



# 1 Pair VRT18 Ribbon Tweeters

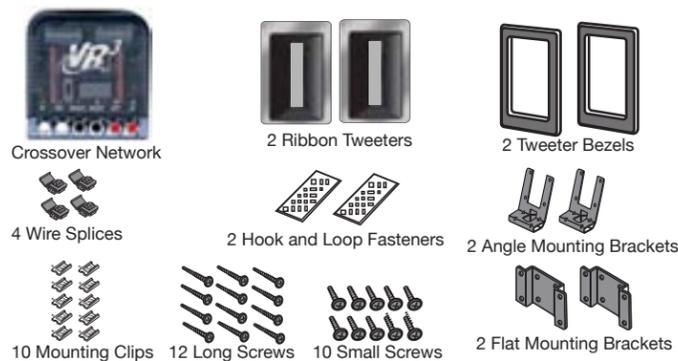
## Read First!

Dear Customer,  
 CONGRATULATIONS. The VRT18 Ribbon Tweeters, when used as described, will give you years of dependable service in your car, truck, RV or mini-van. We have taken numerous measures in quality control to ensure that your product arrives in top condition, and will perform to your satisfaction. In the rare event that your VRT18 Ribbon Tweeters contain a damaged or missing item; does not perform as specified; requires warranty service or you have an installation problem, **DO NOT RETURN THIS PRODUCT TO THE STORE.** Please call our TOLL FREE number US (800) 445-1797 and ask to speak with a member of our technical service team, or submit your questions by E-Mail to customerservice@vr-3.com and a member of our technical service team will respond by E-Mail to your questions. Our in-house technical service team will expedite delivery of your part, or advise you on installation, or help troubleshoot a problem with you. If your product needs warranty service, our technical service team representative will help you obtain the fastest remedy possible under the warranty.

## Specifications

- 150 Watts Maximum Power per Pair
- 80 Watts RMS per Pair
- Sensitivity: 90 db 1W/1M
- Crossover Frequency: 3,500 Hz – 12 db / Octave
- Impedance: 4 Ohms per Tweeter
- Frequency Response: 3,000 Hz ~ 40,000 Hz ± 3 db
- Ribbon Material: Kapton 8mm X 45 mm

## Parts



## Location



Before installing this product, you must check the vehicle's manual for locations of safety equipment such as air bags and CO2 systems installed in the vehicle. Accidental deployment of air bags may result in serious

The VRT18 Ribbon tweeters can be surface or angle mounted. Possible locations for mounting the VRT18 Ribbon tweeters are the dashboard, roof pillars, interior panels, door panels and ceiling panels.



If you are installing the VRT18 Ribbon speakers to upgrade/replace your existing speakers, mark the polarity of the speaker wires, disconnect the speaker wires and remove the existing speakers from your vehicle. Temporarily place the VRT18 Ribbon speakers in the location you selected in your vehicle and connect the existing speaker wires. Temporary placement of the speakers in the vehicle helps in estimating length of wiring needed, as well as, how the speakers will sound in various locations of the vehicle.

We understand that automotive audio equipment installations can be troublesome at times, even to the most experienced of installation technicians. If you are not confident working with electrical wiring, removing and reinstalling interior panels, carpeting, dashboards or other components of your vehicle, please call our TOLL FREE help line (800)445-1797 and our in-house technical service team will answer your installation questions.

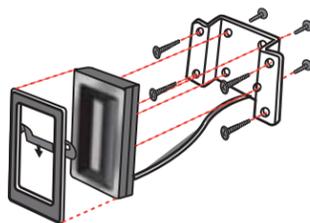
## Mounting



Before installing this product, you must check the vehicle's manual for locations of safety equipment such as air bags and CO2 systems installed in the vehicle. Accidental deployment of air bags may result in serious injury.

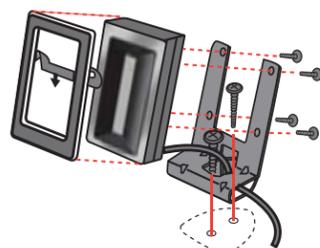
### Flat Surface Mount

1. Attach the flat surface mount brackets to the Ribbon tweeters using the supplied screws.
2. Attach the brackets to the selected location using the supplied screws.
3. Route the wires to the Crossover network and connect them by pushing down on the Quick release terminals and inserting the wires into the holes. Release the terminal to secure the wire.



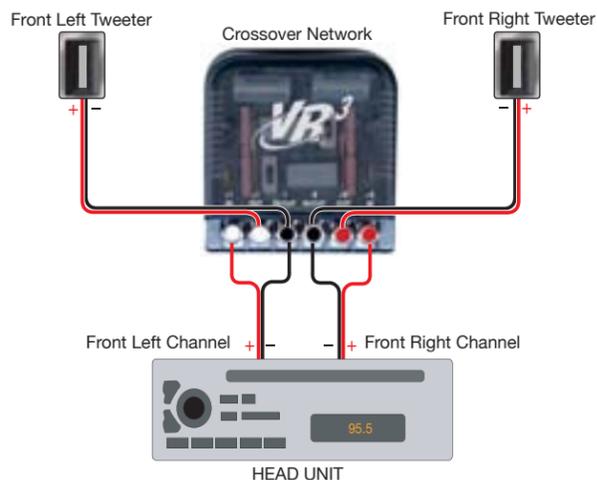
### Angled Surface Mount

1. Attach the angled surface mount brackets to the Ribbon tweeters using the supplied screws.
2. Attach the brackets to the selected location using the supplied screws.
3. Route the wires to the Crossover network and connect them by pushing down on the Quick release terminals and inserting the wires into the holes. Release the terminal to secure the wire.



