

LazTuner[®]

High Power Tuner



LT-4C

www.laztuner.com

Manual - GB
V1.2
october 2023



“For many years I have endeavored to upgrade my station with high quality elements and components. Oversized, maybe, but that's what makes it great. Beyond anything that can usually be found in stores.

I love things that are beautiful and an antenna coupler can be effective, unique and beautiful. My last coupler took me several years to manufacture and refine.

Everything is done by hand, patiently, from the capacitors to the chokes, to the case and its panel. What a pleasure when everything works.

With LazTuner I want to make you love your antenna tuner.

Small series, quality components, meticulous and unique work for each coupler and the pride of using a high-class device. »

73, Lazaro F5UOO

Congratulations !

We are very happy to count you among the users of an LT-Classic-4C antenna tuner.

All antenna couplers are handcrafted with care. These are unique pieces.

Thus, the characteristics and the realization may be slightly different depending on the model.

We invite you to read this manual as well as the recommendations in order to make the best use of your antenna tuner and to obtain the best results.

The LT-Classic 4 antenna coupler

The LT-Classic 4C coupler is a versatile antenna coupler. It has a coaxial input and two coaxial outputs plus a Bypass.

An antenna coupler is to be used with good intelligence. It is not, in any case, a magic box which makes it possible to adjust an antenna but a device which makes it possible to offer the transmitter an impedance of the order of 50 Ohms.

When a tuned antenna is used, the antenna coupler allows to widen the bandwidth by decreasing the SWR.

Each LAZTUNER antenna coupler is a unique piece, handcrafted with care. Thus, the characteristics and the realization may differ slightly depending on the model. In the appendix, a calibration document for your device is attached.

The LT-Classic 4C is the result of many years in the design and production of antenna couplers. It has been tested with powers well above 4kW but it is recommended for use at a maximum of 4kW.

The measurement bridge has been the subject of an in-depth study over several months in order to obtain the best linearity in frequency and power without overheating. The components used and the production are of high quality.

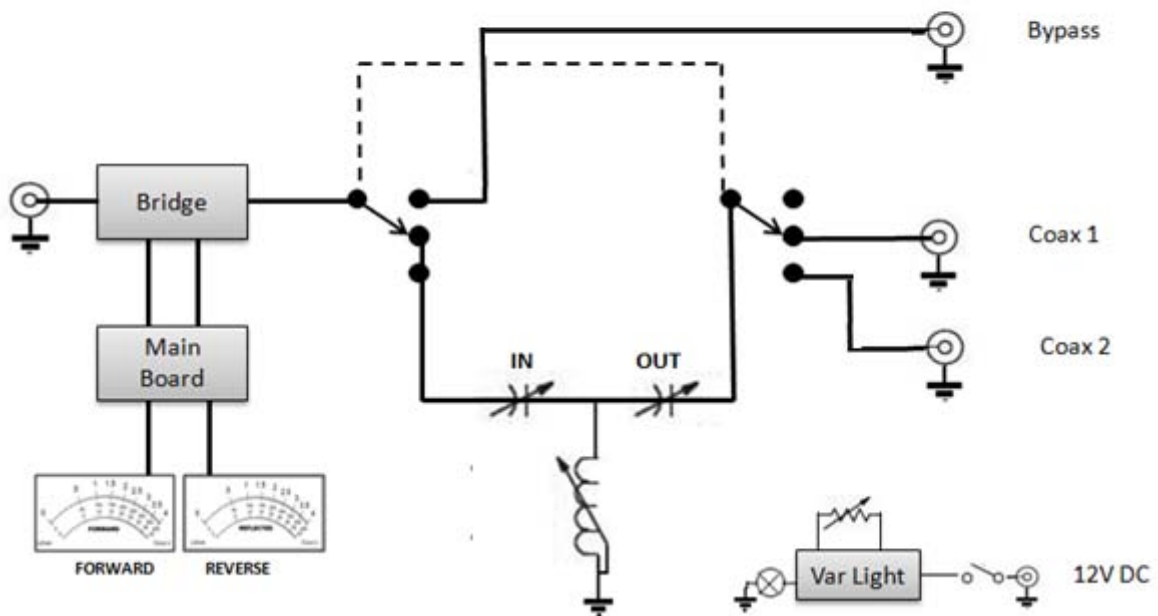
Likewise, the organization of the masses has been judiciously elaborated in the measurement bridge up to the mass on the coaxial which uses silver Amphenol "mass bells".

