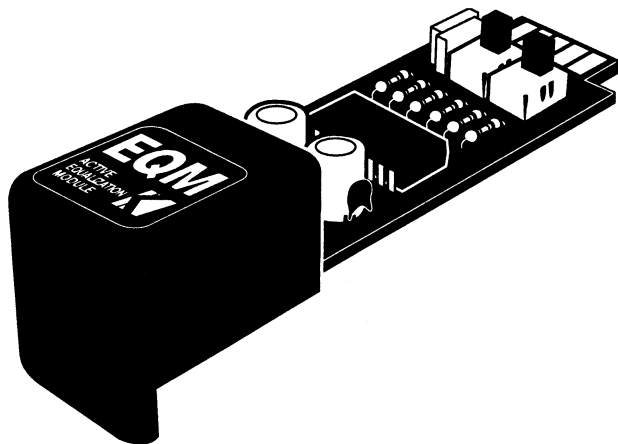


KICKER®

ACTIVE MODULE SYSTEMS

EQM, TWX, MRX & SWX



INTRODUCTION

Congratulations on purchasing a KICKER module to unlock the potential of your KICKER amplifier. This module will help you get the most from your KICKER system.

The modules are designed to be used in the module socket that is a feature of all KICKER amplifiers. This allows you to add additional performance and function to your system, and allows an easy upgrade path for existing systems. This manual is for the SWX, MRX, and TWX crossover modules and the EQM equalization module. This manual details the installation and operation of car audio systems using these modules.

The EQM module provides an extra "KICK" to your system's performance by providing 6dB of boost in the low bass. It also adds 1dB of boost in the higher frequencies to give a subtle sheen to your system's sound.

Stillwater Designs recommends that systems using KICKER modules be installed by an authorized dealer. Authorized dealers have installers who are trained in the operation of the modules and KICKER amplifiers.

AMERICA'S MUSIC MACHINESSM

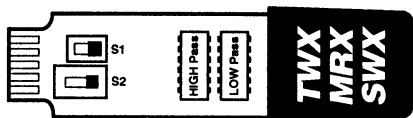
FEATURES & CONTROLS

The controls for the SWX, MRX, and TWX modules are shown below left.

Crossover frequencies are set by the chips. To change a chip, carefully insert a small flat-blade screwdriver between the socket and chip and gently pry upward. Carefully insert the replacement chip, making certain that the pins are aligned with the holes in the socket.

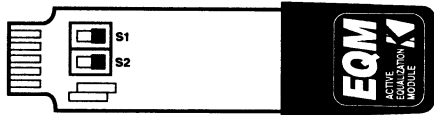
The EQM module is shown below right. These components are fixed and cannot be changed. To install a module in a KICKER amp, first turn off your system. Then pull out the Bypass Module provided with your amp, and insert the new module.

S1: INTERNAL AMP SWITCH:
Directs High or Low Pass
to Internal Amp.
Right=High Pass
Left=Low Pass



S2: EXTERNAL AMP SWITCH:
Directs High, Low or Bypass
to Output RCA Jacks.
Right=Bypass
Center=High Pass
Left=Low Pass

S1: EXTERNAL AMP SWITCH:
Right=EQ
Left=Bypass



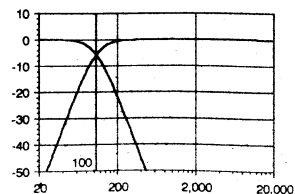
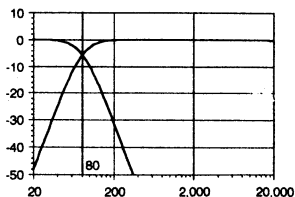
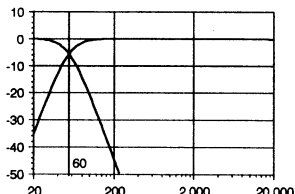
S2: INTERNAL AMP SWITCH:
Right=EQ
Left=Bypass

SWX MODULE

The Active Subwoofer Module (SWX) provides a crossover point between the subwoofer and midbass frequencies. Study the system diagrams in this manual for typical uses of the SWX module. This module is used in multi-amp systems. Three pairs of chips are provided to set the crossover at 60, 80, or 100Hz.

