1. SPECIFICATIONS

|	
Printer Display:	ECD (Electro Chromic Display) 7 segments (6 digits and colon)
Indicator Display:	LCD (Liquid Crystal Display) 7 segments (6 digits and colon)
Printing Position:	Centered on leading edge of copy paper
Battery:	Lithium battery (3V) or dc power from copier
Battery Life:	More than two years
Time Lag:	$\pm$ 30 seconds/month ($25 \pm 10°C$)
Power Source:	3.0 V (Lithium battery) 5.0 V, 0.2 A (from copier)
Dimensions: (W x D x H)	331 mm x 8.6 mm x 52.5 mm (131" x 0.34" x 2.1")
Weight:	Approximately 120 g (0.27 lb) (including lithium battery)

2. OUTLINE
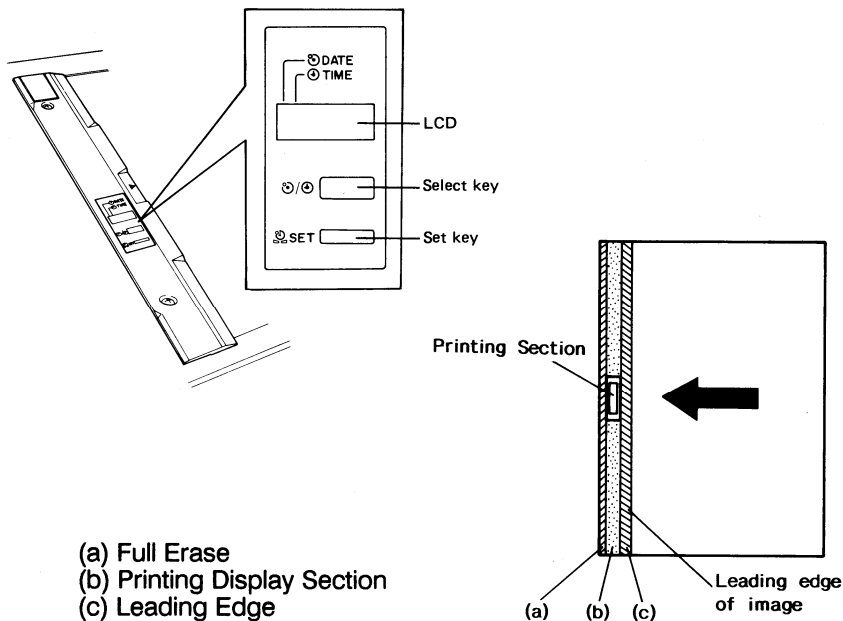
(a) Full Erase
(b) Printing Display Section
(c) Leading Edge

The date printer mode is canceled when the following modes are selected:

- Centering Mode
- Margin Adjustment Mode
- Erase Center Mode
- Erase Edge Mode
- Book Original
- 1 sided Original Mode
- Single Color Overlay Mode
- Auto R/E Mode
- Size Magnification Mode
- Reduce/Enlarge Mode.

The Date Printer prints the date or time, centered on the leading edge of the copy paper.

The electro chromic display (ECD) is located under the left scale, with the display portion face down on the exposure glass. When the Select key is pressed, the ECD displays the date or time (blinks). The displayed date or time is printed on the copy paper when the Start key is pressed.

In date printer mode, the paper registration is advanced 15 mm to leave room on the leading edge for printing of the date or time. As a result, lead edge erase in date printer mode differs from the normal method.
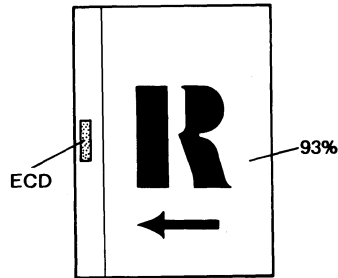
Also, 100% images cannot be made in date printer mode. Depending on the copy paper size, a magnification ratio from 90 to 97% is selected automatically. This leaves room on the leading edge for the printing of the date or time.

3. AUTOMATIC MAGNIFICATION

Full Size Mode   **Date Printer Mode**
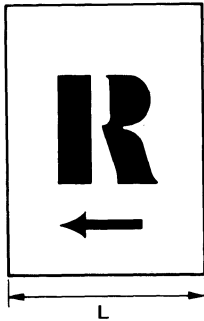
$$\text{Reduction Rate (\%)} = \frac{210}{210 + 15}$$
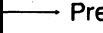$$\text{(A4 sideways)}$$

$$= 93\%$$

The following formula is used to automatically determine the copy magnification ratio. This depends on the paper size and paper feed direction.

