



# **STUDIO** *Driver*

## **COMPONENT SPEAKERS**

**AND**

## **CROSSEVERS**

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# Congratulations

Thank you for selecting **STUDIODRIVER** components. Manufactured in Stuttgart, Germany, technical innovations and high-tech processes are employed throughout our manufacturing process to help ensure many years of musical enjoyment. These drivers are the end result of our commitment to the PRECISION REPRODUCTION of PURE MUSIC WITHOUT LIMIT.

## SERVICE:

Do not attempt to service **STUDIODRIVER** products yourself. Performing exploratory surgery on your audio equipment yourself will void the warranty. Many parts of your **STUDIODRIVER** gear are custom built to our specifications. Our factory parts are not made available to anyone else nor are they for sale. Our goal is to make sure that your **STUDIODRIVER** product will always sound as good as the day it was purchased. Contact your authorized dealer about obtaining any warranty service through **STUDIODRIVER**. (See Warranty inside back cover.)

## FOR YOUR RECORDS:

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

## CAUTION!

The extended use of a high powered audio system may result in hearing loss or damage. While **STUDIODRIVER** products are capable of "Concert Level" volumes, they are also designed for you to enjoy at more reasonable levels, all of the sonic subtleties created by musicians. Please observe all local sound ordinances.

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*Driver*

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# INTRODUCTION

Your new **STUDIODRIVER** component set is part of an exciting line of loudspeakers. They are the definitive result of years of research and development, realized by the same engineering team charged with designing audiophile quality speaker systems for a select group of high performance German automobiles, working hand in hand with our own award-winning engineering staff. Like all **STUDIODRIVER** products, they reflect our commitment to strive for Precision Reproduction of Pure Music Without Limits!

**STUDIODRIVER** components employ cutting edge aluminum curvilinear cones to eliminate unwanted resonance inherent in conventional metal cone designs. Our use of an ultra-light and rigid aluminum cone allows a dramatic increase in sound velocity, or what we call "sonic-speed". This means impulses from the voice coil travel through the aluminum cone nearly four times faster than typical paper cones. Even more significant than pure speed, music is reproduced in a way that is clearly more dynamic, precise, detailed and distortion-free. In other words...sound reproduction has never been more REAL. Always respected in the audio community for its ability to dissipate heat efficiently, aluminum cones assure excellent cooling of the voice coil, resulting in increased power handling and reduced power compression.

**STUDIODRIVER** loudspeakers also feature a unique copper cap over the pole piece, which effectively alters the magnetic field around the voice coil, minimizing the effect of "eddy currents", this results in a more controlled, linear impedance and phase response.

The **NT-1** 25mm high frequency driver features a titanium dome for the perfect combination of superior strength and ultra-light weight.

**Note: STUDIODRIVER** Component midrange and midbass loudspeakers employ pure aluminum cones. They can be damaged if they are not handled with care. Care should be taken during installation to avoid damage to the cones. Physical damage to the cones will not be covered under warranty.

As always, **STUDIODRIVER** recommends that your component speakers be installed by an Authorized Dealer.



# STUDIODRIVER NT-1

## DESCRIPTION

One Inch Titanium Dome Tweeter  
Recommended frequency range 4 kHz - 22 kHz

## MECHANICAL PARAMETERS

Normal Power Handling	100W rms
Fs	1600 Hz
Re	3.4Ω
Le	.18 mH
Z	4Ω
Bl	1.35 TM
Diaphragm Material	Titanium
Voice Coil Diameter	25 mm (1")
Voice Coil Former	Aluminum
Voice Coil Length	1.5 mm
Voice Coil Layers	2
Gap Height	2 mm
Sensitivity (SPL at 1W)	88 dB
Mms	.85 grams

## ADDITIONAL FEATURES

Soft Suspension  
Low Damping/High Stability Ferrofluid  
Neodymium Magnet  
High Precision Phase Shield

## MOUNTING PARAMETERS

Mounting Hole for Recess Mount	2.125"
Mounting Depth	.675" - 1.1"
Tweeter Diameter	1.775"



