420 GT
POWER AMPLIFIER

You have purchased the finest car audio power amplifier available on the market. Orion power amplifiers set new standards for performance and reliability. They are superbly crafted and precision calibrated. If you install each amplifier properly with careful attention to all the details covered in this manual, you will be astonished with the quality of sound and you will have an audio system that you can be proud of and enjoy for many years.

Specifications

output power per channel
with 4 channels driven
Into 4 ohms @ 12Vdc ..... 20 WRMS

distortion:
typical 0.006%
maximum 0.03%

frequency response ..... 6 Hz to 50KHz
±0.5 db

signal to noise ratio ..... 110 db

input sensitivity ..... 150 mV & up

output impedance ..... 4 ohms to 16 ohms

remote turn on current ..... 50 mA

current consumption:
@ no signal ..... 600 mA
@ maximum output ..... 14 amps

voltage requirements ..... 10V to 16V

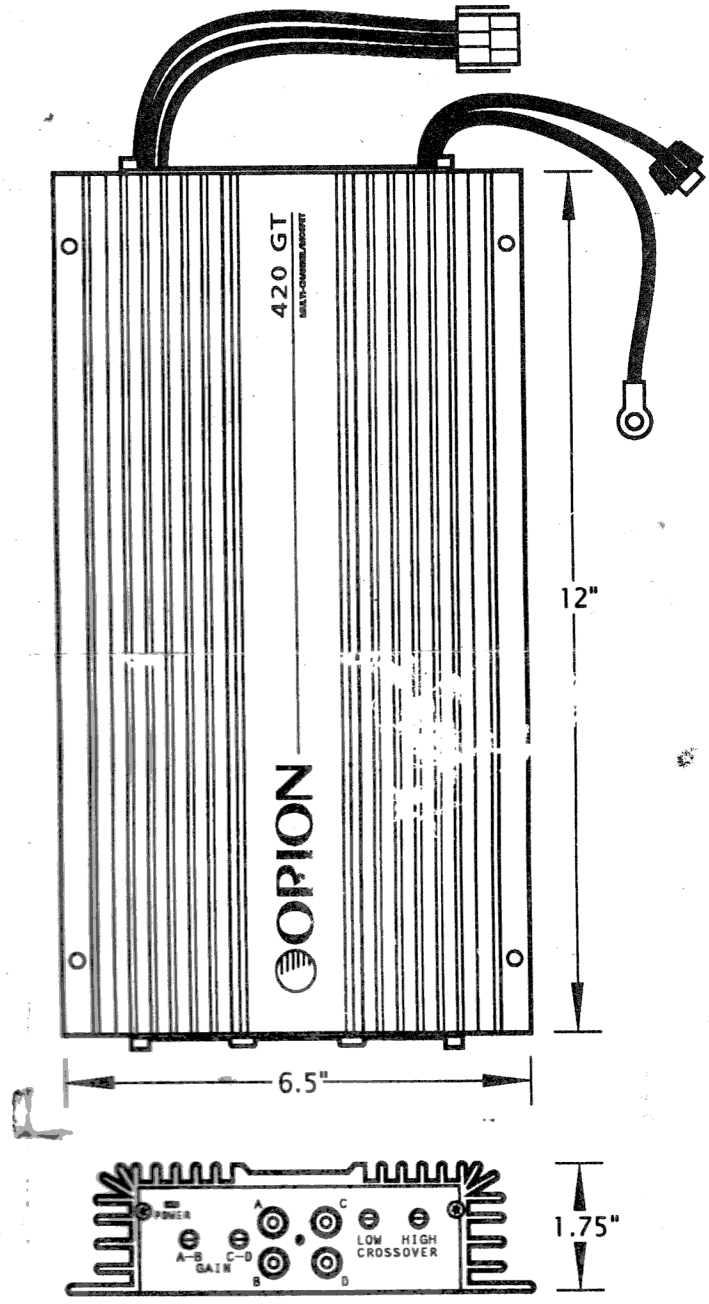
damping factor ..... greater than 200

slew rate ..... 30V per microsec.

