

# **KADEE Coupler Tips and Body Mounting**

Kadee website <http://www.kadee.com/>

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More information on other topics is available at [www.mhgrs.com](http://www.mhgrs.com)

## **The following is from Kadee; Sam the Answer Man: May 2013 "Large Scale Couplers"**

I'm getting enough calls and e-mail questions that I feel a need to talk a bit about some Large Scale issues. I know I've covered this before but repetition is about the only way some of us learn.

We market Both "G" and "#1" scale couplers and people ask which is smaller and which is larger. Our G scale couplers are 1:22.5 scale ratio and is larger than #1 scale at 1:32 scale ratio. For representing a full size coupler the #1 scale couplers are appropriate for 1:32 and 1:29 scale models. For representing a full size coupler the G scale are appropriate for 1:24 up to 1:20.3 scale models. #1 scale couplers are used in the larger scale to represent smaller narrow gauge couplers which, more or less, are 3/4 the size of full size couplers. Some modelers will use the smaller #1 scale couplers regardless just because they look better on many models. If you are a beginning modeler and don't know which coupler size to use I'd recommend the larger G scale couplers (except for 1:32 scale models) until you get more experience in operations and track work.

There are no 1:32 scale models that we know of that will accept G scale size of couplers but only #1 scale size of couplers. MTH was nice enough to make a coupler platform on their 1:32 scale models for our #820 or newer #1906 couplers. Most other 1:32 scale models is a matter of custom fitting a #1 scale coupler. Accucraft 1:32 scale models are using a #1 scale coupler that's easily changed out with our #820/1906 couplers.

Notice in our Large Scale coupler conversion lists we show the option of using either a G scale or #1 scale coupler, except for the 1:32 scale models.

Note that #1 and G scale couplers are mounted at different heights. #1 is 1 1/16" (1.0625" or 27 mm) and G scale is 1 1/8" (1.125 or 28.58 mm) measured from the top of the rail to the center of the coupler head. Our coupler heads fortunately have a parting line (mold mark) across the center of the knuckle easily showing the center of the coupler head. For the top coupler performance (in all scales) all your couplers must be at the same correct coupler height.

There are some people that get confused and overwhelmed by looking at the large selection of Kadee couplers. Then they try to find a coupler for their model by searching through all the couplers. Then I have to show them where to find the coupler conversion information on our web site. In the gray strip just under the title area is the word "conversion" and here you'll find our Large Scale coupler conversion information including drawings and instructions for conversions requiring more than just changing couplers.

For some beginning helpful hints. For the common plastic truck mounted coupler arm with the nub on the end use the G scale #831 or newer #909 and for #1 scale use the #1831 or newer #1909. For general body mounting start with the G scale #830 or newer #906 and for #1 scale #820 or newer #1906. (End of Sam's)

### **Special notes:**

1. The #789 coupler is a result of our member Ed Zellner, who found putting a straight shank coupler in to the 831 box would allow body mounting. This resulted in our club (MHGRS) ordering these special couplers (at that time). Later Kadee made this a standard coupler.
2. The Flex bracket design was a direct result of an article I wrote for Garden Railways Magazine showing how to mount the #830 coupler on the 3080 LGB coaches using a swivel bracket.

### **Track Configurations**

Avoid abrupt S Curves; use a straight section at least as long as your longest car between the curves. Most sidings have S curves, a switch with a siding parallel with the main is a reverse curve. Most cars with a short overhang (distance from bolster to the coupler mount, typical of most freight cars) and body mounted couplers will negotiate a 2' radius, coupling and uncoupling do not work well, or possibly not at all on this radius.

## Assembling the coupler

### Lubrication:

Use graphite or silicone powder, not really required on the large scale, but does help. DO NOT use a grease or oil, as this will accumulate dirt and gum up the coupler.

### #830, 820 style gearbox

After placing the spring in coupler, place the cover in position. There are no screws to hold this in place, so I use a trick from my N scale days, use a soldering iron to weld the top cover to the gear box on each side and at the back end. Sam at Kadee advised me that these gearboxes can be glued with styrene plastic cement. This allows you to handle the assembled coupler without it coming apart. Be sure to smooth any projections on the top of the coupler box.

### Installing centering springs, small gearbox:

Using one hand, place your thumb over the coupler pivot and the middle finger under the coupler box, with your index finger pull the coupler to the side. With the other hand take the spring and put it over the spring pin on the coupler, compress it and push it down to the bottom of the coupler pocket. It is important to push it to the very bottom or it will pop out. Then slide the thumb of the second hand carefully over the coupler pivot and the spring just inserted and repeat for the second spring. Now hold both springs in place with one hand and carefully slide the cover in place, then insert the screw. Be sure the cover has the correct side up, screw hole is chamfered for the flat head screw.

