

MTX[®] **JACK** **AUDIO** **HAMMER**[™]



OWNER'S MANUAL

INTRODUCTION

Thank you for choosing MTX to help you reach your ultimate goal with your vehicle. The MTX JackHammer is a true 22" subwoofer with power and performance beyond anything ever attempted in the mobile audio world. This behemoth, is capable of handling up to 4,000 watts of RMS power. Designed for those who want to show off the biggest woofer ever made.

This subwoofer is perfect for excessive bass and competition use. It can also be Re-coned if needed. For more information, see the *Piston Change (Re-cone Kit)* section in this manual or call 1-800-CALL-MTX.

The most enormous subwoofer continues to prove that MTX is the biggest, baddest, boldest car audio...ever!

SPECIFICATIONS

Model	T9922-22
Description	22" JackHammer SuperWoofer with dual 2 Ohm voice coil
Impedance	2x2 Ohms
Frequency Response	20Hz-150Hz
Power Handling (RMS)	4000 Watts
Recommended RMS Amplifier Power	2000-4000 Watts
Voice Coil Diameter	6.5"
Magnet Weight	900 oz.
Mounting Depth	21.063"
Cut Out Diameter	20.025"
Sealed Enclosure Net Volume	6.0 ft ³
Vented Enclosure Net Volume	8.7 ft ³
Port Dimensions (Slot Port)	24 $\frac{1}{8}$ "H x 3 $\frac{3}{16}$ "W x 10"L
Speaker Displacement	1.8 ft ³
Port Displacement	.5 ft ³
Tune Frequency	32Hz

T9922-22

Fs = 24 Hz	P-Vd = 0.155 cu.ft
Qms = 5.044	Qes = 0.441
Vas = 5.776 cu.ft	Re = 0.87 ohms
Cms = 0.039 mm/N	BL = 18.41 Tm
Mms = 1140.0 g	Qts = 0.406
Rms = 33.92 kg/S	no = 0.487 %
Xmax = 1 in	2.83V SPL = 98.8 dB
Xmech = 3 in	
P-Dia = 18.49 in	
Sd = 267.84 sq.in	

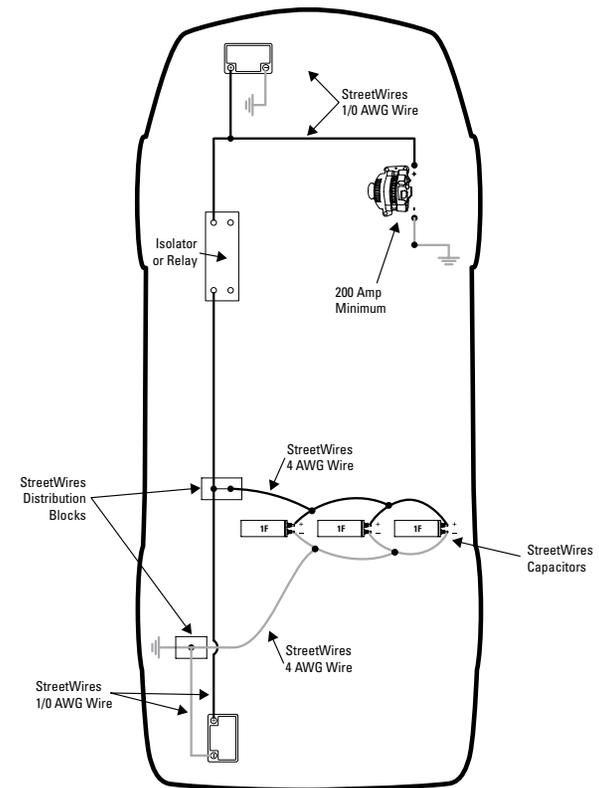
BEFORE STARTING

It is very important that you have your JackHammer installed by an authorized MTX retailer, that is preferably MECP certified. Before installation, make sure you have read the instructions carefully and have the following equipment:

- Fork Lift (or another means of lifting approximately 370 lbs.)
- Electric drill
 - $\frac{1}{2}$ " drill bit
 - T-30 Torx
 - $\frac{1}{16}$ " wrench or socket
- Safety glasses
- Six $\frac{3}{4}$ "-11 bolts 1 $\frac{3}{4}$ " long
- $\frac{5}{32}$ " 4mm, $\frac{3}{16}$ " hex keys
- 3mm hex wrench (if re-coning)

