



# *WiScan* ®

## **Wireless Tester KWT-178AG**

### Quick User's Guide

Version 1.2

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## 1, Introduce

Wireless Tester, KWT-178AG, based on Windows CE Platform, is a wireless detector that supports 802.11 a/b/g and offers current environment with overall wireless information, the signal quality of each channel and the parameters of Base Station's quantity, furthermore, it still monitors Base Stations in all channels. For users, KWT-178AG may trace the information of specified Base Station, including the encryption, the station and the total of packets. Besides, KWT-178AG supplies many useful tools for engineers to research the data.





## 2, Starting Page

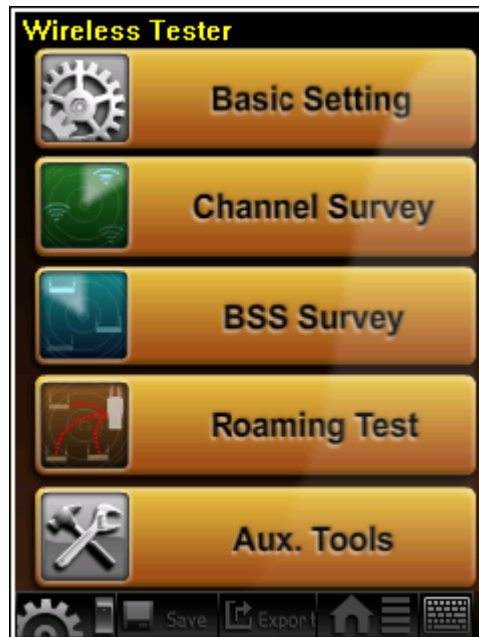


After booting the system, the KWT-178AG will go on.





### 3, Main Page



The main page is a pathway entering the function pages.

**Basic Setting :** Set up the domain, time, date and check the rest of batteries.

**Channel Survey :** Information of each channel.

**BSS Survey :** Information of Base Stations in each channel.

**Roaming Test:** To check whether the construction of Base Stations is suitable for the roaming or not.

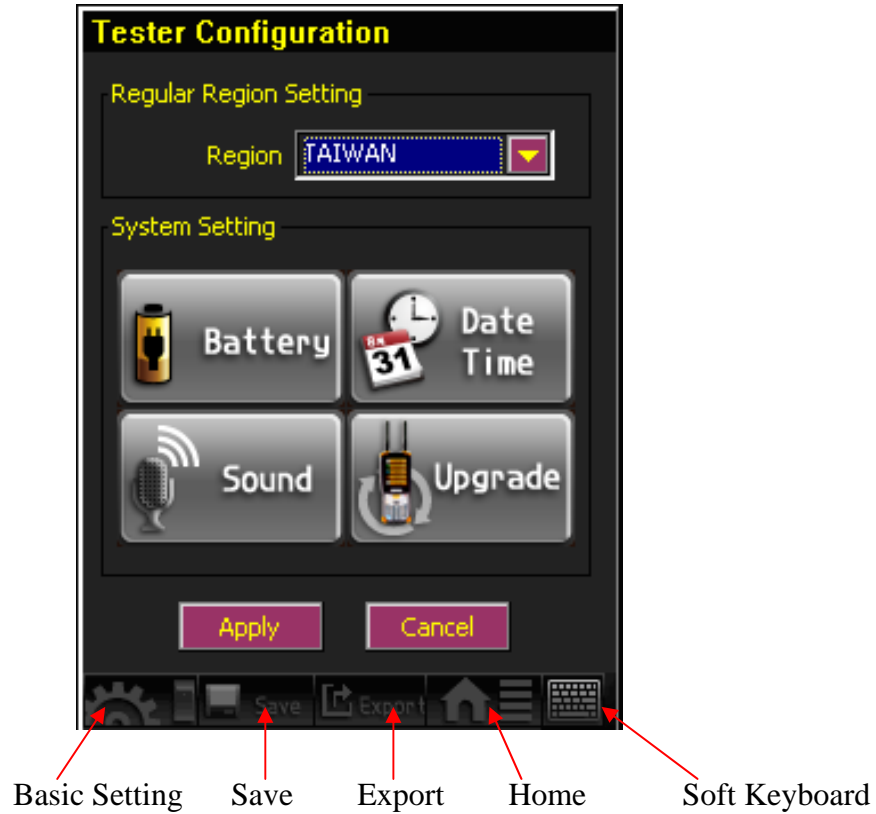
**Aux. Tools :** Some Useful tools including Free Space Loss, Power Meter, AP Detector, Distance Calculation and mW/dBm Conversions.





