DUPLO
490P HYDRAULIC
PAPER CUTTER

Instruction Manual

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Content

After you have finished all cuts, press to remove the automatic movement working, AUTO will disappear on the display and screen appears:

C : 400.0	PROG : 1
1 : 400.0	2 : 380.0 mm

※ If you make a mistake and want to correct the programmed cut positions, use the LAST and NEXT keys to move the cursor to the position that you require, and re-enter the new cut sizes, then press NEXT .

※ In AUTO mode, if the cutting is not cut through, then press LAST the back gauge will move to the original position, at this time you can lower the blade and re-make a cut .

490P
Hydraulic and Programmatic

1. Mains switch
2. Knife change switch
3. Knife depth micro adjustment
4. Backgauge lock handle
5. Backgauge micro adjustment
6. Clamping pressure adjustment
7. Cut buttons
8. Clamping pressure gauge
9. Mark-II control panel
10. Foot clamp pedal
11. Electronic light guards
12. Operate indicate pilot

How to use the Cut & Store (existing) Program

Turn on the power to the cutter, wait until the back gauge moves back and will re-calibrate the position and display appears:
(There will be a cursor flashing over at the last number, this is the work area.)

C : 490.0	PROG : 1
1 : 000.0	2 : 000.0 mm

Select a program number from 1-9, if you press PROG 2 screen appears:

C : 490.0	PROG : 2
1 : 000.0	2 : 000.0 mm

By pressing CUT & STORE the following screen appears:

C : 490.0	PROG : 2	C&S
1 : 000.0	2 : 000.0 mm	

Use the manual keys FAST FWD SLOW FWD FAST REV SLOW REV to move the back gauge to the first cut position say 400.0, then make a cut and screen appears:

C : 400.0	PROG : 2	C&S
1 : 400.0	2 : 000.0 mm	

OPERATING PROCEDURE

1. Mains Switch
   Three positions:

   0 = Off
   1 = Start back gauge drive
   Start = Start hydraulic motor

   After installation of the mains electric supply, turn the main switch (1) to position 1. This will activate the back gauge motor circuit and the back gauge will move backward to the rear and stop, and recalibrate the position. The cut line light shows and the digital display glows.

2. To initiate a cut, the main switch must be turned to START position to start the hydraulic motor, the run operate indicate pilot (12) glows and the program Mark-II will start automatically after one second. Now the machine is ready to operate. At this time, the back gauge can be moved to any position by using the **Mark-II control panel** (9). Fine adjustments can then be made using the back gauge micro adjustment (5).

   PS: If you don't start the main motor, the back gauge will not be functional.

3. Place the paper against the back gauge and initiate a cut by simultaneously by pressing the dual cut buttons (7). *If you can't turn the back gauge micro adjustment (5), please inspect if the backgauge lock handle (4) is locked up.*

Move the back gauge to the second cut position say 300.0 then make a cut and the following screen appears:

```
C : 300.0     PROG : 2     C&S

3 : 000.0     4 : 000.0    mm
```

Move the back gauge to the third cut position, say 205.0 and make a cut, the following screen is displayed:

```
C : 205.0     PROG : 2     C&S

3 : 205.0     4 : 000.0    mm
```

After you finish storing all cuts, press [CUT & STORE] and screen appears:

```
C : 205.0     PROG : 2

3 : 205.0     4 : 000.0    mm
```

Press [END] it will beep twice, then re-press [END] to store the program, and the screen appears:

```
C : 205.0     PROG : 2

1 : 400.0     2 : 300.0    mm
```

If you want to make a cut, press [AUTO], the back gauge will move to the first cut position and the following screen appears:

```
C : 400.0     PROG : 2     AUTO

1 : 400.0     2 : 300.0    mm
```

4. To check whether the paper is in correct position before cutting, press the hydraulic foot clamp pedal (10) to lower the clamp until the clamp press the paper.

5. Press the dual cut buttons (7) until the clamp pressed the paper tightly, the knife will cut the paper automatically. (during operation, if you release either of the cut buttons, the knife will stop function. You must reset the cutter by releasing both buttons and let the blade and clamp return to its home position.) After completing a cut, release both cut buttons, the knife will return to its home position automatically.

   PS: Dual cut buttons with safety activation margin of 0.5 seconds.