ELECTRICAL UPGRADE

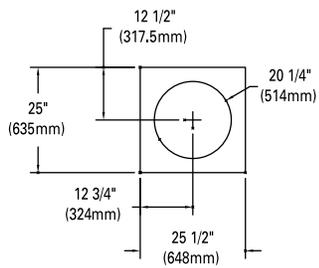
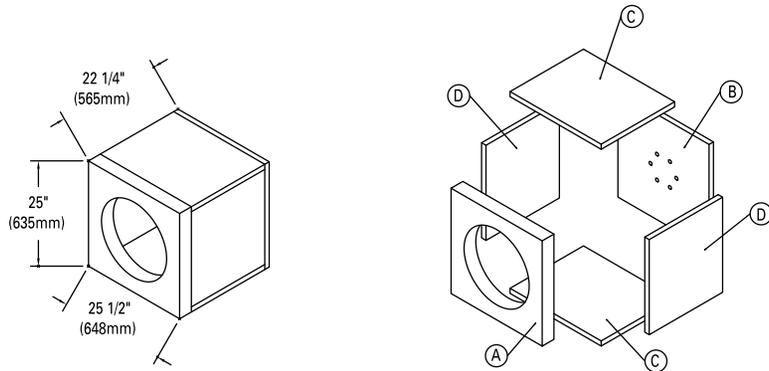
A factory electrical system will not be able to handle the power requirements of the amplifiers that are needed to drive the JackHammer. You will need to upgrade your vehicle's electrical system with both additional batteries and alternators. MTX Audio recommends West Co. SVR80 or SVR100 because they are a sealed battery that can be mounted in any configuration and supply the power needed. Also high-output alternators from either Ohio Generator or PowerMaster. It is recommended to use anywhere from 3 to 6 StreetWires capacitors to help control the flow of power, call 877.STREET1 for more information. The diagram below shows the wiring needs of your entire vehicle. Please see the *Strapping Thunder Amplifiers* section for further information.



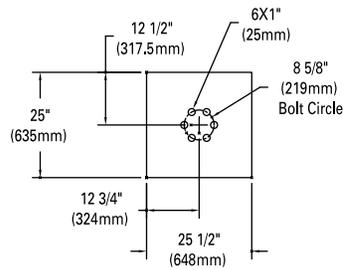
RECOMMENDED ENCLOSURE REQUIREMENTS

For Sealed Enclosures

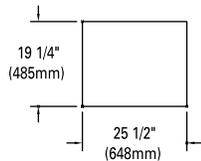
The JackHammer requires a volume of 4.2 cubic ft (net) per woofer. The woofer's displacement is 1.8 cubic ft. The total gross volume will be 6 cubic ft.



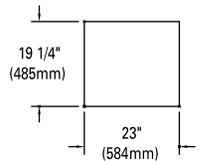
[A] - 2" (50mm) MDF



[B] - 1" (25mm) MDF



[C] - 1" (25mm) MDF

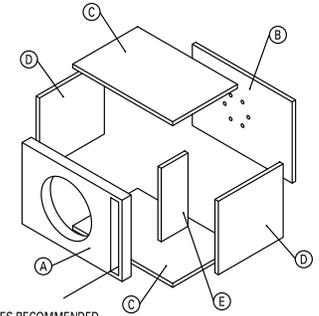
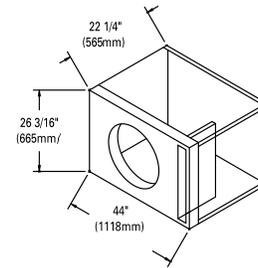


[D] - 1" (25mm) MDF

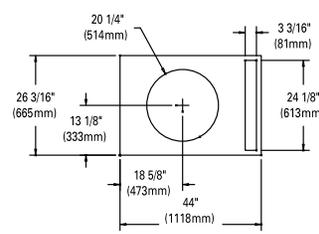
Additional ranges of sealed volumes for a sealed box is 5 cubic ft or greater gross volume.