Bending the trip pin: May not required on correct height body mounted couplers, but I recommend this on truck mounted and checking all couplers. You can check the trip pin height by placing 1/8" thick material across the top of the rails, if it hits it's too low. To check truck mounted couplers place two similar cars on the track with the couplers over the 1/8" piece and pull them apart, if they touch the 1/8" piece, bend the pins up some more. If needed bend the pin so the lower part is parallel with the track or coupler box. The coupler mount on the truck tends to bend down lower under load and may catch on track switches. I do this when assembling the coupler, but can be done any time. A groove joint plier works best, be sure to put one end of the plier on top of the pin and one on the bottom of the pin, so you do not push the pin up in the coupler (see photo)..



## Installations

### Truck Mounting

Most use an 831, 909, or 1831 coupler, conversions are available for other applications see [www.kadee.com/conv/lsc.htm](http://www.kadee.com/conv/lsc.htm) and attached pages. See attached cross reference charts for additional equivalent models. Disadvantage of truck mounted couplers, is that they tend to derail the car when backing trains through switches or curves, especially longer or heavier trains. The force of the coupler against the bolster tends to push the truck sideways.

### Body Mounting

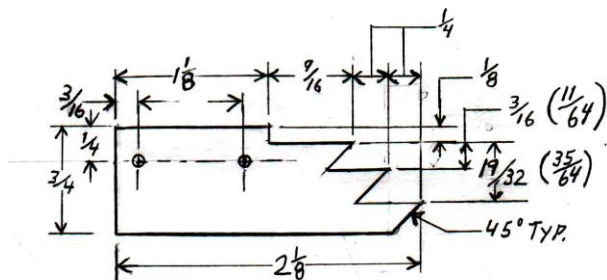
Body mounting is highly recommended when applicable for your layout. When cars or locos have long overhang or are long cars, they probably will not work, On some cars or locos the flex bracket with the 830 coupler will work, (like the LGB 3080 Couches with #830 coupler and #883 flex bracket) be sure the body mount will work for you, body mounted couplers require large radius curves, at least a 4' radius and larger is better. They will work on standard narrow gauge freight and short cars down to 2' radius while some uncoupling functions will not work. Magnetic uncoupling on curves is always difficult. Offset couplers can be used for body mounting eliminating the need to cut into car end to mount the coupler. Using the modified coupler gauge you can determine which coupler configuration works best. Many times you can add shims to the car frame rather than cutting in the car to mount the straight couplers. The shims can be glued to the underframe or bolted, using longer bolts through the couple or bolted separately. Kadee has 1/16" and 1/32" shims available for the 830 style coupler. See

tools and accessories listing. When making shims I prefer to use PVC or ABS shims, the gray plastic sheets are great if you are putting screw into them. Thicker PVC sheets can be obtained from (PlastiCare, Inc. 4281 So. Natches Ct. Unit K, Englewood, Co 80110, Near Oxford and S. Santa Fe Drive), many times in their junk bin or a lot of times they have some partial sheets available and will cut what you need from them, I prefer the 3/16" black color sheets.

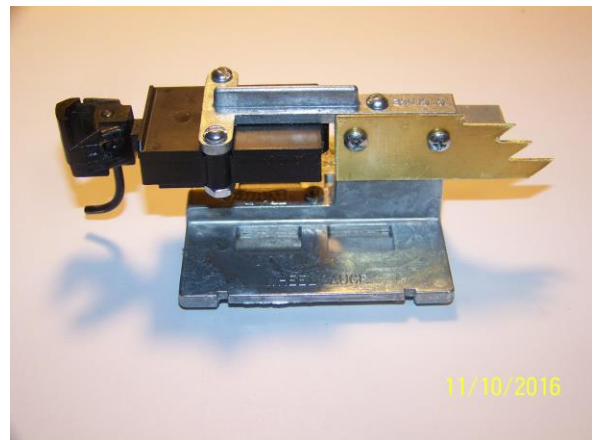
**To start the body mounting**, if you do not have metal wheels on the car I would recommend replacing them first, as they may not be exactly the same height as the plastic ones that are on the car. Then remove the existing coupler and the tongue from the truck assembly that holds the coupler (on some cars you may be able to rotate the tongue away from the car end and leave it in place at least temporarily). Next you need to determine which coupler offset you need to use. You will need the modified coupler gauge shown below or a Kadee coupler already mounted on a car that you know is the correct height. You could use a LBG or similar car with the original wheels and a #831, or correct Kadee coupler as listed in the conversion sheets, mounted in place of the original coupler with the original wheels.

Now you will need a modified coupler gauge or car with a coupler mounted at the correct height. See the following for each of these.

**Get a Kadee "G" coupler gauge (#880) and modify it per the drawing and photo below.** Cut the gauge modification out of 1/32" brass. Drill the holes for the modification piece, these are a #32 drill for a close tolerance fit. Align the top and left side with the coupler gauge. Clamp it to the coupler gauge and drill the holes for the modification piece. Use 4-40 machine screws to secure it to the gauge. Make sure the brass points are sharp, these can be used to mark the car end when required by wiggling car sideways. The top point is for the straight shank coupler, the second one is for medium offset coupler, and the bottom is for the large offset coupler. Note: the dimensions shown will result in the couplers other than the "Straight standard box" will be 1/64" (.015") low, you can use the dimensions in ( ) and the medium offset and large offset will be correct. These same heights will work for #1 couplers except the standard straight box type, you would need to add one additional point 3/32" below the top one. I used the nearest 1/32" as a convenience of design.



