



MICROFET 100

OWNER'S MANUAL (version 1)

Originally written by ADA SIGNAL PROCESSORS, INC. Scanned and edited by Jur at 18th of July 2002. Original ADA logo edited and rendered by Barend Onneweer of Raamw3rk. (<http://www.raamw3rk.net>) The version of this manual is copyrighted and may not be sold or placed on a website without permission of the editor.

Release No.1 for <http://www.ada-mp1.com>

CONTENTS

Introduction

Features

Specifications

Precautions

SetUp

Speaker Impedance

Quick Set Up Chart

Warranty

Returning Units For Service



MICROFET 100 OWNER'S MANUAL

INTRODUCTION

Thank you for purchasing the ADA MICROFET 100 Stereo Guitar Power Amplifier. The MICROFET 100 is designed specifically for use with guitar component systems, such as the ADA MP-1 MIDI TUBE PREAMP and ADA SPLIT-STACK SPEAKER CABINETS. Your new MICROFET 100 will preserve all the tone and fidelity from your guitar, preamp, and effects units, while delivering warm and clean power. Please take a few moments to read this manual and familiarize yourself with your new MICROFET 100.

IMPORTANT: At this time, please complete and return the enclosed warranty card.

FEATURES

- Mosfet design.
- Revolutionary, lightweight design - only 8.5 lbs., 1 rack space.
- Preserves tube fidelity: distortion, compression, and all harmonics.
- Bridgeable.
- Presence control.
- Multi-level power supply protection.
- LED peak/level indicators.
- Optimized for use with guitar speaker cabinets.
- One year parts and labor warranty.

SPECIFICATIONS

	<u>SINGLE</u>	<u>STEREO</u>	<u>BRIDGED</u>
Output Power:			
4 Ohms	64W	53W/CH	N/A
8 Ohms	45W	39W/CH	105W
16 Ohms	26W	23W/CH	76W
Input Impedance:	33k Ohms		
Output Impedance:	0.4 Ohms		
Input Sensitivity:	1.0 VRMS		
Damping Factor:	200 @ 8 Ohms		
Slew Rate:	5 V/uS		
THD.:	< 0.5% Best Spec, in any configuration		
Max. Gain:	24 dB.		
Frequency Response:	30 Hz. to 30 kHz. +/- .5dB		
Dynamic Range:	100 dBu A-weighted		
Protection:	Fuses (internal)		
Controls			
<i>front:</i>	Power on - off Separate A & B channel attenuators Presence control		
<i>rear:</i>	Stereo/Bridge switch AC Outlet 1/4" in/out jacks		
Weight:	8.5 lbs.		
Depth:	17.25"		
Height:	1 rack space (1.75")		
Power Requirements:	117 VAC, 60 Hz., 3 Amps		
Note: Power ratings are RMS, measurements taken below clipping at 1kHz, with presence control set to min.			



PRECAUTIONS

WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

CAUTION: To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

SET UP

WARNING: The MICROFET 100 power amplifier will deliver 50 watts per channel into 4 ohms in stereo mode or 100 watts into 8 ohms in mono/bridged mode. Be careful not to overload your speaker cabinet(s). Check power handling specification on speaker cabinet(s) before connecting the MICROFET 100.

WARNING: In mono/bridge mode the minimum load on your MICROFET 100 must not be less than 8 ohms.

Before connecting the MICROFET 100 to speaker cabinets, check the impedance of your speakers and configure them to achieve optimal performance. Refer to the speaker configuration diagrams A-G. An overall impedance from 4 ohms to 16 ohms (stereo operation), and 8 to 16 ohms (mono/bridged operation) is recommended for maximum performance.

Note: Refer to the QUICK SET UP CHART of this manual for connection diagram.

Connect stereo inputs (A & B) on rear panel of MICROFET 100 to the outputs of your preamp or effects device, using line level outputs. For bridged operation, connect preamp or effect output to the A input of the MICROFET 100.

