

KX-1



Instruction & Parts Manual



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The Framon KX-1 is designed to quickly and accurately code cut many different types of cylinder keys. Switching from one manufacturer to the next is as simple as changing the depth and space cams, as well as changing cutters and vises when necessary.

BEFORE YOU BEGIN

The KX-1 features a convenient drawer underneath the machine. If you ordered your machine set up for a single manufacturer, it should already have the proper vise, cam set and cutter on the machine. The machine has been tested & requires no adjustments.

If your machine was set up for more than one manufacturer and all of the components are either on the machine or in the drawer, they have all been tested & should require no adjustments. If you ordered a kit separately from the machine, be sure to check the new components before cutting a large volume of keys.

In addition to the components for the machine, you should also find the following in the drawer:

- 3/32" allen wrench
- 1/8" allen wrench
- 3/16" allen wrench
- 5/16" allen wrench
- Rubber feet to affix to the bottom of the machine

SETTING UP THE KX-1

If your machine does not have any of the components installed, follow this procedure to install the cams, cutter, and vise (also use this procedure for switching your KX-1 from one manufacturer to another):

DEPTH AND SPACE CAM INSTALLATION

To install the space or depth cam on the machine, remove the cam lock screw from the assembly (Figure 1). The depth cam is the shorter of the two cams, and installs toward the front of the machine. The space cam is larger and installs on the right side of the machine. Slide the cam over the aluminum shaft. Insert the Allen screw through the bearing on the end of the cam and tighten the screw. **DO NOT OVERTIGHTEN!**

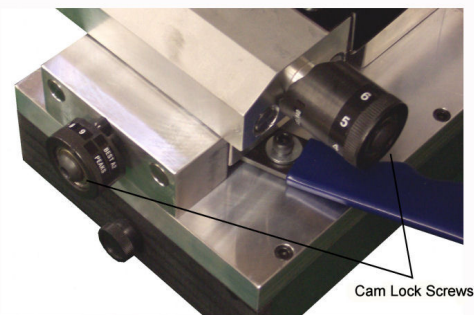


Figure 1: Cam Lock Screws

WISE INSTALLATION

To install the vise on the machine, remove the vise clamp nut from the threaded shaft. The vise bottom has been milled to fit into the channel on the aluminum carriage. Slide the vise with the milled side down over the threaded shaft. The vise should snap into the channel and seat firmly. Do not force the vise into the channel! If the vise does not snap into the channel, it may require that a burr along the bottom channel be removed with a file. Screw the vise clamp nut back onto the machine.

CUTTER INSTALLATION

To install the cutter onto the machine, remove the lock nut and the spacing washer. Most Framon cutters have counter bores on one side, which assures a positive spacing alignment when switching cutters. The counter bored side goes to the left and seats against the spindle. The side of the cutter with the part number on it should be to the right. Reinstall the spacing washer and the lock nut. Do not over tighten the lock nut. See **Figure 2**.

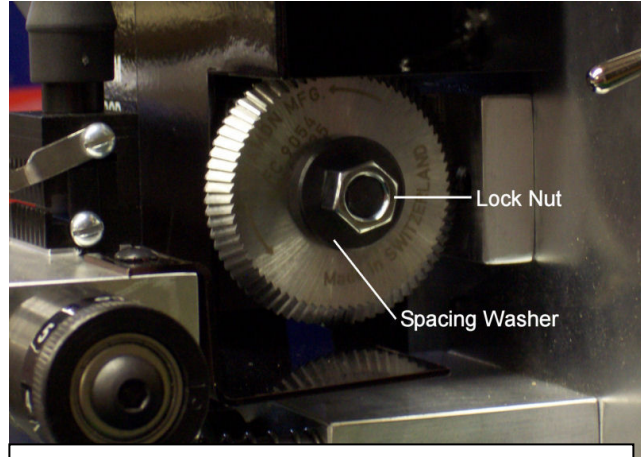


Figure 2: Lock Nut and Spacing Washer

If you need to hold the spindle when removing the nut, there is a small hole in the spindle to the left of the cutter. Rotate the spindle until you can see the hole, and use a small screwdriver or Allen wrench to hold the spindle while you remove the nut.

