

**Distribution
Amplification
MADE EASY**

great divide 2

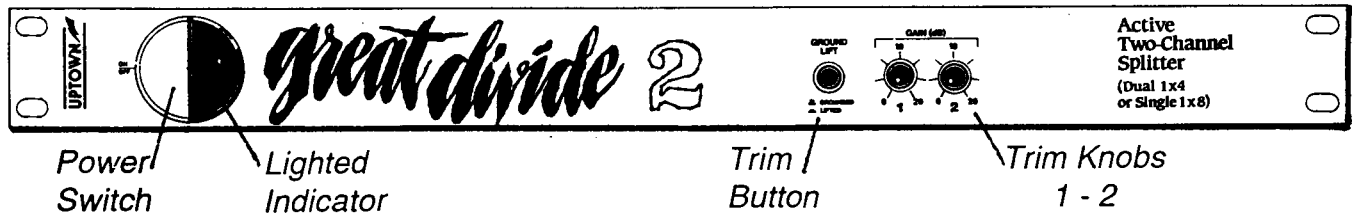
great divide 4

QUAD 1X2 OR DUAL 1X2
PLUS 4 MONO SUMS

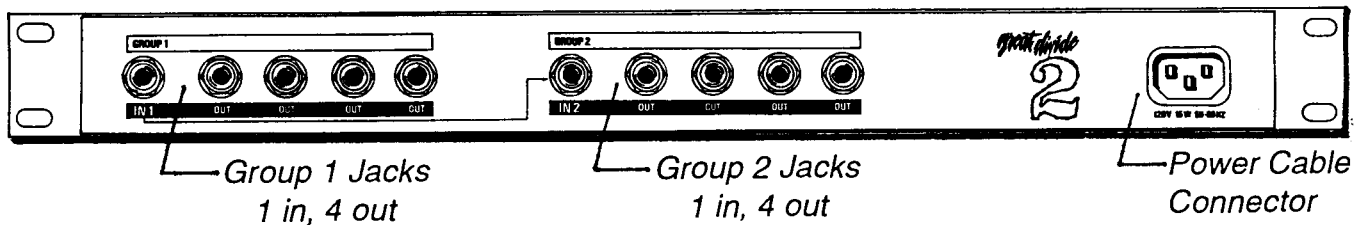
DUAL 1X4 OR
SINGLE 1X8

UPTOWN 

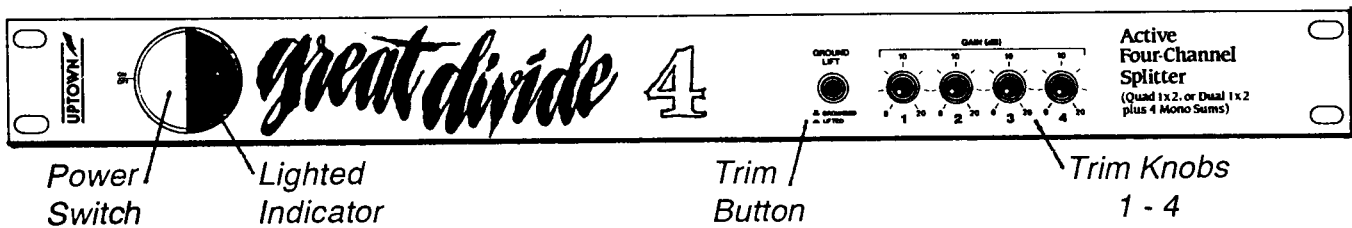
FRONT PANEL



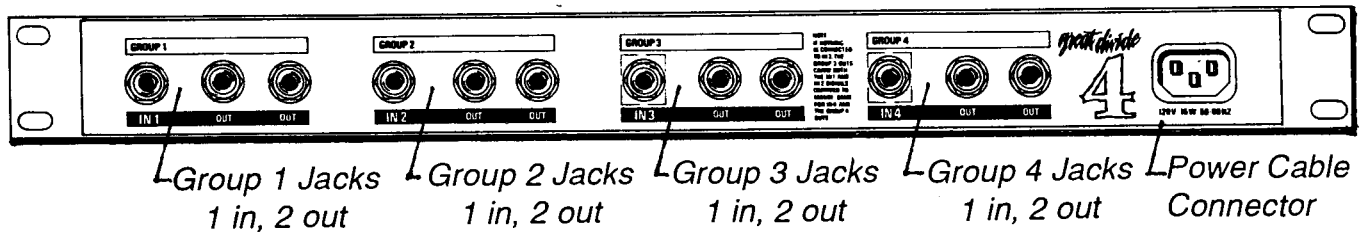
REAR PANEL



FRONT PANEL



REAR PANEL



INTRODUCTION

GREAT DIVIDE is a sonically transparent distribution amplifier for recording studios, guitar and keyboard racks, live sound, theatre and commercial installations, or anywhere parallel or multiple audio path signal routing is a requirement.

FEATURES:

- 1) Input range of -30 to +21 dB.
- 2) Up to 20db of gain on each input.
- 3) Buffered Outputs.
- 4) Ground Lift Switch.
- 5) Multiple Configurations.
- 6) Outstanding Specifications.

WHY UPTOWN BUILDS GREAT DIVIDE 2 and GREAT DIVIDE 4

Different applications require different functions, and we have tried to address these applications as logically as possible. GREAT DIVIDE 2 is optimized for a higher number of outputs per input than GREAT DIVIDE 4. If you need a 1X8 or dual 1X4 splits you should use a GREAT DIVIDE 2.

If your application requires up to 4 discrete channels you should use a GREAT DIVIDE 4. There are a number of diagrams illustrating the various modes of operation of both GREAT DIVIDE 2 and GREAT DIVIDE 4 in the **CONFIGURATIONS** section.

HOW TO APPROACH THIS MANUAL

What you should do to get the most out of this manual depends on who you are.

If you are a *beginner*, take each section in order and try out as many things as you can.

If you are an *audio professional*, you will probably prefer to look over the **APPLICATIONS** section, skim the **TECHNICAL APPENDICES**, and start putting GREAT DIVIDE to work. Consult the manual if you run into difficulties.

Those who feel they belong in the middle of these extremes (i.e., most of us) should read the **INSTALLATION AND OPERATION** section and start exploring the **APPLICATIONS** section for ideas.

INSTALLATION AND OPERATION

INSTALLING GREAT DIVIDE

GREAT DIVIDE can be used either stand-alone or in any 19" rackmount. For stand-alone use we have included attachable rubber feet. For rackmount applications we have included black screws and black protective washers.

Supplying power to GREAT DIVIDE is easy. Just put the detachable power cable that came included with GREAT DIVIDE into the rear panel power jack and plug the other end into an outlet. (If you lose or misplace this cable, any IEC standard 3-prong power cable will work)

When patching GREAT DIVIDE into a system, different applications require different wiring schemes. Use the information in the **APPLICATIONS** section as a guide.

THE IDEAL INSTALLATION

... is always the one that causes you the least grief. In the case of GREAT DIVIDE, this will depend on what you want to do with it. If you only have one task in mind, wire GREAT DIVIDE up that way and then leave it alone. If, however, you want to explore a variety of GREAT DIVIDE applications, we recommend that you either:

- 1) Keep GREAT DIVIDE out of your rack until you've tested various applications and know what you want to do, or
- 2) Put GREAT DIVIDE in your rack, making sure you can get to the rear panel, or
- 3) Best of all, if you have a patchbay, wire every jack on the back of GREAT DIVIDE into it for easy access.

CONNECTING GREAT DIVIDE

All of the 1/4" jacks on the rear panel of GREAT DIVIDE are unbalanced. Ordinary guitar cables are all you need to connect GREAT DIVIDE to audio gear.

