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Operation



# Remote Control

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## Remote Control Operation

Operation of the Boulder 3050 Mono Power Amplifier by remote control is possible by use of a Boulder Link cable to a Boulder preamplifier.

When Boulder Link is connected correctly, the 3050 will turn on and off with the preamplifier. Moreover, the Boulder 3050 is capable of issuing on/off commands to all other Boulder equipment attached by Boulder Link, including it's paired amplifier.



# Remote Control



Remote Control

# Boulder Link

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Boulder Link is a means of interconnecting most of Boulder products so that their microprocessors can talk to each other, pass important information, and issue commands. Among the key features, Boulder Link allows sequential initiation of power amplifiers' and other products. Boulder power amplifiers can send messages to Boulder preamplifiers which are then shown on its display.

## **Connecting The Boulder Link**

Turn off all Boulder products which are to be linked before connecting Boulder Link cables and setting the Boulder Link ID and Master/Slave switches.

Boulder Link cables in various lengths are available as an accessory from you Boulder dealer. Two connectors are provided on the rear panel of the 3050 and other Boulder products.

All the chassis are connected together in a daisy chain manner. Start by connecting one chassis to another—then from that chassis to the next until all are connected. The order does not matter.

A special interface may be obtained to enable Boulder Link to be used with other control systems. Contact your Boulder dealer for more details.

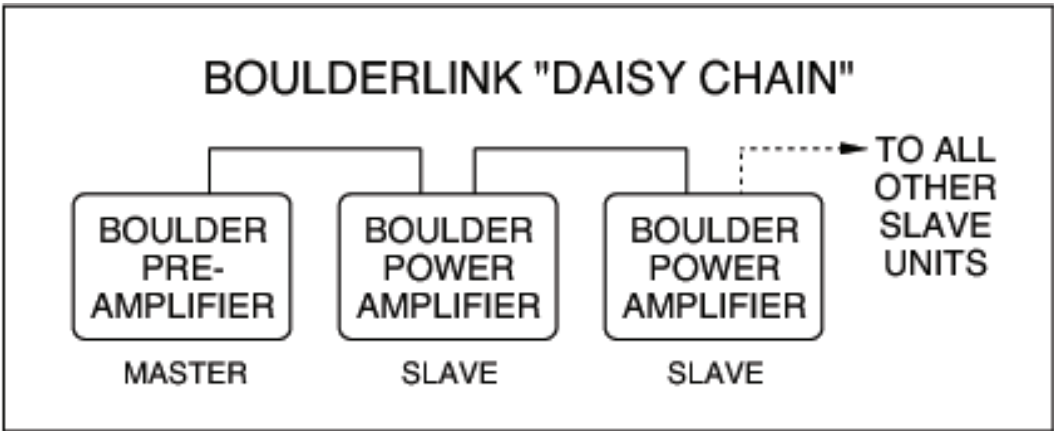
## **Setting Boulder Link Switches**

Every Boulder Link system must have one, and only one “MASTER” component. Usually this is the preamplifier. In the case of the 3050 Power Amplifier, one channel should be set to “MASTER” as long no preamplifier is connected by Boulder Link. Other Boulder Link products which do not have a MASTER/SLAVE switch are not eligible to be “MASTER”.

# Boulder Link



Boulder Link



## **Setting Boulder Link ID Numbers**

Every component is required to have a unique Boulder Link ID number.

Each Boulder 3050 Mono Power Amplifier has an amplifier ID switch on the rear panel. Starting by setting the first switch to “0” or “1” by pressing on the either button above or below the ID window. Once the first amplifier is set at either “0” or “1”, assign other amplifiers numbers, moving up in sequence without duplication. Use of the lowest numbers will hasten the turn on processor, as each amplifier is allowed three seconds to initialize before the next. This spreads out the power line inrush currents preventing the house circuit breakers from unnecessarily tripping. Up to 16 power amplifiers may be connected together in one Boulder Link daisy chain.

