

MTX[®]

AUDIO



RFL4120

4 Channel Class-AB Power Amplifier
800W RMS CEA

mtxaudio.eu



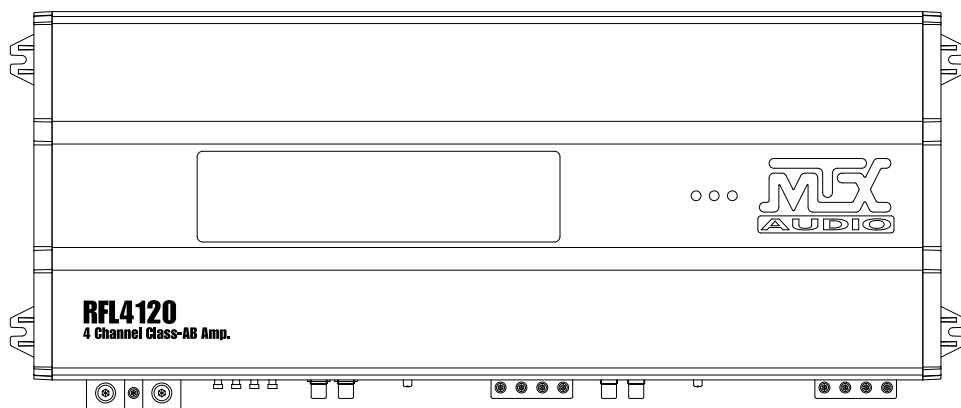
Owner's Manual - MTX RFL4120

● Thank You !

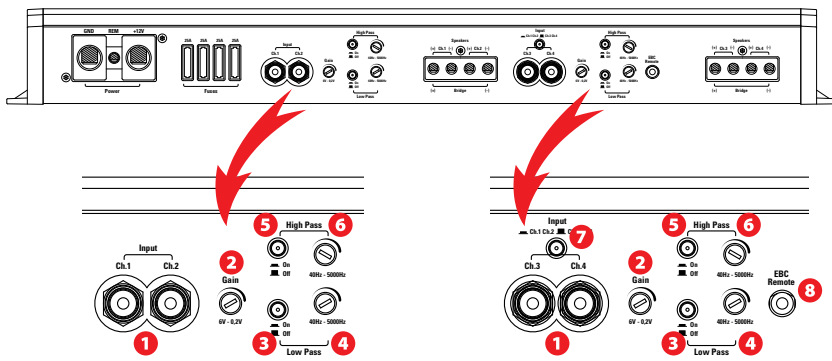
Thank you for purchasing an MTX Audio High-End amplifier. Proper installation matched with MTX speakers and subwoofers provide superior sound and performance for endless hours of waking the neighbors, slammin' your friends or flat out stomping wanna-be players. Congrats and enjoy the ultimate audio experience with MTX !

● Specifications :

- 4-Channel Class-AB amplifier
- CEA2006 certified Power Output :
 - 200 Watts RMS x 4-channels at 2 ohm and THD+N $\leq 1\%$
 - 120 Watts RMS x 4-channels at 4 ohm and THD+N $\leq 1\%$
 - 400 Watts RMS bridged x 2 at 4 ohm and THD+N $\leq 1\%$
- Crossover :
 - High pass 12dB/oct variable from 40Hz to 5000Hz
 - Low pass 24dB/oct variable from 40Hz to 5000Hz
 - Band pass 12dB-24dB/oct variable from 40Hz to 5000Hz
- Signal-to-Noise Ratio (1 Watt) : $> 98\text{dB}$
- THD+Noise (Distortion) (1 Watt) : $\leq 0,05\%$
- Frequency Response ($\pm 1\text{dB}$) : 10Hz-90000Hz
- Maximum Input Signal : 6V
- Maximum Sensitivity : 200mV
- EBC remote control
- Dimensions : 525mm x 204mm x 59mm