The graphs at right show the performance of the SWX module in a KICKER amplifier. Note the steep 24dB/octave slopes. Also note that the response of each section is -6dB at the crossover frequency. This response is correct for a 24dB/octave crossover, and the responses sum to 0 dB.

Subsonic Filter Function. With no chips inserted, and the input switch set to high pass, the SWX module has a 24dB/octave cutoff at 25Hz. When used with amps driving vented boxes, this setting limits woofer travel below the tuning frequency of the box, prevents woofer "bottoming," decreases distortion, and increases power handling.



MRX MODULE

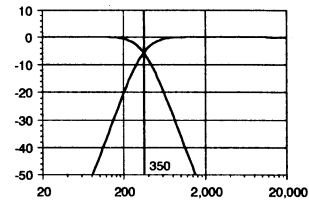
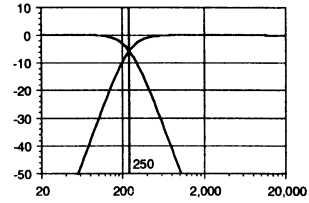
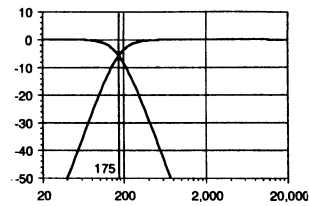
The Active Midrange Module (**MRX**) provides a crossover point between the midbass and midrange frequencies. The system diagrams in this manual show typical installations using the MRX module.

Typically, the MRX module will be used in at least a tri-amp system that also uses the SWX module for the subwoofer crossover.

Three pairs of chips are provided to set the crossover at 175, 250, or 350Hz.

The graphs at right show the performance of the MRX module in a KICKER amplifier. These graphs show that the MRX has the same steep 24db slopes as the SWX.

Sometimes a resonance in a car interior just below 200Hz can be minimized by setting the low pass frequency at 175Hz, and the high pass frequency at 250Hz. Use a real-time analyzer to determine if this technique works for your system.

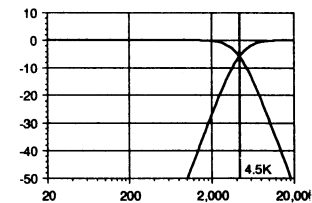
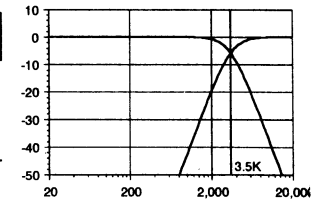


TWX MODULE

The Active Tweeter Module (**TWX**) provides a crossover point between the midrange and tweeter frequencies. The system diagram for this module shows it used with the SWX and MRX modules in a quad-amp system.

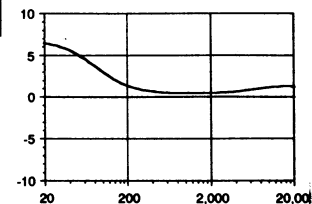
Two pairs of chips are provided to set the cross-over at 3.5kHz or 4.5kHz. (response graphs shown at right.)

Generally, tweeters cannot handle and do not need large amounts of power. It is recommended that a smaller amp, such as the ZR120 or ZR240 be used for the tweeters.