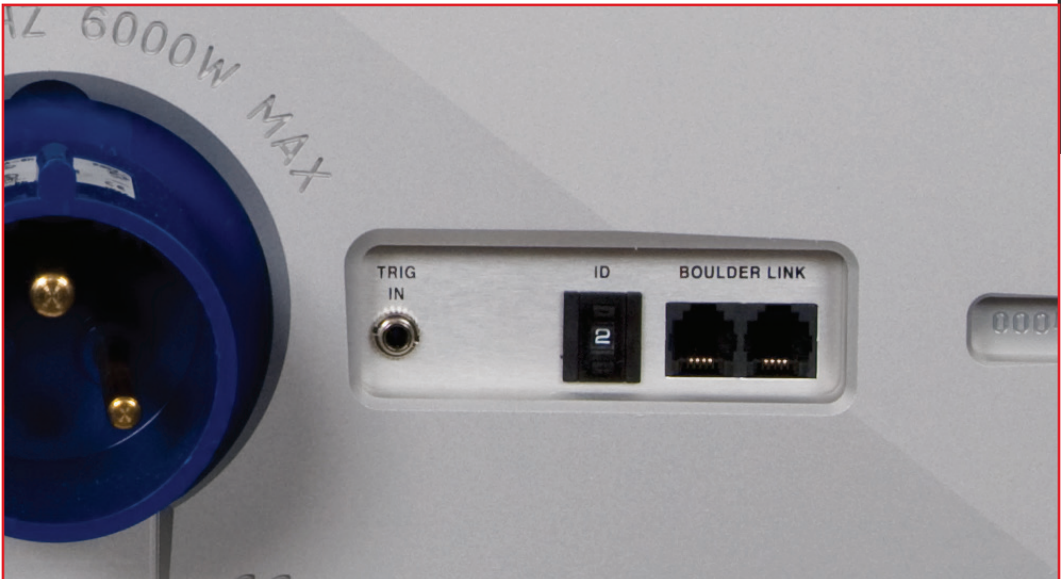
## **Power Up By Boulder Link**

With each component connected together with a Boulder Link cable, and individually connected to a mains outlet, pressing the power amplifier or preamplifier’s “STANDBY” push button will initiate the turn on sequence of all components.

The first time a master is powered up, it will search for any “SLAVE” units connected to it. As the MASTER finds each SLAVE, the SLAVE’s ID number will be shown on the display.

If any of the connected SLAVES are amplifiers, then each time the MASTER is turned on it will display “WAITING FOR AMPS.” Each amplifier will be turned on in the order of their Boulder Link ID. To minimize turn on time, the amplifier’s ID should be set to the lowest possible number in the sequence. For example, use “0”, “1”, and “2”, instead of “13”, “14”, and “15”. An Amplifier set to ID “15” will take 47 seconds to turn on.

# Boulder Link



Boulder Link

## **Boulder Link Messages**

Each component in the system can send a message to the preamplifier which is then shown on its display. This is particularly helpful in confirming the operation status of each power amplifier in a multiple amplifier system. Typical messages on a 2010 Preamplifier are as follows.

“AMP 1 Error” means that an internal power supply has failed and the amplifier has turned itself off to protect the speakers from damage.

“AMP 1 DC” means that it has muted due to a DC offset voltage being detected at its inputs.

“AMP 1 HOT” means that the amplifier has muted due to a higher than normal temperature condition on the heat sinks.

“AMP CLIP” means that the amplifier’s output has momentarily reached its voltage limitation.

“1 OFFLINE” means that the slave is no longer responding via Boulder Link. Its Boulder Link cable may have become disconnected, or the mains power has been disconnected.

“1 ONLINE” means that the slave is now responding via Boulder Link in a normal manner and has been recognized by the master.

# Boulder Link

AMP 1 ERROR

AMP 1 HOT

AMP 1 DC

AMP CLIP

1 OFFLINE

1 ONLINE

Boulder Link

# Fault Conditions

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## **Fatal Errors**

If the indicator of the 3050 Mono Power Amplifier blinks white rapidly for a short time and a series of red flashes follows, a fatal error has occurred. The indicator will flash red in a specific sequence, defining its error code to an authorized Boulder technician. If you are experiencing this problem with your 3050, contact your Boulder dealer immediately.