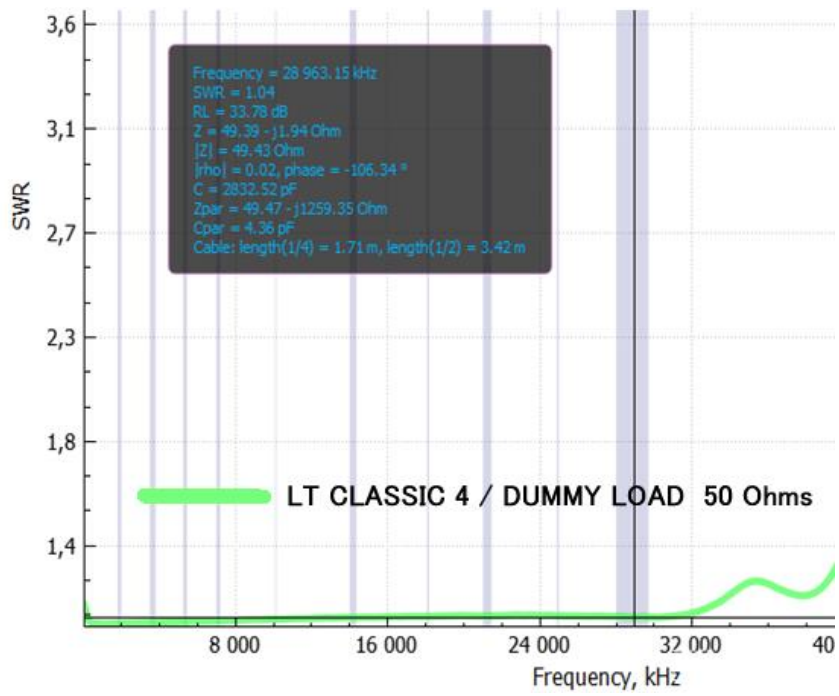
All parts used are new. These are not salvage materials.

Specifications LT-Classic 4C

Freq	1,8 Mhz – 30 Mhz
Power	4000 w
Range	40 w – 400 w – 4 Kw
Input	Coaxial
Output	2 Coaxial
Impedance	20 – 1200 ohms
Display	FORWARD – REFLECTED with 3 scales
Lights	Blue light with adjustment – Input 12V DC
Size – weight	Rack 19 pouce – 13Kg

LT-Classic 4





SWR curve after the bridge on dummy load 50 Ohms.

