



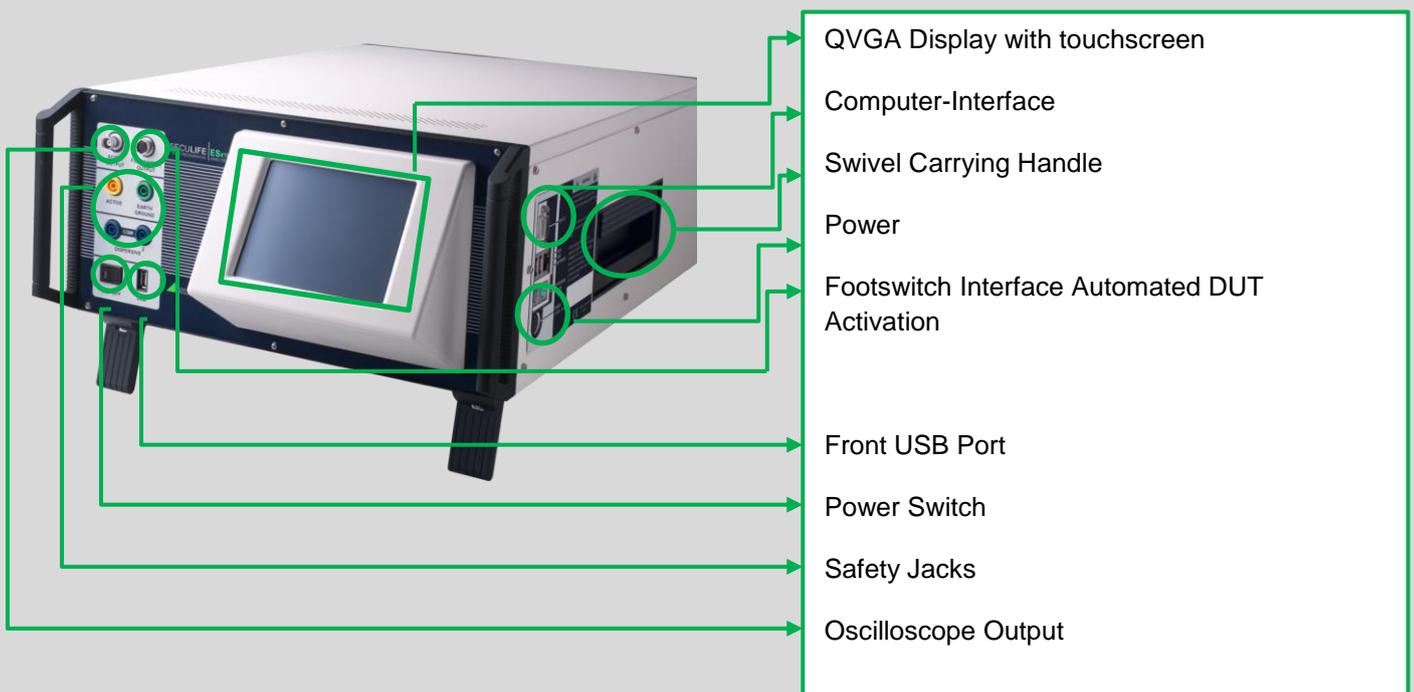
# SECULIFE ESXTRA Quick Setup Guide





## Overview & Components

The SECULIFE ESxTRA Electrosurgical Analyzer is a high-accuracy True RMS RF Voltmeter designed to be used in the calibration and routine performance verification of Electrosurgical Generators. It offers a higher degree of accuracy than previously attainable with conventional Electrosurgical Unit Analyzer designs. The SECULIFE ESxTRA provides an advanced low reactance internal load bank with a range of 1 to 6400 ohms in 1 ohm increments. It is microprocessor based and utilizes a combination of unique hardware and software to provide accurate and reliable test results, even from “noisy” ESU Generator waveforms such as “Spray”. The DFA™ Technology utilized in the SECULIFE ESxTRA allows the system to aggressively digitize the complex RF waveforms produced by Electrosurgical Generators, analyze each individual digital data point, and provide highly accurate measurement results.





## Overview & Components

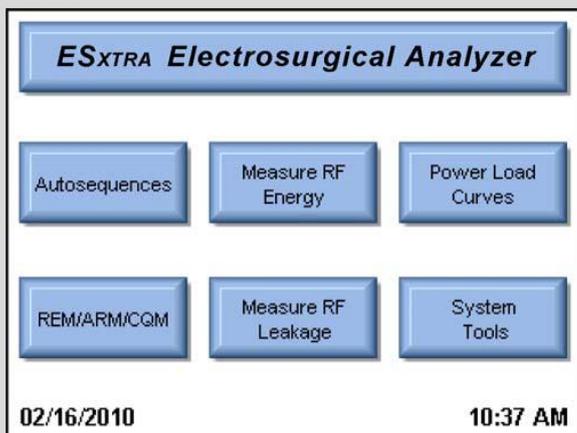
Your SECULIFE ESxTRA will be delivered in ....