# Fault Conditions

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# Appendix

## Specifications

Continuous Power, Each Channel			
Watts	$\Omega$	THD 20-2kHz	THD 20kHz
1500	8	0.0005%	0.0035%
1500	4	0.0008%	0.0045%
1500	2	0.0014%	0.0110%

Peak Power, Each Channel	
Watts	$\Omega$
2100	8
3000	4
6000	2

Equivalent Input Noise (EIN), 20kHz BW	1.5 $\mu$ V
Magnitude Response, 20 to 20KHz	+0.00, -0.04 dB
Magnitude Response, -3dB at	0.015Hz, 200kHz
Voltage Gain	26dB
Input Impedance	Balanced: 200K $\Omega$ , Unbalanced 100K $\Omega$
Common Mode Rejection (Balanced only)	60 Hz: 90dB, 10kHz: 70dB
Inputs	3-pin Balanced
Output Connectors	2 sets of 6 mm / .250 inch wingscrews
Power Requirements	220-240 VAC 50-60 Hz, 300W nominal, 6000 W at maximum output

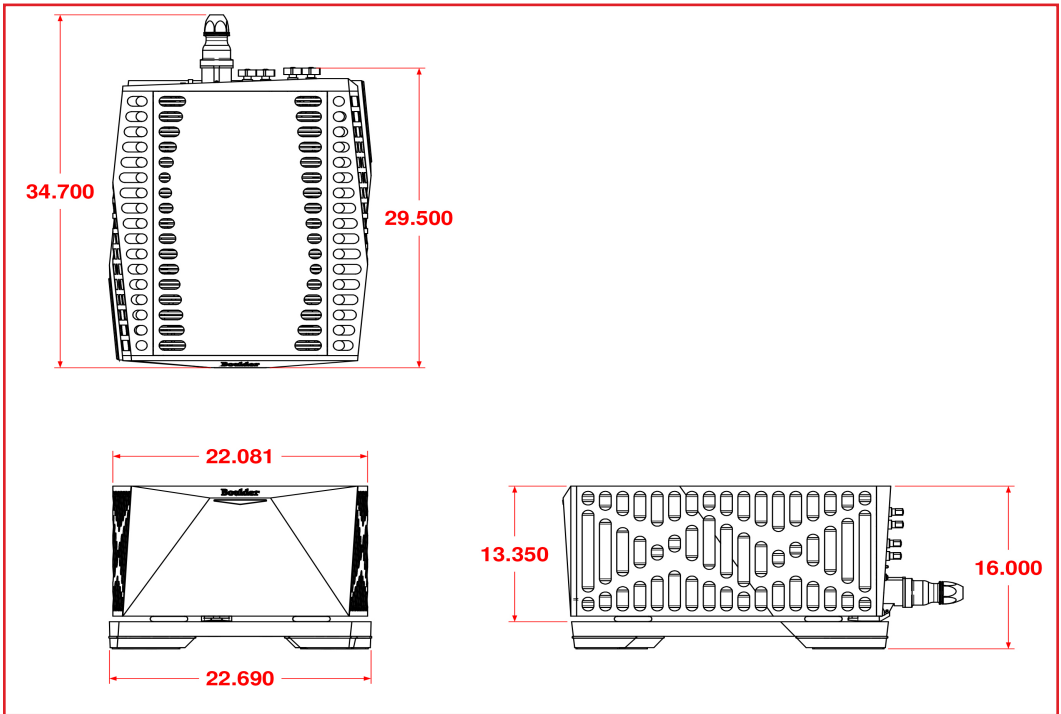
# Appendix

All specifications taken at 240 VAC mains Power

Weight

Amplifier: 355 lbs. (161 kg),  
Granite Base: 86 lbs. (39 kg),  
Shipping: 563 lbs. (256 kg).

Amplifier Dimensions, Inches:



# Appendix

## Troubleshooting

<b>SYMPTOM</b>	<b>CAUSE</b>	<b>REMEDY</b>
No Power Indication	Rear panel power switch is not on	Turn on power switch
	Power amplifier is not plugged in	Connect to an AC Mains outlet
	Home circuit breaker is tripped	Have line voltage checked
Red power indication	Low line voltage	Reset breakers on rear panel
	Defective power cable	Have cable tested
	Defective power supply	Return to dealer for service
White power indication, but no sound from one channel	No signal from one channel of source	Check source controls, cables, and connections
	One Channel is muted by balance control	Re-center balance on preamp
	No signal out to power amplifier	Check connections from preamplifier.

# Appendix

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**Notes:**

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