



LCM-550x12 AMPLIFIER

55 TO 870MHz DISTRIBUTION AMPLIFIER

INSTRUCTION MANUAL

Phone: (209) 586-1022

(800) 545-1022

Fax: (209) 586-1026

E-Mail: salesupport@olsontech.com

www.olsontech.com

LCM-550x12
55 to 870MHz DISTRIBUTION AMPLIFIER

1) INTRODUCTION

The Olson Technology Inc. LCM-550x12 Series Amp is a high performance 55 to 870MHz distribution amplifier designed to work with the output of the 12-port combiner. It is easily attached to the back of the LCM-550x12 chassis by two thumb screws. It will provide +45dBmV of output per channel when connected to the output of the 12 port combiner.

This amplifier is powered from the LCM-550x12 power supply and it includes the required D.C. power interconnect harness. Also included with this amplifier is a cable to connect the 12 port combiner output to the amplifier input.

2) INSTALLATION

- A)** Attach the amplifier to the vertical lip at the rear of the LCM-550x12 chassis. The lip of the chassis fits into the slot at the bottom of the amplifier. The RF Output and Test Point connection should face to the rear. Loosen the two thumbscrews to allow the amplifier to sit all the way down on the shelf lip. Center the amplifier left to right and tighten the thumbscrews firmly to hold it in place.

- B)** Locate the D.C. power harness on the LCM-550x12 intended for the eighth module position (counting from the left side). If the harness is connected to a module, unplug it.

Plug this harness into the 4-pin power connector on the amplifier. Note that the connector is keyed to aid in plugging it in properly, but it CAN be forced on upside down. When correct, the RFD wire is in the TOP position. Do not plug it in upside down.

The D.C. power harness permanently attached to the amplifier is intended to provide power to the eighth module position. If there is a module in the eighth position that was disconnected earlier, connect this harness to it. Use the same caution as above to insure that the connector is not plugged in upside down. Note that on the modulator module, the redwire is on the BOTTOM.

- C)** Connect the provided RF cable between the combiner RF out and the amplifier RF input. Use caution not to damage or bend the small center conductor of this cable.

LCM-550x12
55 to 870MHz DISTRIBUTION AMPLIFIER

3) OPERATION

The LCM-550x12 amplifier is designed to operate at +45 dBmV out with 12 channels. Measure the direct output of the amplifier with a spectrum analyzer or signal level meter. Adjust the output level controls on the individual modulators for your desired operational levels. Exceeding the specified +45 dBmV maximum output level (12 channels) may cause system distortion levels to exceed acceptable levels. If all of your desired carrier levels are below +41 dBmV, Olson Technology suggests that you use a fixed attenuator pad between the combiner output and the amplifier input. Use a 3dB pad for maximum outputs of 35-41 dBmV, a 6dB pad for 35-38, etc. Once the output levels are set, the amplifier may be connected to its intended use and levels at its test point may be measured and recorded for reference. If the amplifier test point is used as an output, be sure that the main output is terminated in 75Ω.

4) SPECIFICATIONS

Frequency.....48MHz to 870MHz
Gain..... 22dB minimum
Gain Variation..... +1dB minimum
Input Return Loss.....15dB minimum
Output Return Loss..... 16dB minimum
CTB/CSO with 12 Carriers..... >65dB below 12 output carriers at +45dBmV
Power Requirements..... Operates from LCM-550x12 power supply. <4 watts