Module IV — Duplicating Processes

Unit 4 — Electronic Stencil Scanner

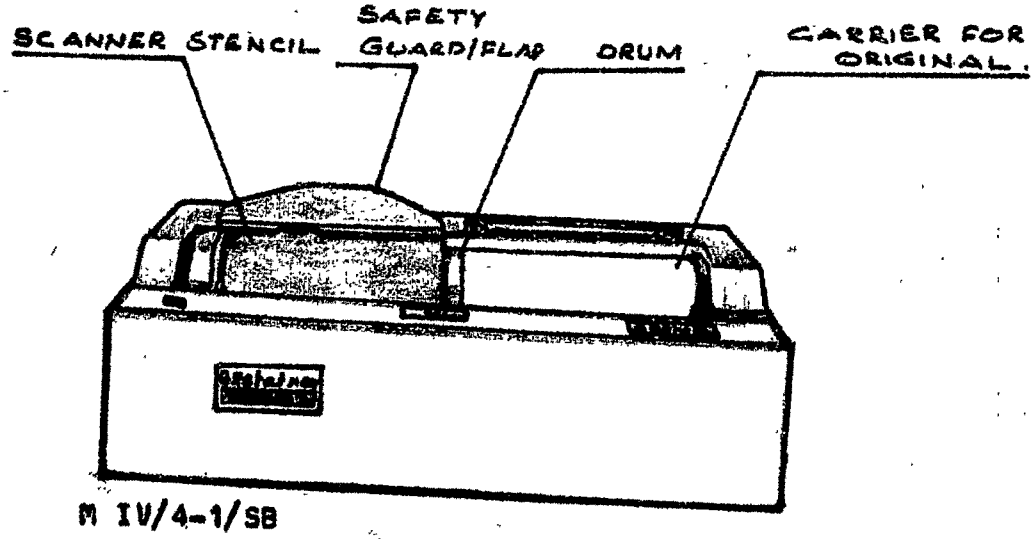
Instructional Objectives:

1. State the advantages of electronic stencil scanner.
2. Name the type of stencil used in electronic scanner.
3. Identify the parts of an electronic stencil scanner.
4. State the situations in which the speed variations are much in a stencil scanner.
5. Explain the method of producing overhead transparency in electronic stencil scanner.
6. Arrange in the serial order the operation for stencil scanning using an 'electronic stencil scanner'.
7. Operate an 'electronic stencil scanner' and scan a drawing to prepare a stencil.

Module	IV	Duplicating Processes
Unit	4	Electronic Stencil Scanner

INTRODUCTION:

For many years, stencil duplicating was limited mostly to the typewriter for its text and stylus for illustrations. However, though for more than 25 years, the electronic duplicator has become popular in the West, we in India, have the facility in the last decade. The written instructional materials prepared,duplicated and issued to the trainees when contains many sketches and illustrations, are difficult to be made with hand. On the other hand, the electronic stencil cutter besides cutting the stencil in little over than 2 minutes, solves many of the problems of preparation of stencil, especially with illustrations sketches and half tone materials. Because the handwritten or drawn stencil cannot always be made a perfect one, the use of the stencil scanner, helps you to make stencils as perfect as you want. You do not require any camera, darkroom, negatives, or chemicals. Your imagination is the only factor that sets the limits on what you may do in the preparation of a layout for stenciling. Remember that you can't use an ordinary stencil for the electronic stencil scanning, you require a special carbon stencil, and Gestetners market 'Faxil 300' You should also remember that electronic stencil cutter prepares stencils from originals, and for making copies you use the same duplicating machines which you used earlier in Unit.3.



