

# LUNARIS-2000

2 Kilowatt 1.8- 56 MHz

SWR & POWER METER HF+6 METER

... with TANDEM MATCH SENSOR & LOGARITHMIC –DETECTOR

**BIG BRIGHT CRISP EXCELLENT RESOLUTION EASY TO READ**



2kW SWR/POWER meter for HF + 6 m Fully auto ranging using ARM CORTEX-M7 & 200 times per second sampling rate. Highly accurate & fast for measuring Forward, Reflected, Peak / Average Power & VSWR. CALIBRATED with ROHDE & SCHWARZ SMY 01 and SMA1008 Signal Generator

MODEL NO.

**LUNARIS-2000**

## SPECIFICATIONS

FREQUENCY RANGE

**1.8 - 56 MHz**

POWER RANGE

**-20db(10 micro watt) to 2 Kilowatt AUTORANGING**

ACCURACY

**(+ / - 5%) Power is measured 200 Times per second**

RESOLUTION

**0.025 db resolution (12bits ADC used)**

MINIMUM POWER FOR SWR

**1 mW onwards – USER PROGRAMMABLE Alarm. Adjustable SWR Alarm threshold 1.5 to 3.9 4.1= SWR Alarm off**

DISPLAY

**LCD 4” Diagonally displays Average power & PEAK power**

DC POWER

**12-24V @250ma typical from External source**

CONTROLLER

**ARM Cortex-M7 at 600 MHz**

MODES

**Forward & Reflected Power, MODULATION SCOPE, 100mS to 2.5seconds Peak power, 100ms Average Power and 1s Average Power and Power in dBm**

ALARM

**Audible/Visual SWR Alarm – user defined Power Level**

## FRONT PANEL

LCD	<b>BIG BRIGHT CRISP EXCELLENT RESOLUTION EASY TO READ DISPLAY IN dbm or WATT</b>
TOUCH SCREEN	<b>FOR NAVIGATION &amp; CONFIGURATION FOR MENU SELECTION</b>
POWER SWITCH	<b>SOFT TOUCH POWER SWITCH</b>
SMA FEMALE CONNECTOR	<b>RF Sampler - 17db</b>
POWER DISPLAY SEQUENCE	<b>PEAK POWER FOR 0.5-5 SECONDS (user defined) INITIALLY AND THEN DISPLAYS AVERAGE POWER</b>

## REAR PANEL

TX /ANT Connector	<b>2x UHF Female SO-239 50 ohms Coax. Connector</b>
Power Source	12 - 24V 0.5A



### **NOTE:**

GPIO PORT — 2 NOS. RCA Connector at the rear panel has been provided and reserved for FUTURE USE by CEDA-Labz  
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**CEDA-Labz**

# Operating Manual

## LUNARIS 2000 Operating manual

There are different menus which can be accessed through the SETUP Button on Screen and also different display modes which can be set at the click of a touch preferably at the TOP End left of the screen.

Such as -

1. Power in dBm, SWR and PEP in dBm at the bottom right
2. Forward and Reflected Power, SWR (both text and bar display)
3. Modulation Scope and PEP in watts
4. Average Power, SWR and PEP in watts (both text and bar display)
5. Alarm Trigger value – display for instant reference of your setting
6. Peak Power, SWR and PEP in watts (both text and bar display)

Note: The click can be almost any part of the display but its more effective if we click on the top left of the display

### SETUP MENU

If we click the SETUP button you will find the **Config Menu**: appears

IN CASE, you can't see the CONFIG MENU text -- go up or down with the scroll button on the left and find **EXIT** menu - select and hit the RIGHT ARROW.

Now, once again you press the SETUP menu - you should be able to see the **config menu** now which are as follows--

1. SWR Alarm
2. SWR Alarm Power
3. PEP Period
4. Display Setup
5. Scale Ranges
6. Modulation Scope
7. Calibrate
8. Debug Display
9. Debug2 Display
10. Reset to Default
11. EXIT

The Calibration has been done so don't hit the button and also don't hit the Reset to Default **Debug Display** is required when we do the calibration to check the Logarithmic detector functioning and reading too --- you may check this too

**Debug2 Display** is a feature given wherein all 6 parameters can be monitored all together - forward power, pep instantaneous power, peak power, average power and SWR  
This mode is a bit silly (only accessible through **Config Menu**). Since the two topmost graphs are dual graphs, this is effectively 8 bar graphs being displayed at once:

**Display Setup** -you can select the display background brightness as per your choice. The screen saver is a function wherein it invokes the display from the SLEEP MODE at the required min. level of power which can be set at 1microwatt or 10microwatt. IN CASE we select the OFF - the display Parameters will remain visible all time ON

**Scale Ranges** -- SELECT 1st Range = 11 for the time being we will ignore the functionality

**PEP Period** -- the PEP display period can be set to your choice which starts from 1s, 2.5s and 5seconds respectively. I normally choose 1s.

**SWR Alarm Power** -- It all depends upon your POWER AMPLIFIER how much Higher SWR it can withstand. I choose 1watt - that's a safe zone

**SWR Alarm Threshold** --- You can adjust it from 1.5 to 4 when you wish to have SWR ALARM INDICATION ON SCREEN followed by a BUZZER.

**NOTE:** WHEN THERE IS A SWR ALARM - you will find the SWR on the main display GOES RED - and if you want to stop JUST CLICK THE RED **SWR button**