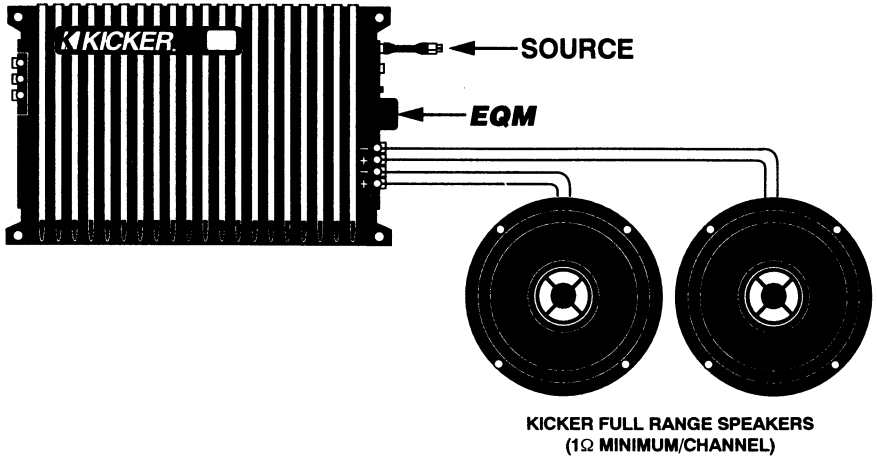


EQM MODULE

The Active Equalization Module (**EQM**) can be used in a single or multiple amp system. Its frequency curve (shown at right) is based on careful listening tests, and provides the extra *KICK* that is often desired, without degrading sound quality.

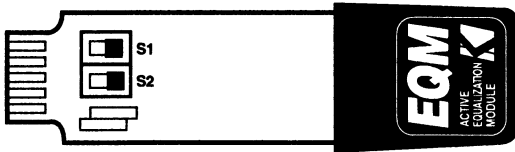


SINGLE AMP SYSTEM W/EQ ON ALL SPEAKERS



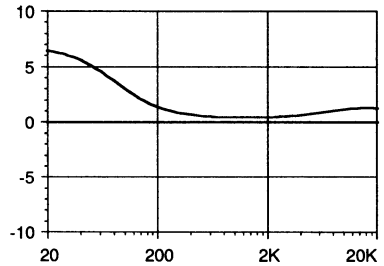
EQM Module Settings

S1: EXTERNAL AMP SWITCH:
Right=EQ



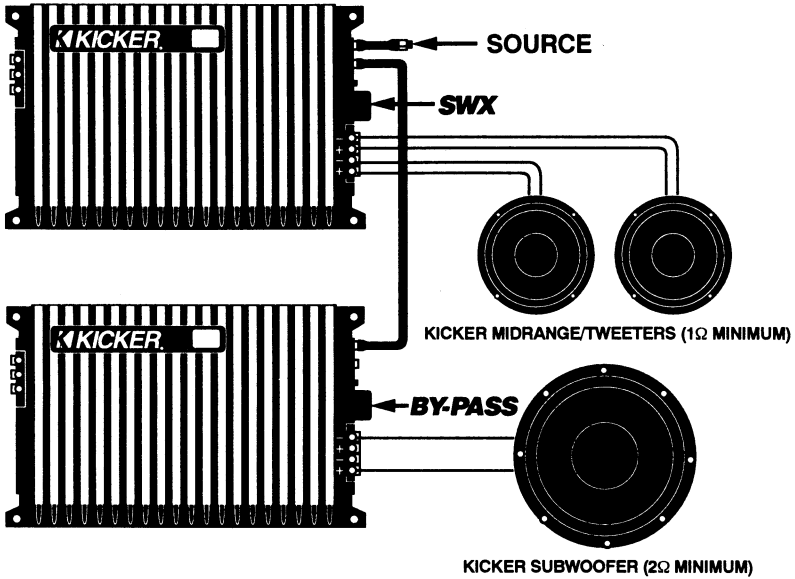
S2: INTERNAL AMP SWITCH:
Either

System Response



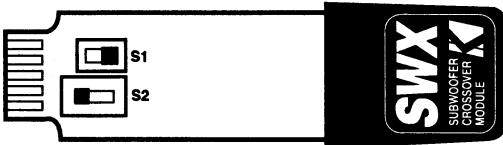
This system shows how a basic single amp system can benefit from the addition of the EQM module. If you like to feel the bass, this is a great sounding upgrade.