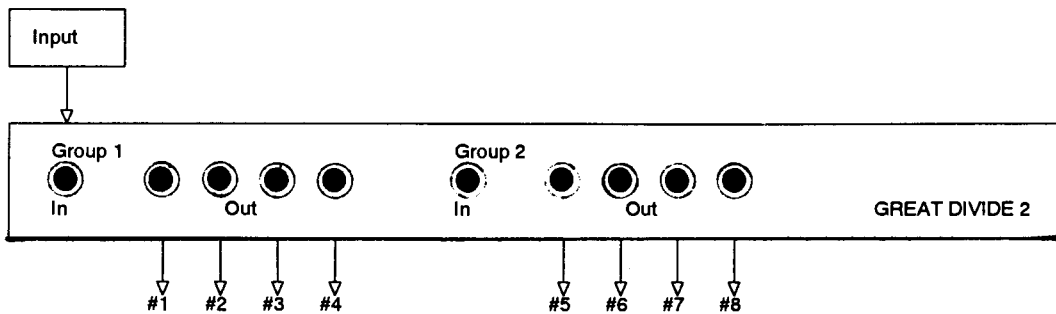
(Please note: By cutting corners on cable and connectors you can significantly decrease both reliability and audio quality. We have had good luck with Canare and Mogame cable, and with Switchcraft and Neutrix connectors. Good cables don't cost much more than average cables, and the difference in performance can be significant.)

CONFIGURATIONS

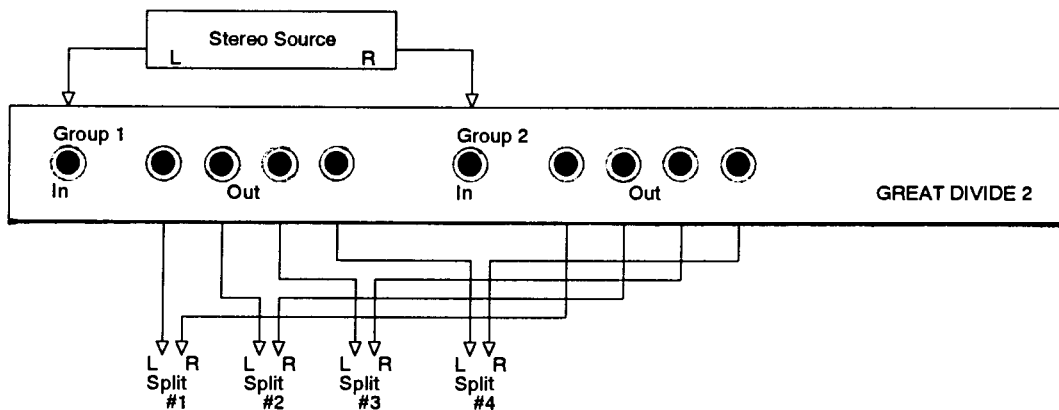
GREAT DIVIDE 2 is a dual 1X4 unit, which can also be thought of as a stereo 1X4 unit. The input of channel 1 is "normalled" to the input of channel 2 by means of a switching jack on input number 2 (this means that if nothing is plugged into input 2, input 2 will "hear" input number 1). GREAT DIVIDE 2 becomes a 1X8 mono splitter when input 2 is not being used. Individual channel gain control is maintained.

great divide 2

1X8 Mono Split



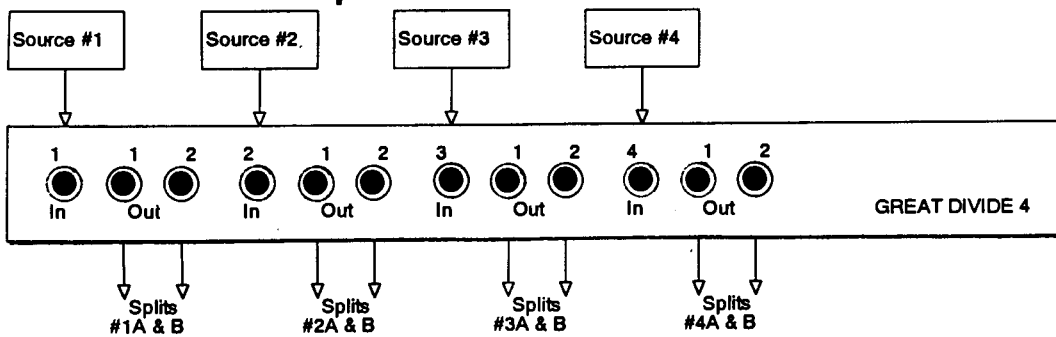
1X4 Stereo Split



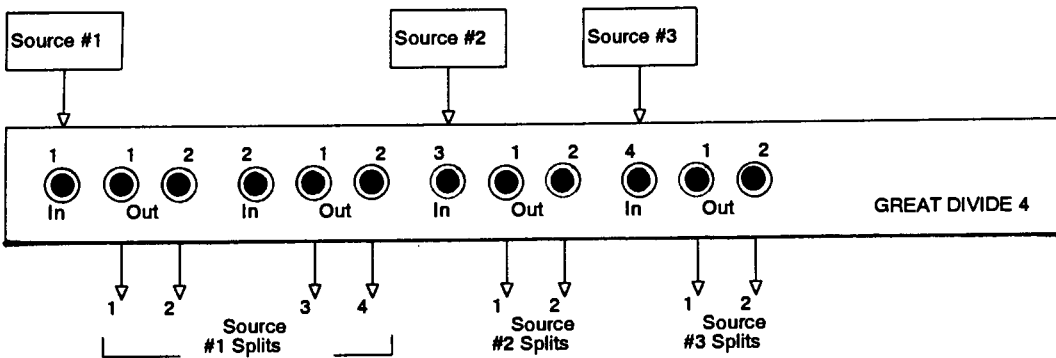
GREAT DIVIDE 4 is a quad 1X2 unit. Each of the four inputs has two outputs with up to +20 db of gain. The input of channel 1 is "normalled" to the input of channel 2 by means of a switching jack on input number 2 (this means that if nothing is plugged into input 2, input 2 will "hear" input number 1). This allows for a 1X4 plus dual 1X2 configuration. When the inputs of channels 3 and 4 are not in use, the outputs of channels 3 and 4 automatically carry the mono sum of channels 1 and 2. This allows correct mono summing of a stereo source while splitting the original stereo signal.

great divide 4

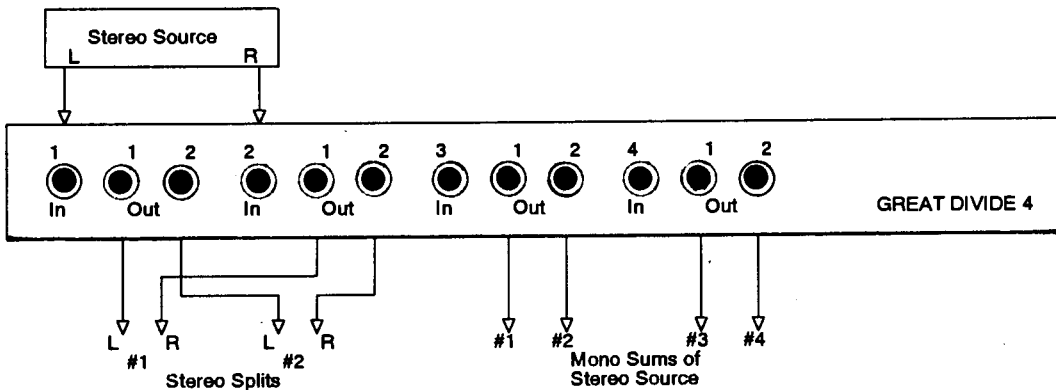
Quad 1X2 Split



1X4 + Dual 1X2 Splits



Stereo 1X2 + 4 Mono Sums



GAIN CONTROLS

GREAT DIVIDE's have individual output controls for each channel, located on the front panel. Each channel has an input range of -30dBu to +21dBu with a maximum output level of +21 dBu, and is capable of supplying a gain range variable from unity (input level=output level) to +20dB (output level is 20dB greater than input level). GREAT DIVIDE 2 is a two channel audio distribution amplifier and GREAT DIVIDE 4 is a four channel audio distribution amplifier.

The front panel gain controls are channelized output controls in any of GREAT DIVIDE 2 or 4's various configurations. When GREAT DIVIDE 2 is patched as a 1X8 mono splitter (input 2 is unused), individual gain control is maintained for each group of outputs. For example, signal can be sent at unity gain from the first four outputs (channel 1), while up to +20dB of gain from the second set of four outputs (channel 2). This allows the output level to be adjusted to meet the input level requirements of the attached equipment. (*Hint to guitar players: running a hotter level into some preamps and signal processors will really improve their sound.*)

GREAT DIVIDE 4 has four channels of gain control, and all four remain active in all configurations. For instance, when in the stereo 1X2 + four mono sum mode, channels 1 and 2 could be used as unity gain buffer amps, channel 3 as a unity gain mono sum of channels 1 and 2, and channel 4 as a +20 dB gain mono sum of channels 1 and 2.