CUTTING KEYS ON THE KX-1

To cut a key on the KX-1, follow this simple procedure:

Load a key into the vise. If you are cutting Interchangeable Core or Kaba type keys, your vise should have a built-in tip stop. Assa vises have a built-in shoulder stop. Other vises use a flip down key stop. Make sure you turn the key stop back before you cut a key, or you may hit the key stop with the cutter. The vise clamp nut can be lifted and turned to prevent it from hitting the guard when the key is fed into the cutter.

Turn the space cam to the first position (#1). It is easier to use your left hand to push the carriage back and turn the space cam to the #1 position with your right hand and release the carriage instead of cranking the carriage back. Turn the depth dial to the proper cut depth as indicated on the depth cam. Feed the key into the cutter with the feed handle until it stops. Turn the space cam to the next position, set the depth cam, and feed the key in. Repeat this procedure until all cuts are made. Remove the key from the vise. The KX-1 features a wire deburring brush on the side of the machine to remove burrs from the key.

ADJUSTMENTS TO THE KX-1

The KX-1 is designed so that you will rarely have to make any adjustments to the machine. If you ever do have to make adjustments to the machine, use the following procedure:

DEPTH ADJUSTMENT

To adjust the depth on the KX-1, make a cut on a key and measure the depth with calipers. You will have to remove the chip guard attached to the carriage by removing two 1/8" Allen screws. The adjustment for depth is located behind the carriage, in between the slide rods. As you pull the carriage forward, the carriage stops when it comes in contact with the black depth stop. To make the KX-1 cut deeper, use the 3/32" Allen wrench to loosen the setscrew located in the depth stop and turn the stop

to the right. To cut shallower, turn the stop to the left. The stop has threaded holes in several positions. Make another cut on the key and measure until the machine is cutting to the proper depth.

SPACING ADJUSTMENT

To adjust the spacing on the KX-1, insert an original key into the vise. Turn the spacing cam to the first position and set the depth cam to the proper depth of the first cut on the original key. Use the feed handle to move the key into the cutter and determine if the carriage needs to be moved to the left or the right.

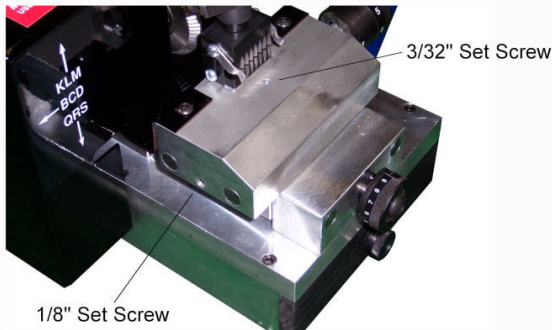


Figure 3: Location of set screws

Slide the carriage to the right as far as it will go (by hand). With the carriage in this position, a setscrew will be accessible thru the small hole located just behind the key vise (see Figure 3). Using the 3/32" Allen wrench, loosen the setscrew. Next, using the 1/8" Allen wrench, remove the setscrew located on the left side of the carriage (See figure 3). Insert a flat screwdriver into this hole (about 3 inches) and turn the screw clockwise to move the vise to the right of the cutter. Turn the screwdriver counterclockwise to move the vise to the left of

the cutter. Once you have set the proper spacing, remove the screwdriver from the carriage and replace the Allen screw. Re-tighten the setscrew by pushing the carriage all the way to the right and inserting the 3/32" Allen wrench into the opening. Release pressure on the carriage.

