

## Consultix CellWizard™ WTX-35-B

### Multi-port CW transmitter

#### User Manual





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## Overview

### Introduction

Consultix WTX-35-B4 is a handheld test transmitter that generates CW (Continuous Wave) signals with a maximum output power of 15 dBm. It is compact, portable, lightweight and easy to use for indoor coverage test scenarios. WTX-35-B4 operates over most of wireless frequency bands; 2.6 GHz, 2.5 GHz, 2.1 GHz, 1.8 GHz, 900 MHz, 850 MHz, 700 MHz, 400 MHz, 3.5 GHz (optional) and others.

### Key Features

- 4 adjustable frequency channels & simultaneous transmission.
- Adjustable output power range: -10 dBm to 15 dBm (according to the frequency band)
- 100 KHz Frequency step
- Best output power accuracy of  $\pm 1$  dB
- Up to 24 Memory channels
- Light weight < 0.7 kg
- Ergonomic user interface
- Functional Keypad
- LCD display
- Battery Operation
- Versatility & Upgradability



### Applications

- CW Measurements
- Walk-Tests
- IBS Path Loss Measurements and DAS Performance Evaluation
- In-Building Coverage Enhancement
- General Purpose Signal Generator



## Safety Compliances & Precautions




In order to use the WTX-35-B4 in a correct, efficient, safe way, and to avoid damage caused by improper operations, you are recommended to:

- A. Use only the original accessories to prevent any damage to the device.
- B. To not affect the radiation pattern, don't touch the antenna during operation.
- C. It is preferable to connect the antenna before switching RF power on.
- D. Don't let water or other liquids flow into the device.
- E. Prohibit approaching the device to flammable or explosive items.
- F. Don't open the device outside company maintenance branches.
- G. For the first time usage of the device, the battery should be charged continuously 10 hours before usage.

## Setup & Installation

### Check the package

Please unpack and inspect the shipping package to make sure that you have received all the parts without damage; the shipping package is shown in **table 1**.

|                      |  |
|----------------------|--|
| <p>WTX-35-B4</p>     |    |
| <p>Power Adapter</p> |   |
| <p>Carrying Case</p> |  |

**Table 1:** WTX-35-B4 Packing list

For any issue regarding the shipment package, please call your agent or our nearest service office or contact us through [support@consultix-egypt.com](mailto:support@consultix-egypt.com)



## User Interface

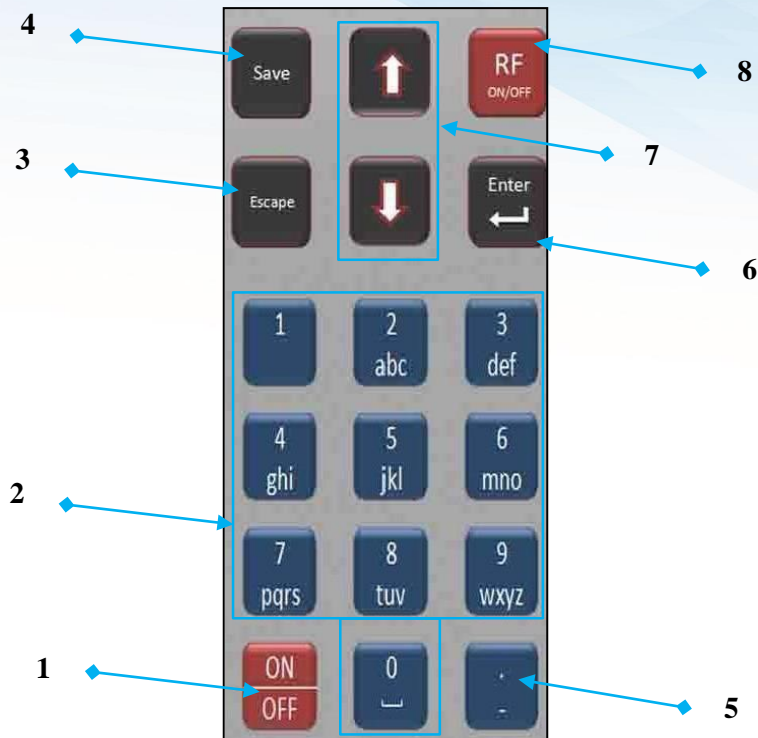
Figure 1 below depicts the Front Panel of the WTX-35-B4.