### 3.1 Tool Bar

Users may use this tool bar to switch quickly from different pages.



**Basic Setting:** Click the first button, it will be KWT-178AG page which is as same function as Basic Setting.

**Save:** Click the Save button, it will save current picture and test data to KWT-178AG.

**Export:** Click the Export button, it will export all saved data into external USB disk.

**Home:** Click the Home button, it will go back to main page.

**Soft Keyboard:** Click the Soft Keyboard button, it will pop-up the Soft Keyboard Window.





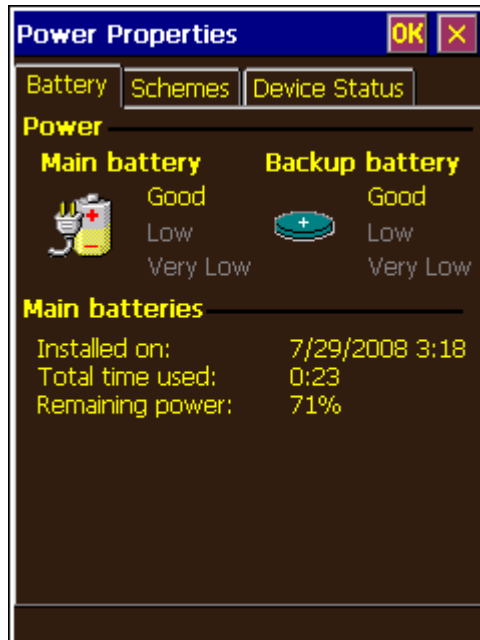
## 4, Tester Configuration Page



Tester Configuration page includes Regular Region Setting and System Setting.

- (1) Regular Region Setting: Select a suitable region. When changing the region, it must press “F1”+”F4” to work out the new setting .
- (2) System Setting, including Battery Setting, Date and Time Setting, Sound Setting and Upgrade tool.