Select the applicable position with the Bridge/Mono Switch. Stereo operation = out, Bridge/Mono operation = in.

Use speaker cables to connect MICROFET 100 outputs to the inputs of your speaker cabinets (12 to 16 gauge speaker cable only). For stereo operation, connect outputs A & B to inputs of speaker cabinets (left & right). For bridged mono operation, connect the bridge output to the input of your 8 ohm minimum speaker cabinet

Before turning your MICROFET 100 on, make sure the A & B attenuators are all the way down. Power up your system in the order of signal flow - preamp first, power amp last. To shut down your system, turn standby switch off and use the reverse procedure - power amp first, preamp last.

The "Presence" control is like a shelving E.Q. In the off/counter-clockwise position the amplifier output is flat. Turning the presence control clock-wise increases highs to a maximum of + 6dB shelving above 1.2kHz.

SPEAKER IMPEDANCE

It is important to always "match" your speaker system to your power amplifier, especially when using component systems such as the ADA MP-1 & MICROFET 100 power amplifier. A proper impedance match will give you optimal performance and keep your power amp in a "safe operating area" so it won't overheat or blow fuses.

To get the proper impedance match using more than one speaker involves a little bit of thought because the overall impedance of all the speakers on a channel is what the amplifier



"sees." The overall impedance is the important value that must be known for proper impedance matching.

For multiple cabinet arrays, knowing the individual cabinet impedances and power ratings will allow you to calculate the overall impedance of your array. This is necessary to correctly match the ADA MICROFET 100 drive requirements.

The rated impedance of a single speaker is the minimum resistance to an electrical signal within the frequency range of the speaker. A 16 ohm speaker means that there is never less than 16 ohms presented to the amplifier output. When connecting a single 16 ohm speaker to an amplifier, the amplifier will be "driving" a nominal 16 ohm load.

When a speaker cabinet has more than one speaker in it, the overall cabinet impedance will vary depending on how many speakers there are, and how the speakers are wired within the cabinet. The following example drawings assume that you are using all 16 ohm speakers. If you are using 8 ohm speakers, divide all totals by 2. If you are using all 4 ohm speakers, divide all totals by 4. Diagram A is a simple one speaker configuration. Diagram B is a "series" connection. To get the overall impedance add the two speakers' impedances ($16 + 16 = 32$).

Diagram C is a parallel configuration. Some of the electrical signal goes to the top speaker and some goes to the bottom. For the two speakers (of equal impedance) the total impedance is 1/2 of the value of each speaker ($1/2 \times 16 = 8$).

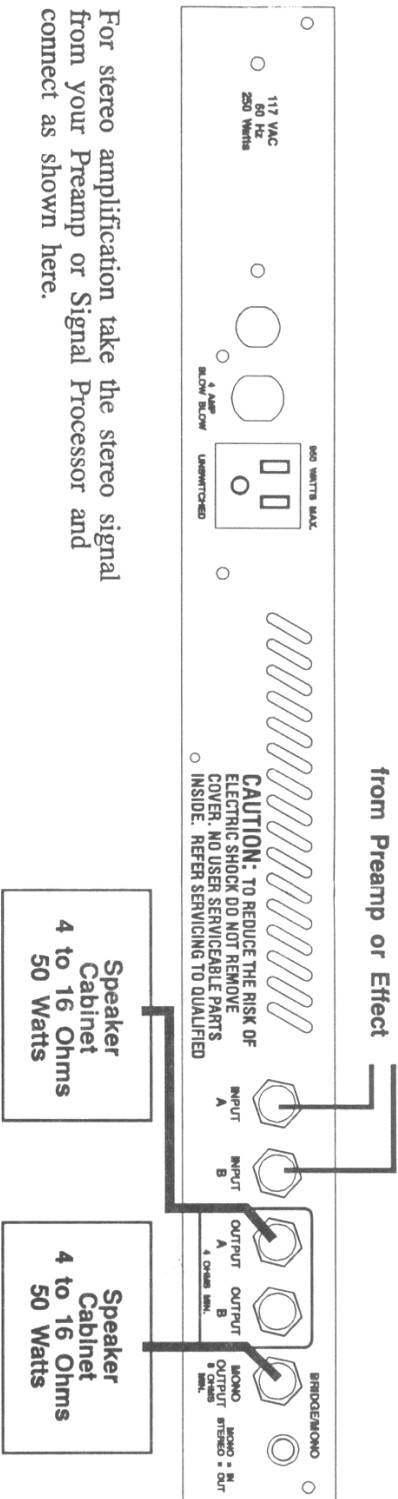
If you have four speakers of equal impedance wired in parallel as shown in diagram D, the overall impedance is 1/4 of the value of one speaker ($1/4 \times 16 = 4$).