When the Start key is pressed, the reduction ratio is displayed on the magnification indicator.
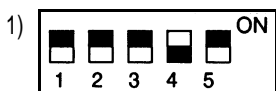
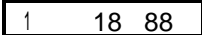$$\text{Reduction ratio (\%)} = \frac{L}{L + 15}$$

NOTE: "L" = L e n g t h

4. DATA PRINTING FUNCTION TABLE

Printing select mode	1	2	3
Mode Name	Clock display mode	Date display mode	Time display mode
Time and date display (example)	Hr. Min. Sec. 13 : 38 : 48	115V Version Month Day Year "1 18 88" 220/240V Version Day Month Year "18 1 88"	Hours Minutes 13 : 38
Select key	⌐─ Press ────	→ Press ────	→ Press ─⌐
Time and date display section	Does not blink	Blinks	Blinks
Printing	Not enabled	Enabled	Enabled
Printing example		115V Version "1 18 88" 220/240V Version "18 1 88"	13 : 38
Remarks	Hour: A 24 hour system is used to display minutes and seconds.	Year, month and day are displayed. See "NOTE".	A 24 hour system is used to display hours and minutes.

NOTE: Depending on the DIP SW setting, the date is displayed as follows:

1) ON 1 2 3 4 5 → Month Day Year 1   18 88

2) ON 1 2 3 4 5 → Day   Month Year 18   1   88

3) ON 1 2 3 4 5 → Year   Month Day 88   1   18
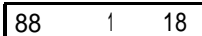
5. TIME CORRECTION

Press the Set key to select the correction modes. Correct the data and time with the Select key.

Set key pressing time	Correction mode	LCD	Press Select key
1	(Seconds)	13 : 24 : "17" (Seconds blink)	"00" seconds
2	(Minutes)	13 : "24" : 17 (Minutes blink)	Minutes count up
3	(Hour)	"13" : 25 : 05 (Hours blink)	Hour counts up
4	(Day)	1 : "18" : 89 (Day blinks)	Date counts up
5	(Month)	"1" : 18 : 89 (Month blinks)	Month counts up
6	(Year)	1 : 18 : "89" (Year blinks)	Year counts up
7	Original condition	13 : 38 : 49	

6. ELECTRICAL TIMING

CN No.	Signal Name	Function
CN1-1	GND	Ground line
CN1-2	ECD Display Timing	LOW to ECD Display ON HIGH to ECD Display OFF
CN1-2	Print Mode	When "Date" or "Time" is selected, a LOW signal is output
CN1-4	Reset	The mode is reset to the initial setting by the LOW signal
CN1-5	+5 (Vcc)	5 volt line

```
                      T1
Print Mode SIG  5V ──┐
                     └──────────────────────────────────┐
                       T2                                └─  0V
ECD Display     5V ──────┐  Approx.1.5sec
Timing SIG               └───────────┐
                                     └────────────────
                                                      T3
Reset SIG       5V ──────────────────────────────┐ ┌──
                                                  └─┘
                   ECD OFF─►│◄─ECD ON─►│◄─ECD OFF
```
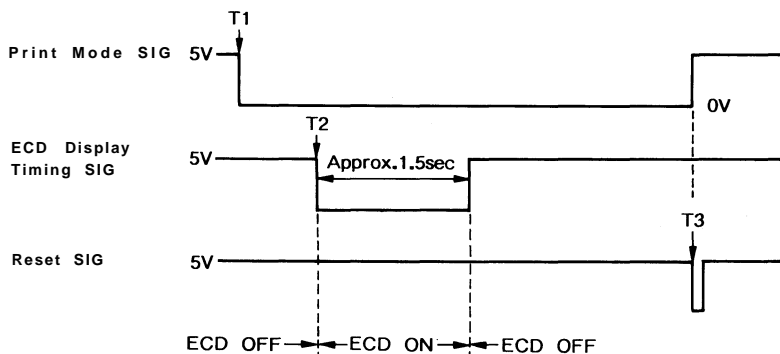
NOTE: T1: When the Select key is pressed, and the "Date" or "Time" is displayed, the Print Mode signal becomes LOW.