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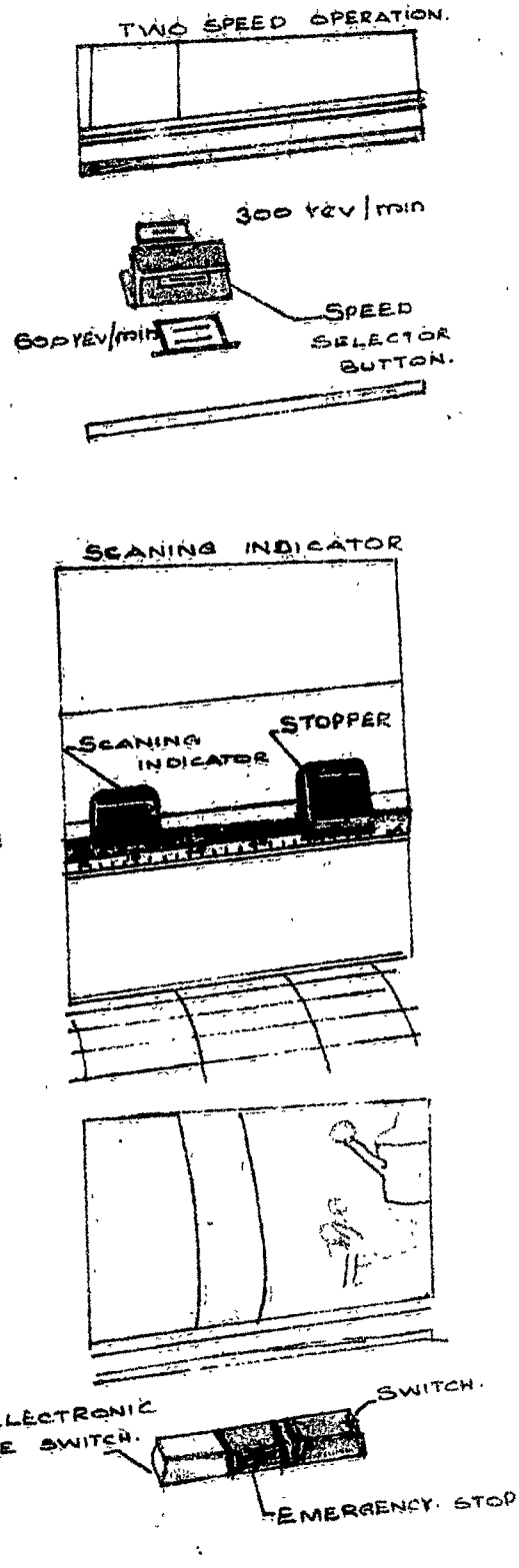
Your Scanner

The figure above shows an Electronic Scanning machine. The Electronic scanner consists of a long cylinder 150 mm dia x 500 mm approximately which is run by a motor at two different speeds 300 rpm. and 600 rpm., that can be engaged by pressing a button speed selector. The matter which is to be scanned on the stencil is prepared in the form of an original with neat sketches and layout as desired for a good presentation. Their original is placed in transparent carrier on the right side of the cylinder of the Electronic Scanner. Similarly on the left side the Electronic Scanning Stencil "Faxil 300 of Gestetner" is mounted. These are mounted such that the written material as well as the stencil face up. The machine has an electronic eye mounted on a carriage which can advance along the axis of the cylinder at slow pace when the cylinder is rotated. This electronic eye is fitted on the right side such that it will READ or SCAN the matter on the original and transmit electric impulses to the stylus which will burn the portion in the stencil depending on the intensity of writing in the original. This way whatever matter is fixed on the right side in the form of original, is produced as a stencil on the left side, which can be used for duplicating later, through a stencil duplicator. The machine has three control Switches. The white button when depressed lights the electronic eye. The red button is for emergency stop



and the green one for rotating the drum. The machine usually stops automatically when the scanning indicator come close to the STOP. The stylus which cuts the stencil is located below the safety guard provided on the stencil side of the drum.

NOTE:

The successful preparation of good electronic scanned stencil is much dependent on the original, hence prepare the original neatly.