stereo separation ..... 80 db

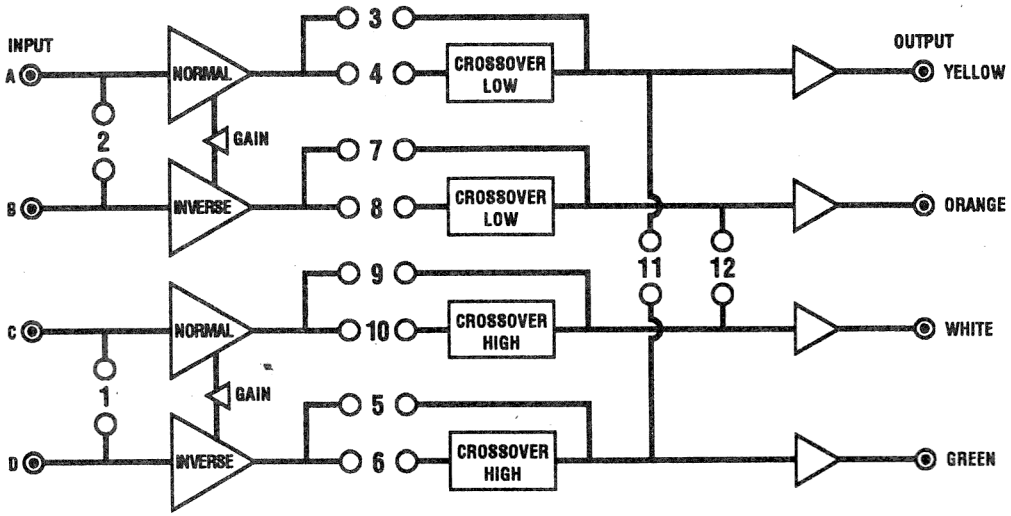
crossover slope ..... 12db per octave

crossover range ..... 50 Hz to 5 KHz



Programming Chart

TO PROGRAM:
Remove cover, turn on switch to energize signal path through amp.The numbers on the switch correspond with the numbers on the drawing. The inverted channels are for bridging purposes.

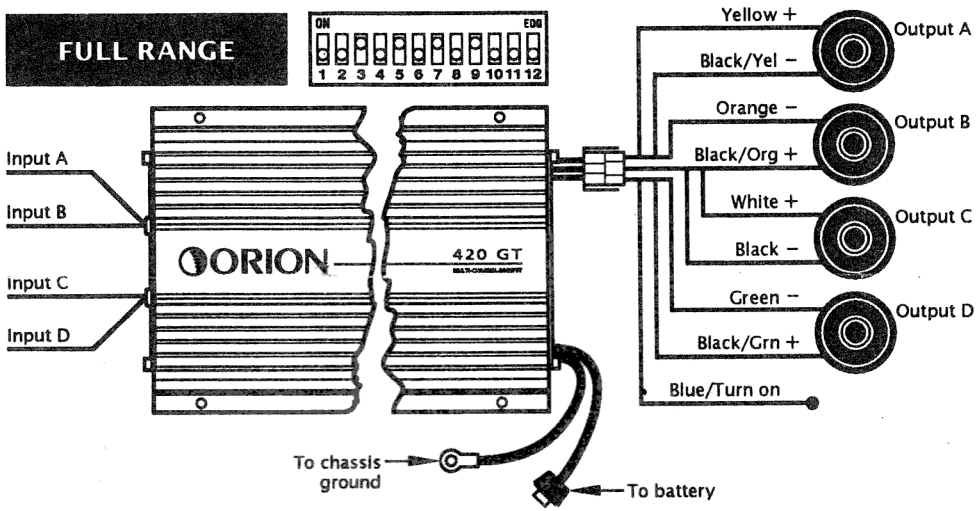


4 Input/4 Output Full Range

20 watts x 4 channels into a 4 ohm load
(40 x 4 @ 2 ohms)

APPLICATION:
Powering full range speakers.

