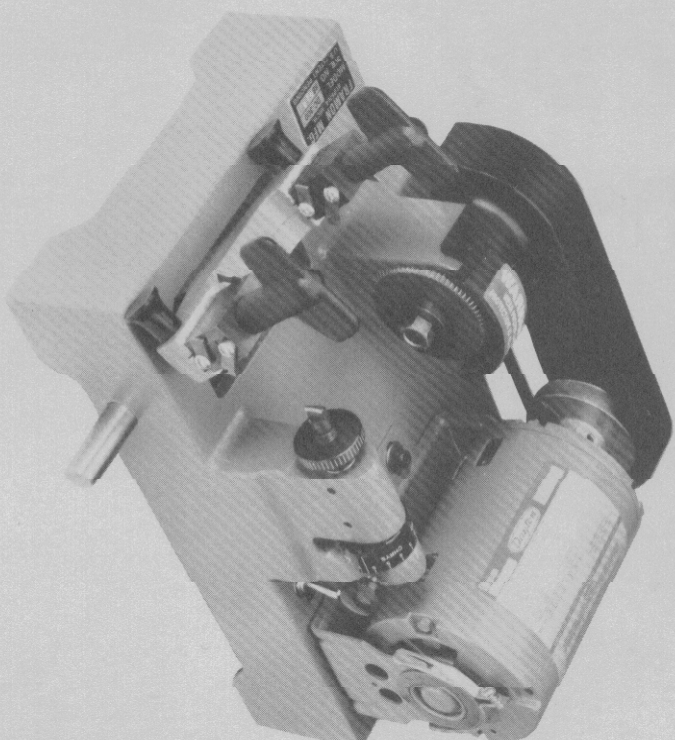
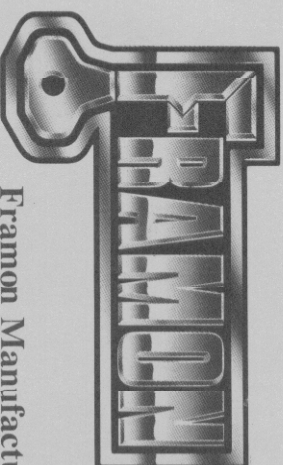


# DC-300



## Duplicating Code Machine Instruction Manual & Parts Book



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Framon Manufacturing Co., Inc.  
909 Washington Ave., Alpena, MI 49707

0	1	2	3	4	5	6	7	8	9
2	3	4	5	6	7	8	9	0	1
11A	11B	11C	11D	11E	11F	11G	11H	11I	11J

.024

.030

.015

.020

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
11A	11B	11C	11D	11E	11F	11G	11H	11I	11J

.020

0	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	0
11A	11B	11C	11D	11E	11F	11G	11H	11I	11J

.015

1	2	3	4	5	6	7	8	9	0
11A	11B	11C	11D	11E	11F	11G	11H	11I	11J
11A	11B	11C	11D	11E	11F	11G	11H	11I	11J

.0235

.0275

.0125

## DESCRIPTION

The Framon Code Duplicator is designed to cut automotive keys by code and to also duplicate keys. This machine uses depth cams and spacing keys to accomplish this type of key cutting

The machine, at time of purchase, includes one cam and five spacing keys. This cam is the #1 cam and has depths for cutting the 5 pin Ford, 10 wafer Ford, American Motors, Chrysler and GM keys. Each of the spacing keys are numbered for identification and with the number of spaces for each manufacturer. Also included is an adjusting wrench (allen) and instruction/service manual.

## CUTTER HEAD

The cutter head is mounted on precision grade sealac bearings for accuracy and long life. The cutter is precision ground of M3 tool steel and to the precise configuration for most automotive keys.

## YOKE

The yoke has two vises. The left vise is used for the blank to be cut. The right vise is used to hold the spacing key required when cutting by code and for holding the pattern key when duplicating (see Figures 1 & 2). Each vise is double sided. Always use the narrow side, unless the blank tips in the vise - then use the wide side of vise.