**KADEE "G" GAUGE MODIFICATION**  
BRACKET BRASS 1/32" x 3/4"  
HOLES: DRILL #32 FOR 4-40 BOLTS  
BYRON FENTON 11-10-16



The 1/64" difference is not objectionable and in many cases the couplers may be off that much or more and is not a problem with G couplers. With this modified gauge you can determine which coupler will work best with the least modification to your car. In some cases adding a shim piece to the frame of the car will work best. I am a fan of body mounted couplers. Sam at Kadee also noted the difference in height of each offset is the height of the shank (192-.200"), if you stack the shanks of the large offset, medium offset and straight couplers, the knuckles will all be at the same height

**Using a mounted coupler for the gauge,** you will need to have the different coupler offsets on hand to try each one. With the mounted coupler and the car you putting the new coupler on setting on the track, roll the cars together and see how close the height is and take a guess as to which coupler will work best. Temporarily mount the coupler to the car. I use FUN-TAK\* to do this, use a very small amount and press it very thin to estimate the shim thickness. Move the couplers together and estimate the shim thickness required.

**Determine which coupler you will need. With the gauge** just run the car on the track up to the gauge and whichever point on the gauge is below the mounting location will tell you which coupler to use, the lowest one is the large offset, the next one above that is the medium offset and the top one is the straight coupler. If the point is not very close in height to the mounting location then you will need a shim.

\* FUN-TAK, by LOCTITE is a mounting putty, removable and non-toxic. Available at Ace Hardware (with the glue) and other similar stores.

### **Mounting the coupler**

Estimate the shim thickness and temporarily attach it to the car body where the coupler will be (this can be any type of material as it is only to determine the required thickness). I use FUN-TAK\* to do this, use a very small amount and press it very, thin as this will increase the shim thickness. Most cars of the same manufacturer will use the same size shim if the car has the same wheels. I highly recommend metal wheels on ALL rolling stock. If I will be using the same shim thickness I cut a strip 13/16" wide for the "Truck mount gear box" and cut the necessary length required (you will need a wider strip for the 830 style coupler and possibly for some cars. Determine the length of shim required, for most if you only need to support the coupler, a 1-1/4" length will do. You may need a longer piece for extra support or for a larger surface to glue the shim. Make sure you have adequate material for a screw to hold the coupler, it may be necessary to add material to the car body or using a longer screw that will reach into the car body. When adding shims and other material avoid using hard plastic, as it may crack or split when screws are attached. Some cars have an end sill that extends below the car frame, the coupler can be mounted to the frame behind the extension using a thicker shim. This also makes the mounting more solid. Locate the coupler on the car as close to the car end as possible and mark locations for the screws (use two screws if at possible to prevent the coupler from swiveling). The cover for the coupler box usually covers the second smaller hole, you will need to run a #32 (7/64") drill through this hole from the side where you can see the hole, this also enlarges the hole for the screw. Most times I use a #4 sheet metal self-tapping screw to anchor the coupler. If you are doing a number of couplers I recommend getting a box of Philips head #4 sheet metal screws for each length, 5/8", 3/4" and 1", you occasionally want a longer screw, but these are the ones you will use the most. Note, the screws supplied are #4 and frequently will not work as they are too short length.

The shim can be glued in place, (preferred) or in some cases you can screw through the shim and into the car to secure the coupler and the shim. I suggest using a drill the size of the hole to mark the screw location, just use your hand and turn the drill bit enough to mark the location then you can use the correct tap drill for the hole. For the #4 screw use a #49 drill (5/64"). There are some cases where it may be better to use a 4-40 screw, in which case you will need to drill (#43) and tap the hole for the #4-40 screw.

<b>Kadee Couplers for Body Mounting with mounting heights above the rail</b>								
	G Scale height to coupler centerline 1-1/8"				#1 Scale height to coupler centerline 1-1/16"			
Type Coupler	Straight Centerset	Medium Offset	Large offset	Straight Standard box	Straight Centerset	Medium Offset	Large offset	Straight Standard box
Mounting Height*	1-5/16"	1-1/8"	29/32"	1-19/64"***	1-5/16"	1-1/8"	29/32"	1-13/64"***
Couplers with truck mount or std box	789, 907	787, 908	831, 909	830, 930, 906	1789, 1907	1787, 1908	1831, 1909	820, 920, 1906
Couplers with Short Box	835	836	837	N/A	1835	1836	1837	N/A
* Mounting height is to top of coupler box				90x series are AAR style w/enclosed kunkle spring				
** Kadee scale height coupler gauge is set to this height								

NOTE: KADEE ALSO HAS SOME COUPLERS AVAILABLE IN RUST COLOR SEE WEBSITE FOR MORE INFO.