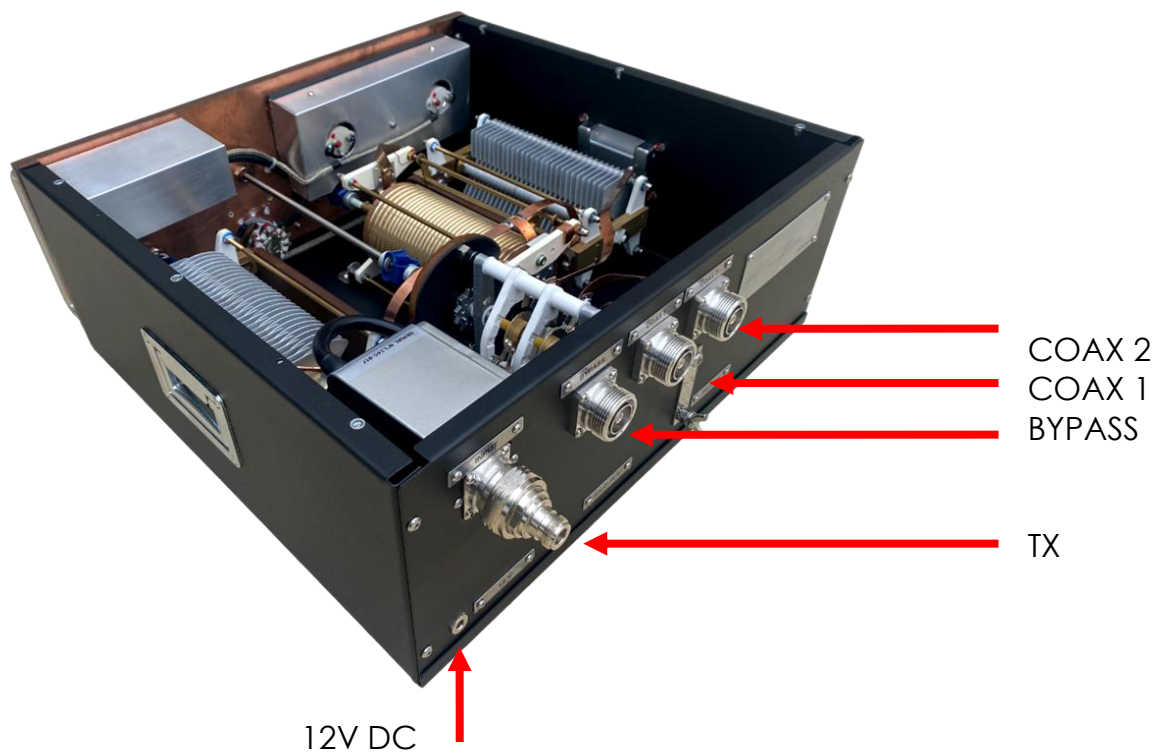


Description of LT-Classic 4C

The LT-Classic4C is available in several versions:

- 4 mm black aluminum front,
- 8 mm bakelite front with copper plate inside.
- SO239, N ou 7/16''



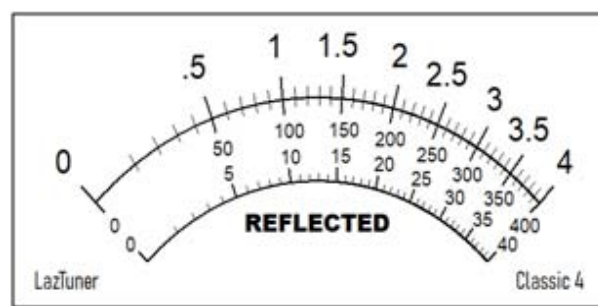
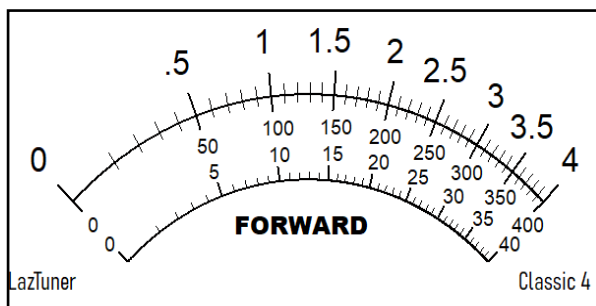


LT-Classic 4C settings

Reading on the galvanometers:

- One scale per power range 40 W / 400 W and 4 kW
- FORWARD: Power transmitted
- REFLECTED: Reflected power

The display is an indication. It is not a measuring device.



ATTENTION ! DO NOT SET AT FULL POWER

- Start with a power lower than 40W,
- Adjust to obtain the minimum reflected power,
- Then switch to the 400W scale,
- Increase the power and adjust, if necessary, the settings,
- Then switch to the 4kW range.

The LT-Classic 4 antenna coupler can support 4kW.

In order to guarantee the lowest possible HF return to the transmitter or the amplifier, it is recommended to carry out the adjustment with a 2-tone generator when high powers are used.

Adjustments and use must be made with the hood closed.

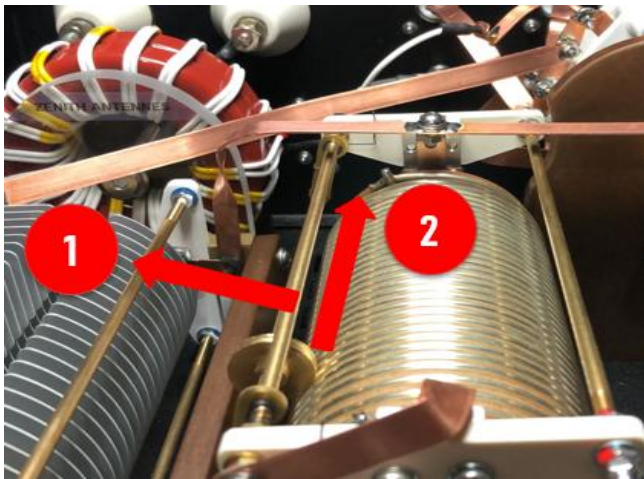
**Be careful when reaching the ends of the variable inductor.
Proceed slowly to avoid going into a stop..**

Maintenance of LT-Classic 4C

Your LT-Classic 4 antenna tuner has been calibrated and does not require adjustment. The Main-Board located at the front contains the various calibration potentiometers and must not be modified.

If the limit stop of the variable inductor is accidentally exceeded, the following operations must be carried out:

- Open the top cover,
- Carefully raise the wheel and its support,
- Turn the inductor button to reset it to 0,
- Position the wheel towards the bottom,
- Carefully lower the wheel and its support.



