

## Remote Control:

The remote head is not supplied from RM Italy however the circuit diagram below shows the requirements of creating a remote front panel if required. The connector is an RJ45 type and cable length should be no more than 3m in length. The remote front panel controls offer the same functionality as the front panel of the KL805.

The function of the pins present on the remote connector as follows:

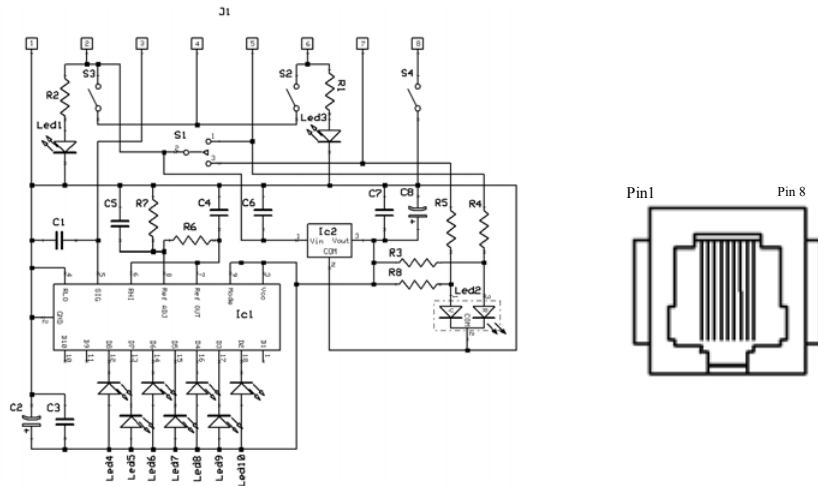
1. Ground
2. Preamplifier ON input
3. Wattmeter signal output
4. Power output for the remote command
5. Hi power input
6. Linear amplifier ON input
7. Low power input
8. SSB input

At no time should voltage appear on pins 5 & 7 at the same time.

When using the remote control, the switches on the front panel should be set as follows:

- Preamplifier OFF
- Linear Amplifier OFF
- SSB / AM AM Mode
- Power set to Mid, (center), position.

The diagram below shows the circuit diagram of the remote control circuit and pin out of the RJ46 front



## Warranty:

The KL805 is covered by a 24 month warranty against manufacturing defects, from the date of purchase. The RF transistors, external and aesthetic damage are not included in the warranty.

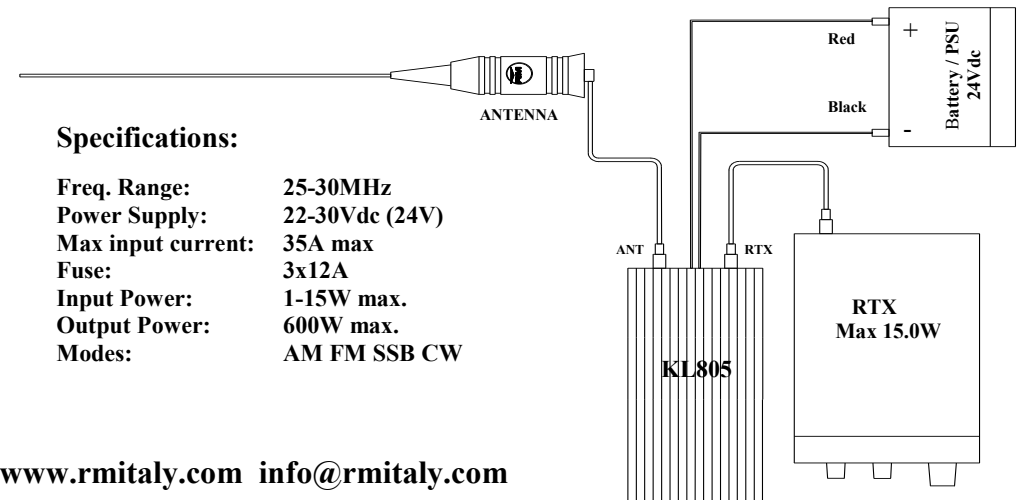
[www.rmitaly.com](http://www.rmitaly.com) [info@rmitaly.com](mailto:info@rmitaly.com)