Diagram E is the same as diagram D except the four speakers are split into two cabinets. Use of multiple speakers or cabinets of different impedances causes unequal power sharing between speakers and is not recommended.

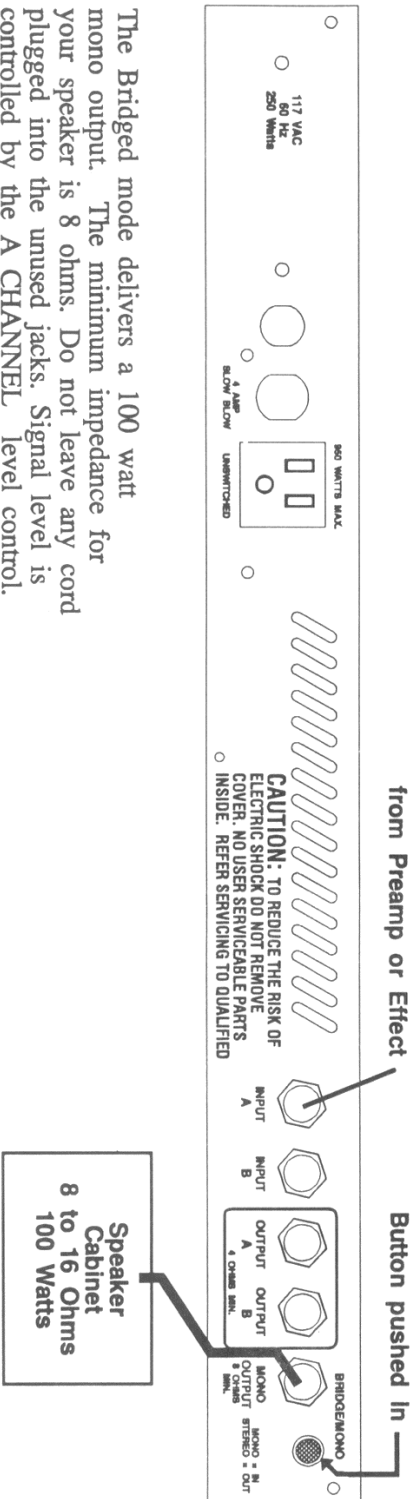


QUICK SETUP CHART MICROFET 100

Shielded Instrument Cord
Speaker Cable

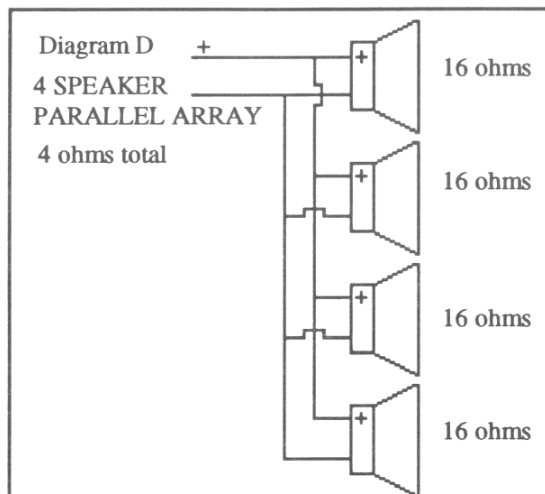
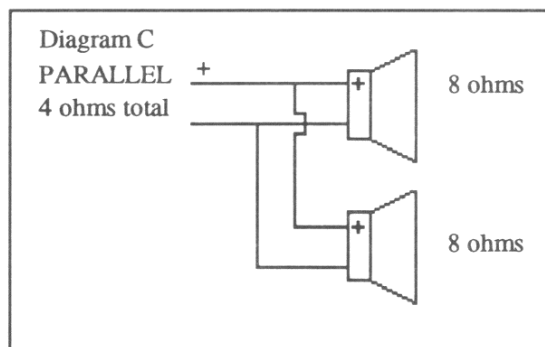
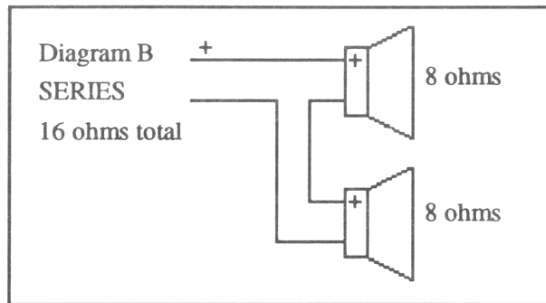
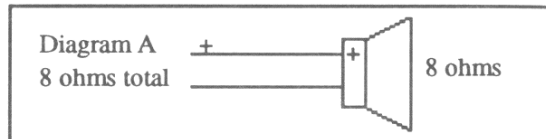


For stereo amplification take the stereo signal from your Preamp or Signal Processor and connect as shown here.



The Bridged mode delivers a 100 watt mono output. The minimum impedance for your speaker is 8 ohms. Do not leave any cord plugged into the unused jacks. Signal level is controlled by the A CHANNEL level control.