## **Uncoupling**

### **Manual;**

I prefer this if you can reach the couplers, with the couplers slack, use your finger to pull the pin towards you, this will open the coupler, and you may need to push the cars apart a little for them to remain uncoupled. This works anywhere you can reach.

### **Magnetic and delayed**

This requires a Kadee magnet placed between the rails, stopping slack couplers over the magnet uncouples them, to couple the cars must be moved away from the magnet. For delayed uncoupling, one car is positioned with the coupler open over the magnet, another car can be pushed up against it and the couplers are offset so they will not couple and can continue to be pushed to a further location and dropped there without coupling. This can also be accomplished manually by holding one coupler to the open position so it will not couple. Magnets for uncoupling: #844 portable uncoupler sits on top of ties between the rails, #842 uncoupler magnet mounts between the rails and requires cutting the ties. Note: you must use Kadee's magnet, it has special polarizing for their couplers. This will not work on most curves, both cars need to be on straight track.

### **Remote control**

See website: <http://www.remoteuncoupling.com/>

**ALL OF THE INFORMATION ON THE FOLLOWING  
PAGES IS FROM THE KADEE WEBSITE**

I have collected it in a more convenient form, this was done in late 2016 and there may be additions at a later date.

**Also prices shown may not be current**

## & G-Scale Tools & Accessories Listing

ITEM #	DESCRIPTION	QTY.	PRICE	AVAILABILITY
829	#1-Scale Height Gauge (5 tools in one)	1	\$20.55	In Stock
839	Truck Centering Springs & Retainers, for LGB 2-axle cars	2 pr.	\$3.40	In Stock
841	Black Shims for Kadee® #830 and #930 gear box, 1/16" (.0625") & 1/32" (.03125")	8 each	\$3.75	In Stock
843	"Speedi" Driver Cleaner Brush for locos.	1	\$19.65	In Stock
860	Knuckle Springs, for all G-Scale Couplers - Except "New Generation" Couplers	1 dz.	\$3.90	In Stock
861	Centering Springs, for all #1 & G-Scale Couplers, except #820, 821, 830, 900, 906, 920, 921, 930, 1900, 1906, 1917 & 11115	1 dz.	\$6.30	In Stock
864	Truck Centering Springs, for LGB 2-axle cars	1 dz.	\$5.15	In Stock
875	Knuckle Springs, for #819 through #828, #920 & #921, #1-Scale couplers	1 dz.	\$3.85	In Stock
876	Centering Springs, for #820 or 920 #1-Scale Couplers	1 dz.	\$4.05	In Stock
877	Centering Springs, for #821, 921, 1917 #1-Scale Couplers	1 dz.	\$5.15	In Stock
878	Centering Springs, for #830, 930, 900, 906, 11115 G-Scale Couplers	1 dz.	\$5.15	In Stock
879	Centering Springs, for #820, 920, 1900, 1906 #1-Scale Couplers	1 dz.	\$5.15	In Stock
880	G-Scale Height Gauge (5 tools in one)	1	\$20.55	In Stock
881	Conversion Platforms for mounting #882 or #883 Flex-brackets on Aristo-Craft™ Heavyweight Passenger Car (couplers not included)	1 pr.	\$5.15	In Stock
882	#1 Scale Flex-brackets for #820, #920 or #1906 Couplers	1 pr.	\$6.70	In Stock
883	G-Scale Flex-bracket for #830, #930 or #906 Couplers	1 pr.	\$6.70	In Stock
884	Conversion Platform Aristo-Craft™ GE U-25B locos	1 pr.	\$7.15	In Stock
941	Brown Shims for Kadee® #830 and #930 gear box, 1/16" (.0625") & 1/32" (.03125")	8 each	\$3.75	In Stock
980	Type "E" Coupler G-Scale Height Gauge (5 tools in one)	1	\$21.70	In Stock
1875	Knuckle Springs, for 1700 & 1800 series, #1-Scale couplers	1 dz.	\$3.75	In Stock
1929	Type "E" Coupler 1-Scale Height Gauge (5 tools in one)	1	\$21.70	In Stock

Prices & Availability Subject to change

## Large-Scale Couplers & Gear Boxes Listing

### #1-Scale "Original Style" Couplers



Straight Centerset Shank Coupler



Centerset/Reverse Offset Coupler #1840



Medium Offset Coupler #1838



Large Offset Coupler #1839



Straight Shank Couplers Stationary Mounting #822



Straight Thick Shank Couplers Stationary Mounting #823

## #1-Scale "New Generation" Type "E" Couplers



Straight Center Set Shank Coupler  
#1900



Center Set Coupler  
#1901



Medium Offset Coupler  
#1902



Large Offset Coupler  
#1903



Straight Shank Couplers Stationary Mounting  
#1904



Bachmann® Shank  
#1916

## G-Scale "Original Style" Couplers



Straight Center Set Shank Coupler



Center Set Coupler  
#1850



Medium Offset Coupler



Large Offset Coupler

## G-Scale "New Generation" Type "E" Couplers



Straight Center Set Shank Coupler  
#900



Center Set Coupler  
#901



Medium Offset Coupler  
#902



Large Offset Coupler  
#903



Straight Shank Couplers Stationary Mounting  
#904



Bachmann® Shank  
#916

## Kadee® RC Remote Couplers

### G-Scale Remote Uncoupler Coupler Kits

#### "New Generation" Type "E" Couplers



Body Mount Coupler Kit

#11115

The #906 Couplers that are included can operated using traditional Kadee® uncoupler magnets or by using the standard hobby servo included.