SWX BI-AMP SYSTEM



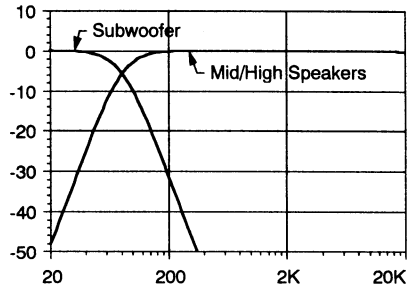
SWX Module Settings

S1: INTERNAL AMP SWITCH:
Set to Right=High Pass



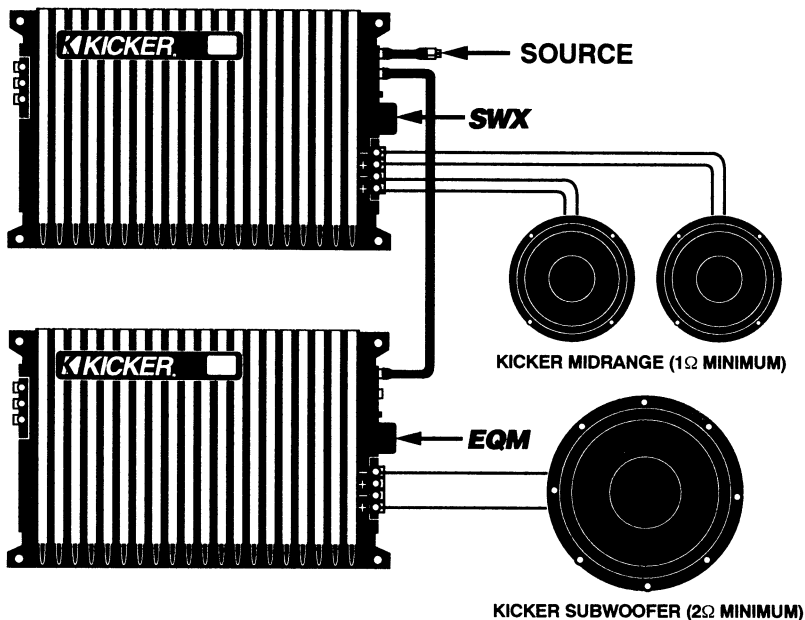
S2: EXTERNAL AMP SWITCH:
Set to Left=Low Pass

System Response



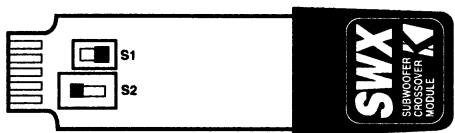
In this system, the SWX crossover module is used to divide the music between a mono subwoofer and stereo midrange/tweeter satellites. The KICKER amp's self-bridging feature is used to drive a mono subwoofer from a stereo signal. Passive crossovers are still needed for the midranges and tweeters.

SWX/EQM BI-AMP SYSTEM W/EQ ON LOW RANGE SPEAKERS



SWX Module Settings

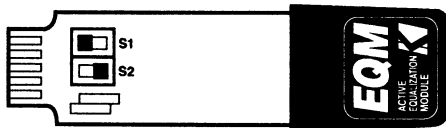
S1: INTERNAL AMP SWITCH:
Set to Right=High Pass