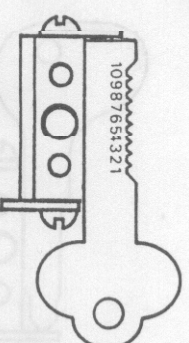
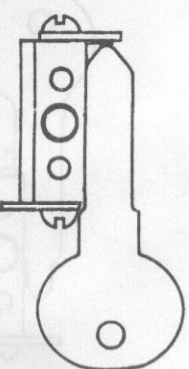
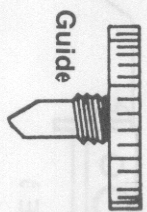
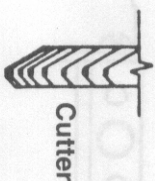


FIGURE 1

Typical Set-Up to Cut Keys By Code  
Using Spacing Key and Blank

All spacing keys are used in the right hand or guide side vise, and keys to be cut by code or duplicated are put in the left hand or cutter side vise.



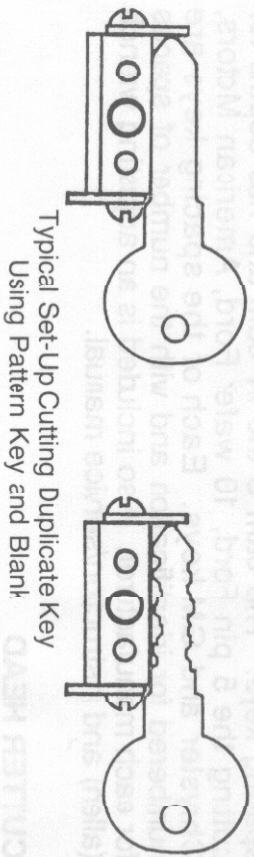
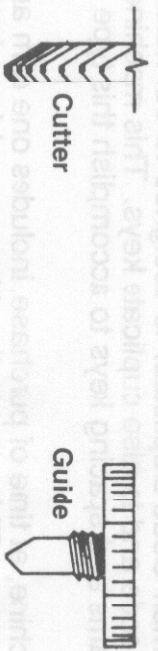


FIGURE 2

## KEY BLANK INFORMATION

Key blanks without bottom shoulders should be inserted into the vise until the tip of the key hits against the tip stop on vise. Key blanks that have a bottom shoulder must be inserted with the bottom shoulder against the right hand side of the vise (see Figures 3 & 4). The spacing key will always be inserted with the tip of the key against the tip stop in the guide vise.

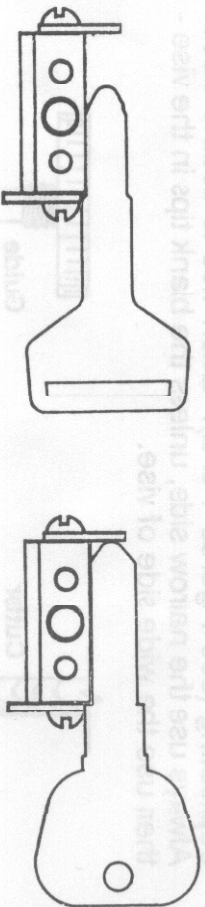


FIGURE 3

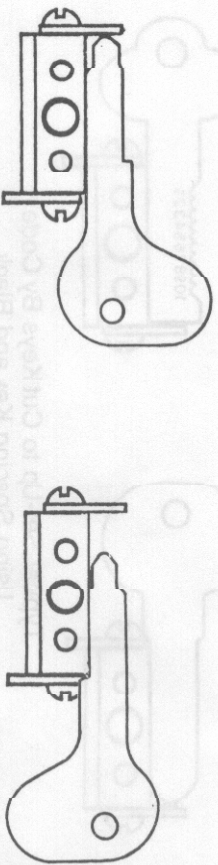
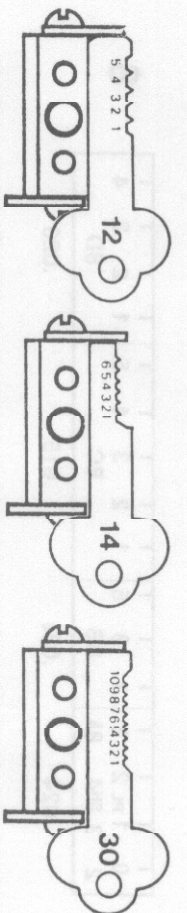