# STUDIODRIVER MR-44

## DESCRIPTION

Four Inch Aluminum Cone Midwoofer  
Recommended frequency range 160 Hz - 8 kHz

## MECHANICAL PARAMETERS

Normal Power Handling	50W rms
Fs	78.0 Hz
Qms	2.74
Vas	2.5 Liters
Cms	0.78 mm/N
Mms	5.3 grams
Rms	0.950 kg/sec
Xmax	5 mm
Sd	48.0 sq.cm
Dia	7.8 cm

## ELECTRICAL PARAMETERS

Qes	0.5
Re	3.4 ohms
Le	.24 mH [@ 1kHz]
Z	4.0 ohms
BL	4.2 Tm

## COMBINATION PARAMETERS

Qts	0.42
no	0.191%
Sens	85 dB [1 Watt / 1 meter]

## MOUNTING PARAMETERS

Mounting Diameter	3.5"
Mounting Depth	2.115"



# STUDIODRIVER MW-54

## DESCRIPTION

Five and one quarter Inch Aluminum Cone Midwoofer  
Recommended frequency range 90 Hz - 3.5 kHz

## MECHANICAL PARAMETERS

Normal Power Handling	100W rms
Fs	62.0 Hz
Qms	4.450
Vas	6.9 Liters
Cms	0.8 mm/N
Mms	8.4 grams
Rms	0.73 kg/sec
Xmax	5 mm
Sd	78.5 sq.cm
Dia	10.0 cm

## ELECTRICAL PARAMETERS

Qes	0.47
Re	3.6 ohms
Le	.12 mH [@ 1kHz]
Z	4.0 ohms
BL	5.0 Tm

## COMBINATION PARAMETERS

Qts	0.43
no	0.302%
Sens	87 dB [1 Watt / 1 meter]

## MOUNTING PARAMETERS

Mounting Diameter	4.4"
Mounting Depth	2.365"



# STUDIODRIVER MW-64

## DESCRIPTION

Six and one half Inch Aluminum Cone Midbass  
Recommended frequency range 70 Hz - 3.5 kHz

## MECHANICAL PARAMETERS

Normal Power Handling	100W rms
Fs	57.0 Hz
Qms	4.130
Vas	18.6 Liters
Cms	0.730 mm/N
Mms	18.8 grams
Rms	0.93 kg/sec
Xmax	5 mm
Sd	135.0 sq.cm
Dia	13.1 cm

## ELECTRICAL PARAMETERS

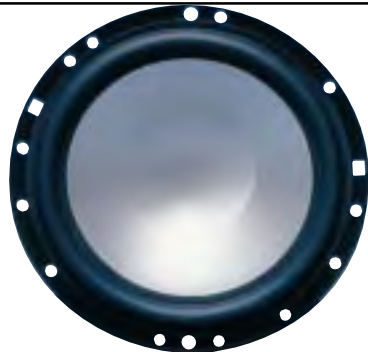
Qes	0.74
Re	3.4 ohms
Le	.15 mH [@ 1kHz]
Z	4.0 ohms
BL	5.0 Tm

## COMBINATION PARAMETERS

Qts	0.63
no	0.302%
Sens	87 dB [1 Watt / 1 meter]

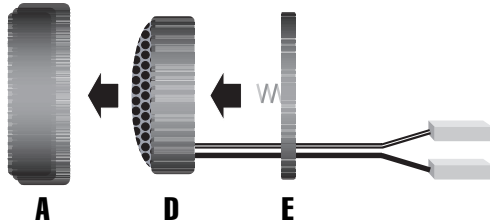
## MOUNTING PARAMETERS

Mounting Diameter	5.625"
Mounting Depth	2.53"

