

HOW TO USE YOUR **REX-O-graph**  
FLUID DUPLICATOR

**How to use your REX-O-graph fluid duplicator**

a. The Original or "Master".....	4
b. How to Make a "Master".....	4
c. Attaching the "Master".....	6
d. Inserting the "Master".....	6
e. Fluid Supply .....	7
f. Pressure Adjustment .....	8
g. Automatic Paper Feed .....	9
h. Receiving Tray Adjustment.....	9
i. Hand Feed Machines .....	10
j. Automatic Paper Centering.....	11
k. Counter .....	12
l. Paper .....	12
m. Problems and Solutions .....	12
n. General Suggestions .....	14
o. Care of Machine .....	14
p. Supplies .....	15

---

**REX-O-graph, Inc.**

**3727 North Palmer Street**

**Milwaukee 12, Wisconsin**

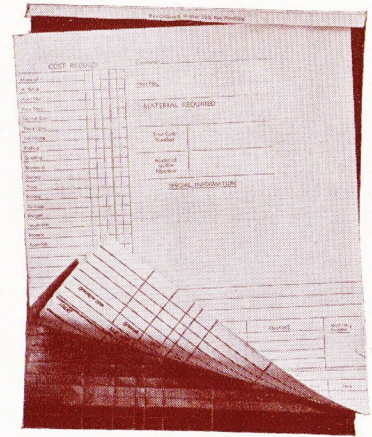
## *Foreword*

By the purchase of a REX-O-graph Fluid Duplicator, you have made a sound investment and obtained a fine piece of equipment. The REX-O-graph is a simple machine, easy to operate, and built to give excellent results. For your own protection, read this manual carefully; it will be time well spent and it will pay big dividends in results flowing from the proper care and use of the machine. By giving the REX-O-graph the same attention you give other pieces of good equipment, you will thoroughly enjoy its excellent service over an extended period of time.

## a. *The Original or "Master"*

Since all copies made on a REX-O-graph are produced from a Master, the first consideration should be the preparation of a Master of the highest quality. ALL Masters for use on a REX-O-graph MUST be made with a spirit duplicating carbon paper. We recommend the use of REX-O-graph Master Sets which comprise a high quality master sheet and a sheet of "Quality", "Intense", or "Systems" spirit

duplicating carbon paper; the "Quality" for the maximum number of copies; the "Intense" for slightly fewer but more brilliant copies; and the "Systems" for short runs, less than one hundred copies.



Two-Part, End-Fold Master Set

4.

## b. *How to Make a "Master"*

Using either a REX-O-graph Master Set or separate sheets of REX-O-graph Master Paper and REX-O-graph Spirit Carbon Paper to make a Master; place the Master Set or separate sheets in the typewriter with the uncoated side of the spirit carbon paper toward the typewriter platen. The entire surface of the Master, save for a narrow "stripping margin", may be used. Actually the REX-O-graph machine requires only a one-eighth inch "stripping margin" for clamping the Master on the drum.

To obtain clear, sharp and bright copies, when the Master is made on a typewriter, a hard platen is desirable; however, if the platen is soft, worn or uneven, a good Master can be made by using the REX-O-graph Backing Sheet (a hard smooth plastic sheet furnished with each machine) behind the Master Set or behind the carbon sheet where separate carbon and Master sheets are used. Clean type is essential in making a good Master, a thin fabric ribbon insures a clear sharp

Master and uniformity of copies will follow the uniformity of the operator's touch.

In writing, printing or drawing a Master, a hard smooth backing surface such as plastic, glass or metal (NOT wood) should be employed. Place a REX-O-graph Master Set with the uncoated side of the spirit carbon paper against the REX-O-graph Backing Sheet, or other suitable hard smooth surface and use a hard pencil (preferably a 3H or 4H) and press firmly and evenly to secure a good impression of carbon on the back of the Master.