## Wiring

COLOR OF WIRES ARE FOR ILLUSTRATION ONLY.



Connect the "Front Channel" speaker wires to the Crossover network inputs. The Crossover network has crossover circuits for both Left & Right channels. Observe proper polarity for each pair of speaker wires.

Connect the VRT18 Ribbon Tweeter wires to the Crossover network outputs, observing proper polarity for each tweeter.

Wires may be spliced using the method shown in the drawing below, or use the supplied "Scotchlok" connectors.

### Recommended Method For Splicing Wires



## Frequently Asked Questions

### What makes "Ribbon" tweeters better than "Dome" tweeters?

Ribbon tweeters use a very low mass metallic ribbon to reproduce faster, more sparkling highs. Dome tweeters use the same type of voice coil as regular speakers.

### Don't "Ribbon" tweeters have lower impedance than 4 Ohms?

Because "Ribbons" do not use a voice coil they do have lower impedance than dome tweeters. This is corrected by a built-in impedance matching transformer that gives them a constant 4 Ohm impedance.

### The frequency response claims 3,000 Hz to 40,000 Hz. Is that real?

Yes. The human ear cannot hear sounds above 20,000 Hz, but it can perceive harmonics well above that. Ribbon tweeters are known for exhibiting extremely wide frequency response.

### Why is the Crossover network needed? Can't I just connect the ribbon tweeters directly to my speaker wires?

The Crossover network protects the Ribbon tweeters from being damaged by low frequencies. This permits the Ribbons to play at higher volume settings.

### One of my VRT18 Ribbon tweeters is not producing any sound. What should I do?

Call Technical Service (1-800-445-1797) for assistance.

## Give Us a Call, We'll Help You Install



GIVE US A CALL, WE'LL HELP YOU INSTALL.

PLEASE DO NOT RETURN PRODUCT TO STORE. Visit us on the WEB

[www.vr-3.com](http://www.vr-3.com)

For Information and Technical Assistance, Call Toll-Free in U.S.A. and Canada.

1-800-445-1797

NOTES

## Limited Warranty

VIRTUAL REALITY SOUND LABS® products are designed and manufactured to provide a high level of trouble-free performance. VIRTUAL REALITY SOUND LABS® warrants, to the original purchaser, that its products are free from defects in material and workmanship for 30 days from the date of original purchase. As part of our commitment to product excellence, VIRTUAL REALITY SOUND LABS® and/or its affiliates routinely improve the designs, materials or production methods of its existing products. Because it is impractical to publicize all changes in every product, we reserve the right to make such changes without notice.

CONDITIONS OF WARRANTY:  
 1. All repairs must be performed by VIRTUAL REALITY SOUND LABS® and/or its affiliates in Eatontown, New Jersey.

2. The equipment must not have been altered or been damaged through negligence, accident, or improper operation.

3. The replacement of parts are exempted from this warranty when replacement is necessary due to normal wear and tear.

4. All warranty claims must be accompanied by a copy of the sales receipt or bill of sale.

5. Repair or replacement parts supplied by VIRTUAL REALITY SOUND LABS® under this warranty are protected only for the unexpired portion of the original warranty.

6. In the case of car stereos, this warranty does not extend to the elimination of car static or motor noise; correction of antenna problems; costs incurred for the removal or reinstallation of the product; damage to tapes, speakers, accessories or car electrical systems.

7. VIRTUAL REALITY SOUND LABS® will not be responsible for any charge incurred for installation.

OWNER'S RESPONSIBILITIES:  
 VIRTUAL REALITY SOUND LABS® will make every effort to provide warranty service within a reasonable period of time.

SHOULD YOU HAVE ANY QUESTIONS ABOUT SERVICE RECEIVED, OR IF YOU WOULD LIKE ASSISTANCE IN OBTAINING SERVICE, PLEASE CALL TOLL FREE 1-800-445-1797, 8:30am - 4:30pm EST.

In order to provide you with the proper warranty service, we request that you adhere to the following procedure:  
 1. Include a copy of your sales receipt or bill of sale with your unit when it is returned for warranty service.

2. If it is necessary to return your product for service, please return it securely packed, preferably in the original shipping carton, and freight and insurance prepaid to the following address: VIRTUAL REALITY SOUND LABS, Service Department, 41 James Way, Eatontown, New Jersey 07724.

3. Please include a detailed explanation of the problem you are having.

4. If your product is found by VIRTUAL REALITY SOUND LABS® to have a defect in material or workmanship, within the warranty period, it will be repaired or replaced at no charge and returned to you prepaid. Where permitted by law VIRTUAL REALITY SOUND LABS® liability shall be limited to that set forth in this warranty. This warranty shall be the exclusive remedy of the purchaser.