NOTE:
(a) **Automatic cut-off:** As a further safety precaution, when you walk away from the machine or do not use the machine continuously, it will automatically shut off in **15 minutes** saving power.
(b) While operating, if you turn off the guillotine when the blade or the clamp is not returned to the top position. Once you re-switch on the machine and start the main motor, the machine keeps alarming all the time, at this time, you have to press any one of both cut buttons, then the blade or the clamp will return to its home position automatically, and you can start cutting.

Place your paper and make the first cut, when completing the cut, the back gauge moves to the second cut position.

Adjust the paper to the 2nd cut & make a cut, the back gauge will move to the 3rd cut position.

Adjust the paper for the 3rd cut & make the cut, the back gauge will then "push-out" your stack automatically. Then it moves to the first cut position and readies itself for the next cut cycle.

After you have finished all cuts, press AUTO to move the automatic back gauge movement, AUTO will disappear on the display, and screen appears:

C : 400.0	PROG : 2
1 : 400.0	2 : 300.0 mm

TO ADJUST THE CLAMP PRESSURE

1. Press the dual cut buttons (7) simultaneously to lower the clamp until the clamp press the paper tightly, and read off the clamp pressure on the clamping pressure gauge (8).

PS: Normal setting: min. 35 kg/cm², max. 50 kg/ cm²

2. Turning the clamp pressure adjustment switch (6):

   ※ To increase pressure, turn the adjuster clockwise.

   ※ To decrease pressure, turn the adjuster anti-clockwise.

   Re-press the cut buttons simultaneously until the clamp presses the paper tightly to read the new revised pressure.

PS: Do not adjust the pressure too low (normal setting: 30 kg/ cm² or more); otherwise, the guillotine will beep.

How to use Step and Repeat Program (even parts cutting for name card & label etc.)

Turn on the power to the cutter, wait until the back gauge moves back and will recalibrate itself and the display appears:

(There will be a cursor flashing over at the last number, this is the work area.)

```
C : 490.0      PROG : 1

1 : 000.0      2 : 000.0   mm
```

Select a program number from 1-9, if you press PROG 3 screen appears:

```
C : 490.0      PROG : 3

1 : 000.0      2 : 000.0   mm
```

If the first cut is at 400.0 and you would like to divide it into 50.0 label for 7 times, please do as follows:

(i) Press 4 0 0 0 and NEXT , the following screen appears:

```
C : 490.0      PROG : 3

1 : 400.0      2 : 000.0   mm
```

TO CHANGE THE KNIFE

1) Turn the knife change switch (2), set the Mark-II control in "MANUAL" mode.

2) Turn the knife depth micro adjustment (3) anti-clockwise to 0, (minimum position).

3) Press both cut buttons until the knife down to the bottom position.

   (Don't release any one of the cut buttons during the operation, otherwise you will have to re-start the procedure from the first step.)

4) Using the tools provided, remove all knife holding bolts. Insert the two knife change handles into the knife through the two open ended slotted holes in the knife carrier tightly.

5) Turn off the knife change switch, the knife carrier will return to the top position.

6) Holding the knife change handles and loose it slightly, remove the knife from the knife carrier.

7) Change the cutting stick to a fresh un-used side.

8) Using the knife change handles to insert the new knife into the knife carrier and push the knife to the top of the slots and tighten the handle against the carrier.

9) Turn the knife change switch on.

10) Press both cut buttons until the knife down to the bottom position.

(ii) Press ▬ 5 0 0 and NEXT , screen appears:

```
C : 490.0       PROG : 3

3 : 000.0       4 : 000.0   mm
```

(iii) Press ✕ 7 and NEXT the screen will change to:

```
C : 490.0       PROG : 3

3 : X 07        4 : 000.0   mm
```

(iv) Press END it will beep twice, then re-press END to store the program, and the screen will change to:

```
C : 490.0       PROG : 3

1 : 400.0       2 : −050.0   mm
```

If you want to start cutting, press AUTO , the back gauge will move to the position 400.0 and the following screen appears:

```
C : 400.0       PROG : 3    AUTO

1 : 400.0       2 : −050.0   mm
```

11) Remove the handles and replace with all knife bolts.

12) Trying to put the knife to the right side until the position of knife beam equal to the cutting stick. Then tighten all knife holding bolts.