**Figure 1: WTX-35-B4 User Interface**

## Functions Keys

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- 1) **ON/OFF**: Switching on & switching off the device
- 2) **Numeric Keypad**: Writing numbers, characters or space
- 3) **Escape**: Going to previous menus, or canceling entered data
- 4) **Save**: Saving the current configuration channel
- 5)  : Editing values or names
- 6) **Enter**: Entering to submenus, accepting choices, going to fine-tuning for amplitude and frequency adjustment
- 7) **Up & Down arrows**: Moving up and down between menus, or fine-tuning of amplitude and frequency (after clicking the “Edit” key as per (5) above)
- 8) **RF ON/OFF**: Starting or stopping RF power transmission

## General Operations



## Preparations

- Connect the power adapter to the charging socket  
(For the first-time usage of the device, the battery should be charged continuously 10 hours)
- Switch On the device by a one-second press on the On/OFF switch
- Connect the antenna to the device; The device now is ready to start RF transmitting

In the following section, the menus of the WTX will be described in details before going through illustrating different operations of the unit

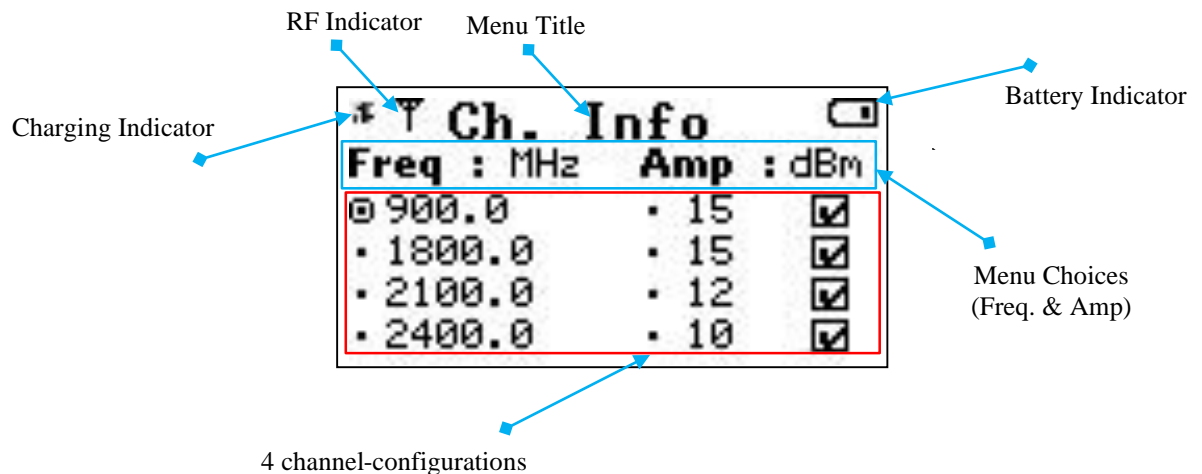
### Main Menu

This menu contains all available functions that can be applied for the transmitter like starting a test, saving a test channel, going to system settings and checking the device memory.



### Start Test

This will recall all configurations for the last test setup including Freq. (MHz), and Amp. (dBm). And you can modify afterward.



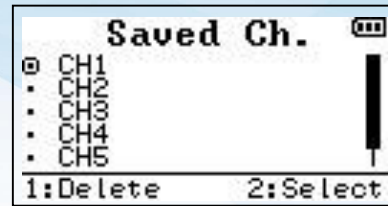
### Saved Channels

This menu contains the saved test channels with all of its configurations. Use Key (1) to delete a saved test channel and use Key (2) to select a test channel.