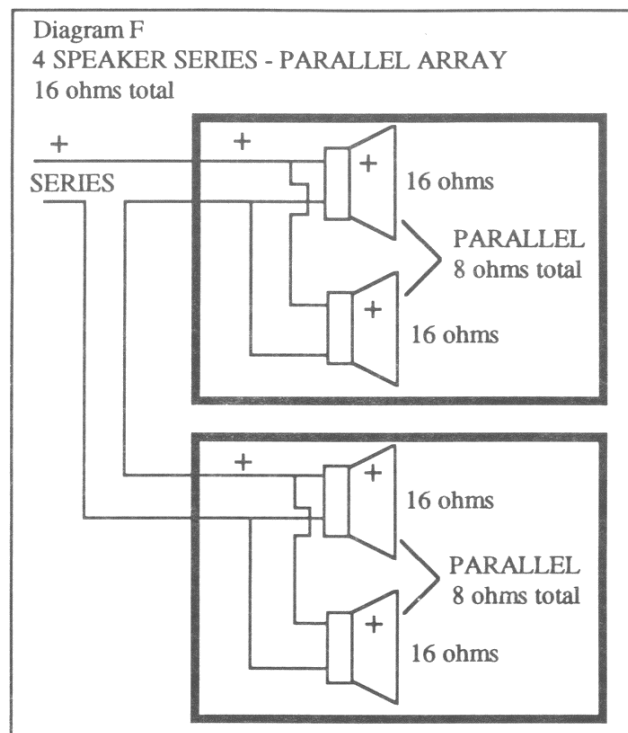
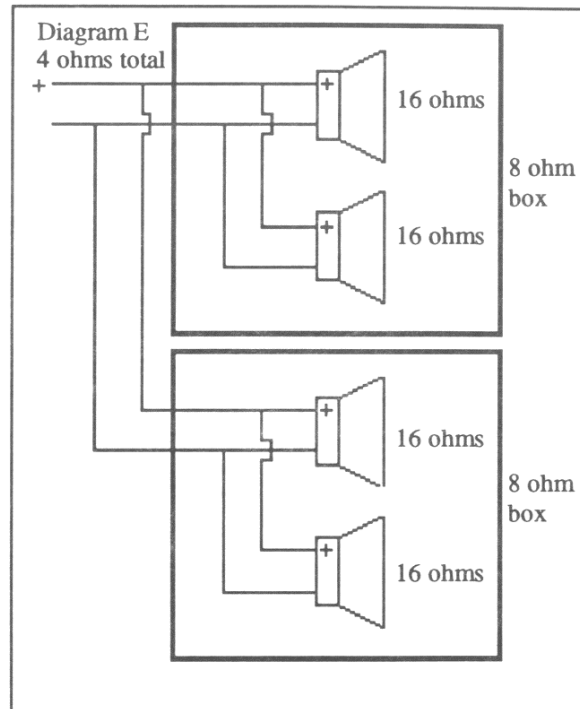
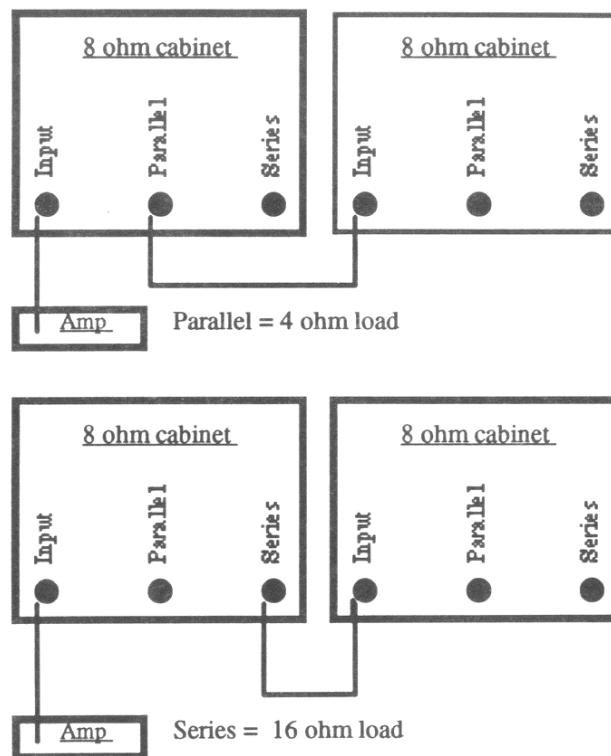


Diagram G



The ADA SPLIT-STACK speaker cabinet uses two 16-ohm speakers that are wired in parallel, which makes the cabinet an 8-ohm load. Only ADA SPLIT-STACK speaker cabinets offer you the versatility of parallel and series extension ports, allowing you to combine cabinets in various impedance configurations.

WARRANTY

ADA MICROFET 100 Guitar Power Amplifier is warranted against defects in material and workmanship for a period of three-hundred and sixty five (365) days from date of purchase. This warranty is to the original owner and is non-transferable. During the warranty period, ADA or its agent will, at its sole option, repair or replace defective parts and make necessary repairs to the product which is defective at no charge. If the failure is the result of misuse, abuse, accident or misapplication, ADA has no obligation to repair or replace the failed product. ADA retains the right to make such determination on the basis of factory inspection. ADA will not be responsible for any speaker or device damaged by the MICROFET 100. This warranty remains valid only if repairs are performed by ADA or its agent, and provided that the serial number on the unit has not been defaced or removed. This warranty is expressly in lieu of all other warranties either expressed or implied. This warranty gives you specific rights. You may have other rights that vary from state to state.

RETURNING UNITS FOR SERVICE

If your MICROFET 100 requires service, please call our Customer Service Department at (510) 532-1152 for a Return Authorization (RA) Number and shipping instructions. **Do not ship repairs to ADA without an RA number.**

