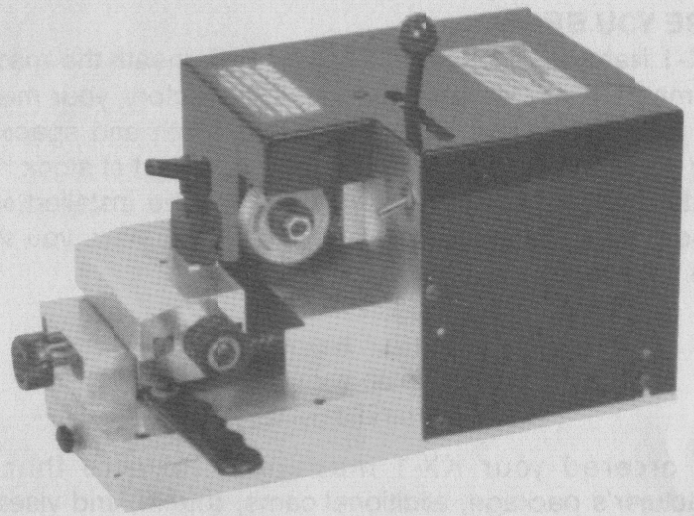
KX-1



Instruction Manual
&
Parts Book

FRAMON MANUFACTURING COMPANY, INC.

NEW AREA CODE (989)

909 Washington Ave., Alpena, MI 49707 • (517) 354-5623
Fax: (517) 354-4238 • e-mail: framon@northland.lib.mi.us
Internet: http://www.framon.com/

MODEL PINTING SERVICE, INC.

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 your machine was drop shipped from the factory, your machine should have the proper cutter, vise, and depth and space cam already installed. If your machine was shipped out of stock from a distributor, the proper components will either be installed on the machine or arrive in a separate carton. In the drawer, you should find the following:

- 3/32" allen wrench
- 1/8" allen wrench
- 3/16" allen wrench
- 5/16" allen wrench
- Feed handle

If you ordered your KX-1 machine with more than one manufacturer's package, additional cams, cutters, and vises may also be found in the drawer or will arrive in a separate carton.

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!

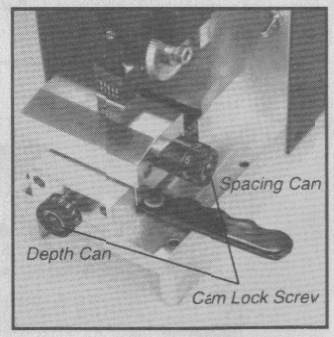


Figure 1

CAM AND CUTTER KITS FOR THE KX-1

MANUFACTURER	SPACE CAM	DEPTH CAM	CUTTER	VISE	SUFFIX
Arrow	1	S	FC9045	Standard	AR
ASSA	2	A	FC9032	ASSA	AS
Best A-2	13	P	FC9054	IC/PEAKS	B2
Best A-3	13	N	FC9054	IC/PEAKS	B3
Best A-4	13	M	FC9054	IC/PEAKS	B4
Corbin D,H,Z System 70	3	B	FC9054	Standard	CD
Corbin K,N System 70	3	D	FC9054	Standard	CK
Corbin X System 70	12	E	FC9054	Standard	CX
Corbin GH	4	X	FC9090	Standard	KW
Emhart	3	F	FC8612	Standard	EM
Falcon Standard	7	R	FC9090	Standard	FS
Falcon I-Core	13	P	FC9054	IC/PEAKS	FI
Grundman (UK)	16	G	FC9051	Standard	GR
Kaba PEAKS .140	15	P	FC9054	IC/PEAKS	K4
Kaba PEAKS .150	13	P	FC9054	IC/PEAKS	K5
Kwikset	4	X	FC9090	Standard	KW
Kwikset Titan	14	X	FC9090*	Standard	KT
Lockwood	20	U	FC9045	Standard	LK
Master	9	L	FC9045	Standard	MS
Medeco Bi-Axial	6	T	FC8612	Standard	MB
Medeco Commercial	5	V	FC8612	Standard	MC
Medeco KeyMark	13	W	FC9054	Keymark	MK
Ruko (UK)	19	A	FC9032	ASSA	RK
Sargent C,R,L	10	J	FC7863	Standard	SR
Sargent U,R,K,G,T,UT	10	H	FC7863	Standard	SU
Schlage (includes Primus)	8	C	FC10031	Standard	SC
Schlage Tri-Ad (SFIC)	18	P	FC9054	IC/PEAKS	ST
Weiser	7	R	FC9090	Standard	WE
Yale Pro-Key (UK)	22	O	FC9045	Standard	YP
Yale Standard	11	K	FC9045	Standard	YA

* Kwikset Titan uses a different cutter for the first cut. If this second cutter is desired, an extra charge will be applied to the machine. Please specify at time of order.

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.

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 never have to make any adjustments when switching from one manufacturer to the next. 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 set screw 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 moved to the left or the right. Using the 3/32" allen wrench, remove the set screw located in front of the vise (See figure 4). Slide the carriage to the right as far as it will go (by hand). With the carrage in this position, another set screw will now be accessible thru the hole. Using the 3/32" allen wrench, loosen the set screw. Next, using the 1/8" allen wrench, remove the set screw located on the left side of the carriage (See figure 5). 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 screwdrver 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 set screw by pushing the carriage all the way to the right and inserting the 3/32" allen wrench into the opening. Reinstal the 3/8" set screw that was previously removed. This set screw is only used to prevent shavings from entering the assembly.

Figure 4

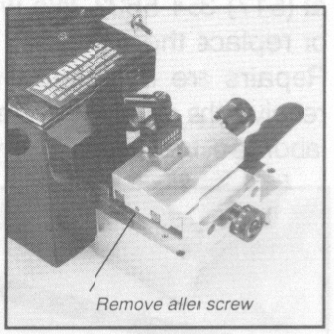


Figure 5

TILTING SPINDLE ASSEMBLY

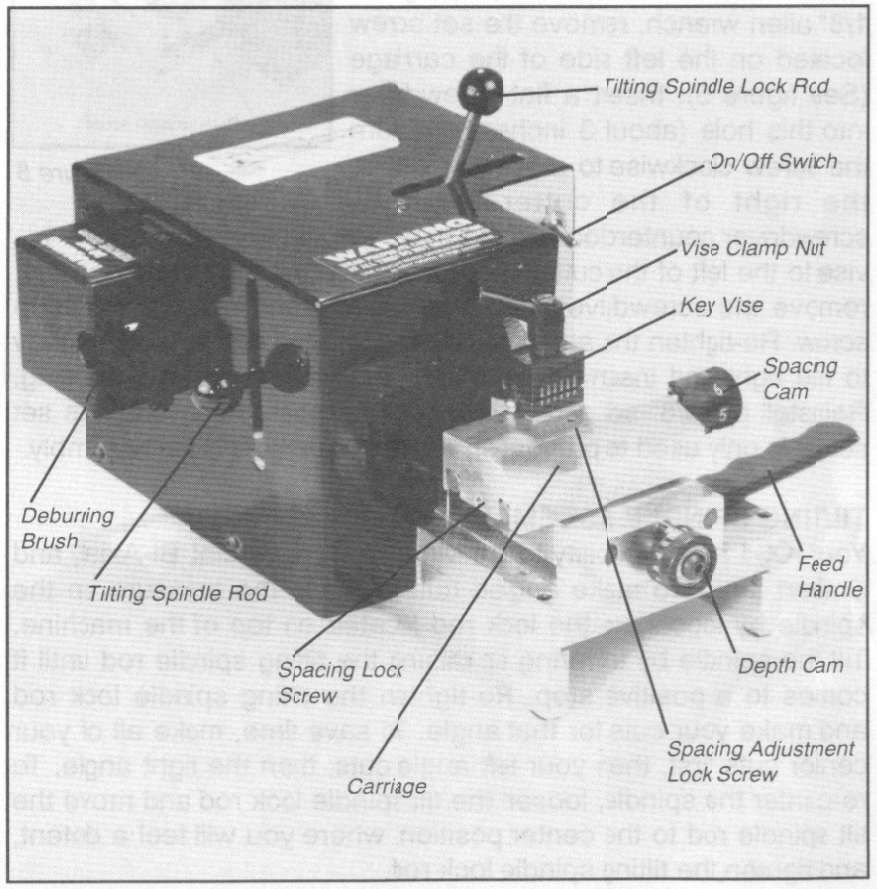
Your KX-1 has the ability to cut Medeco Commercial, Bi-Axial, and Emhart keys. To make angled cuts, release the pressure on the spindle by loosening the lock rod located on top of the machine. Tilt the spindle by lowering or raising the tilting spindle rod until it comes to a positive stop. Re-tighten the tilting spindle lock rod and make your cuts for that angle. To save time, make all of your 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 recuired 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 (517) 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 $40 labor fee, freight, plus any parts needed to complete the repair.



VISE 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! Screw the Vise Clamp Nut back onto the machine.

CUTTER INSTALLATION

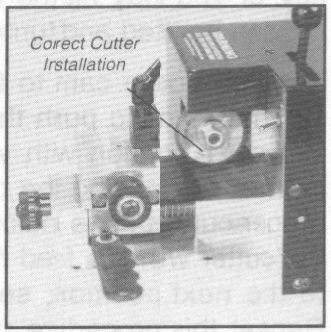


Figure 2

To install the cutter onto the machine, remove the lock nut and the spacng washer. Most Framon cutters have courterbores on one side, which assures a positive spacing alignment when switching cutters. The counterbored 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 overtghten the lock nut. See figure 2.

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.

HANDLE INSTALLATION

Figure 3

The KX-1 is shipped with the feed handle removed from the machine. To install the feed handle, do the following: Remove the allen screw from the right side of the carriage. Under the screw, there should also be a flat washer and a spacing washer. The feed handle is bent so that when installed on the machine it has a slight upward angle. Slide the allen screw through the flat washer, then through the handle, then the spacing washer. Make sure the spacing washer fits into the feed handle (the tapered end will fit into the hole in the feed handle). Screw the assembly into the base of the machine with the allen wrench. Once you tighten the screw, make sure the carriage slides easily. See figure 3. Your machine is now ready to cut keys!