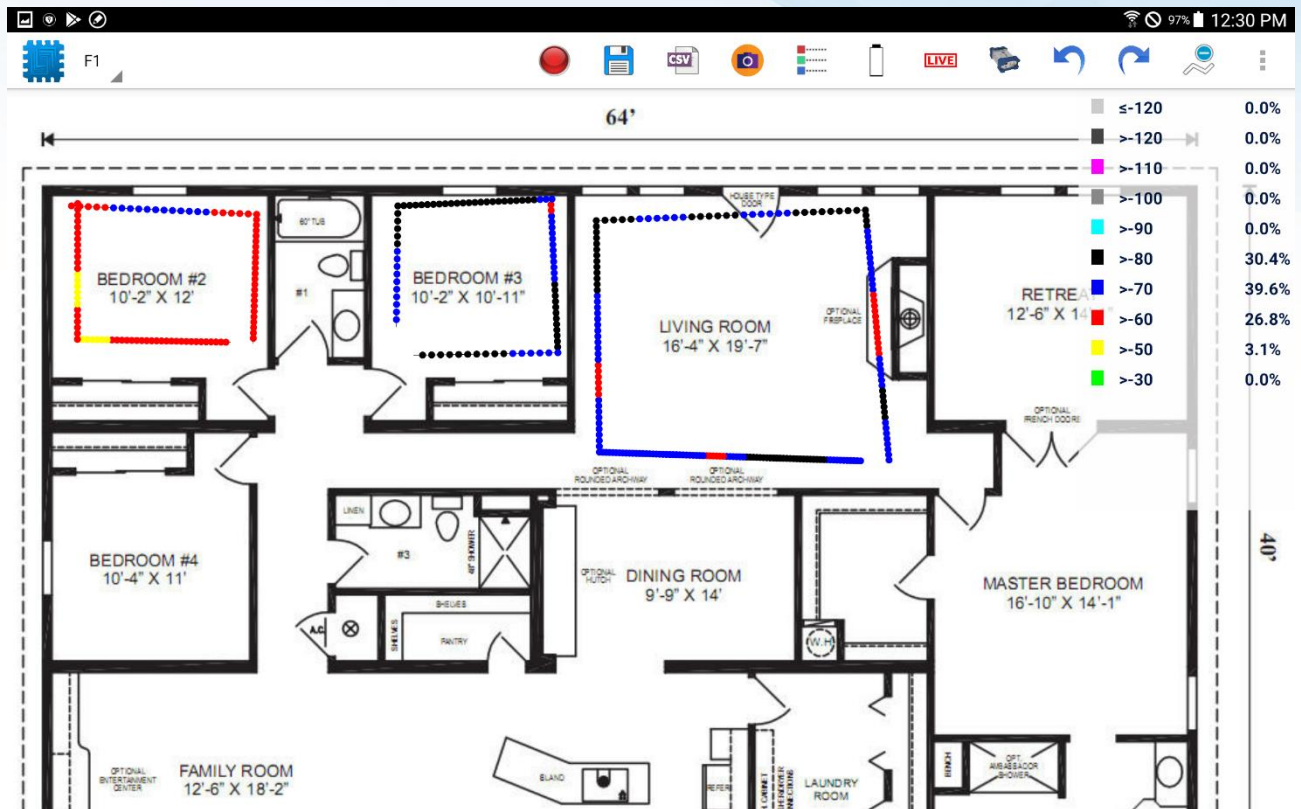
Figure 13: WalkView measurement window

4. When you reach the end of the measurement path, tap start/stop icon 🟥 again to stop your measurements.

5. If you are satisfied with the measurement run, tap the save session icon 💾 to save your measurements, the user can take many runs in the same session as desired

Note: At any measurement point on the floor plan, the user can zoom in and click to view its specific X/Y coordinates (Pixel unit) and power level as depicted in Figure 14 below,
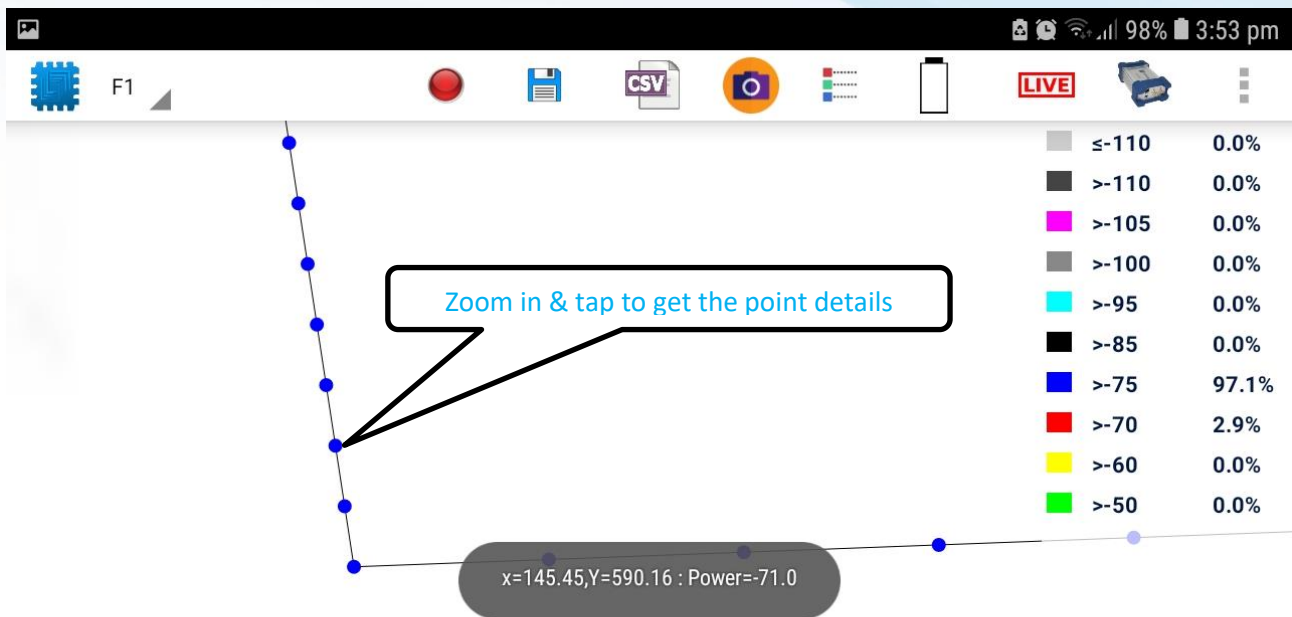
Figure 14: Displaying measurement point details

Typical Walk Test Setup

Figure 15 below shows a typical test setup for an indoor scenario,

Figure 15: Typical Walk Test Setup

Exporting the Measurements

In the WalkView, there are two ways of exporting measurement data,

1. Exporting data in CSV format: Tap the CSV icon [CSV] to export the measurement data to a *.CSV file which is an open format compatible with most RF Planning tools such as iBwave®, RANPLAN iBuildNet®1,…etc.

2. Exporting measurements as a raster image format: Tap the snapshot icon to save the measurement session to a JPEG image file

Note: Default exporting location is **Internal Storage> Consultix > WorkingFolders**

After exporting CW Walk Test measurements, you can use it for RF model tuning and model calibration using most of planning tools such as iBwave®, RANPLAN iBuildNet®…etc to get an accurate prediction model of your design.

Figure 16 below depicts an example of the exported CSV file format of the WalkView.

	A	B	C	D	E	F	G	H	I
1	Consultix Walk-View								
2	Site	Site1							
3	Site Size	Length=0.C	Width=0.0 m						
4	Session	Ant1							
5	Tue Sep 20 13:55:25 EET 2016								
6	Session (	X=0.0m	Y= 0.0m						
7	Freq1	850	Freq2	0	Freq3	0	Freq4	0	
8									
9									
10	Latidute	Longitude	X-Position	Y-Position	Freq.1Power Value	Freq.2 P(	Freq.3 P(	Freq.4 P(	Time
11	0	0	1208.2	597.3	−40.3	−116.8	−115.5	−120.8	46:43.7
12	0	0	1208.5	593.83	−40.16	−118.6	−118.9	−118.2	46:44.2
13	0	0	1208.79	590.37	−40.13	−118.5	−116.8	−120.8	46:44.8
14	0	0	1209.08	586.9	−40.25	−116.7	−113.8	−112.6	46:45.3
15	0	0	1209.38	583.44	−40.42	−107.2	−112.1	−109.8	46:45.8
16	0	0	1210.03	579.11	−40.49	−114.6	−113.3	−113.6	46:46.3
17	0	0	1210.69	574.78	−40.57	−108.1	−108.4	−108.8	46:46.8
18	0	0	1211.35	570.45	−40.52	−116.6	−117	−118.8	46:47.3
19	0	0	1212.01	566.11	−40.46	−106.7	−111.5	−106.5	46:47.8
20	0	0	1212.67	561.78	−40.42	−113.2	−111.1	−113.3	46:48.3
21	0	0	1213.33	557.45	−40.38	−110.8	−111.1	−107.9	46:48.8
22	0	0	1213.99	553.12	−40.35	−121	−121	−120.8	46:49.3
23	0	0	1214.65	548.79	−40.32	−121	−121	−121	46:49.8
24	0	0	1215.31	544.46	−40.3	−118.2	−120.3	−121	46:50.3
25	0	0	1215.97	540.13	−40.28	−118.1	−117.9	−120.9	46:50.8
26	0	0	1216.63	535.8	−40.26	−119.7	−116.5	−116.7	46:51.3

Figure 16: CSV Exported file format

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[1] RANPLAN iBuildNet® is a trademark of Ranplan Company.

Walk Testing Tips

Before starting a CW Walk Test, the following tips should be taken in consideration,

1. You should have sufficient information regarding the venue you are going to test.
2. Check all Walk Test tools prior to making the measurements. CW kit (Transmitter & Receiver), Antenna, data collection software...etc for any required calibration or power issues.
3. Using calibrated equipment is mandatory as level accuracy is the most important factor in RF Model calibration
4. On the floor plan, define the measurement paths according to the planned antenna locations prior to CW Walk Test.
5. Make sure that the measurement data is saved and exported successfully before leaving the site and prior to post processing phase.
6. Always keep a copy of your measurements. They may be useful when you encounter the same environment types in future designs.

Figure 17: WalkView with MRX-D

Further Help

- For any support inquiry, kindly contact:

  Support: support@consultixwireless.com

  Or contact our distributor covering your region (check www.consultixwireless.com)

- For any information about prices, specifications, future developments,

  recommendations, customizations, or general question, kindly contact:

  Sales: sales@consultixwireless.com