AUDIO VISUAL EDUCATION

Module IV — Duplicating Processes
Unit 4 — Electronic Stencil Scanner
Time: 5 minutes

Practical Exercise No: 46

A.PROBLEM

Using Gestetner ESC 79 Stencil Scanner, reproduce a given line drawing.

B. EQUIPMENT & MATERIALS

1. Electronic Stencil Scanner
2. Prepared line drawing
3. Faxil 300 Stencil

C. POINTS FOR GRADING

1. Neatness of scanned stencil
2. Correct operation.

D. Deadline for the project: June 15th.

M IV/u 4/Pr.Ex.46

AUDIO VISUAL EDUCATION

Module IV — Duplicating Processes

Practical Exercise No:46

Performance Check list for operating Electronic Stencil Scaner

PROCEDURE

1. Remove the dust cover.
2. Connect the power supply and switch on the main
3. Place the original under the transparent carrier on the copy side of the drum and clamp it. (originals should be within the guidelines provided on the drum).
4. Lift open the safety guard and check the stylus tip. (If it is worn out replace with a new one).
5. Set density and sensitivity based on the originals.
6. Switch on the electronic eye by depressing white button.
7. Move the carriage and locate the beam so that the light from the electronic eye fall 3 mm beyond the actual right side limit of the original.
8. Move the right hand side stop to position and lock-listen for CLICK.
9. Shift the electronic eye towards left and locate it 3 mm beyond the actual left hand side limit of the original.
10. Remove the stencil fastening strip from the left hand drum.
11. Fold the top edge of the stencil and insert the top edge in the slit of the drum opening.
12. Rotate the drum by hand along with the stencil and insert the other end of the stencil in the opening and hold with the stencil in position by means of the fastening strip.
13. Set the speed . (If the details are in the original very close set the speed to 300 revolutions per minute. Where the details are not so close use 600 revolutions per minute).
14. Open the safety flap/guard on the left. Adjust density and sensitivity, depending on the density and tone of the original. (Correct setting needs experience).

15. Swing the cover to position.
(Otherwise the drum will not rotate).

16. Switch on the green button for scanning.

17. After the completion of scanning the drum will stop automatically. Time for scanning at 300 revolutions per minute is a little over 4 minutes and the 600 revolutions per minute is a little over 2 minutes.

18. Switch off the ele electronic eye, by pressing the white button.

19. Remove the stencil and original and check the stencil, for the effect of impression, switch off, disconnect the power plug.

20. Close the machine with cover.

NOTE:-

The knob for density if rotated to plus side will increase impression. If rotated to negative side the density can be decreased.

Sensitivity can be increased by rotating the knob to the plus side when the original is feeble.

Module IV Duplicating Processes

Pr. Ex.No.46 Electronic Stencil Scanning

The Check list given under are not in a sequence. Number 1,2,3 ... against each step in the correct sequence.

PROCEDURE:

_____a. Set the speed. (If the details in the original are very close set the speed to 300 rpm. Where the details are not so close use 600 rpm).

_____b. Fold the top edge of the stencil and insert the top edge in the slit of the drum opening.

_____c. Open the safety flap/guard on the left. Adjust density and sensitivity, depending on the density and tone of the original.

_____d. Remove the stencil fastening strip from the left hand drum.

_____e. Rotate the drum by hand along with the stencil and insert the other end of the stencil in the opening and hold with the stencil in position by means of the fastening strip.

_____f. Move the right hand side stop to position and lock-listen for the CLICK.

_____g. Shift the electronic eye towards left and locate it 3 mm beyond the actual left hand side limit of the original.

_____h. Switch on the electronic eye by depressing white button.

_____i. Move the carriage and locate the beam so that the light from the electronic eye fall 3 mm beyond the actual right side limit of the original.

_____j. Set density and sensitivity based on the originals.

_____k. Connect the power supply and switch on the mains.

_____l. Lift open the safety guard and check the stylus tip. (If it is worn out replace with a new one)

_____m. Remove the dust cover.

_____n. Place the original under the transparent carrier on the copy side of the drum and clamp it. (Originals should be with in the guidelines provided on the drum).