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### New Channel

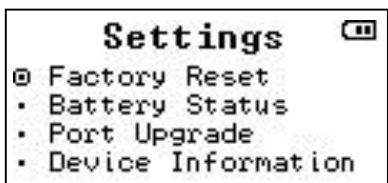
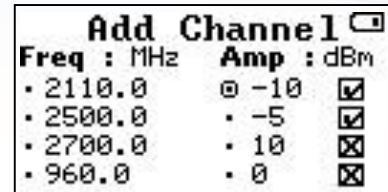
this menu adds a new channel to the device memory for future use.



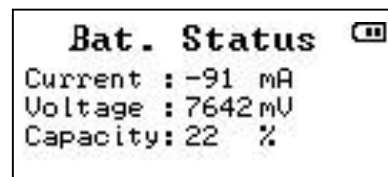
### Settings menu

**Factory Reset:** This function is used to restore WTX factory settings. It will delete all saved test channels from your device

□ **Note:** This action will erase activated Key-codes license



**Battery Status:** This function is used to show the device battery's status.



### Port Upgrade

This menu provides information about activated features and available upgrades



### Device Information:

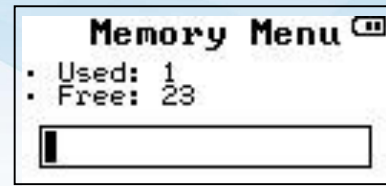
This menu provides the device information; like serial number, Firmware & Hardware version and others



## Memory Status

This menu shows the number of utilized and free memory locations.

(WTX-35-B4 can store up to 24 test channels)



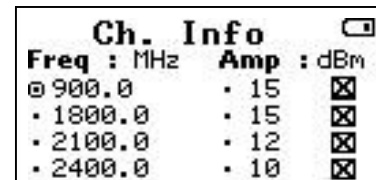
## Starting a test scenario

### Start a new test

As per the CW Measurement scenario, after identifying Antenna locations, connect the WTX-35-B4 CW

Transmitter to the Antenna at the first Antenna location now you are ready for starting a CW Walk Test. Please stick to the following steps to do a proper RF Transmission,

- 1- Press "RF ON/OFF" Key. This will recall the last configuration test.
- 2- Edit any parameter Freq. or Amp. –if needed- and press "RF ON/OFF" again to start transmitting (Alternatively, From Main Menu, go to "Start Test", and click Enter)
- 3- Adjust the new test channel configuration parameters through the following steps:
  - Write test channel frequency (in **MHz**) in the relevant band (a standard frequency step of 100 KHz)
  - Write channel amplitude (in **dBm**) related to the selected frequency band
  - You have 4 channels configurations, 1<sup>st</sup> configuration is for the transmitter port 1, 2<sup>nd</sup> configuration is for the 2<sup>nd</sup> transmitter port and so on



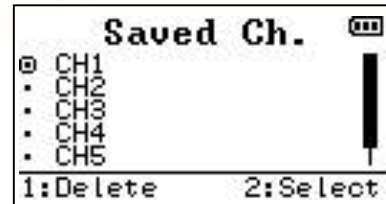
- 4- Press Key "1" to enable or disable the transmitter port 1, press Key "2" for enabling port 2 and so on, then press the RF ON/OFF key. You will notice the RF indicator appears on the screen




- 5- After finishing the CW transmission, press "RF ON/OFF" key to stop the RF transmission.