13) Remove all tools. Turn off the knife change switch. The knife carrier and the clamp will automatically return to its top position.

14) Test cut a full stack of paper. If the bottom sheets are not cut, then adjust the knife micro adjustment clockwise. This will lower the knife towards the cutting stick.

Note:
(1) When making a cut and the guillotine is beeping, you need to check the following:
      (a) The knife is blunt.
      (b) The clamp pressure adjustment is too low.
      (c) A thick paper pile height (over) is used.

Warning for Knife Change:
When you complete **2,000 cuts** operation, it will beep "PI" "PI" ----- at intervals of one second, at this time you have to replace a sharp blade for use, after replacing the blade, the alarm will disappear. If you don't want to change the blade, please turn on the knife change switch to the knife change position and then make a knife change operation, the sound disappears. Then the counter will resets to zero and re-start.

After finishing the first cut, the back gauge will move in forward 50.0 and the following screen appears:

```
C : 350.0      PROG : 3     AUTO

3 : X 07       4 : 000.0   mm
```

After you have made 7 consecutive cuts, the back gauge will automatically "push-out" your stack of paper and moves to the first cut position at 400.0, then you can start the second cutting cycle:

```
C : 400.0      PROG : 3     AUTO

1 : 400.0      2 : −050.0   mm
```

After you have finished all cuts, press [AUTO] to remove the automatic movement working, AUTO will disappear on the display, and the screen appears:

```
C : 400.0      PROG : 3

1 : 400.0      2 : −050.0   mm
```

※ **If you make a mistake and want to correct the programmed cut positions, use the [LAST] and [NEXT] keys to move the cursor to the position that you require, and re-enter the new cut sizes, then press [NEXT] .**

※ **In AUTO mode if the cutting is not cut through then press [LAST] the back gauge will move to the original position, at this time you can lower the blade and re-make a cut.**

※ **If you use & press the keys [X] [1] , the cutter will make "n" times the same size consecutive cuts till it completes all cuts. "(1)" means "n" times.**

ADJUSTMENT FOR THE SIZE OF REAR POSITION

If there is a difference between the actual cut size and the back gauge display size, it indicates the rear position is incorrect. Make the required adjustment as the following procedure:

1. Re-switch on the machine and move the back gauge to the rear position, then to measure the size with a rule (by metric system). Adjust the rear position size by call out program set "0", adjust the first setting figure to the correct size.

2. Cut a piece of paper to two even parts. (Cut paper size 200 mm into two 100 mm paper)

3. Put the outside paper on the inside one and make a comparison between these two parts.

4. If the inside paper is larger than the outside one, you have to increase the correction size (i.e. 0.5mm, then do the adding 0.5 to the rear position).

5. If the inside paper is smaller than the outside one, the correction size should be decreased and do the subtracting.

6. When the correction is made, turn the power off and back on.
   inside   >   outside   (make the correction to add)
   inside   <   outside   (make the correction to subtract)

How to use Step & Repeat Program with Cutter Trim: (even parts cutting for name card & label etc.)

Turn on the power to the cutter, wait until the back gauge moves back And will recalibrate the position and display appears: (There will be a cursor flashing over at the last number, this is the work area.)

```
C : 490.0     PROG : 1

1 : 000.0     2 : 000.0   mm
```

Select a program number from 1 - 9, if you press [PROG] [4] screen appears:

```
C : 490.0     PROG : 4

1 : 000.0     2 : 000.0   mm
```

If the first cut is at 295.0 and you would like to divide it into 55.0 name cards with a 3.0 trim in between for four times each, please do as below:

(1) Press [2] [9] [5] [0] and [NEXT], the following screen appears:

```
C : 490.0     PROG : 4

1 : 295.0     2 : 000.0   mm
```

MARK – II

OPERATOR MANUAL

(2) Press **—** **5** **5** **0** and **NEXT** screen appears:

```
C : 490.0       PROG : 4

3 : 000.0      4 : 000.0   mm
```

(3) Press **—** **3** **0** and **NEXT** screen appears:

```
C : 490.0       PROG : 4

3 : −003.0    4 : 000.0   mm
```

(4) Press **X** **4** and **NEXT** the following screen appears:

```
C : 490.0       PROG : 4

5 : 000.0      6 : X 04   mm
```

(5) Press **END** it will beep twice, then re-press **END** to store the program, and the screen will change to:

```
C : 490.0       PROG : 4

1 : 295.0      6 : −055.0   mm
```

Control Panel

Display Screen

```
C : 490.0      PROG : 1

1 : 000.0      2 : 000.0 mm
```

C : Current cut position.