T2: When the scanner starts moving, the ECD timing signal becomes LOW to turn on ECD for approximately 1.5 seconds.
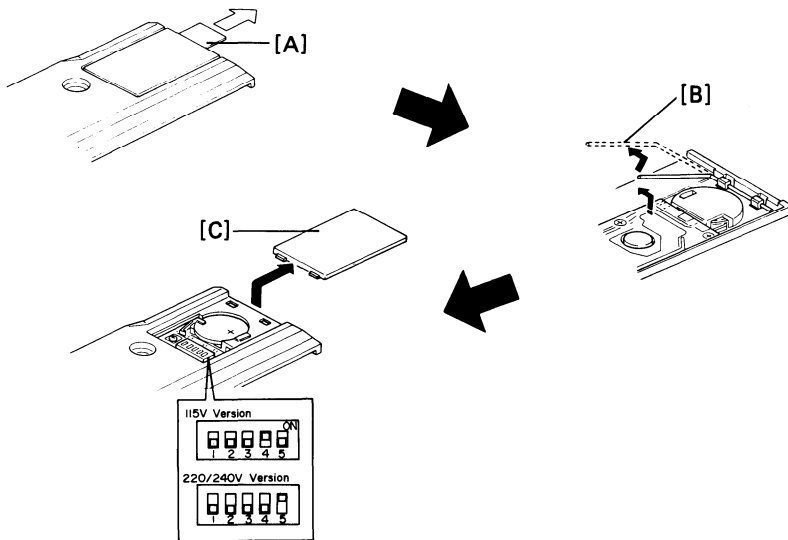
T3: To initialize the Date Print mode, the reset signal (LOW) is sent from the copier and the "Time" indicator is lit.

7. ACCESSORY CHECK

Check the quantity and condition of the accessories in the box according to the following list:

1. Installation Procedure 1
   (115V - English only / 220V - Five Languages)

8. INSTALLATION PROCEDURE

The date printer should be installed before the sorter (option), because the copier upper cover must be raised to install the date printer.

1. Turn off the copier main switch.

2. Remove the protective sheet [A] from the date printer.

3. Turn the date printer over and remove the lock pin [B] by pulling it in the direction of the arrow as shown.

4. Open the battery cover [C] and set the DIP SW for the desired sequence as shown below:

1) → Month Day Year
| 1 | 18 | 88 |

2) → Day Month Year
| 18 | 1 | 88 |

3) → Year Month Day
| 88 | 1 | 18 |
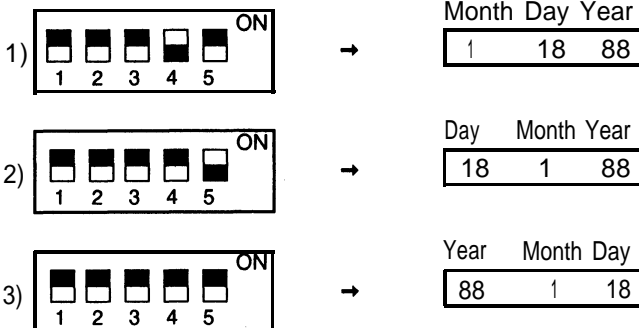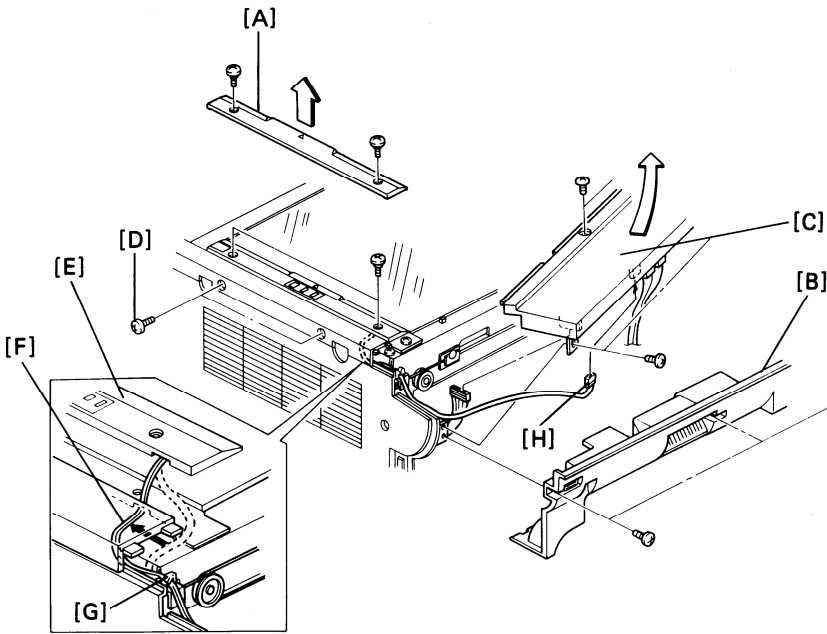
5. Remove the original scale [A] (2 collar screws).