Turn on switches:
3, 5, 7, 9

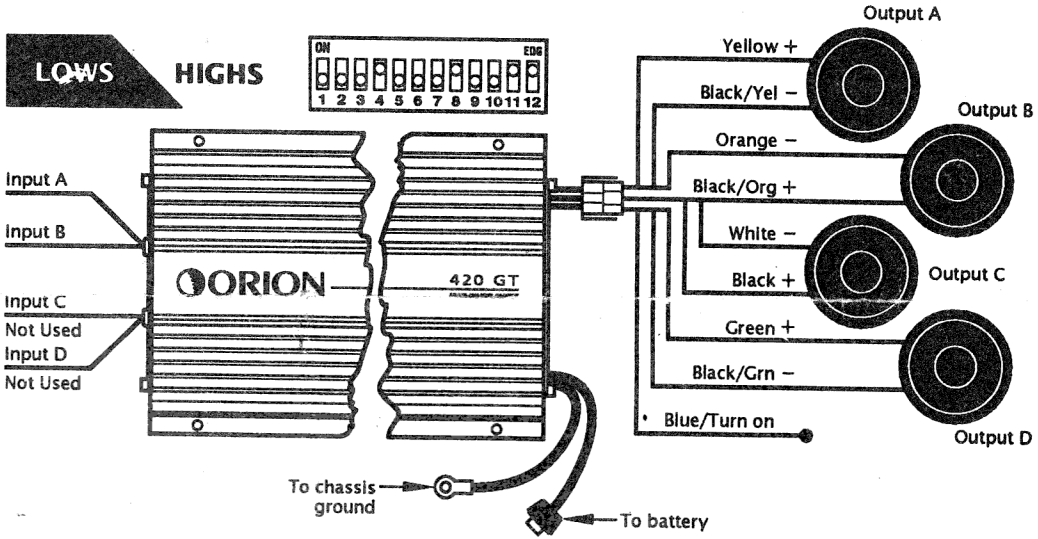


2 Input/4 Output Low Pass

20 watts X 4 channels into a 4 ohm load (40 watts X 4 @ 2 ohms)

APPLICATION:
Powering 4 subwoofers.