FIGURE 4



FORD 5 PIN

GM SIDE BAR

BMW-10-HB-NB

## Example of Spacing Keys

### CAM CHARTS

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
GM	AM	FD	CHRY	CHRY	FD	CHRY	CHRY	FD	CHRY	FD	CHRY	CHRY	FD	CHRY

.025

.020

.026

1	2	3	4	1	2	3	4	5	1	2	3	4	5
2A	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B	2B

.030

.014

.018

1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4
3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A

.015

.016

.023

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A

.020

.011

1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4
5A	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A

.025

.017

.040

1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A

.028

.032

.024

.027

1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
7A	7A	7A	7A	7A	7A	7A	7A	7A	7A	7A	7A	7A	7A	7A	7A

.022

.010

.0125

.038

## LUBRICATION

A small amount of fine oil can be used on the yoke slide rod and the guide shaft. Wipe off all excess oil.

## WARRANTEE

The warrantee on the Framon DC-300 is in effect for a period of one year from date of purchase. Framon Mfg. Co. will repair or replace any part of any machine proven to be defective as to material or workmanship. If any machine is returned to us in the first year, Framon Mfg. will absorb all cost for repairs, including freight. After one year, Framon Mfg. will charge customer for parts, a flat labor rate, and freight. Machines will be repaired and returned within two days of receipt. This warrantee is valid to the original purchaser only. Cutters are not covered by this warrantee. Framon cutters are among the finest cutters made today, but we have no control over their use.

## WARRANTEE CLAIMS PROCEDURE

Purchaser must inform Framon Mfg. Co. by telephone or letter and obtain permission from Framon before returning any machine. Framon will not accept any machine returned without prior permission. Any correspondence pertaining to any problem with a Framon machine should include date of purchase, from whom purchased, and serial number of machine.

## CAMS AND CAM POST

The # 1 cam will handle most domestic autos - Ford 10 water, Ford 5 pin, American Motors, Chrysler and General Motors, etc. Other cams are available with depth increments from .010 up to .040 (see cam chart on pages 11 & 12). The number one depth is common to all cams. Use this depth on all cams when duplicating keys.

To change cams, loosen cam lock knob at right rear of cam post, withdraw cam pin and slide cam out. Slide new cam into slot, push cam pin into place and tighten cam lock knob. (See Figure 5.)

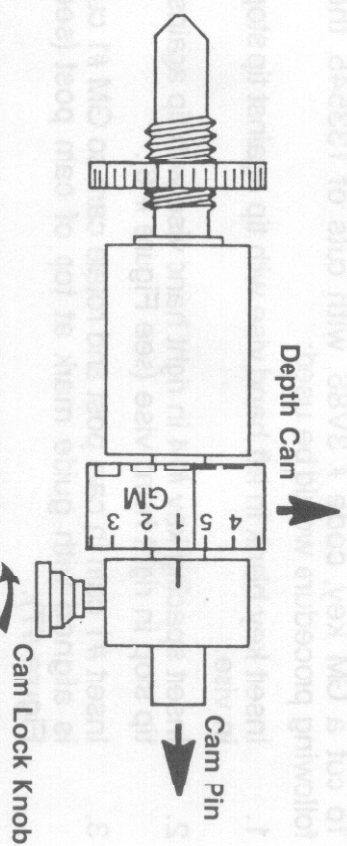


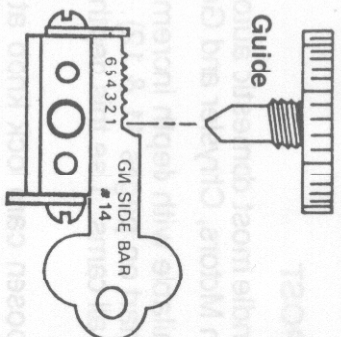
FIGURE 5

## CAM POST AND GUIDE

The key guide in the cam post is spring loaded to allow the guide to enter cuts in either the spacing key when cutting by code or the cuts in a pattern key when duplicating. This system is used to allow straight in cuts.