6. Remove the upper inner cover [B] (3 screws) and the operation panel [C] (4 screws).

7. Remove the 2 upper cover screws [D] in order to slightly lift up the upper cover.

8. Install the date printer [E] (2 screws) and pass the harness [F] of the date printer to the operation panel side as shown.

NOTE: To install the date printer, use the same two collar screws that were used with the original scale.

9. Secure the date printer harness to the harness clamp [G].

10. Connect the harness connector [H] to the 5P connector on the control PCB under the operation panel.

NOTE: Make sure that the harness is not in contact with the scanner wire and is not caught by the operation panel or the upper inner cover.
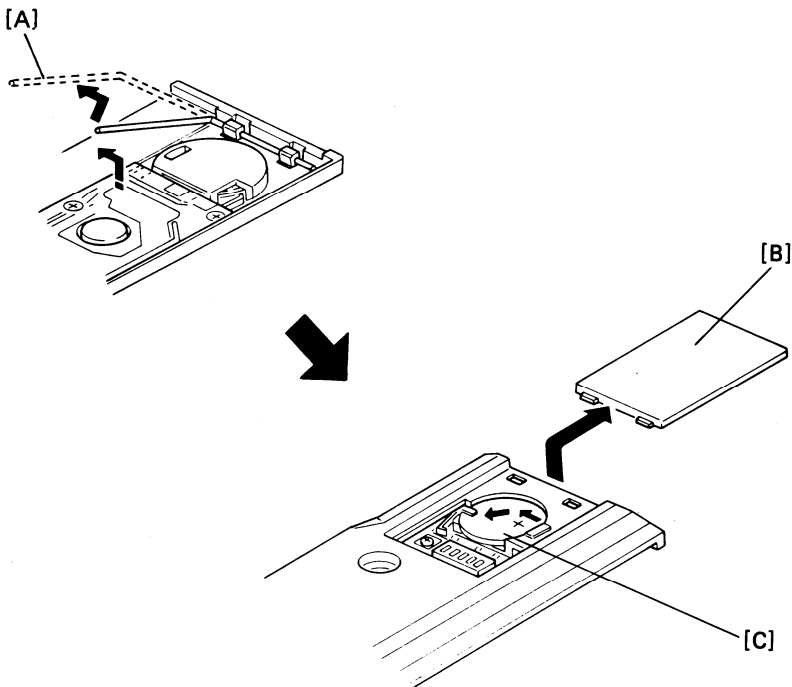
11. Turn on the copier main switch.

NOTE: If the date printer display is abnormal, reinstall the battery as follows:

    1) Turn off the copier main switch.

    2) Remove the date printer (2 collar screws).

    3) Turn the date printer over and remove the lock pin [A] by pulling it in the direction of the arrow.

    4) Open the battery cover [B] and remove the battery [C] by sliding it in the direction of the arrow.

    5) Replace the battery.
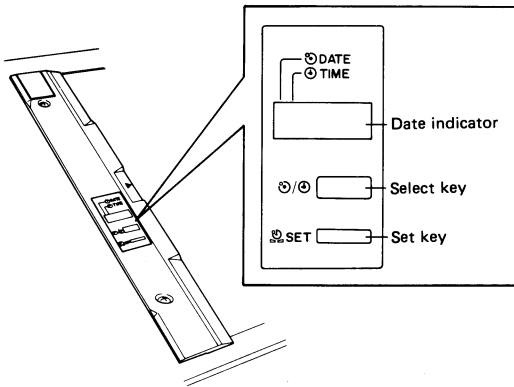
12. Set and adjust the time in the following order:

    1) Seconds ▸ Press the Set Key until the second display blinks;
                 then, press the Select Key to set "0" (second).

    2) Minutes ▸ Press the Set Key until the minute display blinks; then,
                 press the Select Key to set the correct time (minute).

