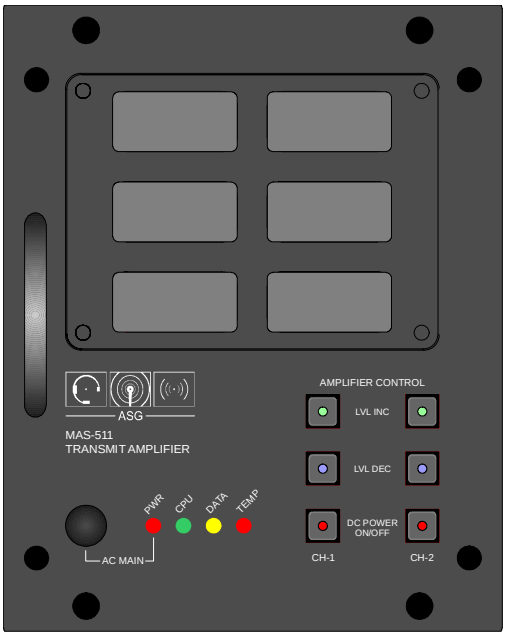
Audio Specialties Group
Products Division

MAS-511 Users Guide

MAS
SYSTEM
MANAGED
ANTENNA
SYSTEM
TECHNOLOGY



Rev-C 3/9/07

Audio Specialties Group and any of its vendors, dealers or representatives forbid the use of the MAS-511 in any way that is contrary to FCC Regulations.

Utilizing the MAS-204 is a way that is contrary to FCC Regulations is expressly forbidden.

Maintaining power levels to within FCC regulations is the sole responsibility of the user.

SECTION 1: Introduction

The MAS-511 Transmit Amplifier is a two-channel device used for amplifying the outputs of low power transmitters for the purpose of distributing the signal to multiple intentional radiators or for the loss-recovery of a transmit combiner.

Each of the two channels is identical. The operation is from the front panel and, if equipped, IP based remote control. Each channel has the ability to change the transmit carrier amplitude and to control the power going to the amplifier circuitry.

SECTION 2: Operation

2.1 PRECAUTIONS

2.1.1 Explanations

 Identifies important performance information

 Identifies safety information

 Identifies important operator actions

2.1.2 Environmental

 Do not expose the MAS-511 to rain or direct sunlight.

 Maintain proper ventilation for temperature specification.

 Check/clean FAN filters regularly. How often depends on how much airborne particulate matter is in the environment.

2.1.3 Electrical

 DO NOT OPERATE THE MAS-511 with the chassis cover removed. Cover must be in place to maintain proper operating temperature. Operating the MAS-204 at full power for longer than five minutes with the cover removed will cause the maximum operating temperature to be exceeded

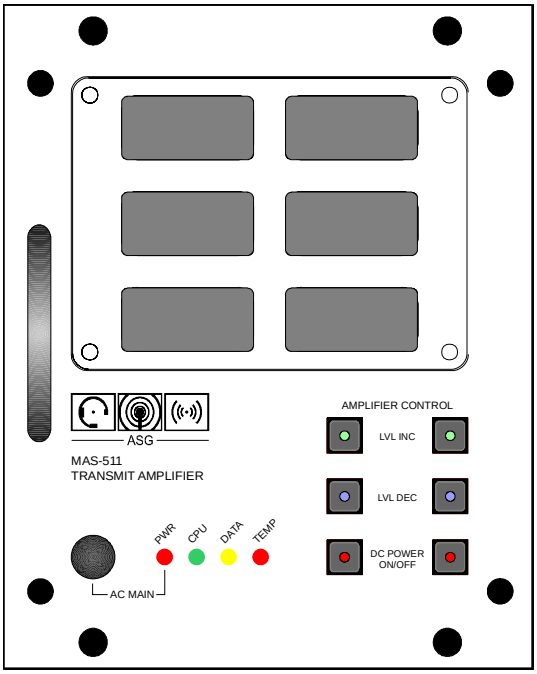
 Emission specifications will only be met if operated within the guidelines of this manual. Operating the MAS-511 other than as specified can generate unwanted radio frequency radiation that could adversely affect the proper operation of other electrical equipment.