TILTING SPINDLE ASSEMBLY

Your KX-1 has the ability to cut Medeco Commercial, Bi-Axial, and Emhart keys. To make angled cuts, release the pressure on the spindle by loosening the lock rod located on top of the machine (the lock rods are shipped inside the drawer, if you are not cutting Medeco you may choose not to install them). Tilt the spindle by lowering or raising the tilting spindle rod until it comes to a positive stop. Re-tighten the tilting spindle lock rod and make your cuts for that angle. To save time, make all of the center cuts first, then your left angle cuts, then the right angle. To re-center the spindle, loosen the tilt spindle lock rod and move the tilt spindle rod to the center position, where you will feel a detent, and tighten the tilting spindle lock rod.

MAINTENANCE

Very little maintenance is required on the KX-1. A slight touch of regular automotive grease on the rod that contacts the space and depth cam will assure smooth operation of the cams. Teflon spray can be used on the slide rods to keep them moving freely. The KX-1 uses sealed ball bearings in the motor and spindle, which require no maintenance whatsoever.

WARRANTY

The KX-1, like all other Framon key machines, comes with a one-year, parts, labor and freight warranty. If you have any problem with your KX-1 within the first year, contact Framon Manufacturing at (989) 354-5623. We will issue a call tag for the machine, repair or replace the machine, and return it to you without any charge. Repairs are completed within 2 working days from the day we receive the machine. After the first year, you will be charged a flat labor fee, freight, plus any parts needed to complete the repair.

KX-1 Application Chart

MANUFACTURER	SPACE CAM	DEPTH CAM	CUTTER	WISE	SUFFIX
Arrow	1	S	FC9045	1	AR
Assa	2	A	FC9032	4	AS
Assa MK "0"	2A0	AM	FC10416	4	AM
Best A-2	13	P	FC9054	2	B2
Best A-3	13	N	FC9054	2	B3
Best A-4	13	M	FC9054	2	B4
Corbin D,H,Z Sys 70	3	B	FC9054	1	CD
Corbin K,N Sys 70	3	D	FC9054	1	CK
Corbin X Sys 70	12	F	FC9054	1	CX
Corbin X Pre 70	12	CX	FC9054	1	CXP70
Corbin GH	4	X	FC9090	1	KW
Corbin 981	3	Y	FC9054	1	C9
Corbin Z Pre 70	3	Z	FC9054	1	ZC
Dorma D Series	DR	P	FC9054	1	DD
Emhart	3	F	FC8615	1	EM
Falcon Standard	7	R	FC9090	1	FS
Falcon I-Core	13	P	FC9054	2	FI
Grundman	16	G	FC9051	1	GR
Kaba Peaks 140	15	P	FC9054	2	K4
Kaba Peaks 150	13	P	FC9054	2	K5
Kwikset	4	X	FC9090	1	KW
Kwikset Titan	14	X	FC9090*	1	KT
Lockwood	20	U	FC9045	1	LK
Master	9	L	FC9045	1	MS
Master Padlock	17	Z	FC9045	1	MA
Medeco Bi-Axial	6	T	FC8615	1	MB
Medeco Commercial	5	V	FC8615	1	MC
Medeco KeyMark	13	W	FC9054	3	MK
Medeco KeyMark X4 – add 1 to depth	13	P	FC9054	2	MKX4
Medeco M3	6	T	FC8615	M3	M3
Ruko	19	A	FC9032	4	RK
Sargent C,R,L	10	J	FC7863	1	SR
Sargent U,R,K,G,T,UT	10	H	FC7863	1	SU
Sargent Degree DG1	5	DG1	FC9054	1	DG1
Sargent Degree DG2/DG3	5	DG2	FC8615	M3	DG2
Schlage (incl. Primus)	8	C	FC10031	2	SC
Schlage SFIC	18	P	FC9054	2	ST
Weiser	7	R	FC9090	1	WE
Yale Pro-Key	22	O	FC9045	1	YP
Yale Standard	11	K	FC9045	1	YA