Actuated Body Mount Coupler with Gearbox - Assembled

#11220

The #11220 Coupler can operated using traditional Kadee® uncoupler magnets or by using the ultra nano servo built in to gearbox.

We recommend operating Kadee® RC Remote Couplers using the Kadee® RC Remote System, other means of operating & controlling the standard hobby servos can be used with Kadee® RC Remote Couplers, as long as the degree of servo rotation is adjustable. The Kadee® RC Remote Couplers are designed to operate with 90 degree servo rotation only.

**#1 & G-Scale Gear Boxes**



Standard Gear Box (830 type)



Truck Mount Gear Box (831 type)



Short Gear Box (835 type)



Extra Short Gear Box (821 type)



Swinging Gear Box (832 type)



Pilot Pocket (791 type)



Sill Mount Pocket (779 type)

AAR Type "E" G-Scale	Original Style G-Scale	AAR Type "E" #1-Scale	Original Style #1-Scale	NOTE: Packaging Descriptions below do not include miscellaneous shims, brackets, screws, etc. that may be included in each package.
905	779	1905	1779	Centerset Couplers with Sill Mount Pockets. (1 Pair) Note: AAR Type "E" couplers are modified for sill mount pocket clearance.
----	781	----	1781	Coupler Conversion - Centerset Coupler & Medium Offset Coupler with Pilot Pocket Gear Box & Truck Mount Type Gear box. (1 Pair)
----	782	----	1782	Coupler Conversion - Modified Couplers with Mounting Brackets (1 Pair)
----	783	----	1783	Coupler Conversion - Modified Coupler with Mounting Bracket & Large Offset Coupler with Truck Mount Type Gear box. (1 Pair)
----	----	----	1784	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
----	785	----	1785	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
----	786	----	1786	Coupler Conversion - Medium Offset Couplers with Swinging Type Gear boxes. (1 Pair)
908	787	1908	1787	Coupler Conversion - Medium Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
----	788	----	1788	Coupler Conversion - Medium Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
907	789	1907	1789	Centerset Couplers with Truck Mount Type Gear boxes. (1 Pair)
----	790	----	1790	Coupler Conversion - Large Offset Coupler & Modified Medium Offset Coupler with Truck Mount Type Gear boxes. (1 Pair)



-----	<b>791</b>	-----	<b>1791</b>	Large Offset Coupler & Centerset Coupler with Pilot Pocket Gear Box & Truck Mount Type Gear box. (1 Pair)
-----	<b>792</b>	-----	<b>1792</b>	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
-----	<b>793</b>	-----	<b>1793</b>	Coupler Conversion - Large Offset Coupler & Medium Offset Coupler with Truck Mount Type Gear boxes. (1 Pair)
-----	<b>794</b>	-----	<b>1794</b>	Large Offset Coupler & Medium Offset Coupler with Truck Mount Type Gear box & Swinging Type Gear box. (1 Pair)
-----	<b>795</b>	-----	<b>1795</b>	Coupler Conversion - Large Offset Couplers with Swinging Type Gear boxes. (1 Pair)
-----	<b>796</b>	-----	<b>1796</b>	Large Offset Couplers with Truck Mount Type Gear box & Swinging Type Gear box. (1 Pair)
-----	<b>797</b>	-----	<b>1797</b>	Large Offset Couplers with Swinging Type Gear boxes. (1 Pair)
-----	<b>798</b>	-----	<b>1798</b>	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
-----	<b>799</b>	-----	<b>1799</b>	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
<b>906 / 906R NEW</b>	<b>830 / 930</b>	<b>1906 / 1906RNEW</b>	<b>820 / 920</b>	Straight Centerset Shank Couplers with Standard Body Mount Gear boxes (820-Black) (920-Rust) (830-Black) (930-Rust) (906-Black) (906R-Rust) (1906-Black) (1906R-Rust) (1 Pair)
-----	-----	<b>1917</b>	<b>821 / 921</b>	Centerset Short Shank Couplers with Extra Short Gear boxes(821-Black) (921-Rust) (1 Pair)
-----	-----	-----	<b>824</b>	Coupler Conversion - Straight Centerset Shank Couplers with Standard Gear boxes (1 Pair)
<b>909</b>	<b>831</b>	<b>1909</b>	<b>1831</b>	Large Offset Couplers with Truck Mount Type Gear boxes (1 Pair)
-----	<b>832</b>	-----	<b>1832</b>	Large Offset Couplers with Swinging Type Gear boxes (1 Pair)
-----	<b>833</b>	-----	<b>1833</b>	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
-----	<b>834</b>	-----	<b>1834</b>	Coupler Conversion - Large Offset Couplers with Truck Mount Type Gear boxes. (1 Pair)
-----	<b>835</b>	-----	<b>1835</b>	Centerset Couplers with Short Gear boxes. (1 Pair)
-----	<b>836</b>	-----	<b>1836</b>	Medium Offset Couplers with Short Gear boxes. (1 Pair)
-----	<b>837</b>	-----	<b>1837</b>	Large Offset Couplers with Short Gear boxes. (1 Pair)