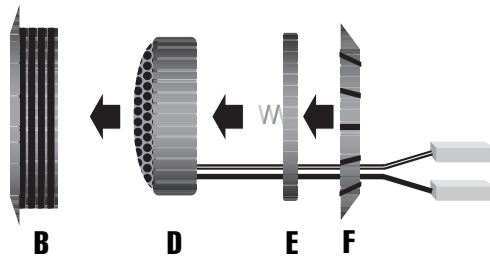


# NT-1 TWEETER ASSEMBLY

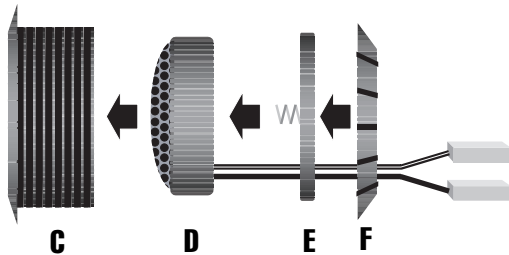
## Surface Mounting



## Recess Mounting



## Recess Mounting



The tweeters are equipped with wires and attached connectors. The tweeter wires are designated solid black (-), and black with a white stripe (+). Locate the corresponding spade connectors from the hardware pack and crimp them to the end of your chosen speaker wire. Attach the positive speaker wire lead to the tweeter connector with the black wire with a white trace. Attach the negative speaker wire to the tweeter connector with the solid black wire.



# NT-1 TWEETER MOUNTING

## Configuring the NT-1 Tweeter

Choose the desired method of mounting the tweeters. The **NT-1** tweeters can be surface or recess mounted while allowing rotation of the tweeter within the mount for optimal imaging.

### Surface Mounting

Locate the disk designated "E" in the tweeter assembly drawing. Once a mounting location has been chosen, drill a hole into the mounting surface (first making sure there is space underneath) for the wires from the **NT-1** tweeter using the large hole in the disk as a template. Mount the disk (with the small spring facing up) to the panel through the two small holes in the disk using two screws or small nuts and bolts (not supplied).

Locate the surface mount trim ring "A" as shown in the drawing. Place the tweeter into the ring as shown. Drop the wires from the tweeter through the large hole in the disk and into the panel. Push down on the trim ring ("A") until it firmly "snaps" onto the disk ("E"). Rotate the tweeter to the desired angle.

### Recess Mounting

Locate the threaded mounting rings designated "B" or "C" in the drawing. The choice of "B" or "C" will depend on the thickness of the panel the tweeter will be mounted through. The "C" mounting ring will accommodate a panel thickness of up to 3/4 inch.

Locate the disk designated "E" in the drawing. Slip the tweeter wires and connectors through the disk with the small spring on the disk facing the bottom of the tweeter. Place the tweeter and the disk through the back of the threaded mounting ring until the tweeter seats against the inside edge of the ring. Snap the disk into the groove on the inside of the mounting ring until it firmly "snaps" into place. Make sure it is fully seated.

Once a mounting location has been chosen, drill a 2-1/8 hole in the panel. Insert the tweeter assembly into the hole until it seats.

Locate the threaded collar designated "F" in the drawing. While holding the tweeter assembly onto the panel, thread the collar "F" onto the tweeter assembly from the back until it is tight.

# INSTALLATION

## Mounting Considerations for your Midwoofers

**STUDIODRIVER** component speakers are designed to mount into most factory speaker locations with minimum effort. The speaker baskets are designed to be a universal fit.

When designing your system, a good rule of thumb is to mount the tweeter close to the midrange/midbass speaker. This usually produces the most accurate soundstage and image.

## Cutting Mounting Holes

Before beginning, now is the time to consider professional installation of your new components. A mistake now can be costly. If you're set on installing these components yourself, read on.

Determine a suitable location for the selected components. Make sure the area under the desired speaker location is free of obstacles such as computers, wires, fuel tanks, etc. Use a hole saw to make the cut. The correct hole saw size for the chosen speaker can be found on pages 2 through 5 of this manual.



## Passive Crossovers

Choose a location for mounting the crossovers. The **FN-3** and **FN-6** crossovers can be permanently mounted.

Squeeze the sides of the **FN-3** housing and remove the top cover. Locate the two holes in the base of the crossover.

Temporarily place the base of the **FN-3** or **FN-6** crossover onto the desired mounting surface and mark the location of the holes.

Drill mounting holes (again making sure there is clearance underneath) in the desired locations. Mount the crossover using the appropriate screws or nuts and bolts. Snap the cover back onto the crossover.