Corrections can be made on a Master by turning back the master paper, placing a REX-O-graph Correction Plate under the positive side of the sheet to provide a hard smooth surface and then coating the negative carbon imprint of the error with a waxy film applied by marking with a REX-O-graph Correction Pencil. For best results, turn the pencil between the fingers while applying the waxy coating and keep the point of the pencil clean by removing the carbon deposit. After the negative carbon imprint of the error has been covered with the waxy coating, cut off an unused corner of the spirit carbon sheet, place it in proper position behind the master paper with the

carbon side toward the master sheet and retype correctly over the error; then remove the corner of the carbon paper from behind the master

paper and continue the preparation of the Master. The error will have been corrected and a satisfactory Master will be produced. If carbon particles remain around the correction after it is made, it may be necessary to discard the first few copies; these carbon particles are usually removed on the first few copies and the remaining copies will be sharp and bright.

After the Master has been used to produce the required number of copies, it may be filed away as regular correspondence, without danger of smearing or smudging, and reused from time to time until the maximum number of copies have been run.

Before reusing the Master, it will be necessary to straighten the "stripping margin" by running it between the thumb and forefinger.



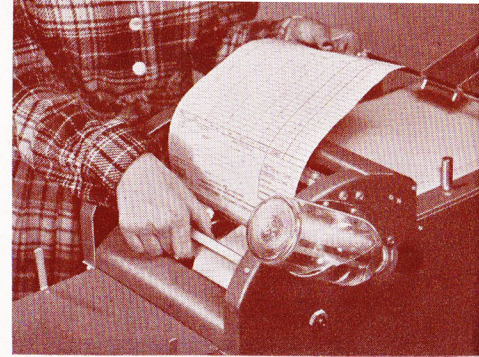
*Correcting the Master*

### c. *Attaching the "Master" to the Drum*

On all models of the REX-O-graph (except the FM and FMH which are provided with a special Master Guide) turn the drum crank in a **CLOCKWISE** direction until the master clamp is exposed. Then insert the thumb of your right hand into the opening in the master clamp and your forefinger into the opening in the drum; squeeze gently against the spring tension on the master clamp and it will move sufficiently to form a slot adapted to receive the "stripping margin" of the master sheet.

6. With the master clamp held in open position, the top or "stripping margin" of the Master is inserted in the slot, care being taken that the *full length of the edge* contacts the *bottom of the slot*, and that the Master is centered with reference to the guide marks on the master clamp and that the side of the Master having the carbon deposit is facing the hand that is holding the master clamp open. When the Master is in proper position, the squeezing pressure of

the thumb and forefinger may be released and the master clamp will move to hold the Master securely in proper position.



*Attaching Master to the Drum*

To remove the Master from the drum, first be sure that no more copy paper is being fed into the machine and that the last copy has been discharged onto the receiving tray. Repeat the procedure for opening the master clamp by inserting the thumb and forefinger in the openings in the master clamp and drum exerting enough pressure to release the gripping action of the clamp on the master sheet. The grain of the paper in a REX-O-graph Master will cause the "stripping margin" of the Master to spring out of contact with the master clamp and a quick turn of the drum crank in a **CLOCKWISE** direction will eject the Master onto the receiving tray.

### d. *Inserting the "Master" - - Model FM-FMH*

Rotate the drum crank in a **COUNTER CLOCKWISE** direction as far as possible, that is, until a solid

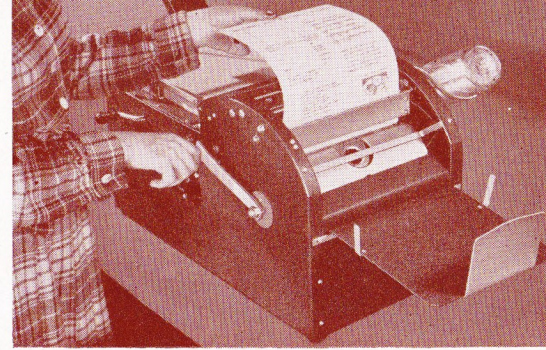
stop is felt. Hold the drum crank securely against the stop that is contacted. With the crank held in

this position, the Master Guide will have been rocked to a vertical position and the master clamp will have been opened automatically. With the negative side of the Master facing the discharge end of the machine, the Master may be dropped into the Master Guide with the "stripping margin" down. Be sure that the full length of the edge of the "stripping margin" contacts the bottom of drum slot and that the Master is centered with reference to the guide marks on the master clamp to insure proper registration with the copy paper. After the Master has been properly positioned, the drum crank may be rotated in a CLOCKWISE direction and the Master will be clamped automatically in proper position and the Master Guide will rock into its normally inactive position wherein it does not interfere with the normal

operation of the machine.