    3) Hours   ▸ Press the Set Key until the hour display blinks; then,
                 press the Select Key to set the correct time (hour).

    4) Days   ▸ Press the Set Key until the day display blinks; then,
                 press the Select Key to set the correct time (day).

    5) Month   ▸ Press the Set Key until the month display blinks; then,
                 press the Select Key to set the correct time (month)

    6) Year   ▸ Press the Set Key until the year display blinks; then,
                 press the Select Key to set the correct time (year).

    7)   Press the Set Key until the time display mode is on (not
          blinking) which means the time setting and adjusting is complete.

NOTE: When the second, minute, hour, day, month, or year displays blink,
       the Date Printer is still in correction mode. Make sure the entire
       display blinks for normal use.

       If the Set Key is pressed again, the correction mode is entered and
       the correction mode shifts in the following order each time the Set
       Key is pressed:

<u>"Second" → "Minute" → "Hour" → "Day" → "Month" → "Year" →</u> Normal
                                                         position
                                                       (Time display
   lights - not blinking)

      Correction mode: Press the Select Key to set the correct time
                                        when the display to be corrected is blinking.

13. Do the following adjustments after installation.

    1) Adjust the registration (Target: 0 ± 1 mm) using SP mode #42.
    2) Place a metal scale (150 mm scale) on the exposure glass with the "0" mm side of the scale against the original scale.
    3) Make 5 copies in full size mode.
    4) Read the graduation of the leading edge on the copies.
    5) Adjust the leading edge erase margin (Target: 2.5 ± 0.4 mm) using SP mode #41 (0.8 mm per step).
    6) Check the copy quality using the date printer mode.

NOTE: If the following problems appear, adjust the following items:
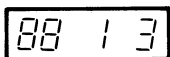
    a) No frame on the leading edge. → Decrease the step number of SP #41 by one step.
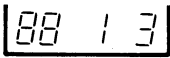
   b) No frame on the trailing edge. → Increase the step number of SP #41 by one step.
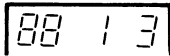
    c) Black line appears in front of the → Move the exposure glass to the left side. When a black line still appears after adjusting the exposure glass position, decrease the step number of SP Mode #42.

14. Instruct the customer as follows:

1) When using the date printer mode, the magnification modes can not be designated. The magnification of the copy automatically shifts between 90% and 97% according to the selected paper size to give enough space for the date / time copy to be printed, therefore 100% image cannot be made.

Date display   (Copied paper)
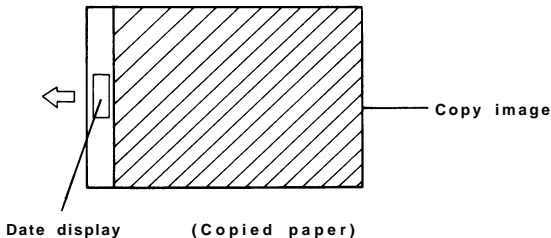
2) The date printer mode is canceled when the following modes are selected:

►Centering Mode	►Margin Adjustment Mode	►Erase Center Mode
►Erase Edge Mode	►Book Original	►1 sided Original Mode
►Single Color Overlay Mode	►Auto R/E Mode	►Size Magnification Mode
►Reduce/Enlarge Mode		