S2: EXTERNAL AMP SWITCH:
Set to Left=Low Pass

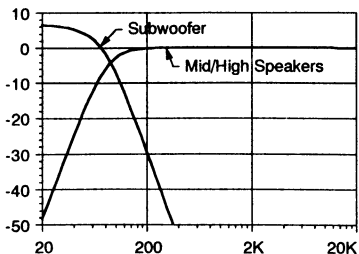
EQM Module Settings

S1: EXTERNAL AMP SWITCH:
Either



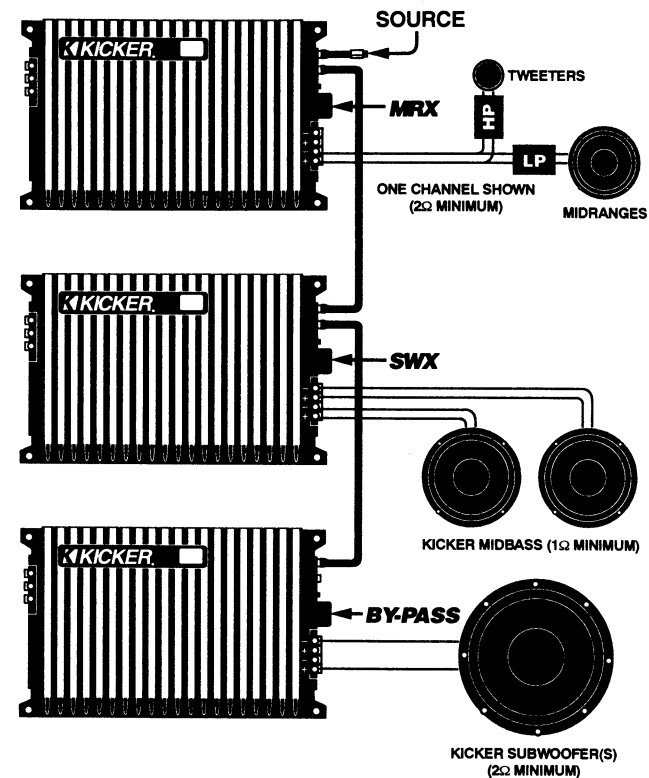
S2: INTERNAL AMP SWITCH:
Set to Right=EQ

System Response



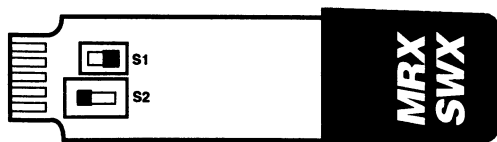
This system is identical to the SWX Bi-Amp System, except that the EQM module is added for extra bass boost.

SWX/MRX TRI-AMP SYSTEM



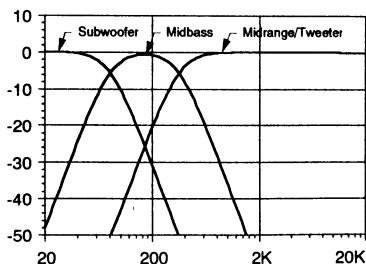
SWX and MRX Settings

S1: INTERNAL AMP SWITCH:
Set to Right=High Pass



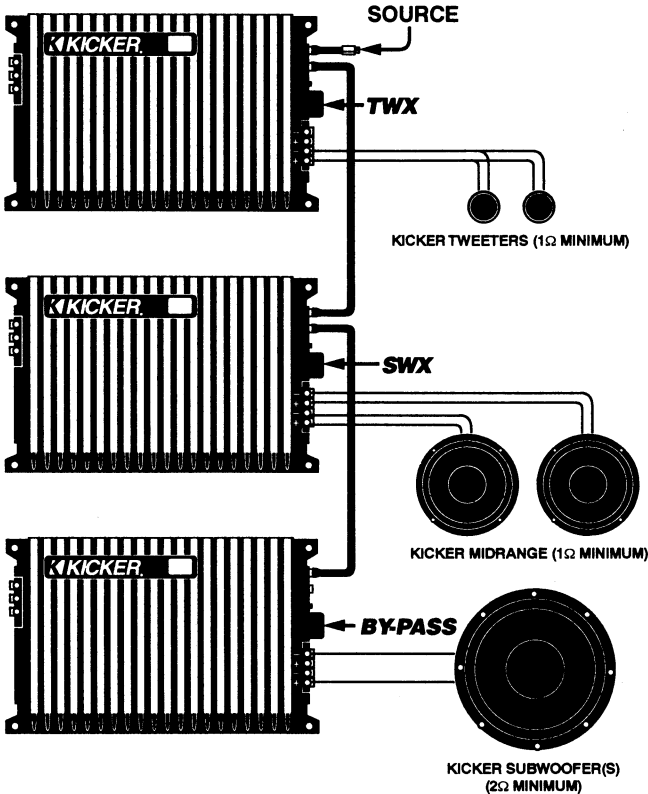
S2: EXTERNAL AMP SWITCH:
Set to Left=Low Pass

System Response



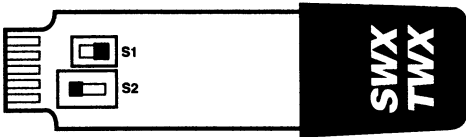
This system shows how the SWX and MRX modules can be used together. Note how the 24 db/octave slopes precisely define the frequency band of the midbass driver.