To remove the Master from the drum, first be sure that no more copy paper is being fed into the machine and that the last

copy sheet has been discharged onto the receiving tray. Then turn the drum crank CLOCKWISE until the master clamp has passed the Master Guide, then REVERSE the direction of drum rotation until a solid stop is felt. This means that the master clamp has been opened and the Master released. A quick CLOCKWISE rotation of the drum crank will eject the REX-O-graph Master onto the copies on the receiving tray.



Inserting the Master on the FM and FMH

7.

## e. *Fluid Supply*

Using a pouring spout, fill the fluid bottle with REX-O-graph Duplicating Fluid leaving enough air space to insure handling of the bottle without spilling. Inspect the rubber washer in the molded bottle cap to be sure that it is properly seated. Then *holding*

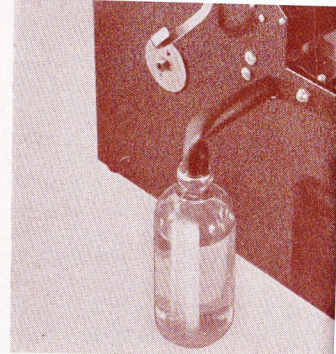
*the cap firmly, turn the bottle* until it is tight in the cap. This procedure prevents kinking of the hose and insures longer satisfactory service in addition to providing positive assurance that the proper seal has been made between the bottle and cap. After the

bottle has been attached to the cap, the bottle may be placed upon the bottle rack and the fluid will flow by gravity into the fluid tank. The REX-O-graph is engineered so that no fluid adjustments are required for its satisfactory operation. When the machine is not in use, the bottle should be removed from the rack and set on its bottom edge until the fluid has drained from the tank back into the bottle. After the flow has ceased, the bottle should be set upright next to the machine frame to cause a slight kink in the hose to reduce the possibility of

8.

fluid evaporation during the period that the machine is not in use.

**CAUTION!** The REX-O-graph should be placed on a level surface to insure the proper distribution of fluid over the entire surface of the moistening roller. Never move the machine while the fluid bottle is on the rack, as tilting of the machine may result in the spilling of fluid which is not desirable at any time.



*"Kinking" Hose when not in use*

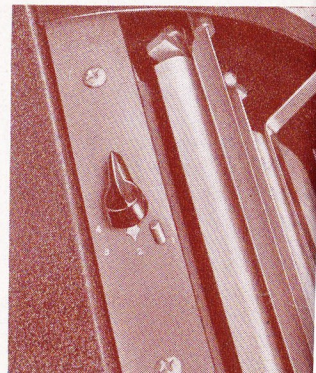
## *f. Pressure Adjustment*

The indicator knob located at the center of the top cross bar of the machine serves as a means for varying the pressure between the impression roller and the drum and provides a simple adjustment for insuring uniformity of copies during an extended run from a Master. The numbers 1, 2, 3 and 4 indicate the degree of pressure. The pressure increases as the knob is moved from 1 to 4. At the start of a run, set the indicator at 1; as the copies become lighter move the

indicator to 2 and so on through the run as the need may require.

For the most accurate registration, the number 2 pressure setting is recommended. Where a shorter run of extra bright copies is desired, the number 3 setting will be found to give excellent results.

*Pressure Adjustment*



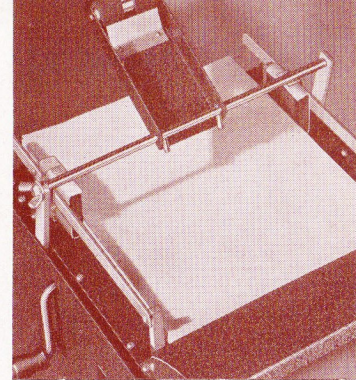


## g. *Automatic Paper Feed*

**Models SA, F, FM and WA**

Care should be taken in properly attaching the paper pusher assembly to the arms which extend upwardly from the sides of the feed board. From the operator's side of the machine, insert the plain end of the pusher rod through the hole in the far arm; then, with the pins on the rod extending downwardly, loosen the wing nut on the threaded end of the rod and insert the squared portion of the rod into the slot in the top of the near arm and tighten the wing nut to hold the pusher assembly in correct position. When you desire to render the paper pusher inoperative, swing the roller frame up until the rear edge of the frame contacts the pins which extend downwardly from the rod. To render the paper pusher operative, it is only