We must have :

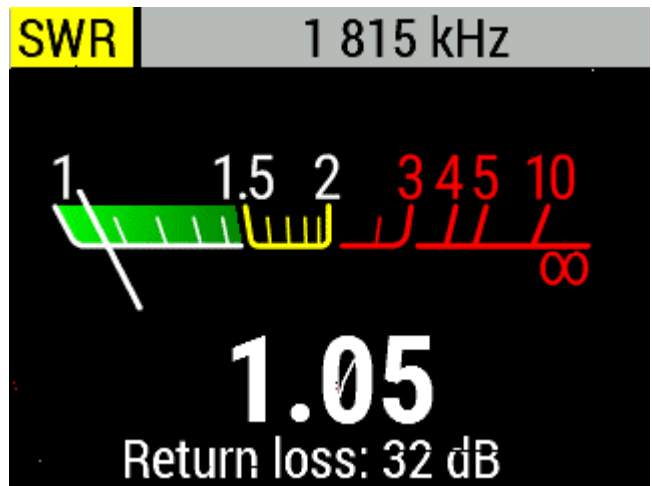
- Roulette to the bottom
- The indicator button on 0

The mechanical part most subject to variation over time is the variable inductor.

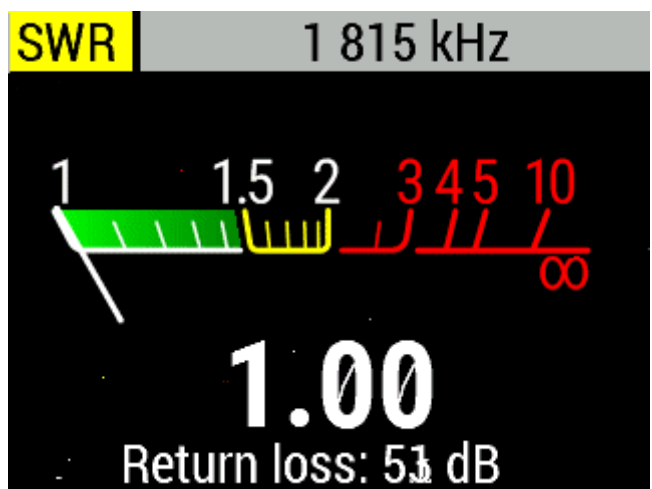
The recommendations :

- Never apply grease to the spool, roller and worm.
- Do not remove existing grease on the endless screw.
- Do not touch the turns of the coil with your fingers.
- Every 4 to 5 months it is possible to clean the coil carefully using a cotton ball soaked in a deoxidizing product.