_____ o. After the completion of scanning the drum will stop automatically. Time for scanning at 300 rpm is a little over 4 minutes and the 600 rpm is a little over 2 minutes.

_____ p. Close the machine with cover.

_____ q. Swing the cover to position

_____ r. Remove the stencil and original and check the stencil; for the effect of impression .switch off disconnect power plug.

_____ s. Switch on the green button for scanning.

_____ t. Switch off the electronic eye, by pressing the white button.

KEY

Module IV Duplicating Processes

Pr.Ex.46. Electronic Stencil Scanning.

The check list given under are not in a sequence. Number 1,2,3 ... against each step in the correct sequence.

PROCEDURE

13 a. Set the speed. (If the details in the original are very close set the speed to 300,rpm. Where the details are not so close use 600 rpm).

11 b. Fold the top edge of the stencil and insert the top edge in the slit of the drum opening.

14 c. Open the safety flap/guard on the left. Adjust density and sensitivity, depending on the density and tone of the originals.

10 d. Remove the stencil fastening strip from the left hand drum.

12 e. Rotate the drum by hand along with the stencil and insert the other end of the stencil in the opening and hold with the stencil in position by means of the fastening strip.

8 f. Move the right hand side stop to position and lock-listen for the CLICK.

9 g. Shift the electronic eye towards left and locate it 3 mm beyond the actual left hand side limit of the original.

6 h. Switch on the electronic eye by depressing white button.

7 i. Move the carriage and locate the beam so that the light from the electronic eye fall 3 mm beyond the actual right side limit of the original.

5 j. Set density and sensitivity based on the originals.

2 k. Connect the power supply and switch on the mains.

4 l. Lift open the safety guard and check the stylus tip. (If it is worn out replace with a new one)

1 m. Remove the dust cover.

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17 o. After the completion of scanning the drum will stop auto-matically. Time for scanning at 300 rpm is a little over 4 minutes and the 600 rpm is a little over 2 minutes.

20 p. Close the machine with cover.

15 q. Swing the cover to position.

19 r. Remove the stencil and original and check the stencil, for the effect of impression switch off disconnect the power plug.

16 s. Switch on the green button for scanning.

18 t. Switch off the electronic eye, by pressing the white button.

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AUDIO VISUAL EDUCATION

CRITERION TEST

Module IV Duplicating Processes

Unit 4 Electronic Stencil Scanner

1. The advantages in preparing stencils using electronic scanner are -

   a. _____

   b. _____

   c. _____

2. The stencil used for Gestetner ESC 79 is _____ _____.

3. State the two speeds at which gestetner Electronic scanner can be operated.

   a. _____ b. _____.

4. State the two situations where each speed is used in the Electronic Scanner.

   a. _____.

   b. _____.

5. The component in the Electronic Scanner which actually cuts the stencil is _____.

6. For preparing stencils on Electronic scanner the original is placed

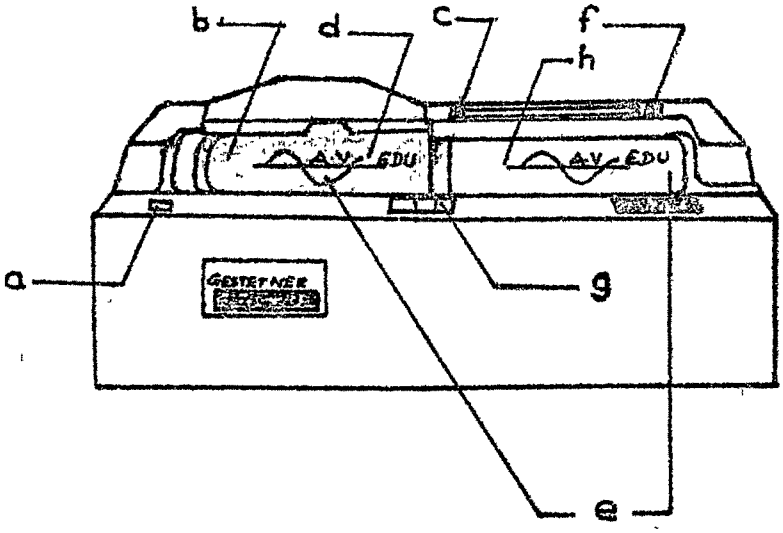
   ____ a. Placed on your left end of the drum