GROUNDING NOISE & THE GROUND LIFT SWITCH

Grounding is one of the great mysteries of audio electronics. It has been said that grounding is as much an art as a science. There's considerable truth to the statement. Getting it right is tough, and we all know the penalty for getting it wrong - **Ground Hum!**

The only real solution is to get your grounding act in order. Some of the things you can try include lifting the ground at one end of the audio cable that is connected to GREAT DIVIDE (keep in mind that at least ONE cable going to GREAT DIVIDE must have a ground that is attached on both ends!); lifting AC ground for either GREAT DIVIDE or the other units in question; making sure that GREAT DIVIDE and everything electrically attached to it is tied to the same ground; isolating all your gear from the rack rails; installing central ground point grounding for your audio system or studio; buying a Juice Goose for your power line...whatever works, works. If you don't know what you are doing, call an expert. **Grounding can be tricky business.**

One technique that works for professional rack builders is to isolate all gear by connecting the ground of each audio cable at only one end (usually the receiving end). Be sure that all your audio gear is isolated from the rack rails to prevent ground loops from occurring through the rack screws. Tie a separate piece of wire from the chassis of each piece of equipment to a central point. This is called a "Star Ground". This technique seems to cure even the worst ground hum/noise problems.

REMEMBER! At least one of the audio cables must make a ground connection to a GREAT DIVIDE input jack. This ground point can be used for a "Star Ground".

The Ground Lift Switch located on the front panel of GREAT DIVIDE determines whether signal ground and chassis ground are connected. Electrical ground is always connected to chassis ground in GREAT DIVIDE, and the ground lift switch does not affect this condition. The best position for the ground lift switch is the setting which results in the least amount of grounding noise.

SIGNAL TYPES

GREAT DIVIDE is designed to work with inputs ranging from -30dBu to +21dBu. This covers everything from low instrument level to professional line level.

DO NOT USE GREAT DIVIDE WITH SPEAKER LEVEL SIGNALS

Using GREAT DIVIDE with amplifier output or speaker level signals will damage GREAT DIVIDE and/or your amplifier and void your GREAT DIVIDE warranty.

Signal Type	Approx. Signal Level	Use with GREAT DIVIDE?
Instrument Level (Guitar, Bass, Direct Box, etc.)	-30db	YES
Semi-Pro Gear (Consumer DAT decks, cassette decks, effects, etc.)	-10db	YES
Professional Gear (Professional mixers, effects, keyboards, etc)	+4db	YES
Amplifier Outputs	Speaker Level	NO

great divide 2/4

APPLICATIONS

GREAT DIVIDE 2

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GREAT DIVIDE 4

FOUR PREAMP SYSTEM.....12

QUAD PREAMP SYSTEM.....12

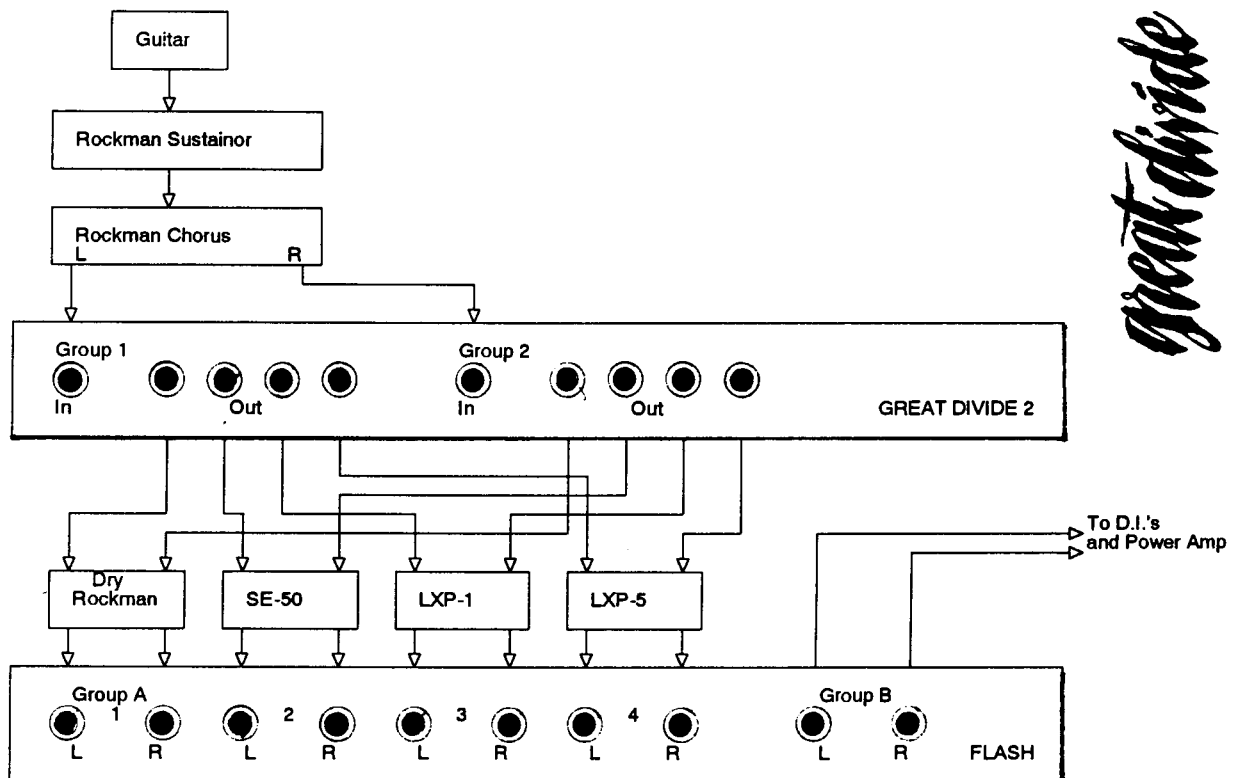
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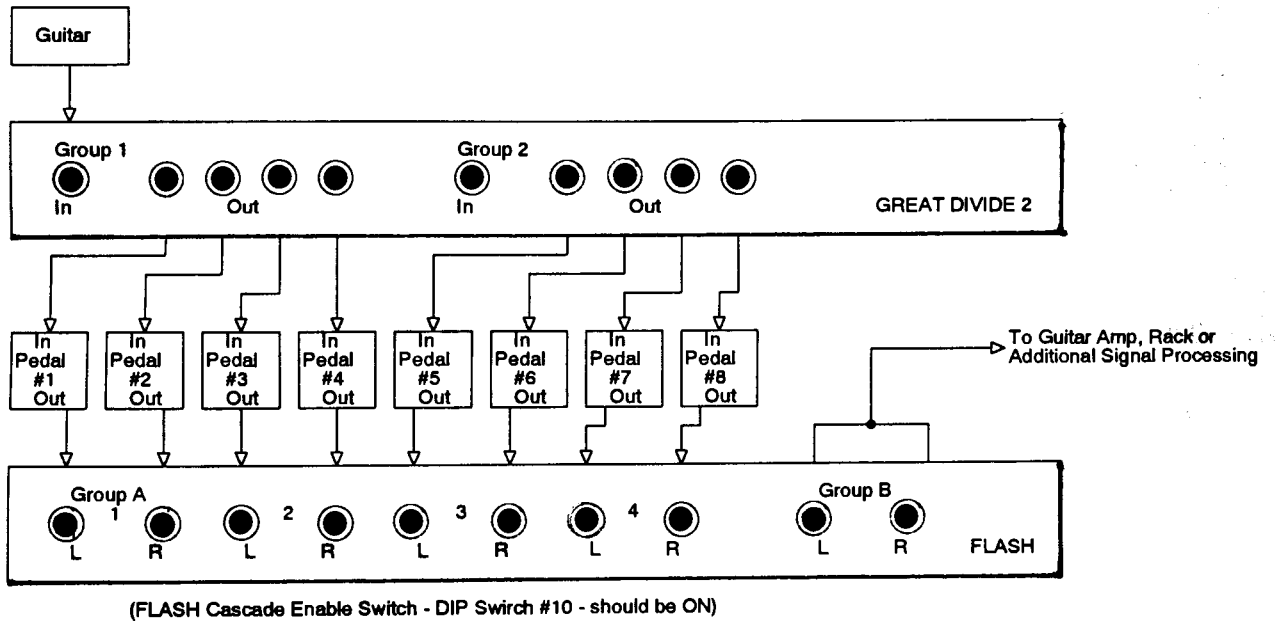
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Rockman System