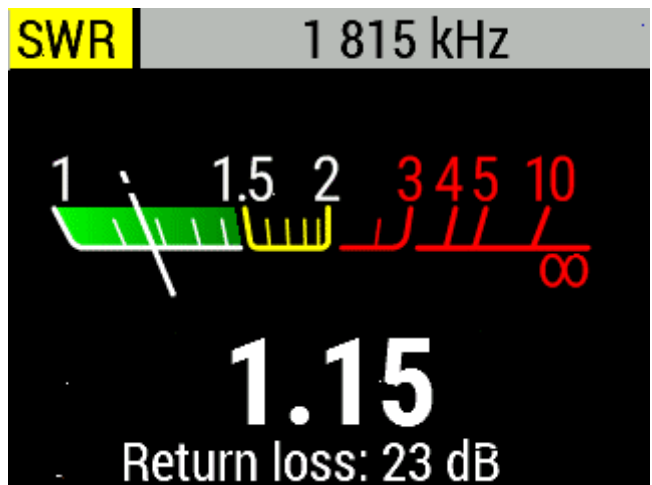
Load 20 Ohms



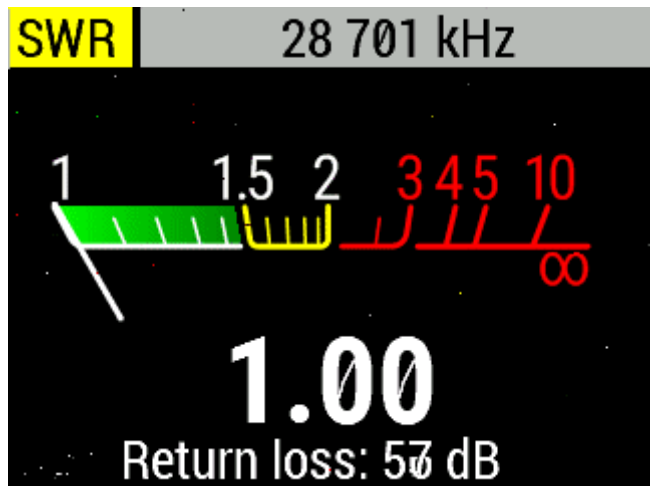
Load 50 Ohms



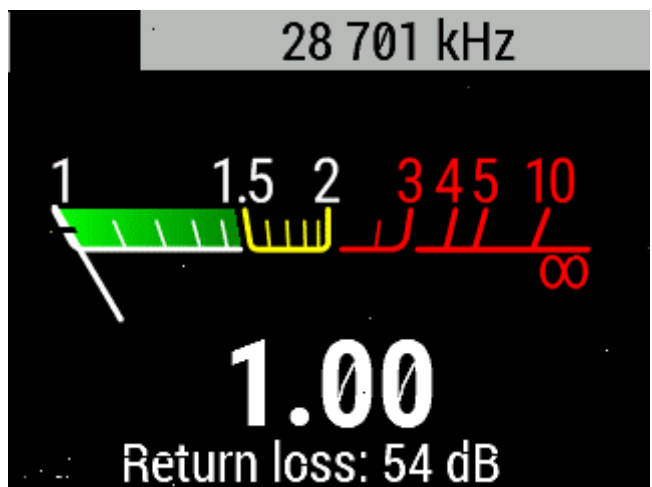
Load 1200 Ohms



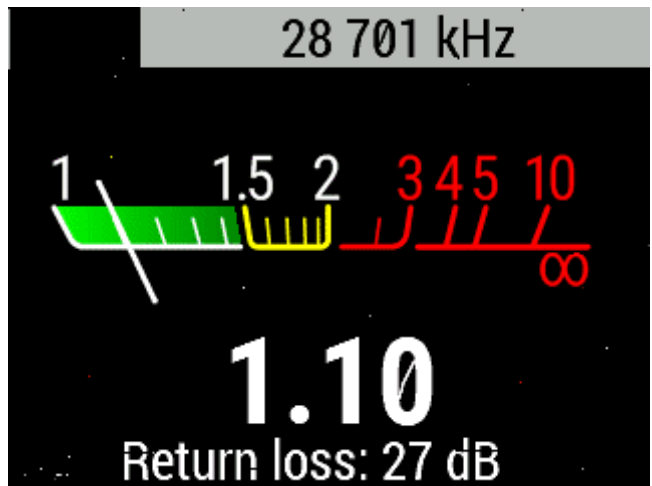
Load 20 Ohms



Load 50 Ohms



Load 1200 Ohms



Versions of LT-Classic 4

The LT-Classic-4 is available in several versions with always the same quality requirements.



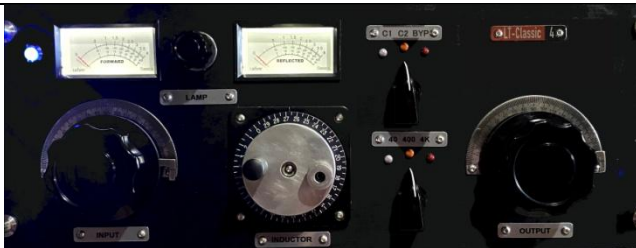
LT-4

BYPASS
COAX 1 DIRECT
COAX 2 DIRECT
COAX 1 TUNED
COAX 2 TUNED
TWINED



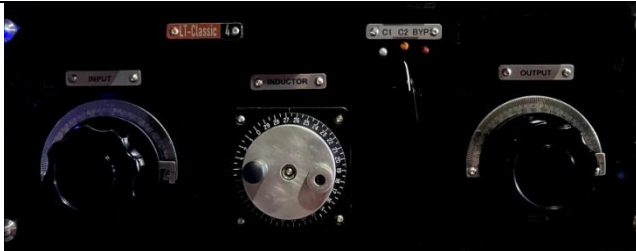
LT-4B

BYPASS
COAX 1 TUNED
COAX 2 TUNED
TWINED



LT-4C

BYPASS
COAX 1 TUNED
COAX 2 TUNED



LT-4CX

BYPASS
COAX 1 TUNED
COAX 2 TUNED
NO BRIDGE



LT-4D

COAX 1 TUNED



LT-4DX

COAX 1 TUNED
NO BRIDGE

Personal notes