# INSTALLATION

## Speaker Wiring

Locate the hardware pack supplied with your new component set. Inside you will find screws and crimp terminals.

The midrange and midbass speakers are each equipped with a small and a large terminal. The large terminal is the positive (+) connection and the small terminal is the negative (-) connection.

Find the corresponding female crimps in the hardware pack. Properly crimp these connectors to the end of your chosen speaker wire. Attach the speaker wire to the terminals on the speakers. Mount the speaker into its proper location.

## Connecting Wires To The Crossover

Attach the ends of the speaker wires to the corresponding screw terminals on the supplied passive crossovers. Refer to the following drawings on pages 10 and 11 to assist in these connections.

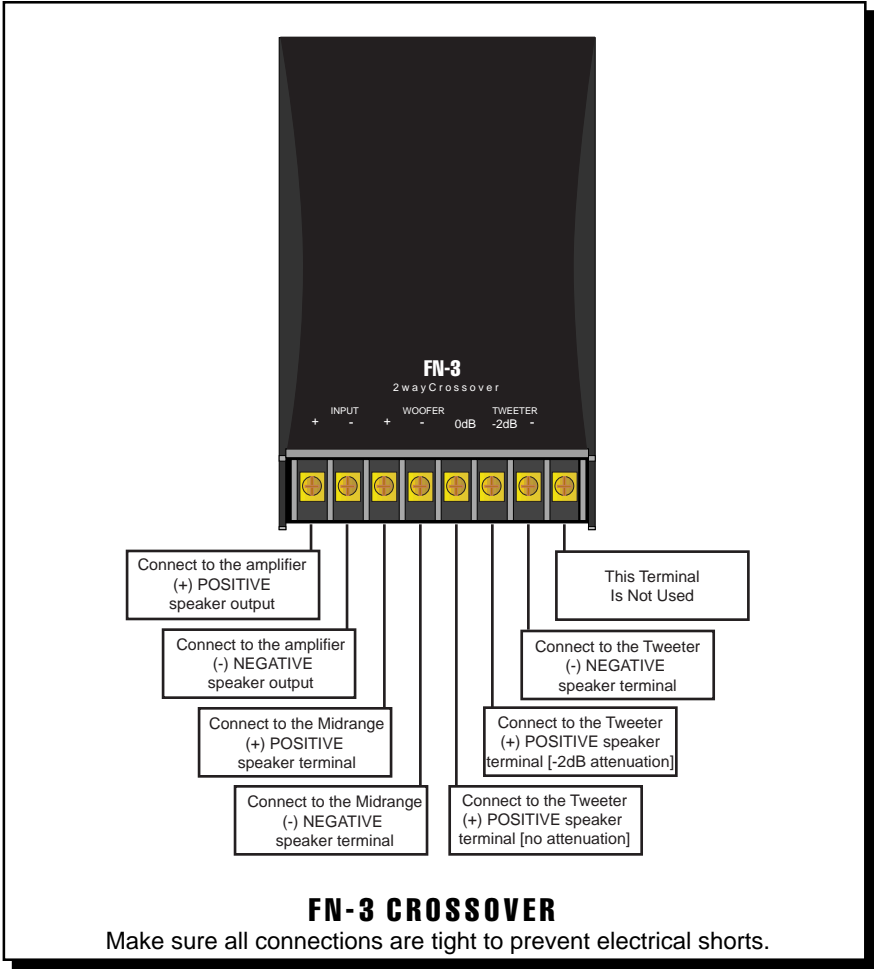
Attach the wires from the tweeter to the crossover observing proper polarity. Note that the crossover has three screws for the tweeter connection. The extra terminal provides a choice of 2 dB of attenuation. Attenuation of the tweeter output (reduced level) may be desirable when the tweeters need to be mounted close to the listening position or when mounted close to glass or other reflective surfaces. Attach the negative tweeter wire to the screw terminal labeled (-). Attach the positive tweeter wire to the 0dB screw terminal for full output, OR to the -2dB terminal for slightly reduced output.