Turn on switches:
4, 8, 11, 12

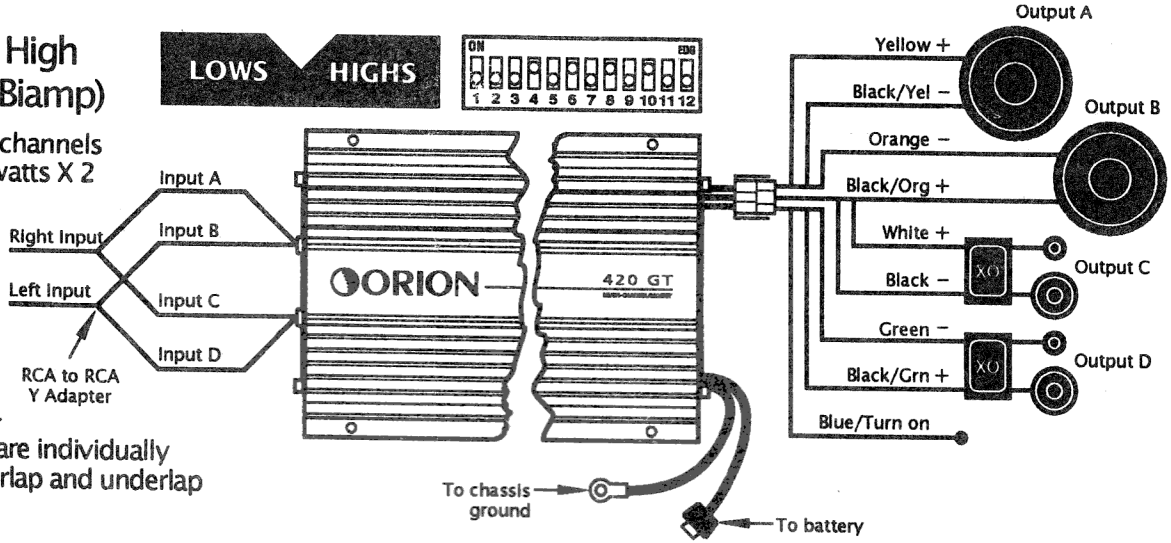


2 Input/4 Output High Pass + Low Pass (Biamp)

Low pass 20 watts X 2 channels into a 4 ohm load (40 watts X 2 @ 2 ohms) High pass 20 watts X 2 channels into a 4 ohm load (40 watts X 2 @ 2 ohms)

APPLICATION:
Complete power for subwoofer/satellite system. (Crossover points are individually adjustable allowing overlap and underlap of frequencies.)

Turn on switches:
4, 6, 8, 10

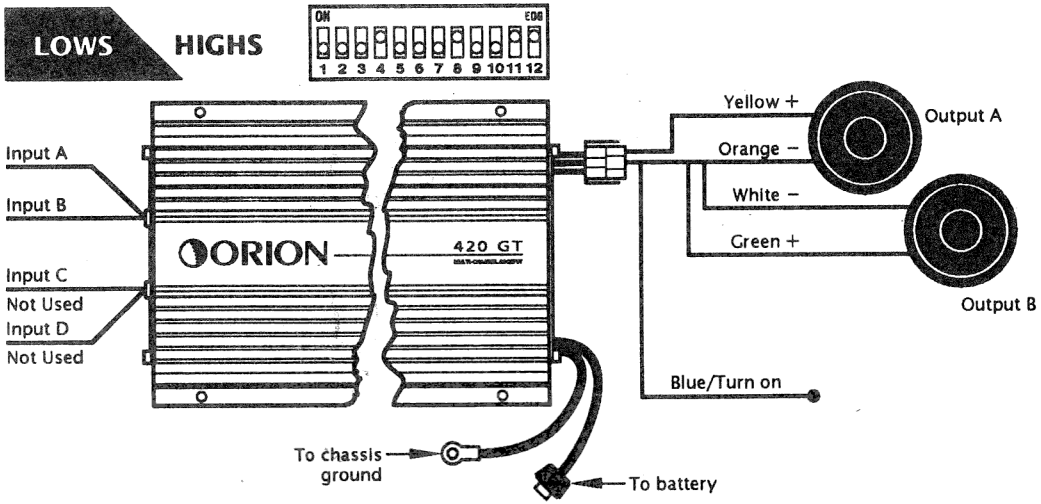


2 Input/2 Output Low Pass Bridged (mono)

80 watts X 2 into a 4 ohm load (minimum 4 ohm load)

APPLICATION:
Powering 2 subwoofers.