For Vented Enclosures

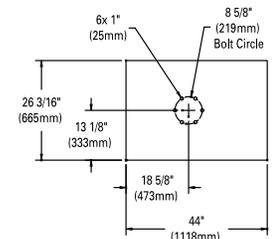
The JackHammer requires a volume of 8.7 cubic ft (net) per woofer. The woofer's displacement is 1.8 cubic ft. The port's internal dimensions are 24-³/₁₆" x 3-³/₁₆" x 10" and it takes approximately .5 cubic ft. The total gross volume will be 11.0 cubic ft.



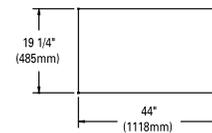
RADIUS PORT EDGES RECOMMENDED



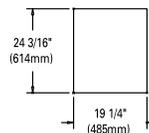
[A] - 2" (50mm) MDF



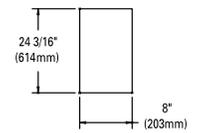
[B] - 1" (25mm) MDF



[C] - 1" (25mm) MDF



[D] - 1" (25mm) MDF

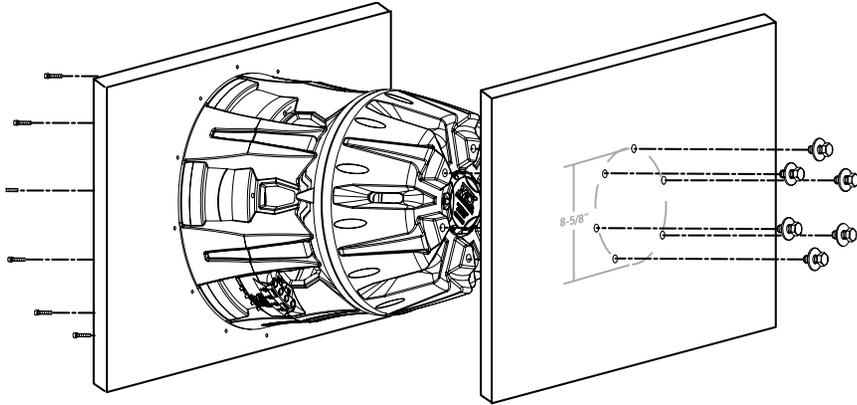


[E] - 1" (25mm) MDF

The final tuning frequency is 32Hz. Additional vented box suggestions are 7.75 to 9.5 (net) cubic ft. Remember to account for the driver (1.8 cubic ft) and the port displacement, with port tuning ranges from 32 to 42Hz, when mounting.

MOUNTING

Mounting the JackHammer is nothing that can be taken lightly, quite literally. You need to follow the steps below carefully and have all the necessary equipment. You will need to be able to lift the nearly 370 lbs. subwoofer comfortably. MTX Audio recommends a fork lift for safe installation.



The woofer is designed to distribute its weight evenly throughout the entire structure. This is accomplished by including rear motor mounts with $\frac{3}{8}$ "-11 bolts so it is mounted from both the front and the back. It is important that both these sides are mounted properly to ensure proper weight distribution. The drawing above shows the rear mounting hole detail for the back support. The holes are located on an 8 $\frac{5}{8}$ " bolt circle, meaning the holes are located on a radius of 4 $\frac{5}{16}$ " from the center point. Use the pallet from the JackHammer packaging to make a mounting template if needed. For the recommended 1" baffle, the bolts needed should be $\frac{3}{8}$ "-11 threaded bolts 1 $\frac{3}{4}$ " long. Washers should be used with the $\frac{3}{8}$ "-11 bolts to be sure there will be no air leaks around the bolts.

Note: MTX Audio also recommends making the back of the enclosure removable to replace the woofer cone if ever needed. This would make it possible to replace the cone assembly without removing the woofer.

In the gasket of the woofer, there are four eyelet rings. Make sure they are screwed in securely and then attach a chain between them for lifting. Use one tine of the fork lift to lift the JackHammer with the chain then slowly lower it into the enclosure. Unscrew the eyelets and align the woofer with the front and rear mounting holes, and then fasten it using the screws and bolts provided. Remember to pre-drill the screw holes using a $\frac{3}{32}$ " drill bit. Then, lift the enclosure, complete with JackHammer, into the back of the vehicle.