The adjusting ring on the guide shaft is what controls the depth of each cut. If keys are cut too high, adjusting ring is rotated counterclockwise to change depth. If keys are cut too deep, adjusting ring is rotated clockwise to change depth. To rotate adjusting ring, loosen set screw (nylon tipped) in edge of ring and tighten when adjustment is made. Do not overtighten set screw.





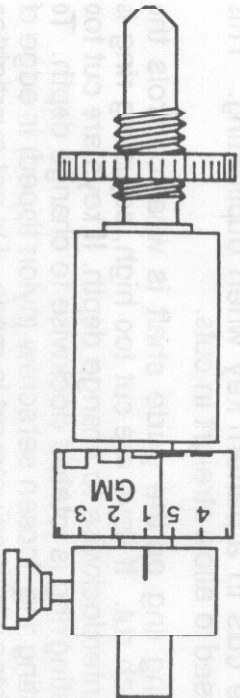
**FIGURE 6**

## CUTTING KEYS BY CODE

Always bottom out key blanks against: back of vise.

To cut a GM key, code # 3V86, with cuts of 133545, the following procedure would be used:

1. Insert key blank in left hand vise with tip against tip stop in vise.
2. Insert spacing key #14 in right hand vise with tip against tip stop in right hand vise (see Figure # 6).
3. Insert #1 cam in cam post and rotate cam so GM #1 cut is aligned with guide mark at top of cam post (see Figure #7).
4. Lift yoke so guide engages #1 cut on spacing key, then continue lifting yoke until cutter engages key and cut is made.
5. Rotate cam to #3 cut and make next two cuts.
6. Rotate cam to #5 cut and make cuts in #4 and #5 spacing positions.
7. Rotate cam to #4 cut and make cut in #5 position. Key is now complete.



**FIGURE 7**

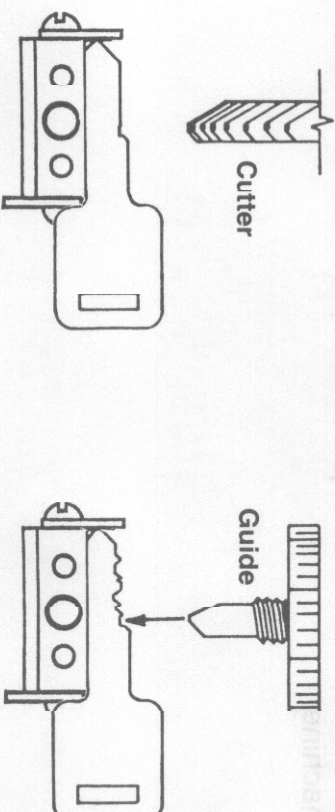
## SPACING KEYS

You will note that each cut on spacing keys are numbered from how to tip. This allows operator to make cuts of the same depth anywhere on any key without changing cam settings. Each spacing key is numbered according to the insert chart. We can furnish spacing keys for any code series needed.

## DUPLICATING KEYS

1. Insert both pattern key and blank in the same manner. Use bottom shoulders, tip stops or top shoulders with key stops.
2. Rotate cam to #1 cut (any #1 cut on any cam can be used for duplicating).
3. Set guide in each cut or pattern key and make each cut by lifting yoke until it comes to a complete stop at each cut until key is complete (See Figure 8).