SWX/TWX TRI-AMP SYSTEM



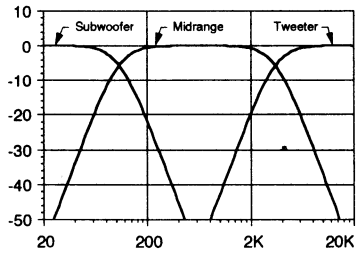
SWX and TWX Settings

S1: INTERNAL AMP SWITCH:
Set to Right=High Pass



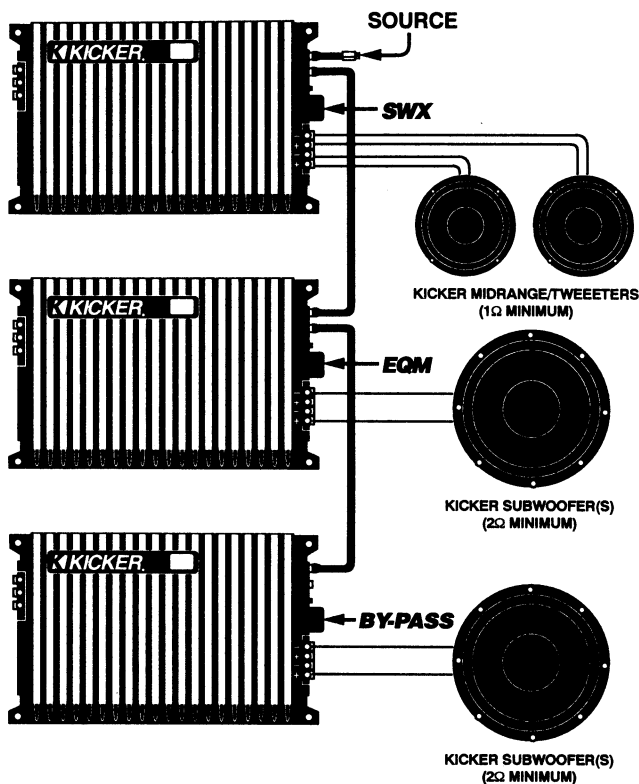
S2: EXTERNAL AMP SWITCH:
Set to Left=Low Pass

System Response



For 3-way systems without dedicated midbass drivers this system provides very good response. The 24dB/octave slopes allow midrange drivers to be safely crossed over at lower frequencies than they can be with 6 or 12 dB/octave slopes.

SWX/EQM SUBWOOFER DAISY CHAIN



SWX Module Setting

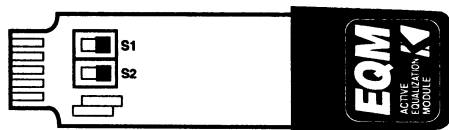
S1: INTERNAL AMP SWITCH:
Set to Right=High Pass