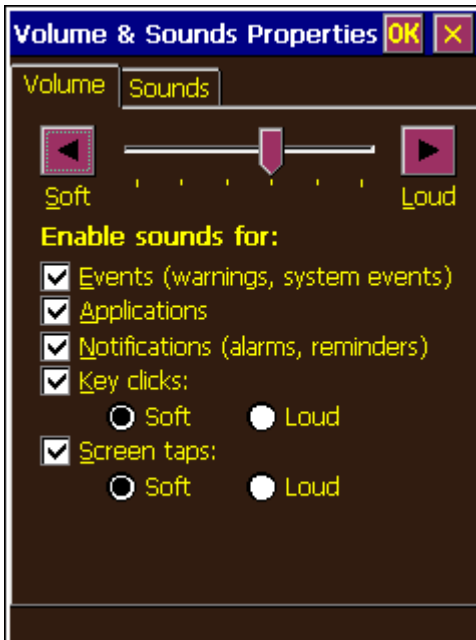


Battery Setting



Time and Date Setting



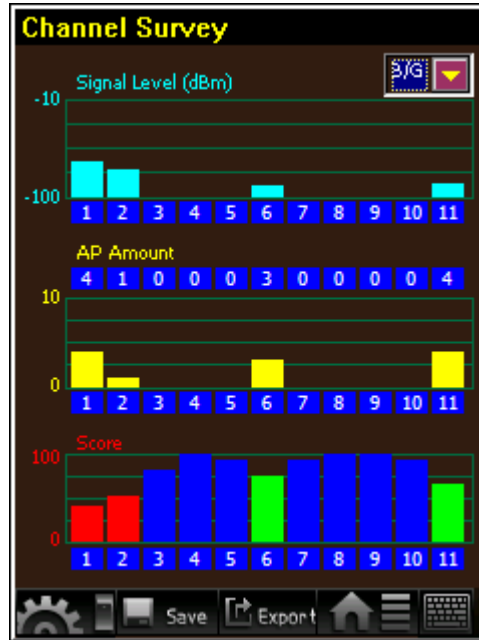


Volume and Sound Setting





## 5, Channel Survey Page

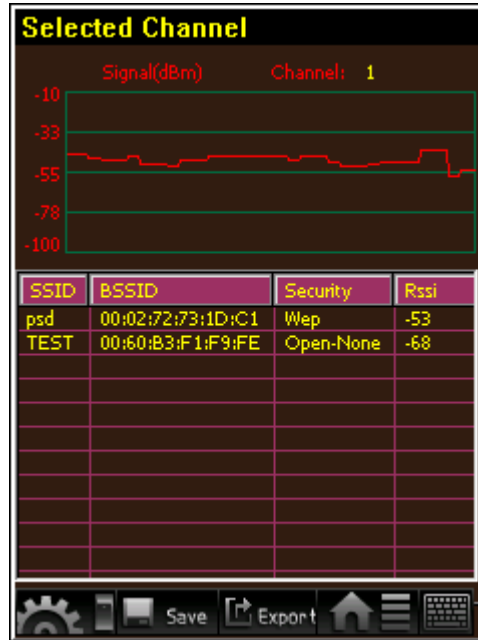


Channel Survey is the page completely controlling the wireless environment. It shows signals of all channels as well as the quantity of Base Stations, and it may also changes the pattern of RF or the items directly on the page. Default mode is B/G.





## 6, Selected Channel Page



The page displays the detailed information of each channel. The chart reveals a real-time intensity of signals in current channel. The list below shows the information of all base stations in current channel, including SSID, BSSID, encryption and signal strength





## 7, BSS Survey Page

**BSS Survey**

b/g: 1 2 3 4 5 6 7 8 9 10 11  
a: 56 58 60 64 149 152 153 157 160  
161

Cancel All Import MAC

Ch	SSID	BSSID
1	jobehsieh	00:18:84:29:20:0A
1	asus	00:17:31:26:99:E4
1	FON_jobehsieh	00:18:84:29:20:09
1	NCTU	00:16:01:7F:BC:D1
6	D-link G700AP	00:19:5B:09:C2:64
6	victor	00:15:E9:0E:08:7C
11	default	00:50:FC:F4:7A:56
11	Hau	00:16:01:98:0F:6B
11	default	00:0E:2E:F6:63:D9
11	WLBARGLV2-...	00:0A:79:B8:8D:35
2		00:0C:20:02:B8:0B
6	WANG	00:18:F3:7A:9E:E5

Save Export

All Channels

**BSS Survey**

b/g: 1 2 3 4 5 6 7 8 9 10 11  
a: 56 58 60 64 149 152 153 157 160  
161

Cancel All Import MAC

Ch	SSID	BSSID	Secu
1	jobehsieh	00:18:84:29:20:0A	WPA
1	asus	00:17:31:26:99:E4	Wep
1	FON_jobehsieh	00:18:84:29:20:09	Ope
1	NCTU	00:16:01:7F:BC:D1	Ope
1	eric630218	00:1B:11:26:A8:D6	Wep
11	WLBARGLV2-...	00:0A:79:B8:8D:35	Ope
11	default	00:50:FC:F4:7A:56	Wep
11	Hau	00:16:01:98:0F:6B	Wep
11	default	00:0E:2E:F6:63:D9	Wep