Turn on switches:
4, 8, 11, 12



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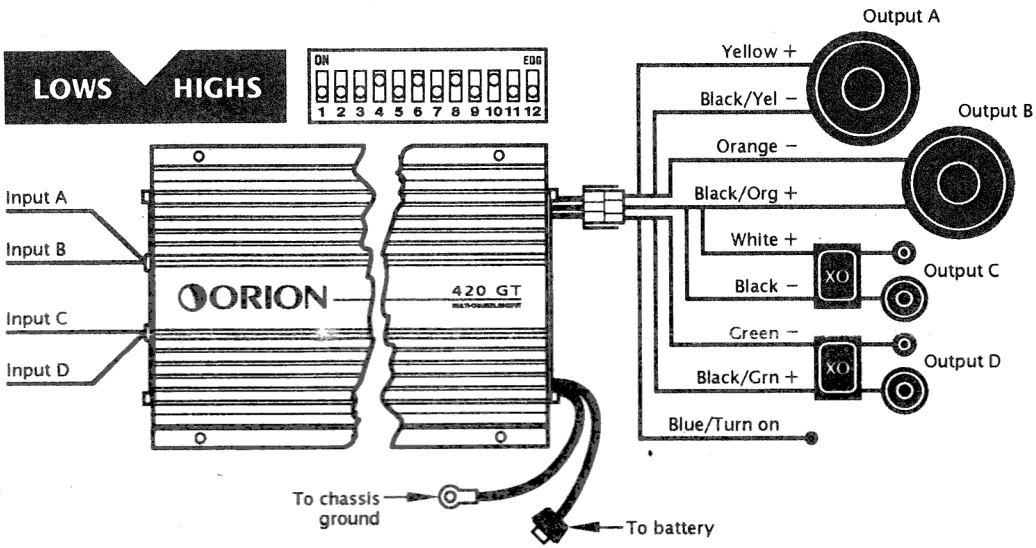
4 Input/4 Output High Pass + Low Pass (Biamp)

Low pass 20 watts X 2 channels into a 4 ohm load (40 watts X 2 @ 2 ohms) High pass 20 watts X 2 channels into a 4 ohm load (40 watts X 2 @ 2 ohms)

APPLICATION:
Complete power for sub-woofer/satellite system. (Crossover points are individually adjustable allowing overlap and underlap of frequencies.)

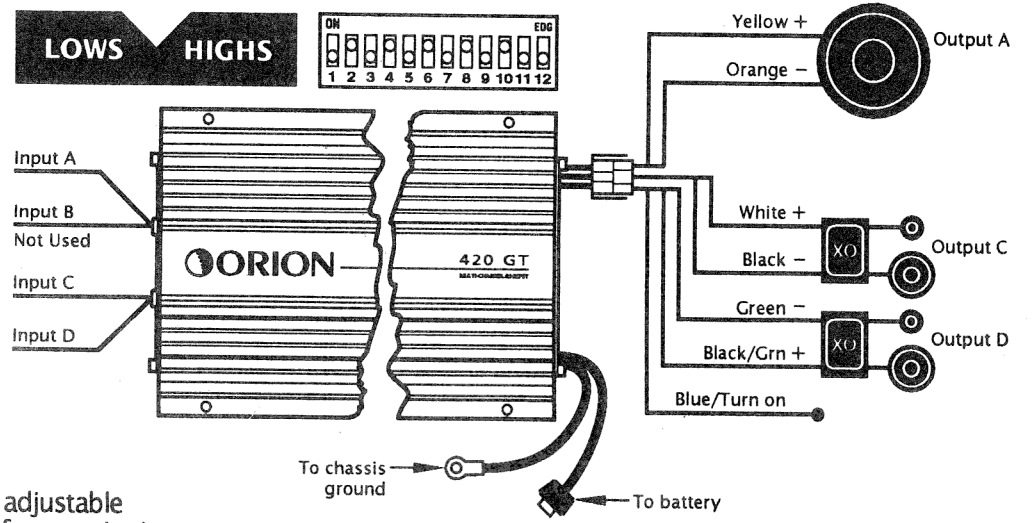
Turn on switches:
4, 6, 8, 10



3 Input/3 Output High Pass + Low Pass Bridged (Biamp)

Low pass 80 watts X 1 channel into a 4 ohm load (minimum 4 ohm load) High pass 20 watts X 2 channels into a 4 ohm load (40 watts X 2 @ 2 ohms)

APPLICATION:
Complete power for subwoofer/ satellite system. Bridged mode provides proper balance of high power to the subwoofer and lower power to the satellites. (Crossover points are individually adjustable allowing overlap and underlap of frequencies.)



Turn on switches: