

SYN-E/X/X MM-WAVE PORTABLE SIGNAL GENERATOR



QUICK START GIUDE

This mm-wave generator (SYN-E model line) operates from 68 to 88 GHz frequency spectrum within a few sub-bands. The generator could be manufactured with an output power of 200 mW as a basic model, or with customized output power up to 2000 mW.

This is a quick guide on how to powering up the generator and use ELVA-1 software to change the frequency settings. This software is recommended to install before using the generator for the first time.



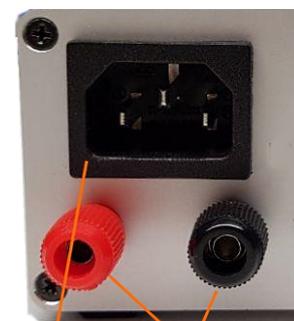
Make sure the load connected to RF output socket can handle output power more than maximum specified for your model of SYN-E generator. If not please use appropriate attenuator or coupler to protect your instrument.

To order relevant attenuator or coupler or power sensor please contact ELVA-1.

Getting started

1. Read this guide and install supplied frequency tuning software on your PC.
2. Remove the protective dust covers from the waveguide and coaxial ports.
3. Make sure there are no mechanical damages to the generator and PSU cases and supplied cables.
4. Check for absence of foreign objects in the waveguide flange. Don't blow through the waveguide with mouth or compressed air.
5. Make sure that both the generator and PSU are turned off.
6. Connect the generator and external PSU via supplied DC/DC cable.
7. Connect the external PSU to a power main (DC or AC input).
8. Connect the USB cable to the «USB in» socket on the generator and to PC.
9. Connect external reference source to the «REF in» socket on the device front side. The reference signal should be 10 MHz and power level from 0 to +10 dBm (typical +4 dBm).
10. Turn ON the PSU by the power switch on rear panel in one of the following positions:
 - Position "I" is for supplied AC,
 - Position "II" is for DC.

Make sure that the Power LED indicator is ON.
11. Switch power on generator front panel to ON.
All LED indicators POWER, REF, LOCK have to be ON.



AC/DC and DC/DC inputs

DC/DC powering could be used for field work (powering from car battery, for example)



3-position power switch

LOCK: PLL Lock indicator, is on when detecting PLL Lock (Phase locked loop)

REF : indicator is on when detecting the external reference frequency 10 MHz

Please check that both REF and LOCK indicator are enabled for correct work of SYN-E signal generator.

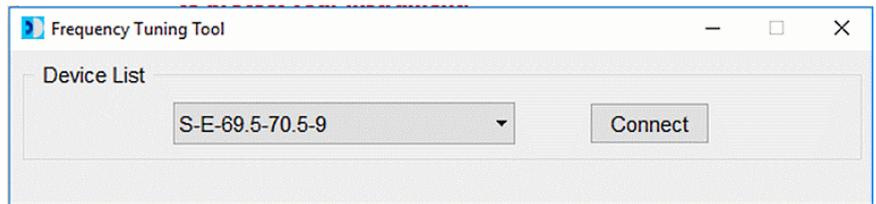
Using software

Launching generator control software



1. Click on Frequency Tuning Tool icon on your PC display to initialize software.
2. Generator model name should appear in the "Device list" drop-down. Press "Connect" button to continue.

- If the model name does not appear, check USB cable if it is connected properly.



Using generator control software

1. Get familiar with the controls on software window.
2. Set desired output RF frequency. There are two ways to enter frequency - type it directly in the 'SET FRQ' line or setting the desired frequency by sequentially clicking the 'Step [kHz]' buttons.
3. Set desired attenuation similarly by entering it directly in "SET ATT" line or sequentially clicking the "Step [dB]" buttons.

- "Power OFF" button turns OFF/ON the RF output signal. Affects the output signal only, not the generator powering.
- "Disconnect" button breaks the connection with PC.