Save Export

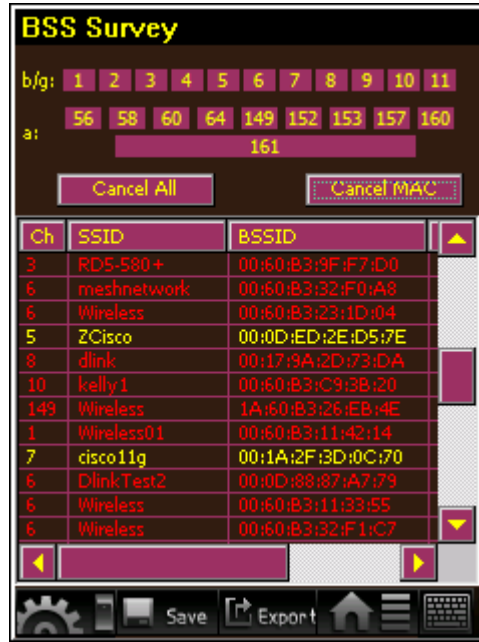
Selected Channels

This page reveals all detailed information of the device which can filter the channels as users want. Then the certain facts about base stations, including SSID, encryption and signal strength, will be showed as follows.



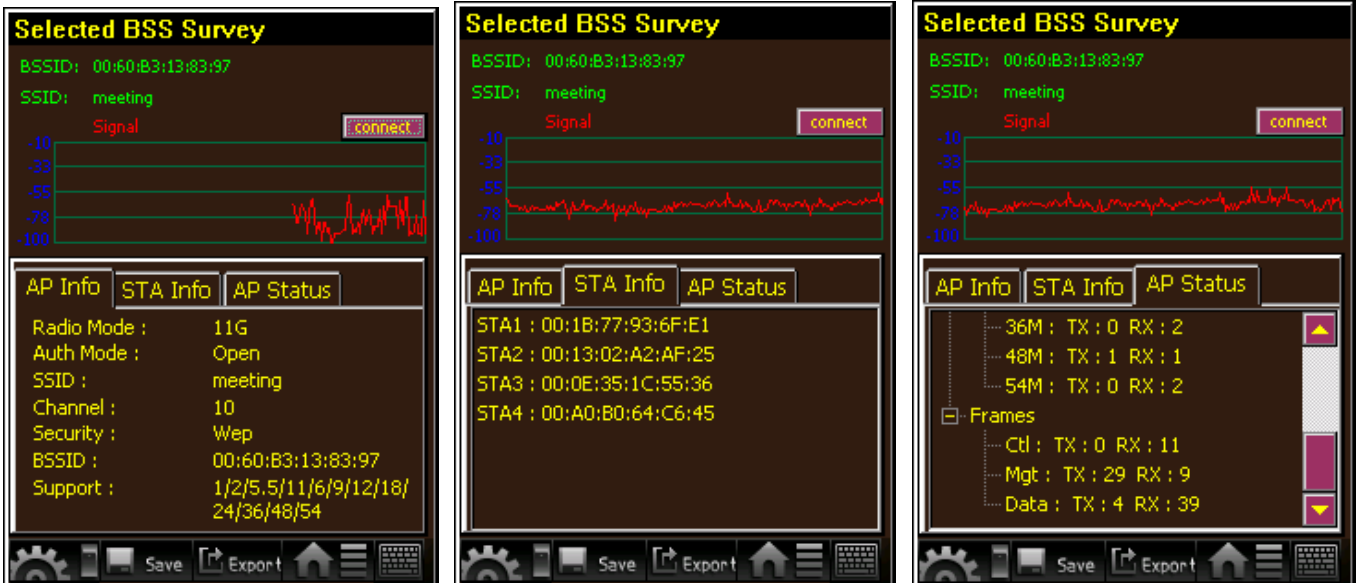


If click the ImportMAC button, KWT-178AG will import the legal APs' mac list from USB disk, the filename must be APLIST.txt. If the AP is not listed on APLIST.txt, it will show the AP information in RED color. The legal APs will show in YELLOW. You can click CancelMAC to ignore all legal APs' mac, and it will show all APs in Yellow. The default setting is showed in Yellow since there is not any legal AP being imported.





## 8, Selected BSS Survey Page

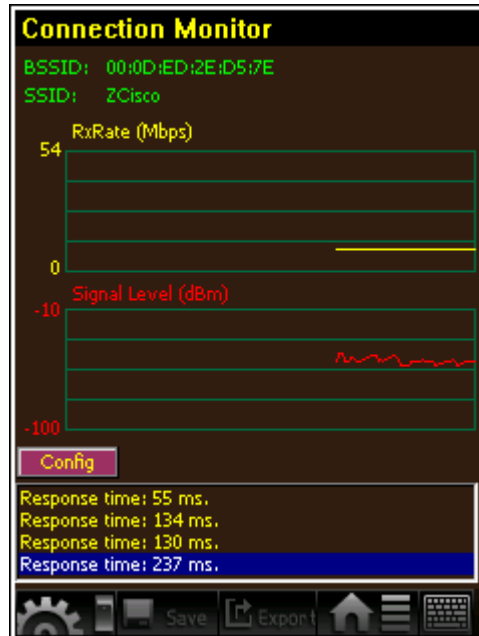


The page reveals the status of certain base station, that is, the signal strength. The list below shows the detail of base station, the information and the statistics of base station. Press the “connect” it will access to the wanted base station.





## 9, Connection Monitor Page

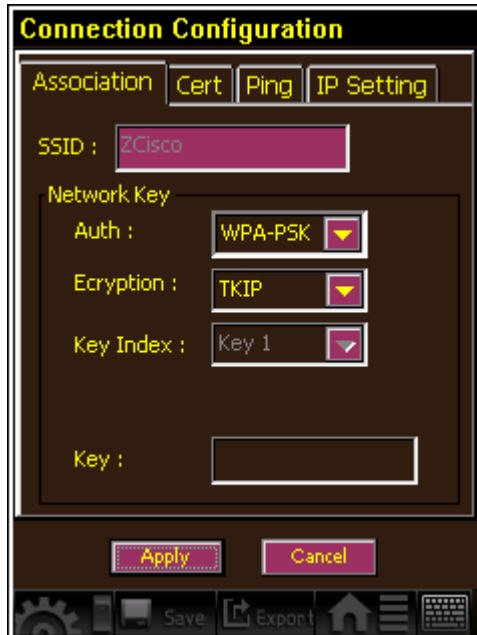


This page is designed for the test of connecting, to show the data rate and signal strength at once. While the data at the status of ping.





## 9.1 Connection Config Page



Before connecting the target base station, users need to set up the parameters included with IP setting, certification and encryption. The program memorizes the setting of base station for next connecting more easily.

The connection will soon start after setting and reveal Rx Rate and signal strength. Window ping is going to show the status of ping if the IP is correct.





## 10, Roaming Test

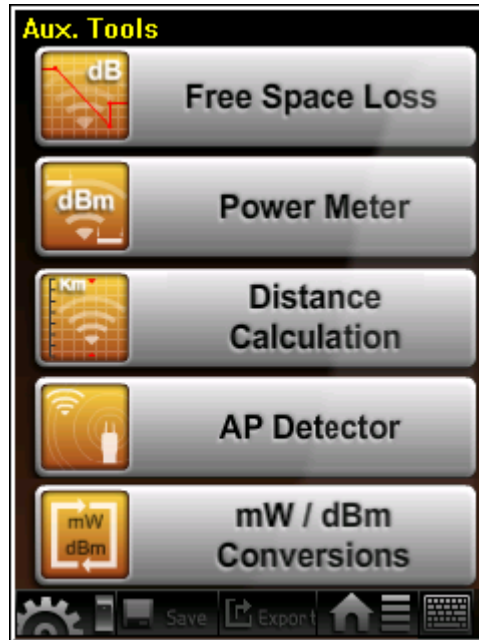
Coming soon.





## 11, Aux. Tools Page

It contains five tool programs. Choose the desired item and enter.





## 11.1, Free Space Loss Page

The declining situation of signals under various frequency and different distance.