 Do not remove output transmission cabling or radiating device from the transmission cable while RF power is active. High power RF energy can cause burns and electrical shock. Damage can occur in the power amplifier stage if the output becomes unloaded.

2.2 Front Panel Features

2.2.1 Front Panel Layout

The DC power supplied to the amplifier modules is always OFF when initial AC MAIN power is applied. This protects the amplifier from damage due to power surges and output cable failure.



2.2.2 Switch and Indicator Function

Channel ON/OFF

The DC POWER ON/OFF switch is a mechanically momentary, electronically latching switch which controls the DC power for the amplifier circuitry. Pressing the switch will turn the DC Power ON. To turn off, press and hold for two seconds. The red LED in the DC power switch will illuminate when DC power is active to that channel. Note that the DC power is OFF on initial power-up regardless of the state when power was turned off.

Adjusting RF Level

Pressing the LVL INC (level increase) switch will increase the bias of the amplifier and therefore the amount of amplification for that channel. Pressing the LVL DEC (level decrease) switch will reduce the bias level. The value of the bias level is stored in non-volatile memory whenever the value is changed.

The blue LED in the LVL INC switch illuminates when the maximum RF level has been reached. Continuing to press the button will change nothing. The green LED in the LVL DEC switch will

illuminate when the lowest RF level has been reached. Continuing to press the button will change nothing.

The level adjustment switches are disabled by a "lock-out" terminator which plugs onto CNTL-2 on the rear-panel. See appendix A for details.

Upon power-up or after a reset, the CPU indicator will illuminate in the following pattern:

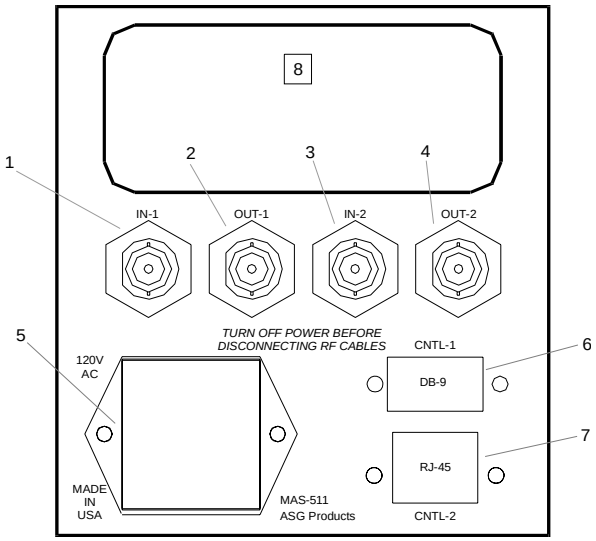
- Illuminate for 1-second
- wink (dark flash) the first digit of the firmware revision
- wink the second digit of the firmware revision
  (ie: firmware version 2.3 = 2 short winks, pause, 3 short winks)

After the channel-enable sequence, it will flash at a 1-Hz rate while the CPU is running properly.

The DATA indicator turns on when an Ethernet signal is connected to the remote control RJ-45. (CNTL-2) connector.

SECTION 3: Installation

2.7 Rear Panel Layout



1 CH-1 RF Input. BNC Connector

2 CH-1 RF Output. BNC Connector

3 CH-2 RF Input. BNC Connector

4 CH-2 RF Output. BNC Connector

5 AC Mains Power (120V AC Only_

6 Control-1 D-Sub 9 Female for Firmware Upgrades

7 Control-2 RJ-45 Ethernet connection for remote control

8 Hot Air Exhaust vent-Do not obstruct.

Apendix A

Control port connector details

CNTL-2

DE-9 Female

1	
2	Serial Data TX
3	Serial Data RX
4	
5	Data Ground
6	Front Panel lock-out
7	Ground
8	
9	