necessary to swing the roller frame down until the rollers rest on the top sheet of a stack of copy paper which has been positioned upon the feed board of the machine in the manner hereinafter mentioned. The automatic paper feed operates from the rotary movement of the drum and is designed to forward the top sheet of the copy paper stack with each revolution of the drum. In positioning the stack of copy paper care should be taken that the stack is so placed that there is a slight buckle in the copy paper as its front edge is moved into contact with the feed and moistening rollers as the result of the action of the paper pusher rollers.



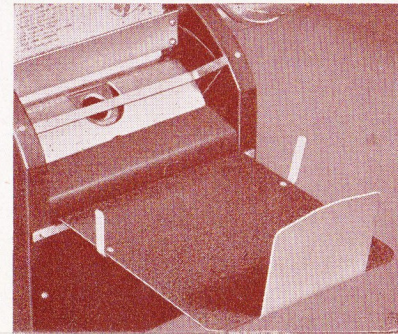
*Automatic Paper Feed  
FM Model*

9.

## h. *Receiving Tray Adjustments*

To insure proper stacking of copies, it is important that the adjustable slide on the receiving tray be in the correct position. On 8½" x 11" sheets, it should be moved close to the end of the tray allowing about a

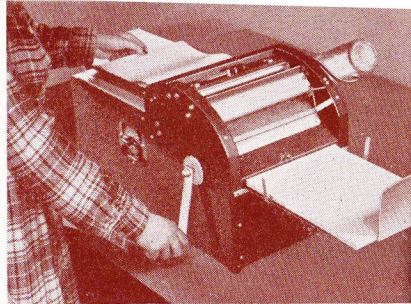
half inch receiving margin. For larger sheets, the slide should be extended to accommodate them and insure good stacking.



*Receiving Tray*

## i. Hand Feed Machines

**Models S, FH, FMH and WH**



*Hand Feeding*

10.

The hand feed machines are provided with a removable feed tray having a pair of pins projecting downwardly from the bottom of the tray. For centering various widths of copy paper on the machine, the feed tray may be placed on the feed board with the pins projecting into the proper set of locating holes in the feed board. After the feed tray has been properly set on the machine, a stack of copy paper (approximately one-half ream) may be placed with its side against the flange on the tray to insure proper alignment for the purpose of feeding. The forward edge of the stack should be about two inches from the forward edge of the tray.

Reefing the stack of copy paper enables the operator to more easily pick up the top sheet by its far left hand corner and feed it into the moistening unit. With the flange of the feed tray as a guide, to insure proper sidewise register with the Master, the copy

sheet is moved forward until it buckles slightly when its front edge lies between and in contact with the stationary feed and moistening rollers. As motion is imparted to the feed and moistening rollers during the upward movement of the crank handle, the copy sheet is gripped between the rollers and forwarded to the impression roller. As soon as the copy paper begins its forward movement under the action of the feed roller, the hand grasp of the sheet should be released and the next sheet should be picked up and moved into feeding position.

**CAUTION!** Never stop the **CLOCKWISE** rotation of the drum crank while a sheet of copy paper is moving through the moistening unit. If the uniform forward progress of the copy sheet is interrupted, an uneven distribution of fluid will result causing uneven brightness in the copies struck from the Master.

## j. *Automatic Paper Centering Device*

### **Model SA**

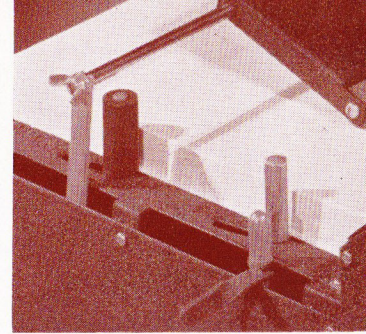
Loosen the set screw which holds the centering lever (the arm projecting from the operator's side of the machine just below the feed board) in its adjusted position. Move the centering lever forward (toward the drum crank) as far as possible; this results in moving the paper grippers to their extreme open position. Take a stack of copy paper (about one-half ream) and place it on the feed board with the front of the stack about an inch behind the front of the feed board and with the stack approximately centered between the grippers. Then pull the centering lever back until the stack of paper is gripped firmly between the rear pair of paper grippers and shows a slight buckle. Hold the lever in this position and tighten the set screw to hold the lever in its adjusted position. This centering device affords a simple, easy and quick method for the automatic centering of sheets of any size ranging from 3" to 9" in width.