9. REPLACEMENT AND ADJUSTMENT

9.1 BATTERY REPLACEMENT
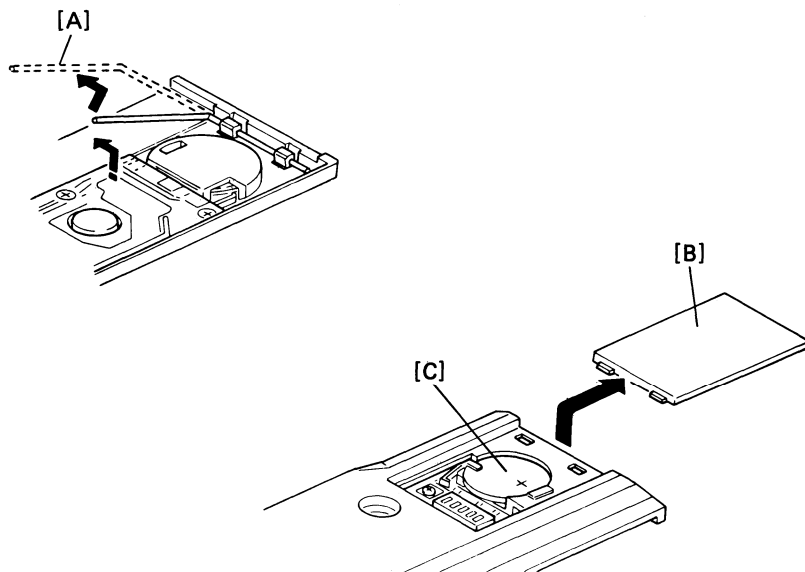
1. Turn off the main switch.

2. Remove the date printer (2 screws), and turn it over.

3. Remove the lock pin [A] by pulling it in the direction of the arrow.

4. Place the date printer face down and remove the cover [B].

5. Replace the battery [C].

NOTE: a) For easy removal, press the battery in the direction of the arrow.

      b) Use battery type : Matsushita BR2032.

10. SERVICE TABLES

10.1 DIP SWITCH TABLES

10.1.1 Standard Mode:

No.	DIP SW					Indicator Display	Select SW	Remarks
	1	2	3	4	5			
1	OFF	OFF	OFF	x	x	13 : 34 : 49	------	Initial setting
2	OFF	OFF	OFF	OFF	OFF	87 5 16	1 time on	Date Printing Mode: Year: Month : Day (100V) Month : Day : Year (115V) Day : Month : Year (220/240V)
	OFF	OFF	OFF	ON	OFF	5 16 87		
	OFF	OFF	OFF	OFF	ON	16 5 87		
3	OFF	OFF	OFF	x	x	13 34	2 times on	Time Print Mode (See "NOTE a")

NOTE: a) When the select switch is pressed three times, the indicator display returns to the initial setting.

b) "x" = DIP SW ON/OFF position does not matter.

10.1.2 Special Mode:

No.	DIP SW					Indicator Display	Select SW	Remarks
	1	2	3	4	5			
1	ON	OFF	OFF	x	x	13 : 34 : 49	------	Initial setting
2	ON	OFF	OFF	OFF	OFF	87 5 16	1 time on	Date Printing Mode: Year : Month : Day (100V) Month : Day : Year (115V) Day : Month : Year (220/240V)
	ON	OFF	OFF	ON	OFF	5 16 87		
	ON	OFF	OFF	OFF	ON	16 5 87		
3	ON	OFF	OFF	x	x	13 34	2 times on	"Time" Print Mode
4	ON	OFF	OFF	x	x	- COPY -	3 times on	"Copy" Print Mode
5	ON	OFF	OFF	x	x	PAGE : 25	4 times on	"Page" Print Mode (See "NOTE b")
6	ON	OFF	OFF	x	x	1 23	5 times on	Special Print Mode (See "NOTE c")
7	x	x	ON	x	x	87 5 16	------	ECD display turns 180 degrees " 9ʟ S ʌ8 " (See "NOTE d")

**NOTE:** a) "X" = DIP SW ON/OFF position does not matter.

   b) "PAGE" is printed on the copy paper and the number of pages is also printed on the side of "PAGE" and automatically shifts from 1 to 99. When the indicator display returns to the initial setting, the page number also returns to 1.

   c) When the select switch is pressed six times, the indicator display returns to the initial setting. The special pattern can be programmed into memory using the Program Mode (see next page).

   d) The indicator in the LCD located under the left scale turns 180 degrees. So, the "Date" and "Time" are printed opposite the standard mode.

10.2 DATE PRINTER PROGRAM MODE

The special pattern can be printed on the copy paper by programming the
date printer in the following manner.

1. Turn on DIP SW -1 and -2.

   a) Segment "A" of 6th digit blinks.
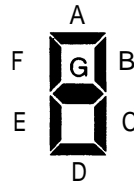
   b) If the Select key is pressed, the segment "A" is lit and the next
      segment "F" blinks. If the Set key is pressed, the segment "A" is not
      lit and the segment "F" blinks.

By the above procedure, the segments of each digit shift in the following
order and allows programming of the special pattern to meet customer re-
quirements.

$$A \rightarrow F \rightarrow B \rightarrow G \rightarrow E \rightarrow C \rightarrow D$$

   c) After the 6th digit is completed, the segment "A" of the 5th digit blinks.
      Then, continue the above procedure until the 1st digit is completed.

2. Turn off DIP SW -2. (Special Mode must be selected.)

3. Press the Select key five times to blink the special pattern. Then press the
   Start key to print it on the copy paper.