S2: EXTERNAL AMP SWITCH:
Set to Left=Low Pass

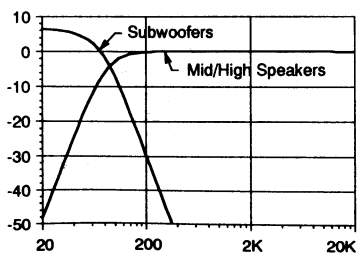
EQM Module Settings

S1: EXTERNAL AMP SWITCH:
Set to Right=EQ



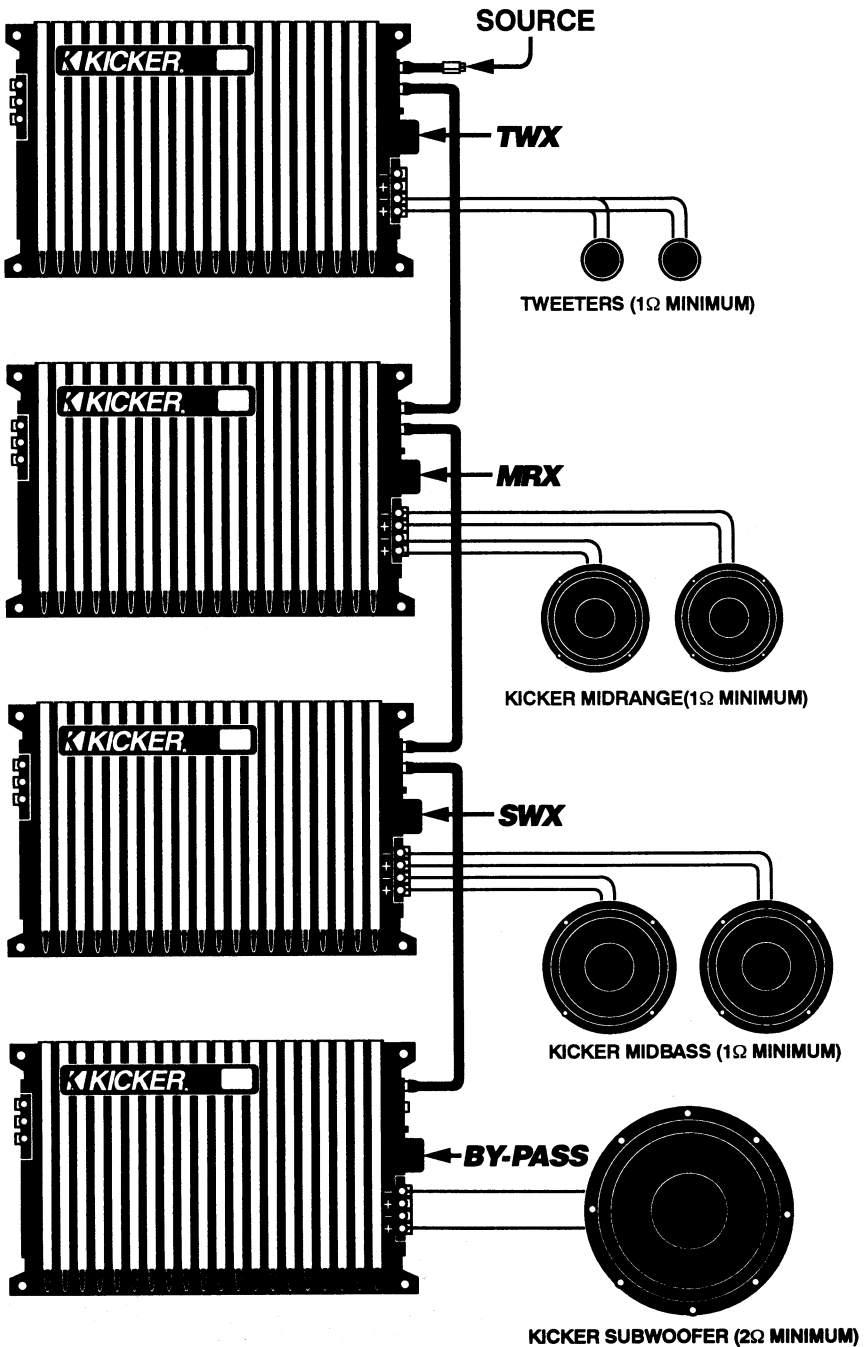
S2: INTERNAL AMP SWITCH:
Set to Right=EQ

System Response



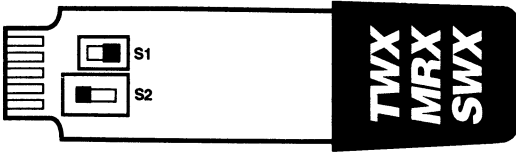
This system shows how to daisy chain amps so that the SWX and EQM modules can control more than one amplifier.