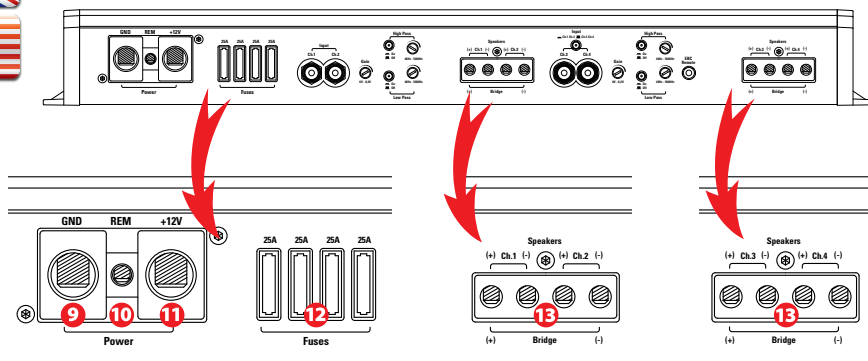
Controls and Inputs :



- 1** RCA Inputs - These RCA inputs are used with head units that have RCA or Line level outputs (head units need a minimum level of 200mV output for proper operation of the amplifier). MTX recommends only high quality RCA cables to decrease the possibility of radiated noise entering the system.
- 2** Gain Control - The gain control matches the input sensitivity of the amplifier to the head unit being used. The operating range varies from 200mv to 6V.
Adjusting the gain
 1. Turn the gain control on the amplifier all the way down (counter clockwise).
 2. Turn up the volume control on the head unit to approximately 3/4 of maximum.
 3. Adjust the gain control on the amplifier until audible distortion occurs.
 4. Adjust the gain control down until audible distortion disappears.
 5. The amplifier is now calibrated to the output of the head unit.
- 3** Low Pass X-Over Switch - Turns the active low pass (LP) x-over on and off. When engaged (On) the x-over is "ON", when disengaged (Off) the x-over is "OFF"
- 4** Low Pass X-Over Frequency Control - Used to select the desired low-pass (LP) x-over frequency. The frequency is adjustable from 40Hz to 5000Hz.
- 5** High Pass X-Over Switch - Used to turn on the active high-pass (HP) x-over on and off. When engaged (On) the x-over is "ON", when disengaged (Off) the x-over is "OFF".
- 6** High Pass X-Over Frequency Control - Used to select the desired high-pass (HP) x-over frequency. The frequency is adjustable from 40Hz to 5000Hz.
- 3 5** Band Pass X-Over : To use, turn "ON" the LP (3) and HP (5) x-overs at the same time, creating a band-pass x-over for kick woofers or midranges. You can tune the filter with frequency controls (4) and (6).
- 7** Input Switch : If the head unit is equipped with 4 RCA outputs (2 front and 2 rear), use the ch-3 ch-4 mode and connect the 4 RCA outputs to the ch-1 ch-2 ch-3 ch-4 RCA inputs on the amp. If only 2 RCA outputs are available from the head unit, use the ch-1 ch-2 mode and connect the RCA outputs to the ch-1 and ch-2 inputs of the amp.
- 8** EBC Port (External Bass Control) - The Remote Subwoofer Level Control (EBC) plugs directly into this port, while the EBC itself can be placed anywhere in the vehicle for on demand bass adjustments. EBC is included.



● Connexions :



- 9** Ground Terminal – A proper ground is required for your amplifier to operate at peak performance. A short ground cable the same diameter as the power cable should be used to attach the ground terminal directly to the chassis of the vehicle. Always remove paint, dirt or debris to expose bare metal where the ground cable will be attached.
- 10** Remote Terminal – The amplifier can be turned on by applying 12 volts to this terminal. Typically this voltage is supplied by a wire from the source unit marked “remote” or “power antenna”.
- 11** (+12) Power Terminal - This is the main power input for the amplifier and must be connected directly to the positive terminal of the vehicles battery for proper operation. Use caution when installing (+12) power cable in the vehicle. Avoid running this cable parallel with RCA cables, antennas, or other sensitive equipment due to massive currents that can induce noise into the audio system. It is also very important to have a tight, secure connection for maximum performance. MTX recommends using 50mm² power wire with the MTX RFL4120 amplifier.
- 12** Fuses - When fuses blow, replace them with the same value. Never use a higher rated fuse !
- 13** Speaker Terminals - Connect speakers to these terminals. Observe speaker polarity throughout the system. Improper phase can result in loss of bass response and/or poor overall sound quality.