## Recall saved configuration

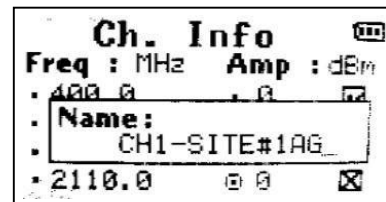
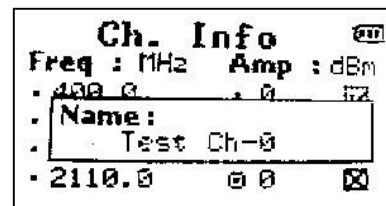
- From Main menu, use up & down arrows to choose “Saved Channels” menu then press enter key
- In the saved channels menu, you will find the saved test configurations you stored "up to 24 test configurations". Use up & down arrows to choose the required configuration then press Key (2) to select the channel and start RF Transmission
- In this case, you don't have to press RF ON/OFF key, you will notice the RF indicator appears on the screen once you select one of the saved channels



## Save a re-usable Configuration

- After setting new test configuration parameters, you can save these new channel configurations by pressing “Save” key to be saved in the “Saved Channels” menu - A text box appears on the screen. It has a default name.
- To save with its default name, press the “Enter” key directly.
- To edit the name, press edit key  then enter the name of the test configuration needed to be saved and then press the “Enter”.

□ **Note:** The maximum number of the channel name characters is 12



## Upgrade WTX-35-B4

WTX-35-B4 is upgradeable by key-code from a 2-port (2 simultaneous channels) unit to a 4-port (4 simultaneous channels) unit. Once purchased an upgrade for your unit, you will be provided with the new code.

### Activating a new upgrade with a key-code

From Main Menu > Settings > Port Upgrade

You will notice a box checked “√” beside activated license, while “X” beside available upgrades

Please notice that the default license of WTX-35-B4 is a Wideband 2port license



Toggle between available upgrades using the Up/Down arrows, and choose one then press “Enter” key you will be required to write the key-code.



To activate any purchased upgrade either the 2-port or the 4-port license, select the required license, press “Enter” key and write down the key code provided by Consultix Support team

Please contact [support@consultix-egypt.com](mailto:support@consultix-egypt.com) for any required upgrades

Press Enter, then you will notice the box checked “√” for successfully upgrade





## Specifications

| RF Characteristics              |   |
|---------------------------------|---|
| Number of simultaneous channels | 4   |
| Internal Frequency Accuracy     | 2 ppm. (Typical 1ppm)   |
| Frequency Range                 | 400 MHz – 2700 MHz<br>150 MHz – 400 MHz (Optional)<br>2700 MHz – 3700 MHz (Optional)  |
| Frequency Step                  | 100 KHz   |
| Modulation                      | CW (Continuous Wave); single carrier  |
| Minimum output power            | -10 dBm   |
| Maximum output power            | 15 dBm @ 150 MHz to 1800 MHz<br>10 dBm @ 1800 MHz to 2700 MHz<br>5 dBm @ 2700 MHz to 3500 MHz<br>2 dBm @ 3500 MHz to 3700 MHz |
| Power Accuracy                  | ±1 dB (typ. ±0.5 dB)  |
| Off Transmit Power              | -100 dBm  |
| Non-Harmonic spurious           | <-40dBc @ 10dBm output power  |
| RF output                       | 50-ohm SMA Female   |
| Power supply                    |   |
| Power Consumption               | <14 Watts   |
| DC Input                        | 12 VDC, 2 A power adapter   |
| Battery                         | 7.2 V, 2.2 A Li-ion chargeable battery  |
| Battery Operation time          | 105 minutes (Field exchangeable battery)  |
| Physical                        |   |
| External Dimensions             | L179 x W80 x H43mm  |
| Antenna interface               | SMA Female  |
| Weight                          | < 700gm incl. battery   |
| Operating Temp                  | -10 to +40 C  |





## Further Help

-For any support inquiry, kindly contact: **Support:** [support@consultixwireless.com](mailto:support@consultixwireless.com)

Or contact our distributor covering your region  
(check [www.consultixwireless.com](http://www.consultixwireless.com))