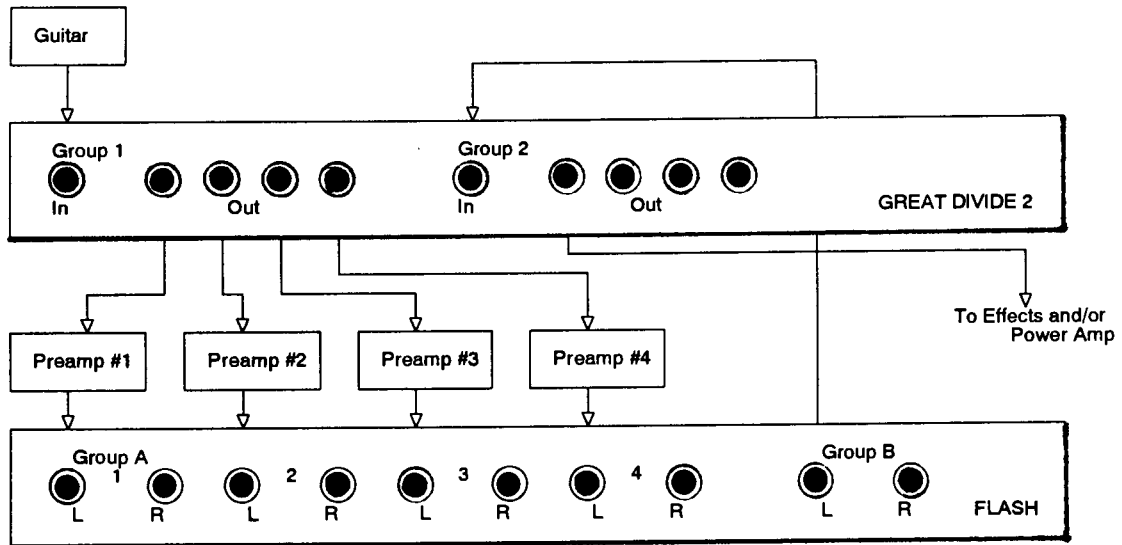


great divide 2

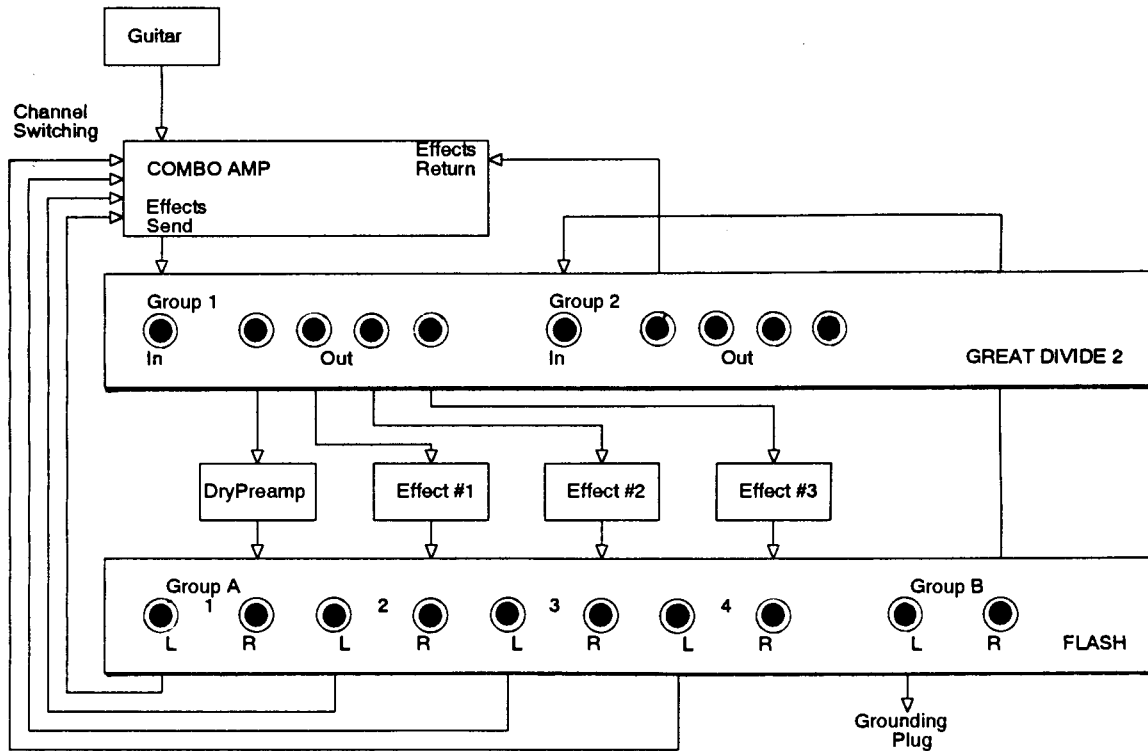
8 FX Pedal Automation System



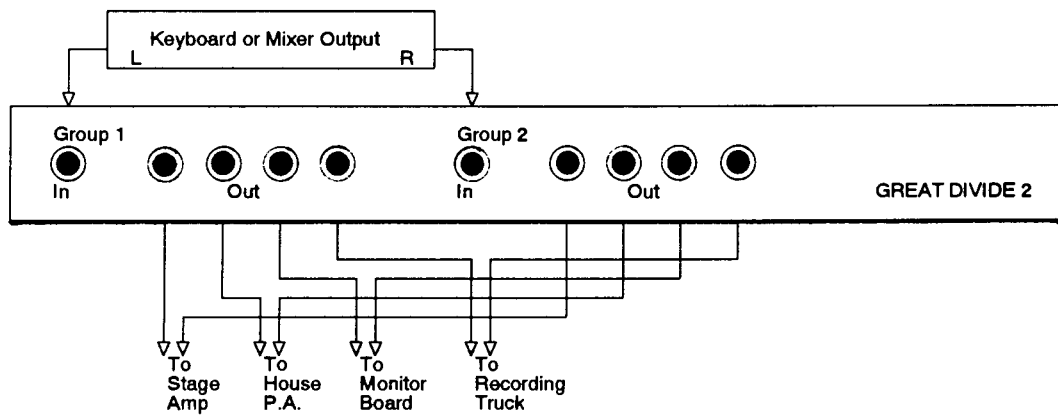
One of Four Mono Preamps Select



Combo Amp System

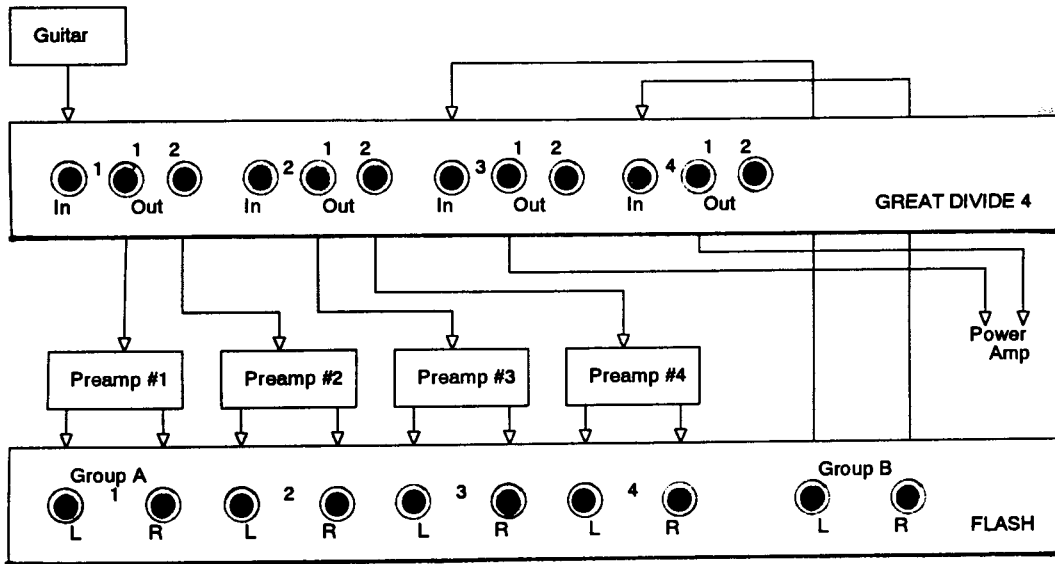


Keyboard/Mixer Distribution

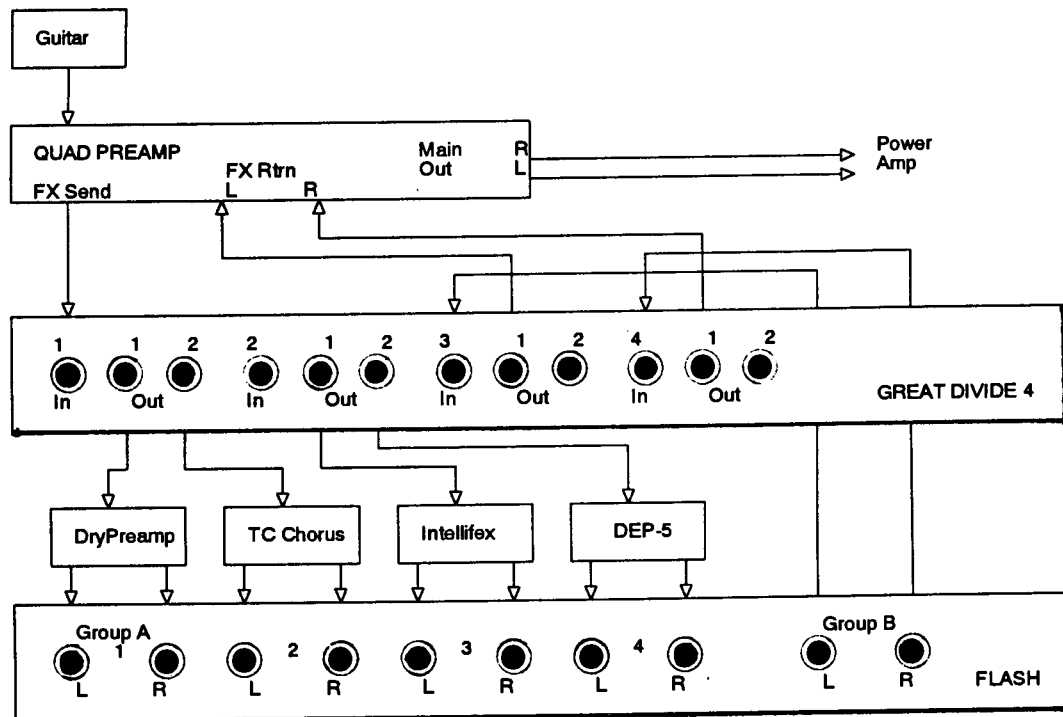


great divide 4

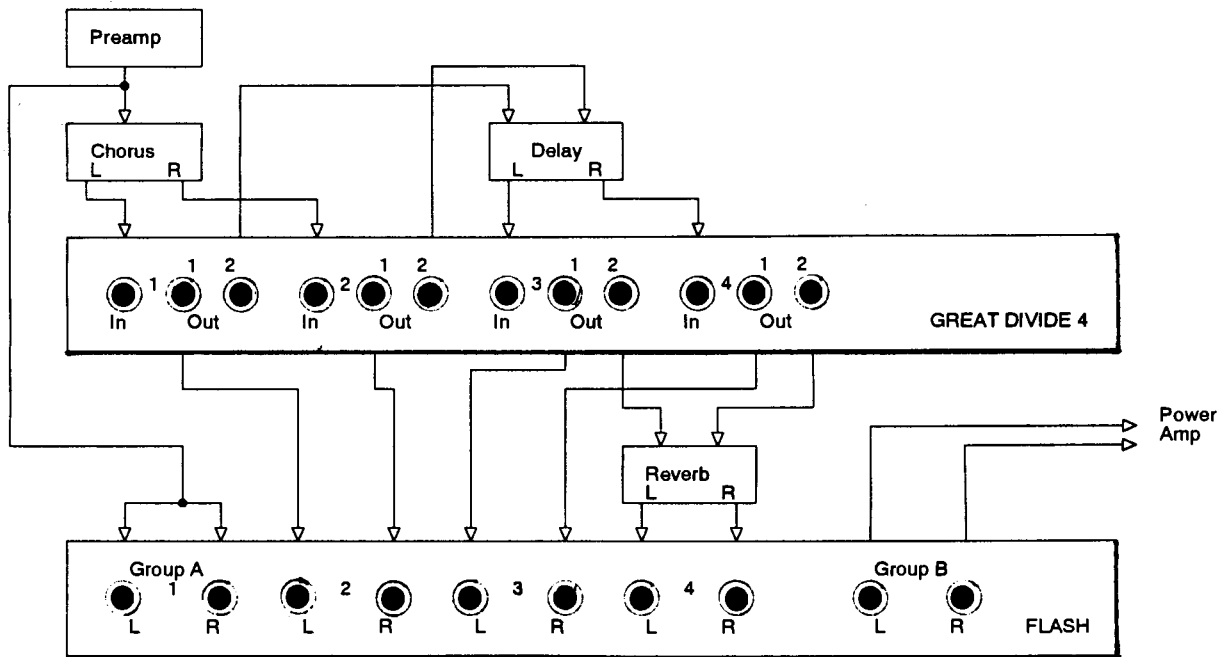
4 Preamp System



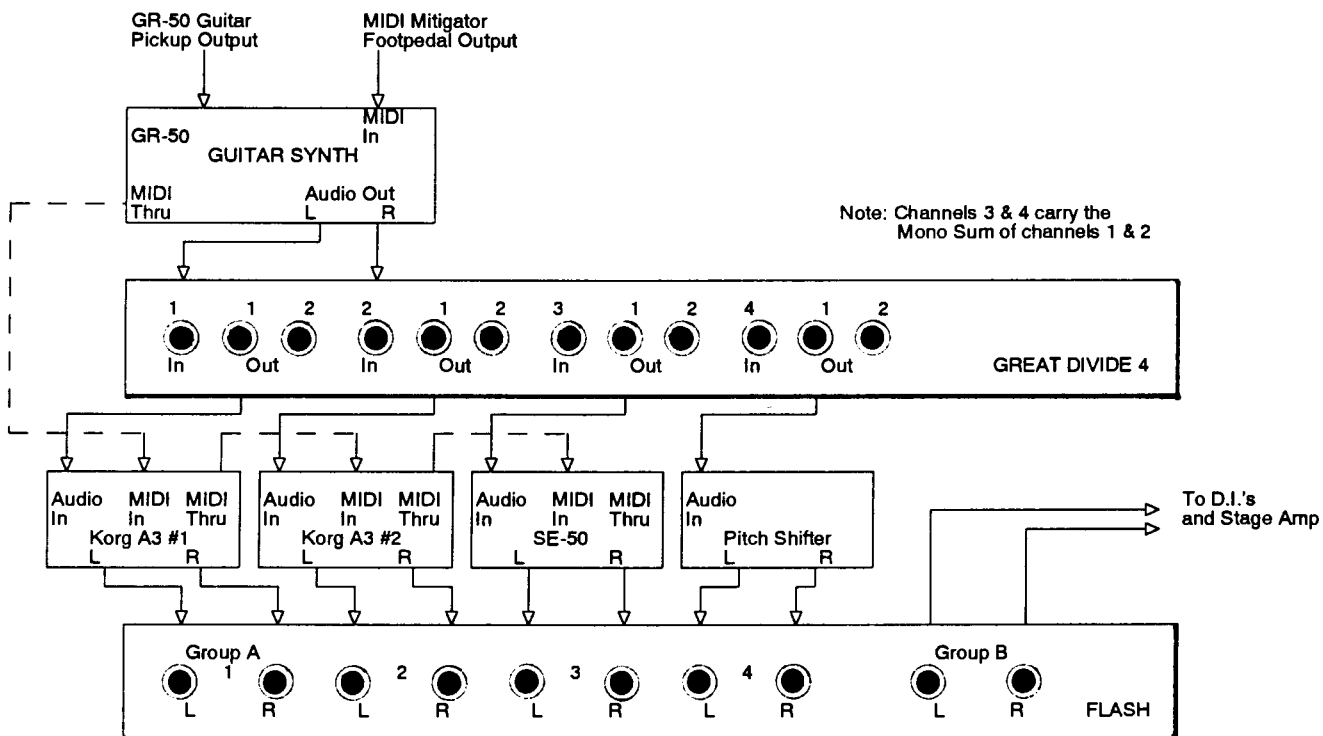
Quad Preamp System



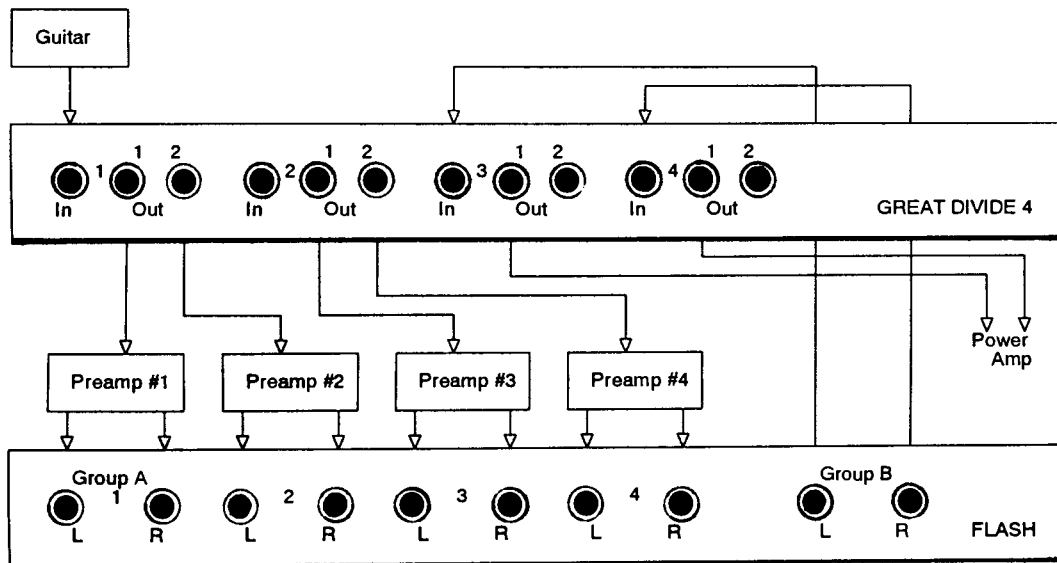
3 Series/Parallel Effects



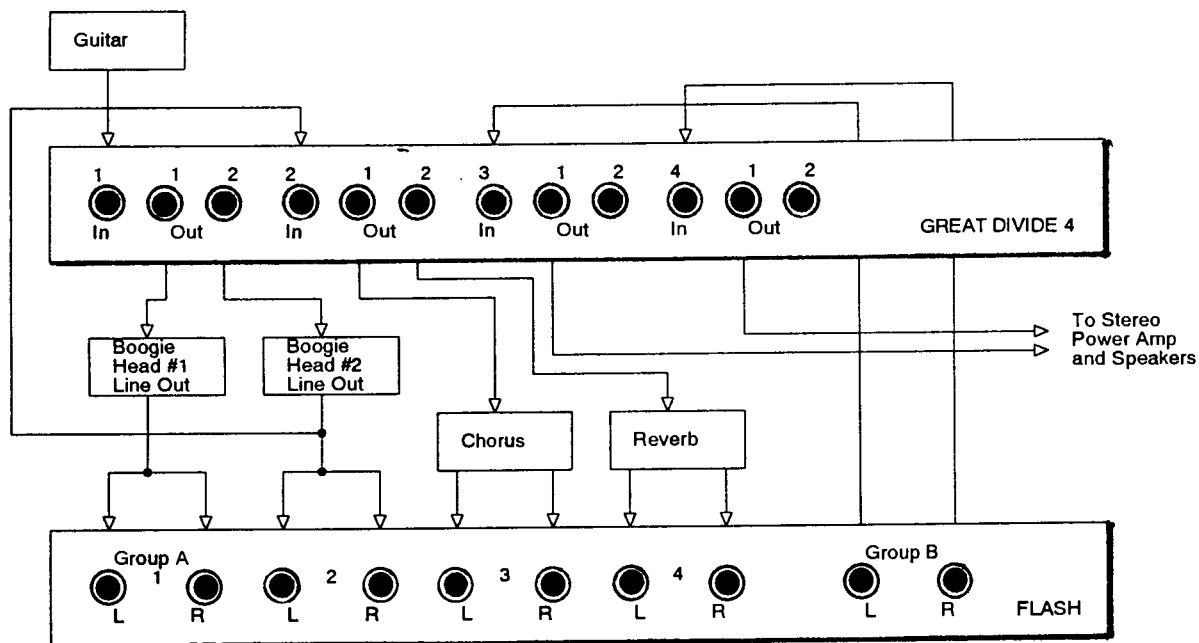
Guitar Synth System



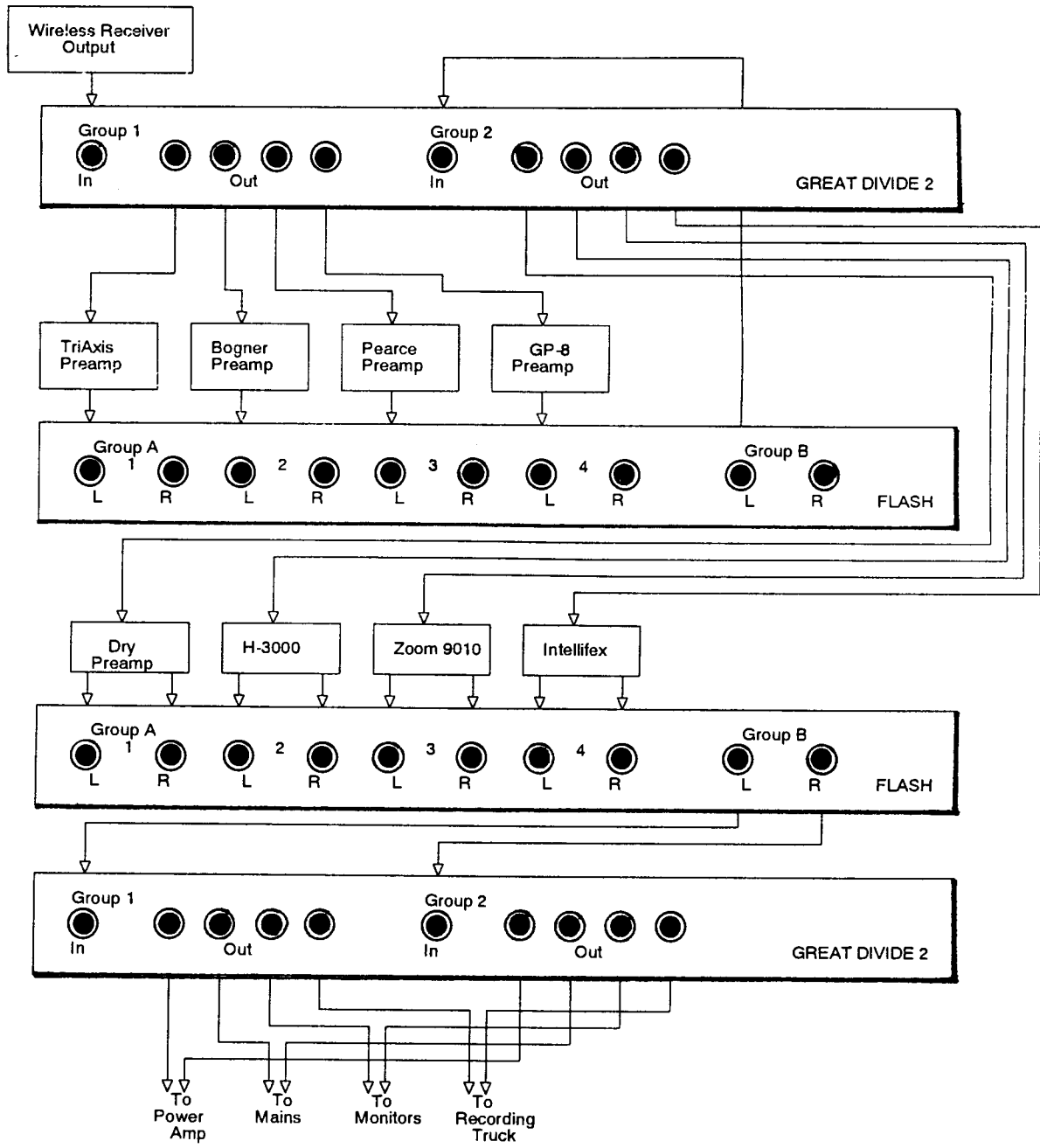
One of Four Stereo Preamps Select

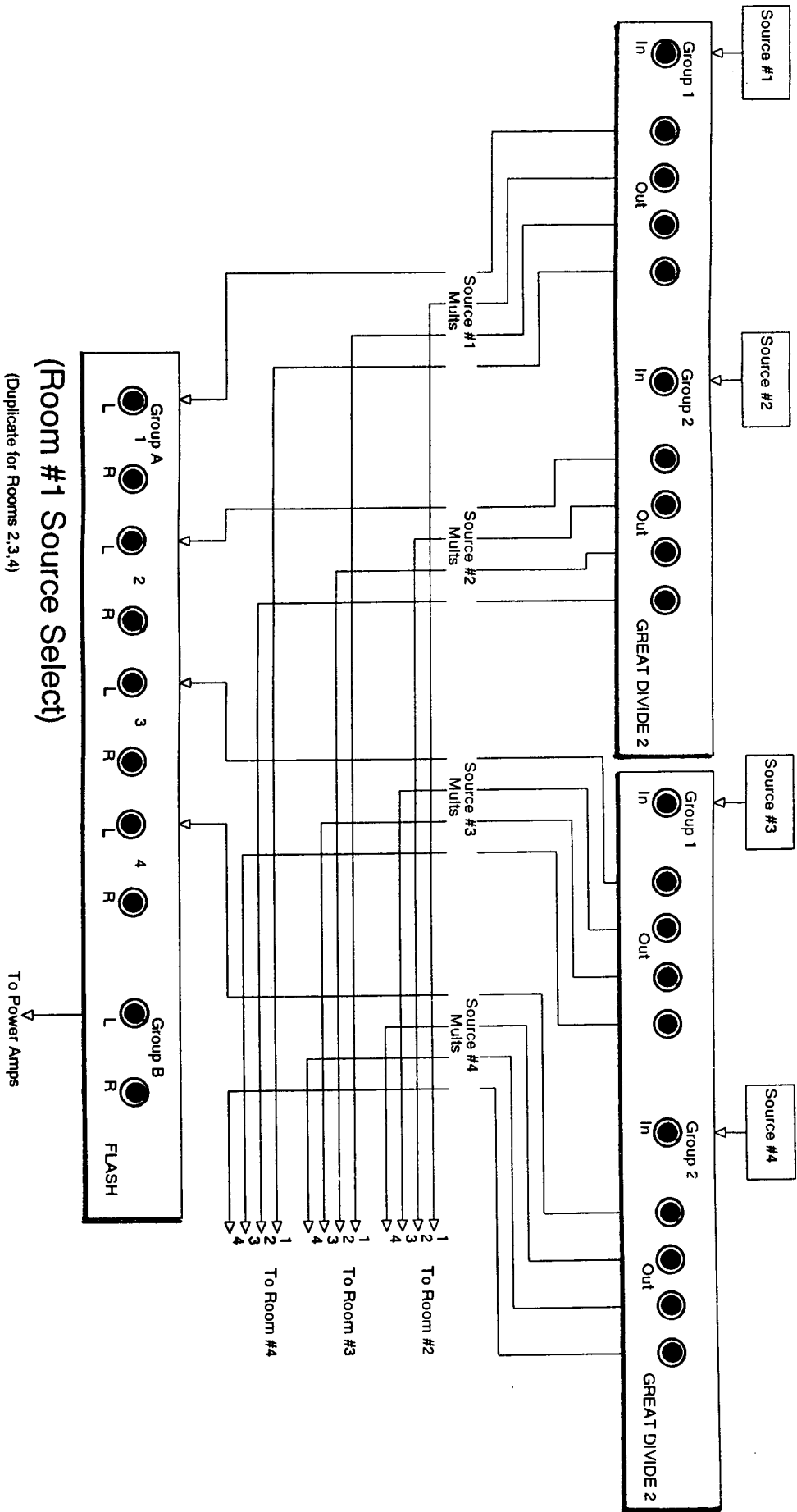


2 Head Guitar System



Guitar Rack





4 Mono Audio Source to 4 Destination System

UNIT AND AUDIO SPECIFICATIONS**GREAT DIVIDE 2**

Description: Stereo 1X4 or Mono 1X8 Audio Distribution Amplifier
 Dimensions: Standard 1-High rackmount (front)
 1 5/8"h X 17"w X 9"d (chassis)
 Weight: 7 lbs.
 Electrical: 120V 25W 50-60Hz
 Max Input: +21 dBu
 Max Output: +21 dBu
 0 dBu = 0.775Vrms
 Controls: on/off switch
 gain control knobs (2)
 ground lift switch
 Indicators: power on leds
 Connectors: 1/4" mono inputs (2)
 1/4" mono outputs (8)
 IEC 3 pin AC power jack
 Power: internal transformer with plug-in IEC standard cable
 Suppression: All inputs and outputs RF (Radio Frequency) suppressed