Bridge Mode:

When bridging the amplifier, use the Ch1 positive terminal and the Ch2 negative terminal only.

When bridging the amplifier, use the Ch3 positive terminal and the Ch4 negative terminal only.

Warning : do not bridge the amplifier with an impedance lower than 4 ohm.

● Installation & Mounting :

MTX recommends your new amplifier be installed by an Authorized MTX retailer. Any deviation from specified installation instructions can cause serious damage to the amplifier, speakers and/or vehicles electrical system. Damage caused from improper installation is NOT covered under warranty. Please verify all connections prior to system turn on !

1. Disconnect the vehicle's negative battery cable.
2. Determine the mounting place for your MTX amplifier. Keep in mind there should be sufficient air flow for proper cooling. Mark the mounting holes from the amplifier to be drilled. Before drilling make sure all vehicle wires, gas lines, brake lines and gas tank are clear and will not interfere with installation. Drill the desired holes and mount the MTX amplifier.
3. Install a positive (+) power cable from the vehicle's battery through the firewall using a grommet or firewall bushing to avoid cable damage from sharp edges of the firewall. Run the cable through the interior of the vehicle and connect it to the amplifier's +BATT terminal. Do Not connect to the battery at this time.
Note : Use only proper gauge wire for both positive and negative connections.
4. Install a circuit breaker or fuse within 20cm of the battery. This effectively lowers the risk of severe damage to you or your vehicle in case of a short circuit or accident. Make sure the circuitbreaker is switched off or the fuse is taken out of the fuse holder untill all connections are made. Now connect your positive power cable to the positive battery terminal of the battery.
5. Grounding - Locate a proper ground point on the vehicle's chassis and remove all paint, dirt or debris to reveal a bare metal surface. Attach the ground wire to that contact point. Connect the opposite end of the ground wire to the GND terminal on the MTX amplifier.

● Installation & Mounting :

6. Connect a Remote Turn-on wire from the head unit to the MTX amplifier's Remote terminal. If the head unit does not have a dedicated Remote Turn-on lead, you may connect to the head unit's Power Antenna lead.
7. Connect RCA cables from the head unit to the MTX amplifier's RCA inputs. Run all signal cables away from vehicle wiring, computers and power cables. If cables must be crossed do so at a 90° angle. Use only high quality RCA cables to decrease radiated noise from entering the system.
8. Connect your speakers to your MTX amplifier's speaker terminals using the right gauge speaker wire. Two channels bridged can drive a 4 ohm minimum load for max power.
9. Double check all previous installation steps, in particular, wiring and component connections. Once verified, reconnect the vehicle's negative battery cable, turn the circuit breaker on or place the fuse in the fuse holder.

Note : Gain Levels on the amplifier should be turned all the way down (counter clockwise) before proceeding with adjustments.

● Troubleshooting :

Problem	Cause	Solution
No LED indication	No +12V at remote connection No +12V at Power connection Insufficient ground connection Blown power fuse	Supply +12V to terminal Supply +12V to terminal Verify ground connection Replace fuse
Power LED on, no output	Volume on head unit off Speaker connections not made Gain control on amplifier off Signal processing units off All speakers blown	Increase volume on head unit Make speaker connections Turn up gain Apply power to signal processor Replace speakers
Output distorted	Head unit volume set too high Amplifier gain set too high	Lower head unit volume Lower amplifier gain
Balance reversed	Speakers wired reversed RCA inputs reversed	Wire speakers with correct orientation Reverse RCA input
Bass is weak	Speakers wired out of phase Not using MTX woofers	Wire speakers with correct phase Buy MTX woofers
Blowing fuses	Excessive output levels Amplifier defective	Lower the volume Return for service

● How To Stay Tuned :



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MTX is proud to be an American Audio Company since 1971.



MiTek

Corporation

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