*The following conversion charts are in alphabetical order, by manufacturer, from the Kadee website*

<http://www.kadee.com/>

***Note:*** *Kadee has many special installation instructions for some locos and cars, if the listing is **highlighted in blue**, go to the website and click on it for more information. Sometimes the information you need is packaged with the coupler if it is for a specific application.*

## **KADEE COUPLERS**

### **Large-Scale (#1-Scale & G-Scale) Conversion Information**

## Large-Scale (#1-Scale & G-Scale) Conversion Information

Once you have looked up our suggested starting coupler\* below you can use the link from the model to take you to the How To Instructions and Diagrams for that model; these instructions will help you with the coupler installation process (this is on website, not available here)

**Note:** Our conversions typically requiring the least modification to a model. The How To Instructions and Diagrams are based off the Original Style Coupler.

**Note:** If the coupler conversion doesn't have a "New Generation" Type "E" Coupler option listed it is not available. If you would like "New Generation" Type "E" Couplers, you will need to purchase the listed coupler package (in order to have the necessary components for conversion) & then you would need to purchase the appropriate "New Generation" Type "E" Coupler replacement couplers & swap out couplers in original conversion. Use the coupler cross reference chart description or coupler description from Kadee® web site product page to identify the coupler style included in the packaging. The #782, #783, #1782 & #1783 have modified couplers that are not available in the "New Generation" Type "E" Coupler.

**Note:** Kadee®-RC Couplers can only be body mounted.

Always check the #1-Scale coupler heights with either our #829 or Type "E" #1929 #1-Scale Coupler Height Gauge and check the G-Scale coupler heights with either our #880 or Type "E" #980 G-Scale Coupler Height Gauge. Please visit our trouble shooting page for helpful hints.

\*Our conversion's based on only one model from a production run, there may be inconsistencies in a model's production run that require a different coupler or model modifications to achieve the proper coupler height for coupler function.

### ACCUCRAFT, AMERICAN MODEL SUPPLY (AMS)

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®-RC	#1-Scale AAR Type "E"	#1-Scale Original Style
0-4-0 Caradoc		905	779		1905	1779
0-4-0 Ida		905	779		1905	1779
0-4-0 Porter (Adjust Beam)		905	779		1905	1779
0-4-0 Ruby Deluxe		905	779		1905	1779
0-4-0T Ruby (Adjust Beam)		905	779		1905	1779
0-6-2 Superior		905	779		1905	1779
2-4-2 Mimi		905	779		1905	1779
4-8-8-4 Big Boy 1:32 (Tender Only)					1904	822
Shay - Mich. Cal #2		905	779		1905	1779
Shay - Mich. Cal #5		905	779		1905	1779
Shay - 13T Open End		905	779		1905	1779
Plymouth Switcher - (Front)		905	779		1905	1779
Plymouth Switcher - (Rear)			835			
<a href="#">Freight Cars (Coupler Only)</a>			*835			*1835
Rolling Stock - Large Pocket	11115 or 11220	906	830	11221	1906	820
Rolling Stock - Small Pocket			835			1835
Disconnect Log (#1 Scale Link & Pin Pocket)		*908	*787			*921

## ARISTO-CRAFT (REA)

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
0-4-0 Switcher	11220	909	831		1909	1831
2-4-2 Rogers Loco (Rear Only)	11220	909	831		1909	1831
2-8-0 Consolidation C-16 (Tender Only)	11220	909	831		1909	1831
2-8-2 Mikado (Pilot)	11220	909	831		1909	1831
2-8-2 Mikado Vanderbilt Tender - (#1 Scale add .075" shim)	11220	906	830		1906	820
2-8-2 Mikado Slope Back Tender (#21900 Series)		909	831		1909	1831
2-8-8-2 Mallet - (Pilot)		908	787		1908	1787
2-8-8-2 Mallet - (Tender)	11220	909	831		1909	1831
4-6-2 Pacific (Tender Only)	11220	909	831		1909	1831
FA-1 Diesel Loco (First Production)			793			1793
FB-1 Diesel Loco (First Production)			792			1792
Lil' Critter			788			1788
Center Cab Industrial Switcher			788			1788
E-8	11220	906	830		1906	820
GP-40		908	787		1908	1787
RDC (Budd RDC-1)		907	789			1789
RS-3 Diesel - Large Diameter (More than 8 Foot Diameter)		908	787		1908	1787
RS-3 Diesel - 8 Foot Diameter			788			1788
RS-3 Diesel - Tight Diameter (Less than 8 Foot Diameter)			786			1786
GE Dash 9-44 CW		907	789			1789
GE U-25 B Locomotive - Conversion Platform (Coupler not included)			884			884
SD-45 Diesel Loco		908	787		1908	1787
Doodle Bug-rail Car - (Front)		908	787		1908	1787
Doodle Bug-rail Car - (Rear)	11220	909	831		1909	1831
Eggliner Locomotive		908	787		1908	1787
Rail Bus (Rear Only)	11220	909	831		1909	1831
Snow Plow	11220		788			1788
Rolling Stock	11115 or 11220	909	831		1909	1831
Smooth Side Passenger Cars (mounted on "top" of extension)	11220	907	789			1789