SWX/MRX/TWX QUAD-AMP SYSTEM



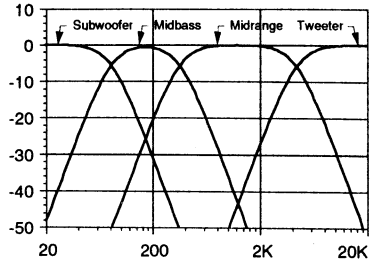
SWX, MRX & TWX Settings

S1: INTERNAL AMP SWITCH:
Set to Right=High Pass



S2: EXTERNAL AMP SWITCH:
Set to Left=Low Pass

System Response



The Quad-amp system takes maximum advantage of the modules' cascading capability. This system uses no passive crossovers, and each driver has a dedicated amplifier.

LIMITED WARRANTY

Stillwater Designs warrants this product to be free from defects in material and workmanship under normal use for a period of **three (3) years from date of original purchase** when installed by an Authorized KICKER Dealer or one (1) year from date of original purchase if not installed by an Authorized KICKER Dealer. If this product is labeled "B Stock", it is warranted for one (1) year from date of purchase, regardless of place of installation. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction during the warranty period, Stillwater Designs will replace or repair (at its discretion) the defective merchandise at no charge.

This warranty is valid only for the **original purchaser** and is not extended to owners of the product subsequent to the original purchaser. Any applicable implied warranties are limited in duration to a period of the express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether express or implied, shall apply to this product thereafter. Some states do not allow limitations on implied warranties, therefore these exclusions may not apply to you.

This warranty gives you specific legal rights; however you may have other rights that vary from state to state.

WHAT TO DO IF YOU NEED WARRANTY OR SERVICE

If it becomes necessary for you to send defective merchandise, package all defective items in the original container or in a package that will prevent shipping damage, and return to
Stillwater Designs, 5021 North Perkins Road, Stillwater, OK 74075

Return only defective components. Non-defective items received will be returned freight collect. Include a dated proof-of-purchase from an Authorized Dealer. Warranty expiration on items returned without proof-of-purchase will be determined from the manufacturing date code. Coverage may be invalidated if this date is greater than one (1) year previous to the date item is sent in. Freight must be prepaid; items received freight collect will be refused.

Failure to follow these steps may void your warranty. Any questions can be directed to the Warranty Department at (405)624-8510. If you have more questions about the installation of your new KICKER component, see the Authorized KICKER Dealer where you purchased your component. You may also call our Technical Services Line at (405)624-8583 for technical assistance.

WHAT IS NOT COVERED?

This warranty is valid only if the product is used for the purpose for which it was designed. It does not cover:

- Products purchased from an unauthorized dealer.
- Damage due to improper installation.
- Damage caused by exposure to water, excessive heat, chemical cleaners, and/or UV radiation.
- Damage through negligence, misuse, accident or abuse. Repeated returns for the same damage may be considered abuse.
- Freight damage.
- The cost of shipping product to Stillwater Designs Service.
- Items previously repaired or modified by any unauthorized repair facility.
- Items returned from unauthorized individuals or dealers.
- Return shipping on non-defective items.
- Products with tampered or missing barcode labels.

HOW LONG WILL IT TAKE?

Stillwater Designs maintains a goal of 24-hour service for all returns. Delays may be incurred if lack of replacement inventory or parts is encountered.

INTERNATIONAL WARRANTY

Contact your International Stillwater Designs dealer or distributor concerning specific procedures for your country's warranty policies.



P.O. Box 459 • Stillwater, Oklahoma 74076 • U.S.A. • 405 624-8510

STILLWATER
Designs

WARNING:

KICKER components are capable of producing sound levels that can permanently damage your hearing! Turning up a system to a level that has audible distortion is more damaging to your ears than listening to an undistorted system at the same volume level. The threshold of pain is always an indicator that the sound level is too loud and may permanently damage your hearing. **Please use common sense when controlling volume!**