Attach the wires from the midrange speaker to the corresponding screw terminals on the crossover (FN-6 3 way crossover) if so equipped, again observing proper polarity. A 2 dB attenuation screw is also provided for the midrange speaker on the 3 way component sets.

Attach the wires from the midbass speaker to the screw terminals designated "Woofers" on the crossover again observing speaker polarity.

The two remaining screw terminals on the crossover are the inputs. Attach the speaker wires from the outputs of your amplifier here observing proper polarity.

# FN-3 CROSSOVER



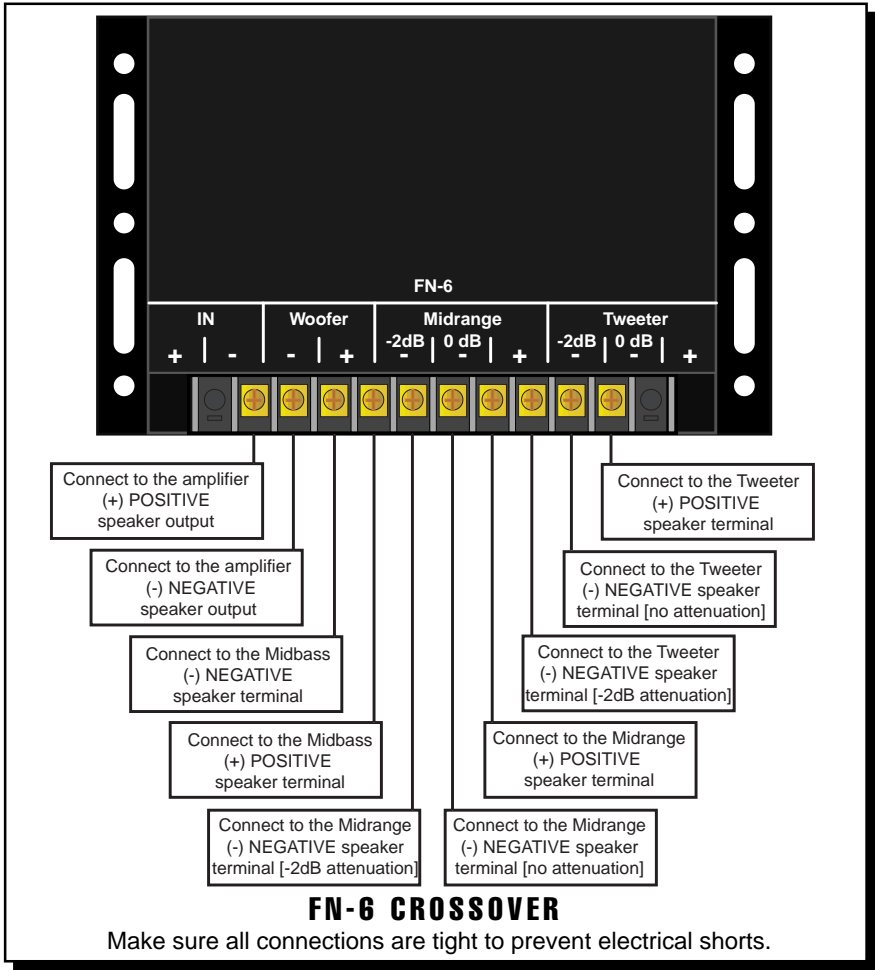
## SPECIFICATIONS

Mounting Length	5.115"
Mounting Width	3.335"
Mounting Depth	1.515"

## FREQUENCIES

Tweeter High Pass	4 kHz
Woofers Low Pass	2.2 Hz

# FN-6 CROSSOVER



## SPECIFICATIONS

Mounting Length	3.985"
Mounting Width	6.325"
Mounting Depth	1.750"

## FREQUENCIES

Tweeter High Pass	4 kHz
Midrange Band Pass	2.2 kHz - 900 Hz
Woofer Low Pass	900 Hz

## ADDITIONAL INFORMATION

Our dealers are trained to achieve the highest level of performance from our products. If you are installing your new component speakers on your own and need assistance, please ask your local dealer or call the **STUDIODRIVER** Technical Service Department at **1-888-627-6937**.

