



LA-1K Fault and Display Notifications

Firmware Revision v1.05J adds a feature when direct keying mode is selected in the user menu: If in direct keying mode, the LA-1K will automatically switch to standby whenever band changes occur, to make using the HF Auto tuner more convenient. This switching to standby with band changes applies with, or without band data cable connected.

Important: all matching adjustments must be completed at low power with the HF AUTO.

The LA-1K displays **fault** indications when the indicated values are too high. Failed parameters will turn red, and **Starting with Firmware Revision 1.05H, a fault indication message will flash on the display until the next transmission.**

NOTE that on all previous versions of firmware before Firmware Revision 1.05H, the fault indications are only displayed while the PTT line is keyed low (Except over temperature).

" TX" is displayed, any time the PTT line is keyed low.

Note that "TX Bypass" simply means that the amplifier is currently feeding exciter power straight through to the antenna. This normally displays when transmitting in standby mode.

What follows is the latest description of “fault” display indications for the LA-1K:
This updated list is based on the latest 1.05J firmware.

TX Bypass SWR: The SWR has gone high during a transmission. It may do this with a transient SWR fault (such as an arc fault on the antenna, or lightning arrestor) The SWR reading may be low, or high after tripping but the LA-1K STAYS in bypass until you unkey the transmitter. **The “Bypass SWR” graphic will then continue to flash until transmitting shows a lower SWR.** (Starting with V1.05H firmware)

Adjusting the antenna tuner while transmitting high power may trigger this indication. **The LA-1K should always be in BYPASS for all antenna tuner adjustments.**

SWR High, TX wait displays: The amplifier will not key up until the SWR indication is below 2.5, it is waiting for lower SWR before keying up. When you unkey, the display continues flashing Bypass SWR

SWR low, TX wait displays: The amplifier is keyed on the PTT line but waiting for RF to be applied before transmit mode completes. (In Operate Mode) This indication does not occur in direct keying mode if band data is present.

Bypass ID: This fault trips to protect the transistors whenever the drain current (ID) exceeds 45.9A. This may occur with a poor load SWR that places capacitive reactance on the LA-1K output. If the SWR cannot be adjusted to provide lower ID values, the LA-1K drive level must be reduced to prevent tripping. **Normal ID values should never exceed 42A at 1,000 W carrier power.**

Bypass Temp: The LA-1K heatsink temperature has exceeded 99 degrees C. The LA-1K stays locked in STANDBY until the temperature has dropped below 70 degrees C. Note that if power is cycled, the amplifier lockout may be reset immediately, providing that temperature is below 99 degrees C. Make sure the LA-1K vents are not blocked. Reduce power if necessary.

TX OVERDRIVE: The LA-1K has detected drive levels exceeding 70W. It has bypassed to protect the transistors from possible damage. This protection only works on signals with a fast rise time, such as CW. Drive level should not exceed 60 W.

Note that if the frequency turns red, and the LA-1K won't key, you are transmitting in a locked out frequency range such as 27 MHz CB band. The lockout window is from 25.983 MHz to 28.001 MHz. If transmitting below 1.8 MHz, the LA-1K simply shows **TX Bypass**. It will not operate in this frequency range.

For questions or support, please visit:

<http://www.palstar.com/en/support/>