## Setup Guide

### Main Screen

The SECULIFE ESXTRA boots to the main screen by default. The power up screen can be changed in the System Setup screen. The main screen provides a quick way to select the desired operating mode.



#### **Autosequences:**

This mode provides for automated DUT testing. Autosequences can consist of any combination of user instructions.

#### **Measure RF Energy:**

This mode provides for RF measurements. The user can configure the desired RF measurement

#### **Power Load Curves:**

This mode provides for automated load curve testing of the DUT. Load curves can be configured for multiple load values and power levels.

#### **REM/ARM/CQM:**

This mode allows the user to test the REM/ARM/CQM function of the DUT.

#### **Measure RF Leakage:**

This mode provides for RF Leakage measurements. All switching for the leakage modes is performed by internal relays.

#### **System Tools:**

This mode provides for Configuration of the SECULIFE ESXTRA.

## Setup Guide

### Verification of RF output power monopolar



- 1.) Connection of DUT and SECULIFE ESxTRA  
Establish a connection between DUT and SECULIFE ESxTRA before performing a RF measurement. To this end, the monopolar socket of the DUT is connected with the yellow safety socket of SECULIFE ESxTRA via a measurement cable (yellow marking). Connect the SECULIFE ESxTRA function tester with the neutral port of the DUT via the blue cable (see blue marking).
- 2.) Select settings and perform measurements  
The measuring parameters (e.g. resistance) can be configured at the display (black marking). After connecting the footswitch output with the footswitch input of the DUT, the DUT can be remote controlled (cable is optional). Measurements are launched by pressing the footswitch symbol (marked in red).



### 3.) Verification of RF power (monopolar)

The preset value of the DUT (here: 40 Watt) is compared with the display value of SECULIFE ESxTRA (here: 37.1 Watt).



Excerpt: DUT display

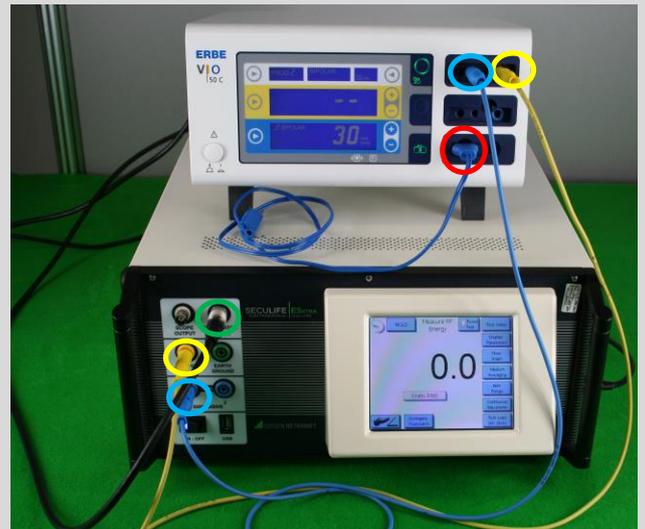


Ausschnitt: SECULIFE ESxTRA

## Setup Guide

### Verification of RF output power bipolar

1.) Connection of SECULIFE ESXTRA with DUT for establishing a connection, insert the yellow cable into the bipolar socket of the DUT and into the yellow safety socket of the SECULIFE ESXTRA (marked in yellow). Furthermore, the blue cable must be plugged into the bipolar socket (in the middle) of the DUT and connected with SECULIFE ESXTRA (left socket). A short circuit which deactivates the neutral electrode monitoring is triggered by means of the blue plug connector.



2.) Select settings and perform measurements  
The measuring parameters can be set via the display. Measurements are launched by pressing the footswitch Symbol (marked in red). The black cable serves as an "automatic footswitch" which can be replaced by a manual footswitch.

3.) Verification RF power (bipolar)  
The value of the DUT is (here: 30 watts) compared with the value of SECULIFE ESXTRA (here: 28.3 Watt).



Ausschnitt: Display SECULIFE ESXTRA

Ausschnitt: Display Prüfling



## Setup Guide

### Verification RF – Leakage current

This operating mode provides for the measurement of RF leakage current. The user can configure the den SECULIFE ESxTRA for the requested RF leakage measurement which includes measurements of pulsed or continuous waveforms and load settings.



#### 1.) Connection of DUT and SECULIFE ESxTRA

For leakage current measurement, a connection must be established by means of a clamp cable. For this purpose, the alligator clip is clamped onto the equipotential bonding (at the back of the DUT housing) and connected with the safety socket at the front panel of the SECULIFE ESxTRA

#### 2.) Select settings

Settings can be made at the display of the SECULIFE ESxTRA. 4 modes are available for leakage current measurements.

#### 3.) Verification of leakage current

The value shown at the display is compared with the limit values (refer to operating manual).