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**NOTE:** Abuse and/or Installation Error: **STUDIODRIVER** defines abuse as, but not limited to, burnt voice coils (blackened, no continuity, melted adhesives, coil separated from the former, etc.), punctured or damaged surrounds, dented cones, broken speaker terminals, non-**STUDIODRIVER** modifications, bent, chipped, or broken frames, ripped spiders, or damaged back plates. Speakers submitted with any of the above will be considered out of warranty.

 **FerroSound** The Solution Is Loud And Clear™

Ferrosound means more stable sound quality and performance, smoother frequency response, reduced distortion, increased power handling, greater efficiency and voice coil centering.

# WARRANTY

## Three-Year Limited U.S.A. Warranty

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. StudioDriver warrants its products to be free from defects in materials and workmanship under normal use and service for a period of three (3) years from the date of original purchase when the unit is installed by an Authorized Dealer. Non-Authorized Dealer installed products carry a one (1) year parts and ninety (90) days labor limited warranty. The extent and conditions of Limited Warranty are as follows:

1. Authorized Dealer Installed Products: StudioDriver will either repair or replace at no charge, to the original purchaser, any unit which StudioDriver's examination discloses to be defective and under warranty, provided the defect occurs within three (3) years from the date of original purchase when the unit is installed by an Authorized Dealer and the product is returned immediately to StudioDriver. This warranty is not transferable.
2. Non-Authorized Dealer Installed Products: StudioDriver will either repair or replace at no charge, to the original purchaser, any unit which StudioDriver's examination discloses to be defective and under warranty, provided the defect occurs within ninety (90) days from the date of purchase and the product is returned immediately to StudioDriver. Warranty claims beyond ninety (90) days for Non-Authorized Dealer Installed Products will be for parts only and will extend for one (1) year from the date of purchase. This warranty is not transferable.
3. The date of purchase and proof of Authorized Dealer Installation of a StudioDriver product must be established by an original sales receipt which must accompany the article being returned for warranty work.
4. This warranty shall NOT apply to any StudioDriver product found to have the original factory serial number removed or defaced. All products received (by StudioDriver) for in warranty or out of warranty repair, with their original serial numbers removed or defaced, will NOT be repaired and will be returned to sender, freight collect. Refer to original packaging for the serial number of your component speakers.
5. The provisions of this warranty shall not apply to any StudioDriver product used for a purpose for which it is not designed, which has been repaired or altered in any way, or which has been connected, installed, or adjusted other than in accordance with the instructions furnished in StudioDriver's owner's manual. Nor shall this warranty apply to any part which has been subject to misuse, neglect, or accident.
6. StudioDriver does not authorize any other persons to assume any other liability in connection with its products. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY STUDIODRIVER APPLICABLE TO ITS PRODUCTS. ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO STUDIODRIVER PRODUCTS IS LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. STUDIODRIVER SHALL NOT BE LIABLE FOR THE INCIDENTAL, CONSEQUENTIAL, OR COMMERCIAL DAMAGES RESULTING FROM THE BREACH OF THIS WRITTEN WARRANTY. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so the above limitations or exclusions may not apply to you.
7. Your product will be serviced on an in-warranty basis within the warranty period for the correction of warranted defects. If improper operation of your StudioDriver product should occur, contact your Authorized Dealer for assistance with the return and factory repair of your StudioDriver product. If an Authorized Dealer is not available, return the unit including your name, telephone number, return address, a copy of your sales receipt, and a description of the problem to:

STUDIODRIVER  
Service Department  
4829 S. 38th Street  
Phoenix, AZ 85040-2964

**TO RETURN STUDIODRIVER PRODUCTS OUT OF WARRANTY:** Return the unit, postage prepaid, in the original protective carton. Please include a description of the problem and, if desired, a request for an estimate of repair costs. Unless a request for an estimate is included, the unit will be repaired as necessary. Please contact StudioDriver Customer Service at 1-888-627-6937 for questions concerning out of warranty repair charges. Repaired unit will be returned with an itemized statement, C.O.D.

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