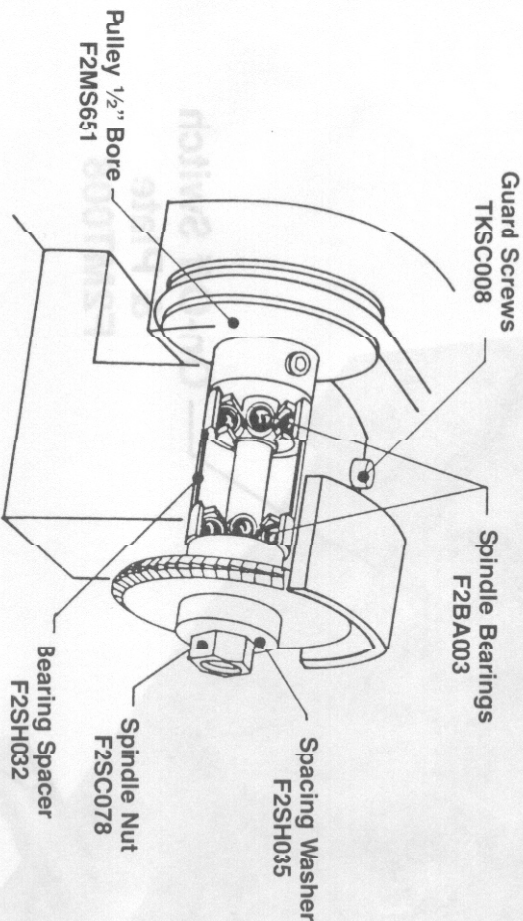
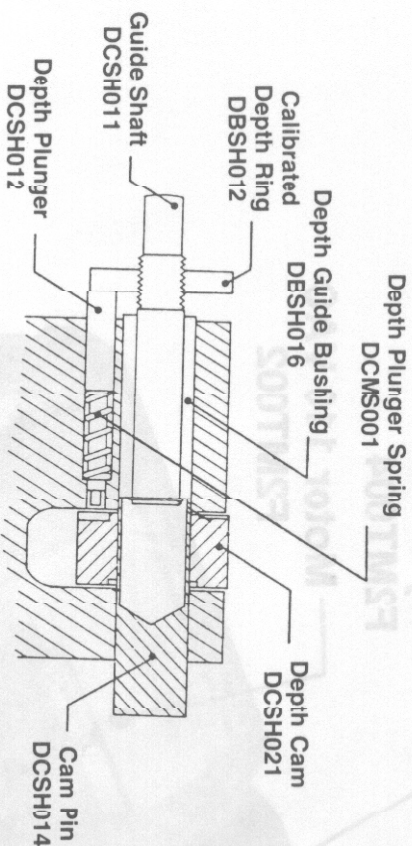
If blank and pattern keys have a bottom shoulder, keys should be inserted in vises with bottom shoulder against right hand side of vise, otherwise use tip stops or top shoulders with key stops.



**FIGURE 8**

## ADJUSTMENTS

See section on Cam Post and Guide.



## Page 5 - DUPLICATING CODE MACHINES

Part #	Description
DC9040	Cutter
DCMS001	Depth Plunger Spring
DCMS101	Name Plate
DCMS551	Tip Stop
DCSH001	Base
DCSH003	Yoke
DCSH005	Vise Bottom
DCSH006	Vise Top
DCSH007	Spindle Shaft
DCSH011	Guide Shaft
DCSH012	Depth Plunger
DCSH014	Cam Pin
DCSH021	#1 Depth Cam
DBMS051	Yoke Knob
DBMS052	Cam Rod Lock Knob
DBSH005	Guard
DBSH012	Calibrated Depth Ring
DBSH014	Yoke Rod
DBSH016	Depth Guide Bushing
F2BA003	Spindle Bearing
F2MS551	Key Stop
F2MS601	Belt
F2MS651	1/2" Pulley
F2MT002	Motor
F2MT003	3 Wire Cord
F2MT004	3/8" Pulley
F2MT008	On-Off Switch & Plate
F2SC003	2" Stud
F2SC078	3/8-24 Hex Nut
F2SH014	Vise Clamp Nut
F2SH032	Bearing Spacer
F2SH035	Spacing Washer
TKMS402	3/32 Allen Wrench
TKSC008	Guard Screw