### **Models F and FM**

The automatic centering device on these models is operated by turning a hand crank projecting from

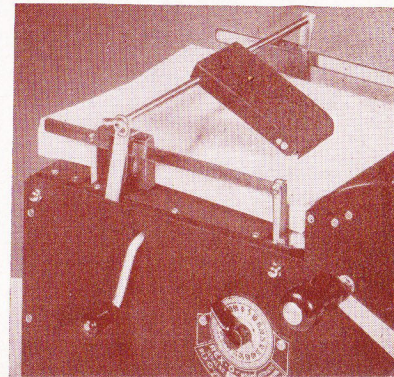
the operator's side of the machine just below the feed board. Turn the crank in a COUNTER CLOCKWISE direction until the paper grippers have moved apart far enough to accommodate the width of paper you are about to use. Take a stack of copy paper (about one-half ream), square it on all sides, place it on the feed board with the front of the stack about one-half inch behind the front of the feed board and the sides of the stack lying between the rubber faced paper grippers. With the paper in proper position on the feed board, turn the crank in a CLOCKWISE direction until the gripper pads become slightly indented and the stack of paper is buckled slightly.

Any width of sheets ranging from 3" to 9" may be automatically centered by this simple, easy and quick method of turning the crank.

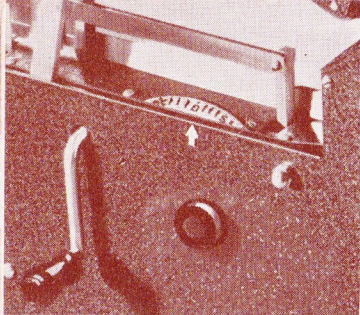


*SA Model*

11.



*F and FM Model*



"Top sight-bell" type

On counter equipped machines, either the "top sight-bell" or "front sight-silent" type of counter will be found. One complete revolution of either counter

represents the production of one hundred copies.

Where an accurate number of copies, less than one hundred, is desired:

On the "top sight" counter, turn the counter knob **CLOCKWISE** until the arrow points to the number

12.

## 1. *Paper*—Choice, Care and Handling

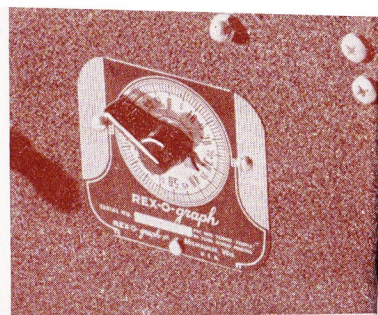
For best results be careful in the care, handling and choice of copy paper that you use in the machine. We recommend the exclusive use of REX-O-graph Copy Paper of 20 pound substance.

In opening a ream of paper, if the ends curl downwardly be sure to turn the stack over when it is placed upon the feed board of the machine. This simple pre-

caution will prevent the copy paper from following around the moistening roller as the moistened sheet passes through the moistening unit.

Replace the unused portion of the ream of copy paper back in the package and seal the package. For best results keep copy paper in a dry place.

CAUTION . . . NEVER attempt to turn the counter knob in a **COUNTER CLOCKWISE** direction.



"Front sight-silent" type

## m. *Problems and Solutions*

When copies come through the machine too wet and wash out the Master: *Cause* — Rubber washer in fluid bottle cap is missing or not seated properly.

*Remedy* — Replace washer or see that it is properly seated. *Cause* — Bottle cap may be loose in hose connection to the fluid tank.

*Remedy* — Screw cap tightly in hose.

*Cause* — Copy paper wound around moistening roller in moistening unit.