GREAT DIVIDE 4

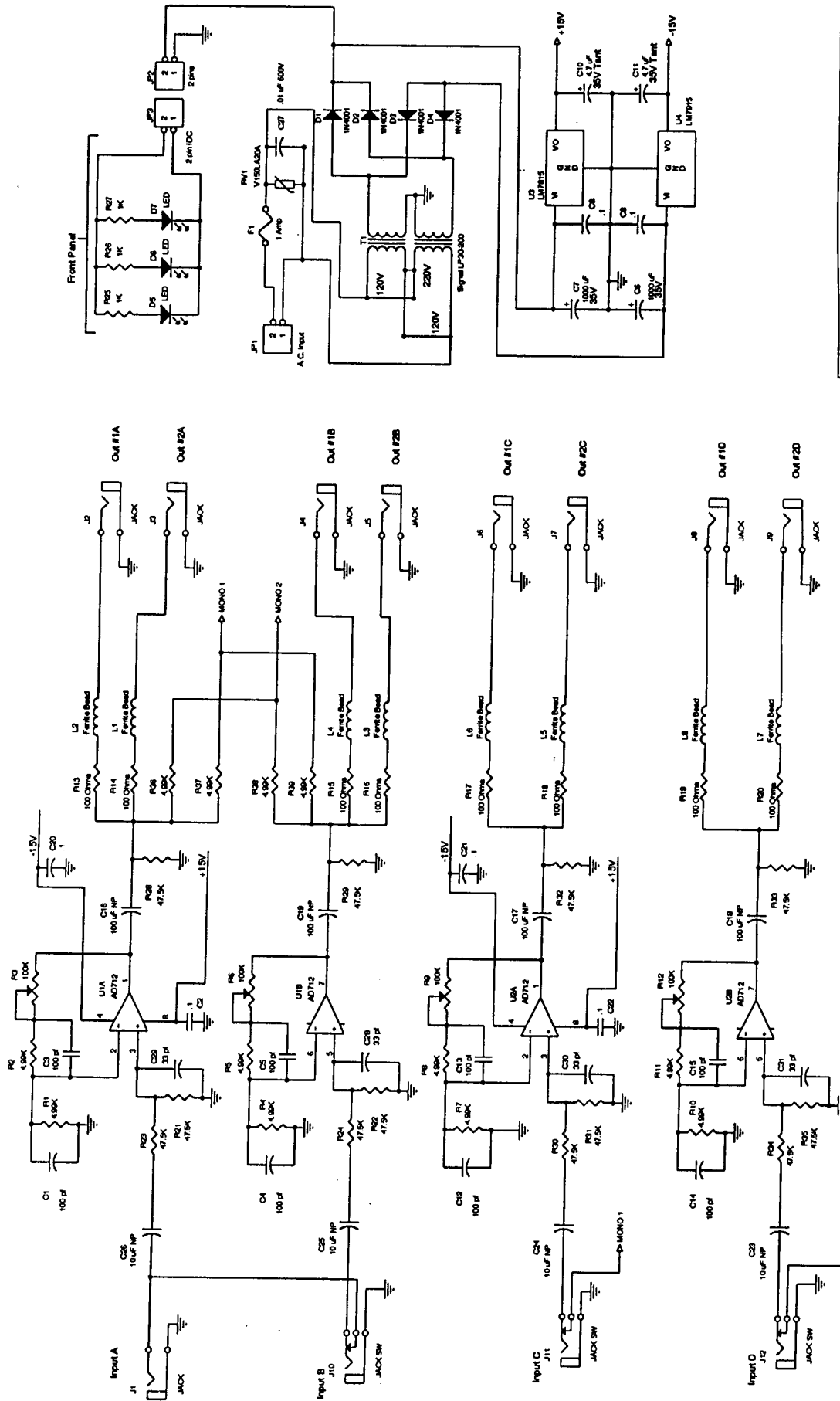
Description: Multiple configuration Quad 1X2 Audio Distribution Amplifier
 Dimensions: Standard 1-High rackmount (front)
 1 5/8"h X 17"w X 9"d (chassis)
 Weight: 7 lbs.
 Electrical: 120V 25W 50-60Hz
 Max Input: +21 dBu
 Max Output: +21 dBu
 0 dBu = 0.775Vrms
 Controls: on/off switch
 gain control knobs (4)
 ground lift switch
 Indicators: power on leds
 Connectors: 1/4" mono inputs (4)
 1/4" mono outputs (8)
 IEC 3 pin AC power jack
 Power: internal transformer with plug-in IEC standard cable
 Suppression: All inputs and outputs RF (Radio Frequency) suppressed

TESTED AUDIO SPECS:

Signal/Noise: - 103dB (ref. 0dBu at unity gain)
 Gain Range: Unity - +20db
 THD: < .005% (ref. 0dBu at unity gain)
 Freq. Resp.: 20-20K hz +/- .1 db (0 - +20dB gain)
 Crosstalk: -90dB at 1K (at unity gain)
 0dBu = 0.775Vrms

2
great divide

4
great divide

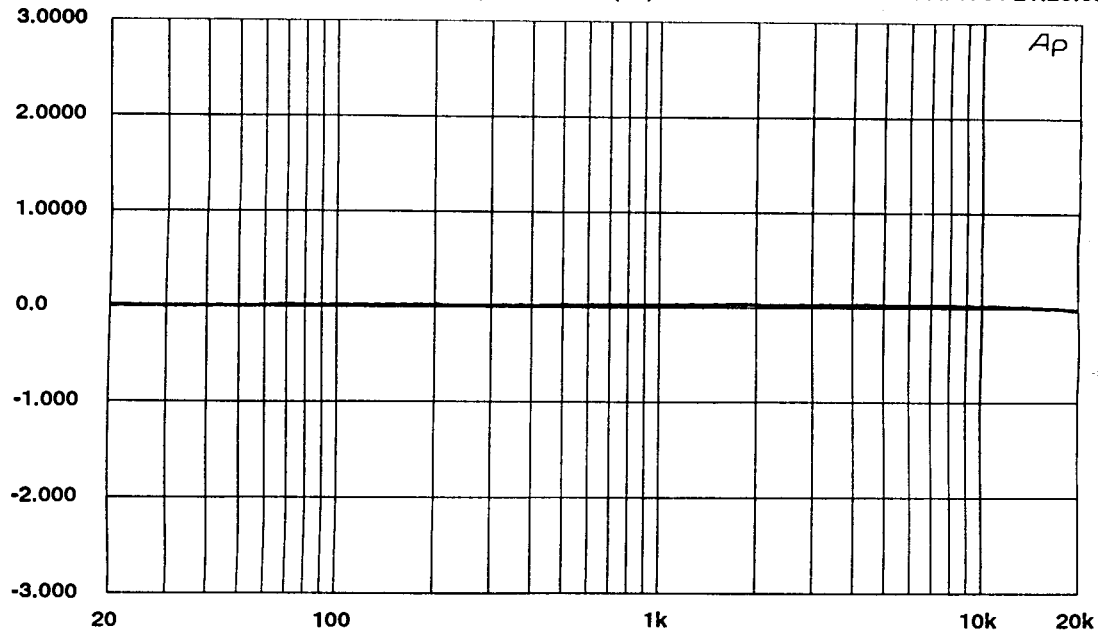


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Title	
Size	Great Divide 4
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Sheet	1 of 1
REV	1.0

FREQUENCY RESPONSE AT UNITY GAIN

AUDIO PRECISION FREQRSP3 AMPL(dBr) vs FREQ(Hz)

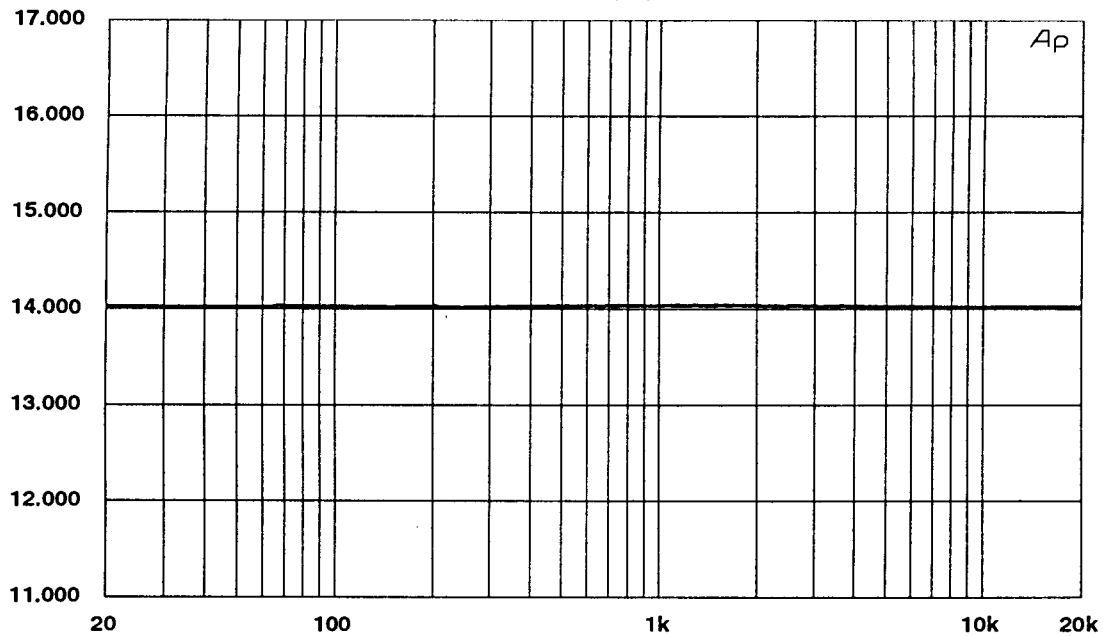
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FREQUENCY RESPONSE AT 20 dB GAIN

AUDIO PRECISION FREQRSP3 AMPL(dBr) vs FREQ(Hz)

14 APR 91 21:29:33



UPTOWN IS HAPPY TO PROVIDE CONSULTATION, BLOCK DIAGRAMS, AND SYSTEM INSTALLATION ADVICE UPON REQUEST. PLEASE FEEL FREE TO CALL OUR TECH SUPPORT LINE AT 414-563-9932.