# KL805 Linear Amplifier

25-30 MHz



The KL805 is a 24Vdc narrow band HF Linear amplifier covering 25-30MHz. Maximum output power is 600W from 15W input power. It may be used in AM,SSB,CW and FM modes of transmission. The KL805 features a independant receive preamplifier that provides about 26dB gain for the received signal. The diagram below and the front and rear panel descriptions on the following page show how the amplifier should be connected. The KL805 features an internal RF switch so when the linear amplifier is switched on, it will automatically switch to TX and amplify the output of the transceiver when there is RF on the RTX input connector. The KL805 features internal automatic VSWR protection and will shut down if the antenna VSWR increases about about 2.5:1 protecting the transistors from damage. It is also protected from excessive temperature that when reached will disable the amplifier and increase the fan speed to maximum speed, automatically resetting when the temperature falls to within the normal range. The KL805 is also protected against accidental DC input reverse polarity.



## Specifications:

<b>Freq. Range:</b>	25-30MHz
<b>Power Supply:</b>	22-30Vdc (24V)
<b>Max input current:</b>	35A max
<b>Fuse:</b>	3x12A
<b>Input Power:</b>	1-15W max.
<b>Output Power:</b>	600W max.
<b>Modes:</b>	AM FM SSB CW

[www.rmitaly.com](http://www.rmitaly.com) [info@rmitaly.com](mailto:info@rmitaly.com)

## KL805 Front and rear Panel Connections:



1. SSB-CW / AM/FM Switch
2. Preamplifier ON / OFF Switch
3. Linear Amplifier ON / OFF Switch
4. Output Power Selector
5. Transmission 'TX' LED indicator
6. Receive Pre-Amplifier 'ON' LED indicator
7. Linear Amplifier 'ON' LED indicator
8. Output Power LED Indicator:  
Green - Low Power  
Orange - Medium Power  
Red - High Power
9. Output Power level and Protection indicator
10. Remote Control Connector



1. SO239 (UHF) Transceiver (RTX) Connector
2. SO239 (UHF) Antenna (ANT) Connector
3. 24VDC Power Supply input connector

## Operation:

Connect the amplifier as shown on the front cover connection diagram. Ensure that the KL805 is located in an area that will provide adequate ventilation for the heatsink.

Use power supply cables of at least 6mm<sup>2</sup> cross sectional area and directly connected to a 24V battery system or 24Vdc power supply, and cables no longer than 3meters in length. The power supply cables should be as short as practically possible, if a longer length is required the cross section of the cable conductor should be increased accordingly. The cables should be attached to the supplied mating connector of the KL805 and secured firmly with the screw terminals on the connector.

Use a good Quality antenna with at least 1000W continuous power rating and tuned to give a maximum VSWR of 1.5:1 or less. The coaxial feeder from the amplifier to the antenna should be 50 Ohms impedance and suitably rated for the at least 1000W continuous use. It too should be kept as short as practically possible. Excessive coaxial cable length only increases losses both in transmission and reception

Do not hold the amplifier in transmission at maximum power for extended periods of time as it is not designed for continuous duty cycle. Allow sufficient time between transmissions for the transistors to cool down.

If the antenna VSWR increases beyond a preset value the amplifier will protect itself by shutting down the amplifier and flashing all of the LED's on the output power LED indicator. To restore normal operation the antenna VSWR should be adjusted to within acceptable limits <2.0:1 but preferably 1.5:1 or less. The Amplifier On OFF switch needs to be cycled OFF and ON to restore operation.

If the heatsink temperature is allowed to increase excessively the internal thermostat will shut down the amplifier and increase the cooling fan speed to maximum. The KL805 will automatically reset when the temperature falls to within acceptable limits. It is advised not to switch off the amplifier during this time as the cooling fans will reduce the temperature at a faster rate.

The receive preamplifier may be used independently without having the amplifier switched on. Maximum input power should be no more than 15W. The output power of the KL805 can be regulated in two ways. Either by reducing the input power on the transceiver or by selecting Low Mid or HI power from the front panel of the KL805.

If using SSB or CW the SSB switch should be set to SSB. This will provide a short delay, about 1 second, to the RTX relay before it switches back to RX avoiding the RTX relay switching back to RX during pauses in speech.