    The back gauge current position.

PROG : Program number.

    There are 9 programs from 1 – 9.   The **PROG : 0** is for
parameter setting, any changes on the parameter should be
made in cipher code.

1: 2: 3: 4: 5: 6: 7: 8: Cut position.

    It allows for 9 programs with 8 cuts each.   Two or more
Programs can be combined.   A total of 72 cuts can be stored.

If you want to make a cut, press ⬛AUTO , the back gauge will move
to 295.0 position and the following screen appears:

```
C : 295.0      PROG : 4      AUTO

1 : 295.0          6 : −055.0   mm
```

Make the first cut and the back gauge moves in forward 55.0, the
following is on the screen:

```
C : 240.0      PROG : 4      AUTO

3 : −003.0    4 : X 04   mm
```

After the second cut is made, the back gauge moves in forward 3.0
and the following appears:

```
C : 237.0      PROG : 4      AUTO

3 : −003.0    4 : X 04   mm
```

After you finish your 55.0 & 3.0 for four consecutive cuts each, the
back gauge moves to the first cut position 295.0, then you can make
the second cut cycle:

```
C : 295.0      PROG : 4      AUTO

1 : 295.0          6 : −055.0   mm
```

Instruction for Keys

1 ~ **9** : To key in a size.

PROG : Selection programs. There are 9 programs from 1 - 9. For example: If you want to select the program number 1, press **PROG** , the screen shows PROG :, then press **1** , the cursor will be flashing over the last digit on cut position #1 (1:000.0), you can key in the cut size.

LAST : 1. Last cut position. You can use this key to select cut position checking, correction & memory. i.e.1 : 400.0 、 2 : 300.0, press **LAST** , the cursor will shift to the last cut position.

    2. In AUTO mode, if the cutting is not cut through, then press **LAST** the back gauge will move to original position at this time you can lower the blade and re-make the cut.

After you have finished all cuts, press **AUTO** to remove the automatic back gauge movement, AUTO will disappear from the display, and screen appears:

C : 295.0	PROG : 4
1 : 295.0	6 : −055.0 mm

※ **If you make a mistake and want to correct the programmed cut position, use the LAST and NEXT keys to move the cursor to the position that you require and re-enter the new cut sizes, then press NEXT .**

※ **In AUTO mode if the cutting is not cut through then press LAST , the back gauge will move to the original position, at this time you can lower the blade and re-make the cut.**

※ **If you use & press the keys X 1 , the cutter will make "n" times the same size consecutive cuts until it completes all cuts. "(1)" means "n" times.**

NEXT : Next cut position. Use the key to select cut position numbers, checking, correction, and memory.

END : 1. End/Memory. When you finish a program, press the **END** button. It will make "PI" "PI" sounds. Once the key is pressed it will clear all cut numbers in the back also the screen will be back to the first cut mark and memorize all the setting.

2. Clear. Press **END** it will make "PI" "PI" sounds, once the key is pressed again, all programs under the shift will be erased.

FAST FWD : Fast forward. Press & hold down the key, the back gauge will move fast forward.

SLOW FWD : Slow forward. Press and hold down the key, the back gauge will move forward slowly.

How to use (recall) Existing Programs

Turn on the power to the guillotine, press **PROG** **1** ~ **9** to select the program numbers which have been stored in your controller, and select the required program, then press **AUTO** . Please refer to previous pages for operation procedures. After you have finished all cuts, re-press **AUTO** to remove the automatic movement working.

FAST REV : When the key is pressed and hold down, the back gauge moves fast to the rear and stops at the rear point, after the key is released the back gauge moves forward 2 mm automatically

SLOW REV : Press and hold down the key, the back gauge moves slowly to the rear and stops at the rear point. And it will move forward 2 mm automatically when you released the key.

BRAKE RELS : When you make micro adjustment, you should press & hold the key.