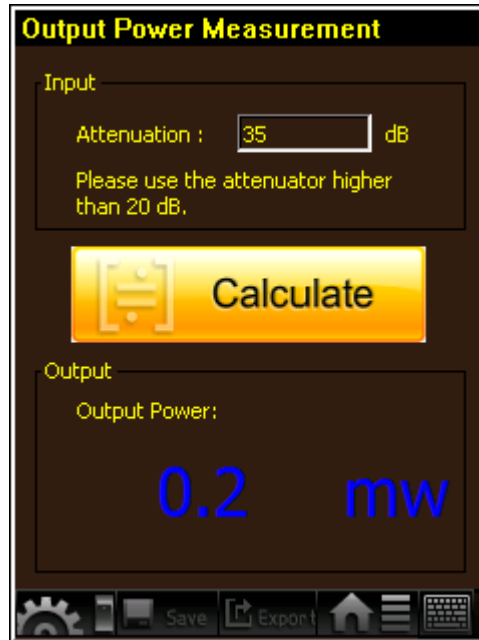
The screenshot shows a mobile application interface for calculating Free Space Loss. The title is "Free Space Loss". Under the "Input" section, there are two text input fields: "Frequency" with the value "2412" and unit "MHz", and "Distance" with the value "0.4" and unit "Km". A large yellow "Calculate" button is positioned below the input fields. Under the "Output" section, the text "Free space loss:" is followed by the result "92.1 dB" in a large blue font. At the bottom of the interface, there is a navigation bar with icons for settings, home, and other functions, along with "Save" and "Export" buttons.





## 11.2, Power Meter Page

Use the attenuator to detect the output power of base station directly.





### 11.3 Distance Calculation Page

Assign various radio mode, data rate, output power and antenna gain to figure out the maximum range and required height of antenna.

The screenshot shows a software interface titled "Distance Calculation". It features an "Input" section with the following fields: "Radio Mode" set to "B", "Data Rate" set to "11" Mbps, and two columns for "Site 1" and "Site 2". Under "Site 1", "Tx Power" is set to "1" mw and "Antenna" is set to "0" dBi. Under "Site 2", "Tx Power" is set to "1" mw and "Antenna" is set to "0" dBi. A large yellow "Calculate" button is positioned below the input fields. The "Output" section displays "Max Distance: 0.04 km" and "Required Antenna Height: 1.61 m". At the bottom, there is a toolbar with icons for settings, save, export, home, and a keyboard icon.





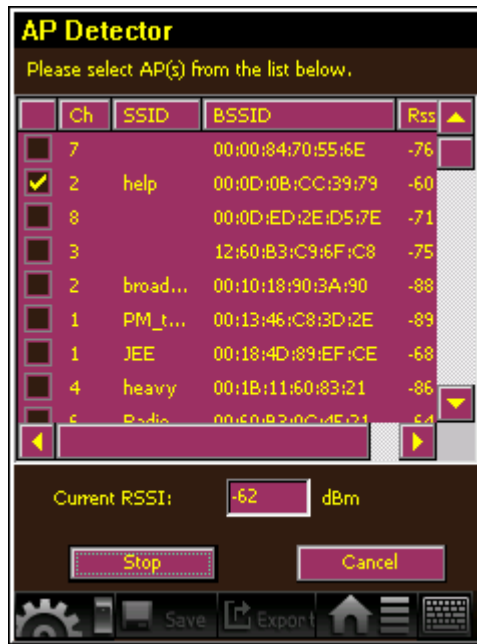
### 11.4, AP Detector Page

Using this function to detect the target base station quickly.

When entering this page, KWT-178AG will automatically search all the base stations in the environment.

User has to select the wanted base station on the table list of the base stations first, and click "Detect" to start searching.

The closer the wanted base station near KWT-178AG, the faster the sound, "Dan Dan Dan", KWT-178AG made.





### 11.5, Client Finder Page

Using this function to detect the target client quickly.

User has to type the wanted MAC address of client, and click "Search" to start searching. The result will be showed below.

It includes client's status, MAC address of base station, RSSI of client, radio of client, modulation of client and the total amount of packets.





### 11.5, mW/dBm Conversions Page

The conversion between mW and dBm.

