

Safari Transmitter Family

User Manual

(Safari, Mini Safari & Grand Safari)





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Introduction

The Safari™ CW transmitter family comprises portable high-power signal generators engineered particularly for field applications such as outdoor model tuning, candidate site assessment, DAS injection/testing or CW walk-testing.

This field-proven family of RF generators allows full flexibility of user's choice from single, dual up to quad port operation with the widest mix of amplifiers in the market from 1 Watt up to 20 Watts covering most of wireless bands from 100 MHz up to 4.2 GHz.

The Safari family is based on the user interface of Consultix award-winning WTX transmitter which achieved remarkable success globally and has been the preferable choice for radio planning and test engineers since 2011 due to its field-convenience, wide-band operation and cost-efficiency.

The modular family allows user's selection of up to 4 modules from 200, 300, 400, 700, 850, 900, 1800,1900, 2100, 2400, 2600, 3500 MHz or up to 2 modules of wideband operation up to 4 GHz (4.2 GHz in Mini Safari).

Features

- Handheld & Heavy-duty
- Ruggedized Plastic Hard Case
- Wideband operation
- A broad range of high-power amplifiers

Supported Bands (depend on your ordered configuration)

- VHF
- CBRS
- LTE
- UMTS/HSxPA
- GSM/EDGE
- CDMA2000/EV-DO
- WIFI/WiMAX
- Public safety / Tetra / LMR
- 5G sub-6 GHz
- C-band



Safety Compliances & Precautions

In order to use the transmitter in a correct, efficient, safe way and to avoid any damage that might be caused by improper operations or connections, you are recommended to:

1. Use only the original accessories to prevent any damage to the device
2. To not affect the radiation pattern, don't touch the antenna during operation
3. Connect the antenna before switching on the corresponding RF port
4. Don't let water or other liquids flow into the device
5. Prohibit approaching the device to flammable or explosive items
6. Don't open the device outside company maintenance centers

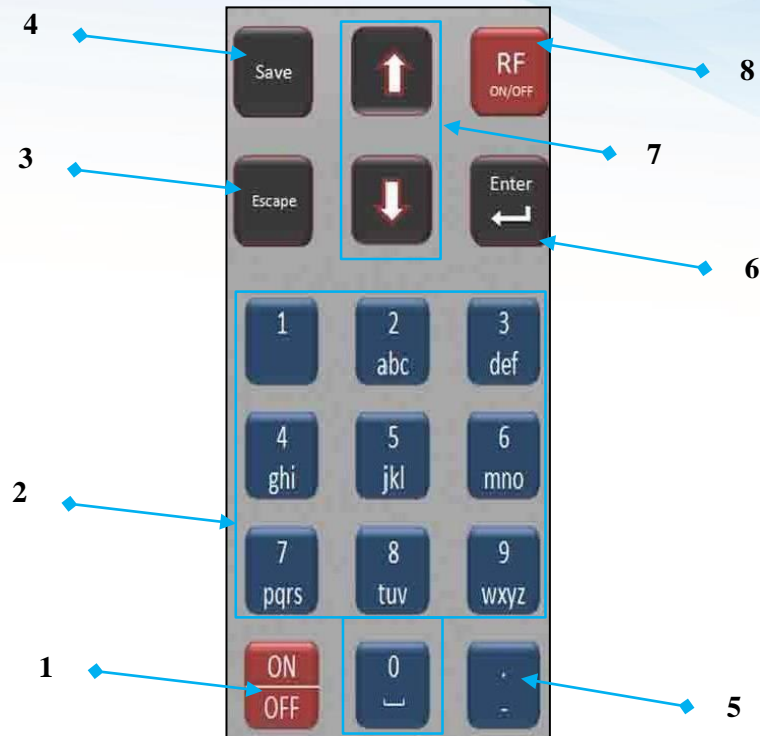
Physical Interfaces




Figure 1: User interface

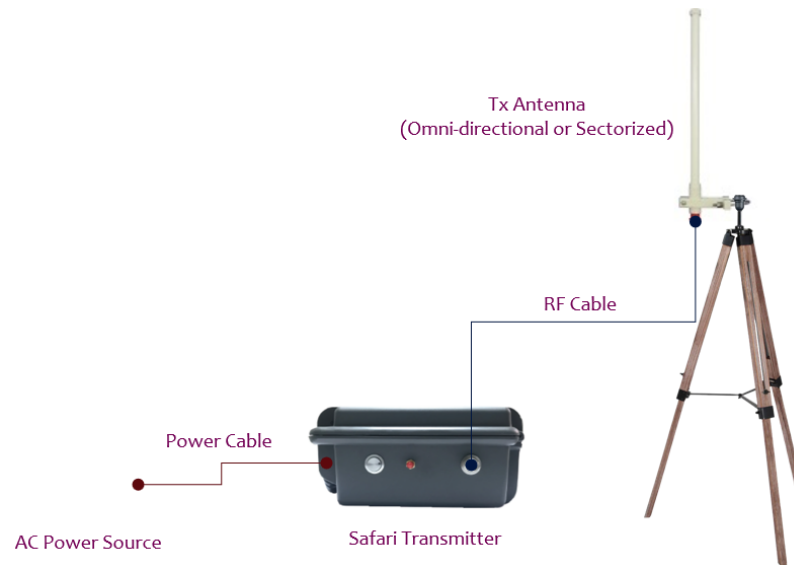


Control Keypad



- 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

System Preparations (some might not apply to your case)