   ____ b. fixed on the transparent carrier

   ____ c. placed together with the stencil one over the other.

   ____ d. placed between the carbon stencil and the backing sheet.

7. Identify the parts of the stencil scanner by placing the corresponding letter against the parts listed below.



____ 1. Carrier for original
____ 2. Drum
____ 3. Safety flap/guard
____ 4. Speed selector button
____ 5. Stop
____ 6. Scanner stencil
____ 7. Scanning indicator
____ 8. switch for drum

AUDIO VISUAL EDUCATION

KEY TO
CRITERION TEST

Module IV	Duplicating Processes
Unit 4	Electronic Stencil Scanner

1. The advantages in preparing stencils using electronic scanner are-
   a. Stencil is made in less than two minutes/fast.
   b. Stencils with illustrations and sketches can be made without any difficulty.
   c. Stencils of half tone materials can be made.

2. The stencil used for Gestetner ESC 79 is "FAXIL 300".

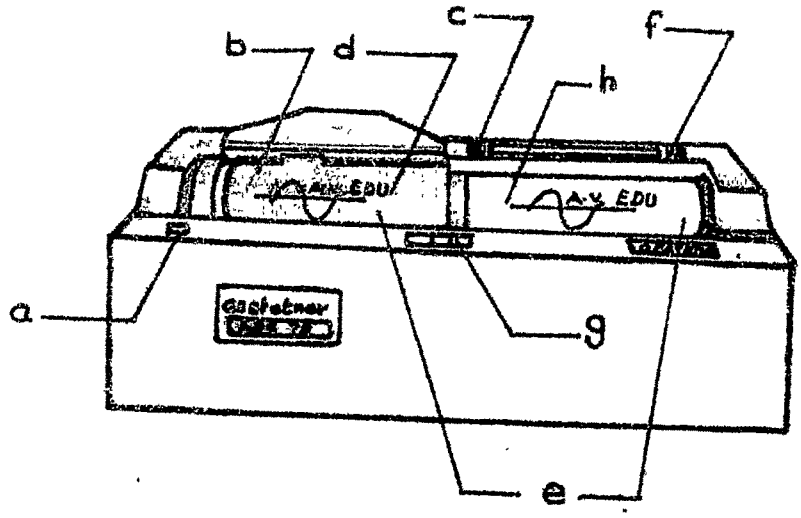
3. State the two speeds at which Gestetner Electronic scanner can be operated.
   a. 300 rpm
   b. 600 rpm

4. State the two situations where each speed is used in the Electronic scanner.
   a. 300 rpm is used when the details are very close.
   b. 600 rpm is used when the details are not too close.

5. The component in the electronic scanner which actually cuts the stencil is stylus.

6. For preparing stencils on electronic scanner the original is placed.
   ____ a. Placed on your left end of the drum.
   ** b. Fixed on the transparent carrier.
   ____ c. Placed together with the stencil one over the other.
   ____ d. Placed between the carbon stencil and the backing sheet.

7. Identify the parts of the stencil scanner by placing the corresponding letter against the parts listed below.



h	1. Carrier for original	f	5. Stop
e	2. Drum	b	6. Scanner stencil
d	3. Safety flap/guard	c	7. Scanning indicator
a	4. Speed selector button	g	8. Switch for drum.