Streamline Passenger Car	11220	909	831		1909	1831
Heavyweight Passenger Car - Conversion Platform (Coupler not included)	11220		881			881
Heavyweight Passenger Car - "Flex Bracket" (Coupler not included)	11220		883			882

## **BACHMANN**

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
<i>4-6-0 Big Hauler</i>			791			1791
<i>2-4-2 Prairie - Pilot</i>		907	789			1789
<i>2-4-2 Prairie - Tender</i>	11220	909	831		1909	1831
<i>2-4-2 Tank Switcher (Spectrum)</i>		909	831		1909	1831
<i>2-8-0 Consolidation</i>			781			1781
<i>2-8-2 K-27</i>		906 or 916	830		1916	
<i>4-6-0 Ten Wheelers</i>			791			1791
<i>0-4-0 Porter</i>			796			1796
<i>2-6-0 Mogul (Tender Only)</i>			837			1837
<i>4-4-0 Centennial (Tender Only)</i>			837			1837
<i>Climax</i>			782			1782
<i>Heister</i>			835			1835
<i>Shay (New &amp; Old Production) Large Diameter (8 Foot Diameter &amp; Larger) - (Front)</i>		907	789			1789
<i>Shay (New &amp; Old Production) Large Diameter (8 Foot Diameter &amp; Larger) - (Rear)</i>			835			1835
<i>Small Diameter (Less than 8 Foot Diameter)</i>		909	831		1909	1831
<i>45 Ton Diesel Switcher</i>			835			1835
<i>Side Dump Ore Car (All Plastic)</i>		907	789			1789
<i>Log Car (B)</i>		907	789		1906	820
<i>20' Rolling Stock</i>	11220	908	787		1908	1787
<i>Other Rolling Stock - to date</i>	11115 or 11220	909	831		1909	1831

## **BACHMANN SPECTRUM®**

	G-Scale Kadee®- RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
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2-4-4 Forney		916			1916	
2-6-6-2 Baldwin Articulated		916			1916	
1:20.3 Narrow Gauge Rolling Stock		916			1916	

## CHARLES RO

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®-RC	#1-Scale AAR Type "E"	#1-Scale Original Style
Rolling Stock	11115 or 11220	909	831		1909	1831

## DELTON

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
2-8-0 C-16 Locomotive (Tender Only)		909	831		1909	1831
Rolling Stock	11115 or 11220	909	831		1909	1831

## DEPOT G

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®-RC	#1-Scale AAR Type "E"	#1-Scale Original Style
Rolling Stock	11115 or 11220	909	831		1909	1831

## KALAMAZOO

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
0-4-0 Loco #27 and #54			832			1832
4-4-0 American (Tender Only)	11220	909	831		1909	1831
Freight Cars	11115 or 11220	909	831		1909	1831
Passenger Cars - (Small Diameter) (Less than 8 Foot Diameter)	11220		797			1797
Passenger Cars - (Larger Diameter) (8 Foot Diameter & Larger)	11220		834			1834

## LGB

	G-Scale Kadee®- RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1- Scale AAR Type "E"	#1-Scale Original Style
0-4-0 Small Steam - (20100, 20101, 20200, 21211, 20761, 20750?, 21761, 22212, 23211)			832			1832
0-4-0 Industrial Loco (Field Rwy) - (20140, 21140, 22140, 23140)		909	831		1909	1831
0-4-0 With Drive Tender (20151, 21151)			796			1796
0-4-0 Old West w/Cow Catcher (Tender Only) - (20171, 22171)	11220	909	831		1909	1831