- 1- Erect the tripods and mount the Antennas
- 2- Connect the RF cable between the Safari RF port and the antenna (or your test point)
- 3- Connect the provided AC/DC adapter to AC source and the other end to the DC socket of the Safari
- 4- Press the Power ON/OFF button to switch the system on



- 5- Open the system cover to access the front panel

In case you have a power sensor (optional)

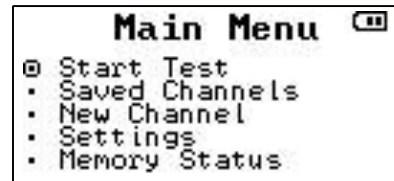
- 6- Connect the RF cable between the Safari and the power sensor
- 7- Connect the output port of the power sensor to the antenna with another RF cable
- 8- Connect the power sensor to the PC and run its software (if any)
- 9- If you have more than one port/sensor select the sensors SNs you are using and open all sensors on the same session

Getting started

- Make sure your load, DUT or antenna is connected before switching on
- Switch On the device by a one-second press on the keypad On/OFF switch

Main Menu

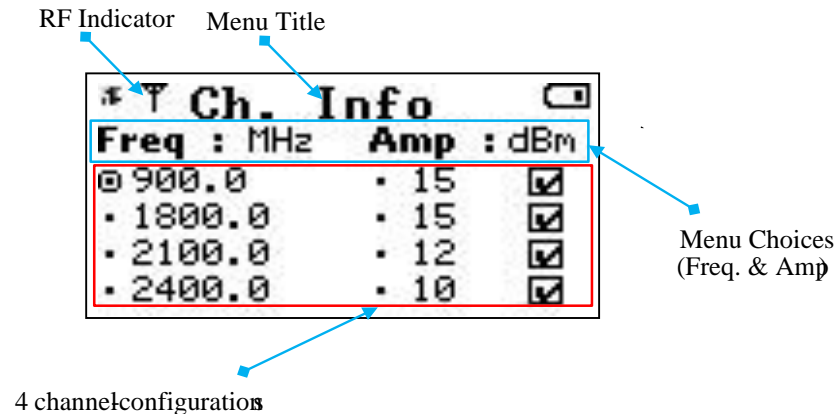
This menu contains all available functions that can be applied for the transmitter like starting a test, saving a test channel, going to system settings and checking the device memory.



Start your Test

Selecting this menu choice will recall all configurations of the last test setup including Freq. (MHz), and power (dBm or Watts). And you can modify it afterward.

This is usually the first step to make you CW measurements.



1- Edit any parameter as follows

- Move with the cursors between different ports (up and down)
- Press the button “Enter” to edit any port
- Write test channel frequency (standard frequency step is 100 KHz)
- Write each port power (in **dBm** or **Watts**)
- You have up to 4 channels configurations, 1st configuration is for the transmitter port 1, 2nd configuration is for the 2nd transmitter port and so on

| Ch. Info | | |
|------------|-----------|-------------------------------------|
| Freq : MHz | Amp : dBm | |
| @ 900.0 | • 15 | <input checked="" type="checkbox"/> |
| • 1800.0 | • 15 | <input checked="" type="checkbox"/> |
| • 2100.0 | • 12 | <input checked="" type="checkbox"/> |
| • 2400.0 | • 10 | <input checked="" type="checkbox"/> |

2- Press Key “1” to enable or disable the transmitter port 1, press Key “2” for enabling port 2 and so on.

| T Ch. Info | | |
|------------|-----------|-------------------------------------|
| Freq : MHz | Amp : dBm | |
| @ 900.0 | • 15 | <input checked="" type="checkbox"/> |
| • 1800.0 | • 15 | <input checked="" type="checkbox"/> |
| • 2100.0 | • 12 | <input checked="" type="checkbox"/> |
| • 2400.0 | • 10 | <input checked="" type="checkbox"/> |

3- After selecting your settings, press RF ON from the keypad. You will notice the RF indicator appears on the screen

4- Then use the system RF ON/OFF Push buttons to activate each Power Amplifiers



5- Once you are done, go through the following steps.

Switching OFF

After you accomplish your test, please follow the below instructions:

- 1- Turn RF off from the transmitter keypad
- 2- Turn off the push button of each RF port
- 3- Turn off the main power of the Safari
- 4- Disconnect the RF loads/antennas from the ports



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

