

The IC-9700 has a built in Bias T circuit to supply 12V at up to 400mA over the coax feed to an external LNA (Low noise amplifier) - preferably mounted as close to the antenna as possible – not in the shack. Running one in the shack will just raise the noise floor.

Configure the LNA's gain level so that it raises the noise floor very slightly when it is switched on, having too much LNA gain reduces the dynamic range of the radio and worsens the strong signal handling capabilities. – see <http://www.ifwtech.co.uk/g3sek/vhfdx/preamps-talk-2015.ppsx> and <http://www.ifwtech.co.uk/g3sek/vhfdx/dg8-design-calcs.xls>

If you run with an external power amplifier, you need to check that it passes DC as some don't, and it is possible that the external amplifier may not like being fed with 12V on it's RF input.

## Each band's LNA power needs to be enabled in the Connectors menu.

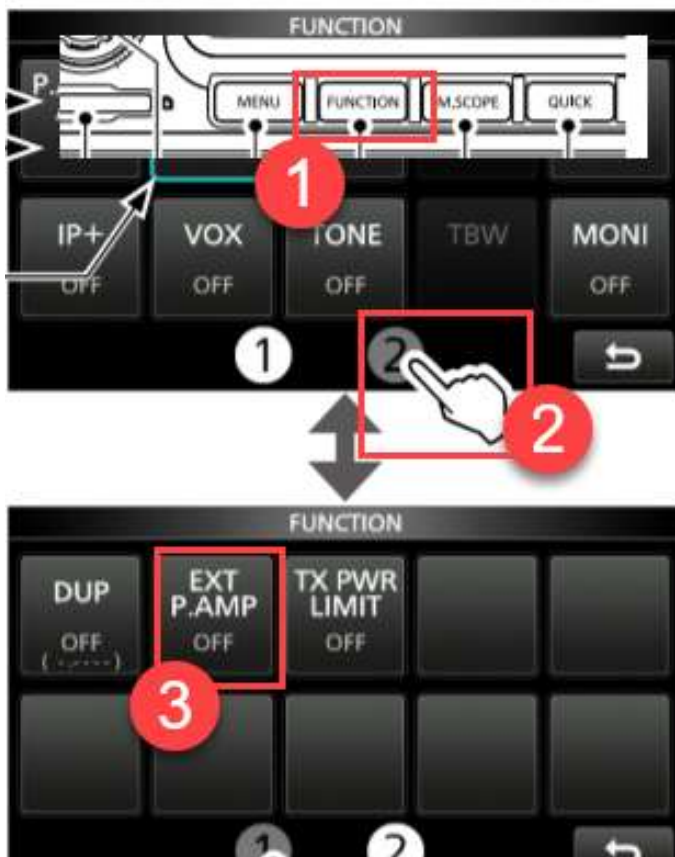
### Using an external preamp

You can also use an external preamp (User supplied)

① To use an external preamp, you need to set the External Preamp ON or OFF for each band on the MENU screen.

**MENU** » **SET > Connectors > External P.AMP**

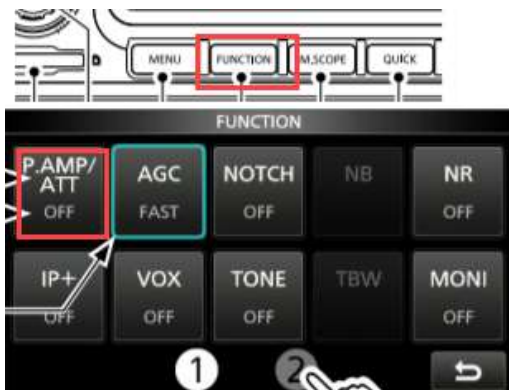
The LNA 12V feed can be switched on/off from the rigs Functions menu  
It is on the 2<sup>nd</sup> Function screen.



# IC-9700 Pre-amp (LNA) Control

Robin G1MHU

The rig's own internal pre-amp is controlled from the rig's front panel Pre-amp / ATT button or from the 1<sup>st</sup> Function screen. It is a shame that the external LNA cannot be controlled by a long press of this button, or a double tap, maybe Icom's firmware guys will implement this later?



### FUNCTION screen list

\*1 Touch for 1 second to select the function.

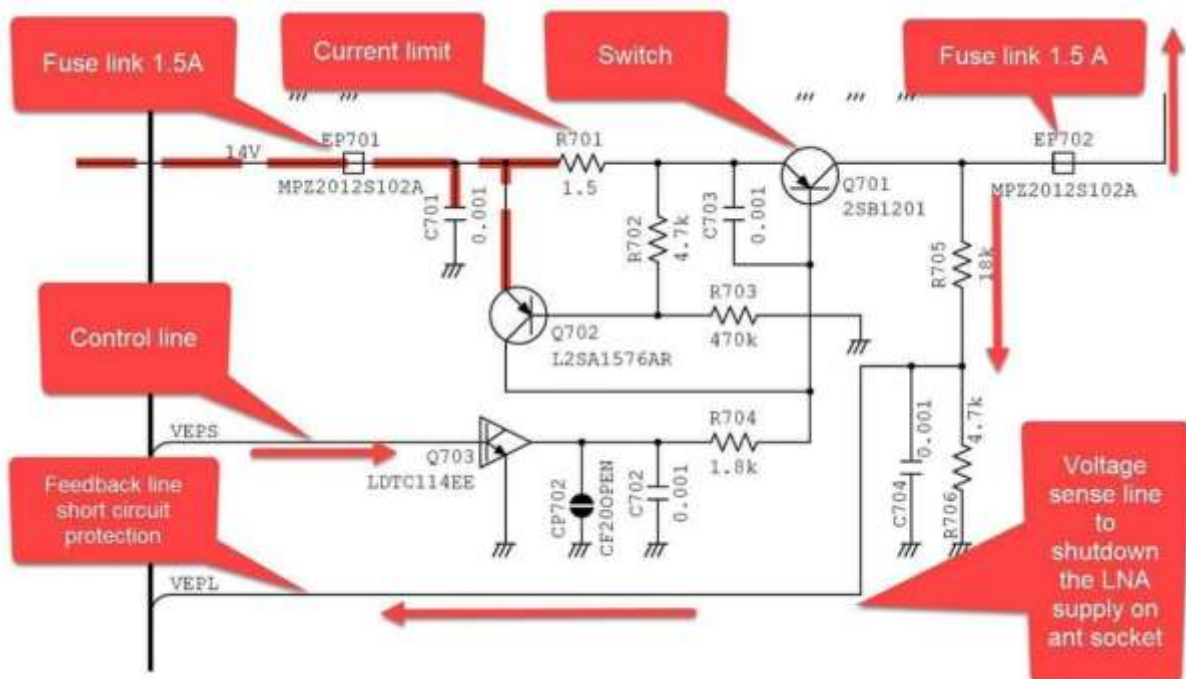
\*2 Touch for 1 second to open its function menu.

P.AMP/ATT	AGC <sup>*2</sup>	NOTCH <sup>*2</sup>	NB <sup>*2</sup>
OFF	FAST	OFF	OFF
P.AMP	MID	AN	ON
ATT <sup>*1</sup>	SLOW	MN	

## The Circuit (this is showing just one of the 3 band control lines)

CP702 can be bridged to disable the LNA voltage. (similar solder lands are for each band)

If your pre-amp drive voltage is not appearing – check EP-701 and EP-702 are not open circuit.



If the CPU detects too high a current drain, then the rig will disable the LNA voltage.