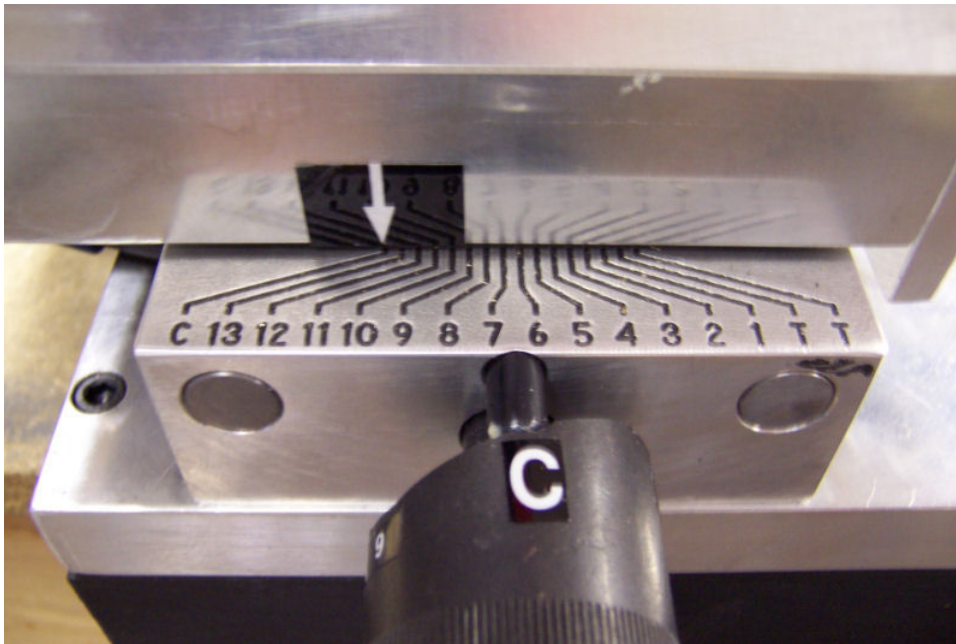
* Kwikset Titan models are shipped with the FC9090 cutter. A separate charge (included upon request only) will be added for the FC4590T cutter for making the first cut next to the shoulder of the key, which has a 90 degree angle at the bow side.

Instructions For Cutting Southern Steel 13 Cut Keys

After reading your instruction manual for your KX-1 machine, there are a few differences in the operation of the machine for 13 cut keys.

The depth cam shown below operates in the same way that the manual shows. Simply turn the cam to the desired depth and feed the key into the cutter. The cam does have one special cut labeled "C", for Clearing Cut.

Above the depth cam is the spacing plate. Instead of having the cut labels on the cam, the spacing plate and arrow will show in which position the carriage is. The key has 13 cuts, and the carriage will detent to a stop in these positions. In addition, the carriage will also stop at the two positions marked with a "T" and the last position marked with a "C". In all three positions, you should turn the depth cam to the "C" position and make a cut. These are clearing/relief cuts so that the blank will operate properly in the lock and are just as important to the operation of the key as the other 13 cuts are.



The machine also requires a special cutting wheel, part number **DBC1085S**. Be sure when replacing the cutter that the teeth on the cutter are pointing downward.

The key is to be loaded into the machine with the tip of the key to the left and bow of the key to the right. Use the bottom shoulder of the blank to stop the key.

If you have any questions, contact Framon Manufacturing Company at 989-354-5623 or Southern Folger Detention.

RR Brink and Folger Adam Users

Along with this manual, you should also have received a single or two-page addendum regarding specifics for your detention keys. We do not publish this information in this manual due to the sensitive depth and space information included with it. If you lose the addendum, you will need to contact us at 989-354-5623 with the serial number of your machine to receive it. We will also need to know the location that the machine is being used in, which must match our records before it will be released.

Parts Diagram