Note: This unit is EXTREMELY heavy! Make sure everyone is clear and out of the way in case something should break or fall!

Note: MTX Audio is not responsible for damages occurred during installation. For custom installation help or answers to further questions, please call 1-800-CALL-MTX.

WIRING OPTIONS

Often overlooked, the installation components used to connect the entire system need to match the maximum capability of the system or you will lose performance. MTX Audio recommends using StreetWires 4 AWG cable as the speaker wire.

Dual Voice Coil Wiring

The JackHammer Superwoofer is available in a dual 2 Ohm (T9922-22) voice coil configuration. The voice coils are labeled VC1 and VC2.

Note: Both voice coils should always be connected.

Independent Voice Coil Connection Configuration

This connection is ideal when using two large mono block amplifiers per voice coil.



Parallel Configuration

Wiring the voice coils in a parallel configuration will have a total final load of 1 Ohm. Connect each of the dual voice coil's positive terminals together so that they share the same source (amplifier). Do the same for the negative terminals. This connection is ideal when using a large 1 Ohm stable amplifier.



Note: The wiring of the dual voice coils will affect impedance for the amplifier system. Care must be taken to assure that the resulting impedance does not exceed the amplifier's requirements.

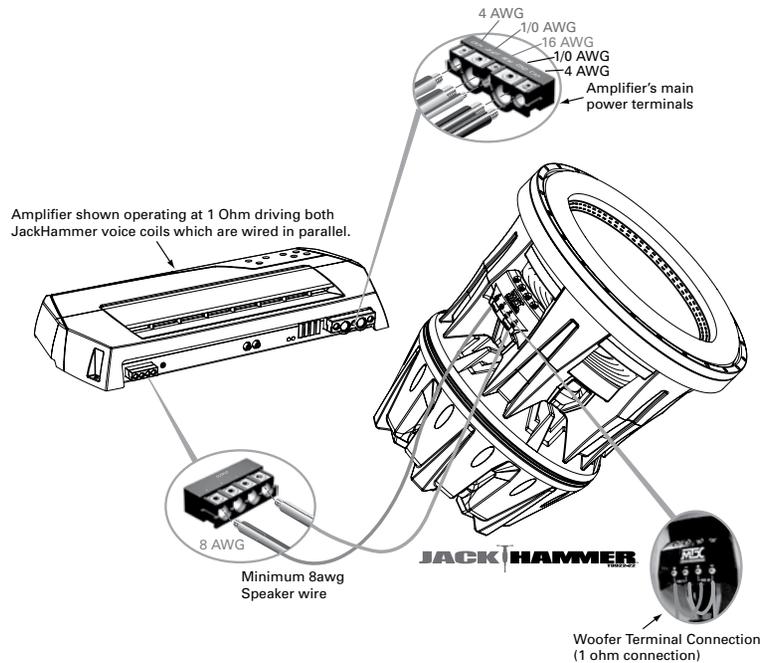
Series Configuration

Wiring the voice coils in a series configuration will have a total final load of 4 Ohms.



T9922-22 WIRING SETUP

This figure shows the recommended amplifier connection for the T9922-22 using the MTX TE4001D amplifier.



SETTINGS AND TUNING

Strapped amplifiers require "gain matching." This is the process of adjusting each amplifier's gain, frequency, and EQ to be sure both amplifiers are sending the same AC voltage to the woofer. This will require a volt ohm/multi meter and test tones.

1. It is recommended to have a crossover setting of 60-80Hz and the subsonic filter turned off.
2. The parametric EQ can be used to adjust ± 12 dB from 30-80Hz with a variable "Q" of 0.5 to 4. Using the boost in the 60-80Hz region with a "Q" of 1 or 2 is suggested. The "Q" adjusts the bandwidth of frequencies that are boosted or cut. For more information, read the owner's manual for the amplifier.

Wiring Conversion from -44 to -22

The T9922-22 requires only one TE4001D amplifier to operate correctly, while the T9922-44 requires two TE4001D amplifiers. If you are converting your woofer from a dual 4 Ohm (T9922-44RCK) to a dual 2 Ohm (T9922-22RCK) you will need to wire the coils in a parallel configuration (1 Ohm impedance) before connecting to one TE4001D amplifier. The other option is to connect the woofer in series (4 Ohm impedance) to two TE4001D strapped amplifiers.