*NOTE:* This condition is invariably due to one of two causes; either the front edge of the copy paper is curled downwardly on the stack (See second paragraph under PAPER heading) or it is due to mis-operation by stopping the operation of the machine while a sheet of copy paper is between the feed and moistening rollers. When this is done the paper has a definite tendency to adhere to the moistening roller and follow around it when the roller is again set in motion.

*Remedy* — Tilt back the cover over the tank unit and inspect the roller which is in contact with the top roller. If copy sheet is wound around the moistening roller, turn crank handle on drum slowly until the end of the sheet is accessible; then grasp and pull sheet out. **WARNING**—Never use a sharp instrument in an attempt to pick or cut sheet loose as damage to the moistening roller will result in poor copies and may even require the replacement of the roller.

When copies do not print the full width of the text on the Master:

*Cause* — The machine is not setting on a level surface.

*Remedy* — Check to see if some paper or other object has inadvertently been placed so that the machine is resting upon it. If nothing of this nature is found check the machine with a level and correct the faulty position.

*Cause* — The hose connection may be kinked.

*Remedy* — Reposition fluid bottle on the rack to remove the kink.

When 8½" x 14" paper does not feed properly on automatic feed models:

13.

*Cause* — Improper positioning of the stack of copy paper on the feed board.

*Remedy* — Move the stack of paper away from the feed roller to a position where there is only a slight buckle to the paper when the pusher has moved it into contact with the feed and moistening rollers.

*NOTE:* In feeding this size of paper it is frequently advisable to move the paper grippers to the rearwardly extending portions of the gripper supporting rails.

## n. *General Suggestions*

The suggested operating speed of the machine for best register using 11"-20 lb. paper is approximately 75 copies per minute; when doing bulletin work or processed Masters, speeds up to 125 per minute are customary.

In operating the machine always turn the drum crank with a smooth even motion — avoid a galloping motion.

Be sure to turn drum crank one revolution before starting to feed copy paper into the machine.

When using 8½" x 11" copy paper on an automatic feed machine, place the rear edge of the stack even with the rear surface of the machine.

Never hesitate or stop turning the drum crank when the Master is in contact with a sheet of copy paper or with the impression roller. This will result in damage to or complete ruination of the Master.

Service — In case of mechanical difficulties contact your REX-O-graph Sales and Service man.

## o. *Care of the Machine*

REX-O-graph Fluid Duplicators are so constructed that they require the minimum of attention. As in all machines, lubrication is important; an occasional drop of oil in the bearing blocks of the feed roller will prolong the life of these bearings. The pivot points of all moving parts should be lubricated from time to time to insure smooth and quiet operation. On many REX-O-graph models sealed ball bearings are employed which greatly reduce friction and wear. On models having bronze bearings on the drum shaft, an occasional oiling is all that is required.

If hectograph ink stains appear on the rollers and metal parts of the machine they can be easily removed

by moistening a cloth with the duplicating fluid and wiping off the stains.

Dust covers are provided with each machine and they should be used when the machine is not in operation. The life and service of the machine will be greatly prolonged if it is kept free from the accumulation of dust and dirt.

Keep this instruction manual in a handy place so that it can be used to advantage to acquaint new operators with the correct methods of handling the machine to insure the continued production of copies of the highest quality.



## REX-O-graph Supplies

**REX-O-graph Two-Part, End-Fold  
Master Sets**

**REX-O-graph Spirit Carbon Paper**

**REX-O-graph Spirit Master Paper**

**REX-O-graph Copy Paper**

**REX-O-graph Duplicator Fluid**

**REX-O-graph Correction Pencils**

**REX-O-graph Correction Plates**

**REX-O-graph Backing Sheets**

**REX-O-graph Cleansing Cream**

15.

REX-O-graph Supplies are of the finest quality available, made especially for REX-O-graph Fluid Duplicators. The use of these supplies will insure the highest quality of work at an unusually low cost. Do not endanger the performance of the machine or of the fluid duplicating process by the use of substitute supplies.

All REX-O-graph Supplies are carried in stock by authorized REX-O-graph dealers in principal cities and towns throughout the country.

**REX-O-*graph*** *INC.* MILWAUKEE 12, WISCONSIN

---

---

**Service** — For additional service information contact your local **REX-O-*graph*** dealer.