Figure: active output grounded, type CF 1a, e. g. bipolar

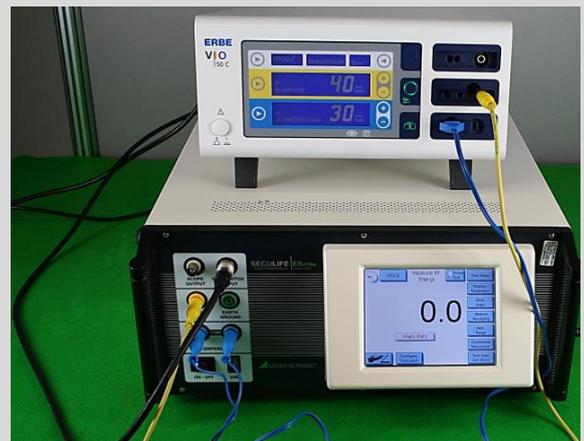


Figure: neutral electrode grounded, type CF 1b, e. g. monopolar

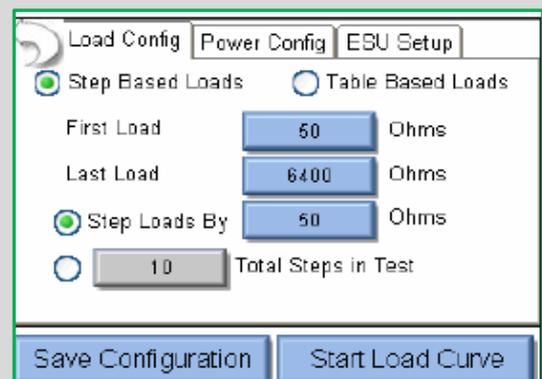
## Setup Guide

### Output power as a function of load resistance

- 1.) Connection of SECULIFE ESxTRA and DUT  
The same connection as for measurement of RF output power (bipolar/monopolar) can be used.

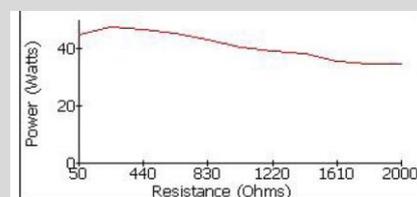


- 2.) Load curve configuration  
The load curve menu allows for manual configuration of a load curve. The settings can be made under the respective tab at the top of the display. It is possible to configure loads, power settings and the ESU generator.



- 3.) Verification  
For verification purposes, the issued load curve / measured values can be compared with the curves in the operating manual.

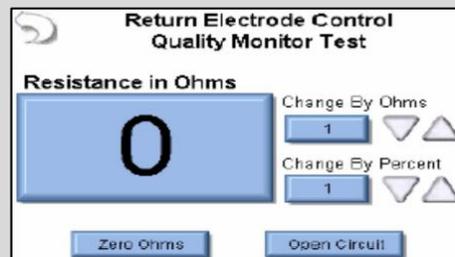
Measurements:	
Load	100W
50	45.2
245	47.9
440	46.7



## Setup Guide

### Verification of neutral electrode

This mode enables the user to test the REM/ARM/CQM functions of the DUT. The resistance can be set manually by entering either an absolute resistance value or a percentage value. This mode allows for running the CQM load in idle state.



#### 1.) Connection

For testing the neutral electrode, it is only necessary to connect the blue cable with the neutral electrode socket of the DUT and with the blue sockets of the SECULIFE ES<sub>x</sub>TRA (blue marketing).

#### 2.) Verification

The easiest way to check whether the resistance has been set at too high a level, is to check the neutral electrode pilot lamp.

This pilot lamp helps to approach the trigger point (the value is frequently indicated in the manufacturer service manual).



Excerpt: DUT display

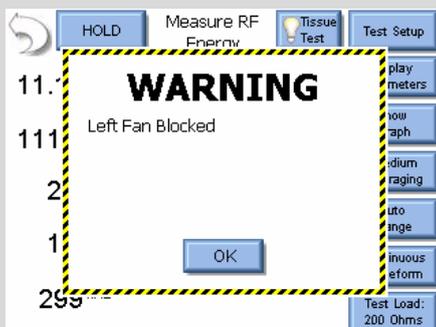
## Setup Guide

### Barcode-Scanner

The SECULIFE ESXTRA is compatible with USB type barcode scanners. These scanners can be helpful when entering DUT information. They will act as keyboards that convert barcode data into text. When the SECULIFE ESXTRA is ready to accept the desired text, simply trigger the barcode scanner instead of typing in the barcode text.



### Error Messages



The SECULIFE ESXTRA continuously monitors for various system faults. If a fault occurs, the user will be notified by a warning message as shown left.

When the user presses the OK button, warning message is cleared from the screen. After a failure has been detected, the main screen will display an icon indicating that faults

are present, as shown →



**Pressing** on the warning icon will **display** the active faults and the status of the faults.