PISTON CHANGE (RE-CONE KIT)

Since the installation of the JackHammer is a large investment in time and resources, the cone can be removed without removing the entire sub or enclosure. Re-coning the woofer is surprisingly easy. No glue is needed, just bolts, and if you followed the enclosure design it can be done without taking the woofer out of the enclosure. Directions for either procedure follow.

To Re-cone the Woofer when Removed from the Enclosure

To remove the cone, unscrew the twelve $\frac{3}{16}$ " hex screws from the front gasket of the woofer and remove the gasket. Next remove the six $\frac{3}{8}$ " hex screws from the back of the spider plateau and loosen the tinsel leads at the terminal. The tinsel leads are the four 3mm hex screws at the top of the terminal that hold the voice coil wires. Gently pull on the cone under the surround and the cone assembly should pull away from the woofer motor. Be sure and pull evenly to prevent the assembly from binding in the basket. You are now ready to put in the new re-cone kit.

Place the new cone assembly into the woofer motor. Make sure to align the tinsel leads from the re-cone kit with the terminals and line up the large notches in the surround with the largest holes in the basket. Insert the tinsel leads into the terminal ensuring the red lead is going into the positive (+) position and the black lead is going into the negative (-) position. Tighten the four set screws and then slightly tug in the tinsel leads to make sure they are tight in the terminal.

Next, insert the six $\frac{3}{8}$ " hex screws back into the spider plateau and tighten. Replace the top gasket over the surround on the top of the woofer. The counter-bore holes in the gasket need to align with the smaller threaded holes in the basket. Insert the twelve $\frac{3}{16}$ " hex gasket screws into the counter-bored holes and tighten. Your new cone is now installed and you are ready to once again experience the JackHammer's extreme bass!

To Re-cone the Woofer when Installed in the Enclosure

If you have made the back removable, as suggested earlier in this manual, you can remove the cone without removing the woofer from the enclosure. To remove the cone, unscrew the twelve $\frac{3}{16}$ " hex screws from the front gasket of the woofer and then remove the top gasket. DO NOT remove the T-30 wood screws because the gasket can be removed with these still in place. Next, remove the six $\frac{3}{8}$ " bolts from the back with a $\frac{1}{16}$ " wrench and pull off the back of the enclosure. Then, remove the six $\frac{3}{8}$ " hex screws from the back of the spider plateau and loosen the tinsel leads at the terminal. The tinsel leads are the four 3mm hex screws at the top of the terminal that hold the voice coil wires. Gently pull on the cone under the surround and the cone assembly should pull away from the woofer motor. Be sure and pull evenly to prevent the assembly from binding in the basket. You are now ready to put in the new re-cone kit.

Place the new cone assembly into the woofer motor. Make sure to align the tinsel leads from the re-cone kit with the terminals and line up the large notches in the surround with the largest holes in the basket. Insert the tinsel leads into the terminal ensuring the red lead is going into the positive (+) position and the black lead is going into the negative (-) position. Tighten the four set screws and then slightly tug in the tinsel leads to make sure they are tight in the terminal.

Next, insert the six $\frac{3}{8}$ " hex screws back into the spider plateau and tighten. Replace the top gasket over the surround on the top of the woofer. The counter-bore holes in the gasket need to align with the smaller threaded holes in the basket. Insert the twelve $\frac{3}{16}$ " hex gasket screws into the counter-bored holes and tighten. Finally, replace the back of the enclosure and re-attach the $\frac{3}{8}$ " bolts to support the back of the woofer. Your new cone is now installed and you are ready to once again experience the JackHammer's extreme bass!

The True 22 .com



© 2009 Mitek Corporation. All rights reserved. MTX, Thunder, JackHammer and StreetWires are trademarks of Mitek Corporation. Designed and Engineered in the U.S.A.

Due to continual product development, all specifications are subject to change without notice.

MTX Audio, 1 Mitek Plaza, Winslow, IL 61089 U.S.A.

MTX002140 RevD 1/09

21A9259