0-4-0 Porter (LEHMANN) (21771, 22771)			835			1835
0-4-2 Chloe (Rear Only) (20130, 22130)	11220	909	831		1909	1831
0-6-2 Series "U" - (20701, 20711, 21701, 21711, 22701, 20731, 23701)			796			1796
0-6-6-0 CC Mallet Tank - (20851, 23851, 22852, 25851)			832			1832
2-4-0 (20232, 21232)(Pilot ? Tender only)	11220	909	831		1909	1831
2-6-0 Mogul W/Coupler pilot - (20192, 21190, 22184, 22192, 23191, 24194, 25182, 25192, 25194, 26192, 27192, 29192)			791			1791
2-6-0 Mogul "Bear Trap" w/Plow - (23192, 25192, 26182, 27182)	11220	909	831		1909	1831
2-6-0 Mogul Draw Bar Pilot (Tender Only) - (20281, 21181, 22182, 23182, 24182)	11220	909	831		1909	1831
2-6-0 Spreewald (21741, 22741)		909	831		1909	1831
2-6-2 Tank - (20801, 20802, 21802, 22801, 23802, 24801)			799			1799
Forney (20251, 20252, 21251, 21252, 23252)			790			1790
2-6-6-2 Mallet Sumpter Valley - (20892, 21892)			783			1783
2-6-6-0 Mallet Unitah Rwy Co. - (20882, 21881)			783			1783
2-8-2 Mikado (European Style) - (22871, 22872)(?) 909			831		(?) 1909	1831
2-8-2 Mikado - (20872, 21872, 23872, 24872, 25872)			(?)791			(?)1791
<b>F-7 All "A"&amp;"B" Units</b>		909	831		1909	1831
Alco DL 535E - (20550, 21552, 20560, 21562, 22552, 22560, 22562, 23560, 24552)		909	831		1909	1831
DB Diesel loco - (21510, 22512, 23510, 24512)		909	831		1909	1831
Diesel Switcher - (20630 D&RGW), (22630 SVR), (23630 PRR)		909	831		1909	1831
Genesis (20490)		909	831		1909	1831
Switcher (20604, 20610, 22604, 23600)			832			1832
Industrial Switcher (20620, 21620)			832			1832
Kleinlok Switcher (20900, 21900)			832			1832
Track Cleaning Loco (20670)			832			1832
Track Maintenance and Fire Dept. - (20330, 22330)			832			1832
<b>Rail Truck (20680, 21680, 22680, 23680)</b>			835			1835
Diesel Snow Plow (25604)			832			1832
Traktor Locos (20410, 27410)			832			
Electric Loco Switcher - (20300, 21300, 22300)			832			1832
GE6/6 RhB "Crocodile" - (20400, 21400, 22400, 24402)			832			1832

GE2/4 Slant Rod Passenger - (20440, 20450, 21440, 21450)		799				1799
Tractor Locos (20410, 27410)			832			
2 Axle Cars	11115 or 11220		833			1833
4 Axle Cars	11115 or 11220	909	831		1909	1831
Field Railroad Cars (& similar short cars)	11220	909	831		1909	1831
Disconnect Log Car	11220	909	831		1909	1831
Sight Seeing Car - (30410, 3530, 40430 Through 40470)			798			1798
Passenger Cars (Small Diameter)			797			1797
Passenger Cars 2 wheel			831			1831

\*Our conversion's based on only one model from a production run, there may be inconsistencies in a model's production run that require a different coupler or model modifications to achieve the proper coupler height for coupler function.

## LIONEL

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
0-4-0 Loco-Frontier Freight - Thunder Mountain Express Great Northern			795			1795
0-6-0 Gold Rush Special - Disney Magic Express (Rear Only)			795			1795
4-4-2 Loco and Tender			794			1794
GP-20 Diesel		908	787		1908	1787
Rolling Stock	11115 or 11220	909	831		1909	1831

## USA TRAINS

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
4-6-4 Hudson Steam (Tender only)	11220	906	830		1906	820
44 Ton Loco		909	831		1909	1831
20 Ton Loco			785			1785
F-3 "A"&"B" Units - (two options, instructions available) (Pilot)		908	787		1908	1787

F-3 "A"&"B" Units - (Pedestal)		909	831		1909	1831
F-3 "A"&"B" Units - (Platform)	11220	906	830		1906	820
GG-1			835			1835
GP-7			785			1785
GP-9			785			1785
GP-30		909	831		1909	1831
GP-30 (Closer more secure coupling)		908	787		1908	1787
GP-38-2			785			1785
PA-1		906	830		1906	820
PB-1		906	830		1906	820
S-4		908	787		1908	1787
SD-40-2			837			1837
SD-70 MAC			836			1836
NW-2 - Large Diameter (8 Foot Diameter & Larger)		908	787		1908	1787
NW-2 - Small Diameter (Less than 8 Foot Diameter)		909	831		1909	1831
Rolling Stock	11115 or 11220	909	831		1909	1831

## USA TRAINS Ultimate Series

	G-Scale Kadee®-RC	G-Scale AAR Type "E"	G-Scale Original Style	#1-Scale Kadee®- RC	#1-Scale AAR Type "E"	#1-Scale Original Style
Extruded Aluminum Passenger Car	11220	906			1906	820
Modern Tank Car	11220	906	830			
4 Bay Center Flow Hopper	11220	906	830		1906	820
60' Box Car Cushion Underframe	11220	906	830		1906	820
Freight Cars - With Body Mounts	11115 or 11220	906	830		1906	820