CUT & STORE : First select the program number, press **CUT & STORE** the screen appears C&S. You can now setup the required cut size. When the cut size is selected, make a cut and the cut position will be auto stored in the memory.

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Parameters: (to set up)

If you want to enter the parameter it must be in **Cipher Code**, say (1234) as listed below:

Press **PROG** **0** , it appears X X X X

Press **1** **2** **3** **4** and **END** , you can select the following parameters on PROG 0:

1 : Rear calibration position size - If the size is incorrect, calibrate the rear position.

2 : Back gauge push-out size - To push out the paper forward when back gauge moves in reverse.

3 : Front safety size - smallest cutting length (with false clamp plate fitted)

4 : Empty slot - No function, setup as 0000.

5 : The size for high speed transition to low speed - The setting for the slow movement distance before the back gauge fast moves to the desired cut position.

6 : The timing position for brake - The setting for the back gauge stops in advance before the back gauge moves to the rear end position.

7 : Back gauge moving back setting - The setting size for the back gauge to move in reverse, then slow forward (1.0 = 16 mm).

8 : Convert mm & inch - 0011 → mm / 1111 → inch

※ Any revisions on the parameter, you have to press **NEXT** or **LAST** key.

※ After revised the above mentioned parameters, press the **RESET** key to re-start the Mark-II programmatic.

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AUTO : You have to confirm the start position of the shift before the key is pressed. Press the key, it will store the desired cut positions in order.

RUN : In AUTO mode, press **RUN** , it will run (or skip) over a certain cut size which is not used, and will go to the next cut in memory.

— **✕** : **—** can be used together with **✕** . These keys are used for making multiple cuts into more pieces (i.e. business cards) or for two cuts trim.

RESET : Press **RESET** to re-start the Mark-II programmatic and calibrate the position size .

Error Display

> **REAR SWITCH ERROR**
> **CHECK REAR SWITCH**

Reason:

The back gauge has go over the back safety length range, touches the safety switch, so the back gauge can not be operate.

Solution:

1. Turn off the power.

2. turn the handle manually, move forward the back gauge into the safety range.

3. Turn on the power and the back gauge will be able to operate again. If not, please contact the nearest dealer for service.

> **PLEASE CHECK TOP SW**

Reason:

1. The knife or the clamp is not back up at the top position.

2. The top switch of the knife or the clamp is not function.

Solution:

1. Check if the top knife / clamp switch faulty or functional.

2. Adjust the knife / clamp switch to the right position.

How to use in MANUAL Operation

Turn on the power to the cutter, wait until the back gauge moves back and will recalibrate the position and display appears:

(There will be a cursor flashing over at the last number, this is the work area.)

```
C : 490.0      PROG : 1

1 : 000.0      2 : 000.0   mm
```

Manual mode has two operating controls:

1. The back gauge moves with the manual keys below:

If you press ① - ⑨ entering 400.0, the screen appears:

```
C : 490.0      PROG : 1

1 : 400.0      2 : 000.0   mm
```

Press **RUN** , the back gauge will move to the requested position.

ENCODER ERROR
PLEASE CHECK ENCODER

Reason:

1. Display when switching on the power: Encoder faulty.

2. Display during operation: The bush could be too dry or too tight.

Solution:

1. Apply grease or oil on the bush, or do some necessary adjustment to it.

2. If it still not function, please contact the nearest dealer for service.

ENCODER ERROR
CHASE A (g) B (w)

Reason:

1. Wrong connection for the encoder wires.

   (Only occur after changing the encoder)

Solution:

1. Switch the green wire and the white wire connection.

Making a New Program

Turn on the power to the cutter, wait until the back gauge moves back and will recalibrate the position and display appears:

(There will be a cursor flashing over at the last number, this is the work area.)

```
C : 490.0      PROG : 1

1 : 000.0      2 : 000.0   mm
```

Select a program number from 1-9, if you press **PROG** **1** screen appears:

```
C : 490.0      PROG : 1

1 : 000.0      2 : 000.0   mm
```

If you want to make 3 cuts, the first cut is at 400.0, the second cut at 380.0, and the last cut at 205.0, follow the procedure as listed below:

(I) Press **4** **0** **0** **0** **NEXT** , the following screen appears:

```
C : 490.0      PROG : 1

1 : 400.0      2 : 000.0   mm
```

(II) Press **3** **8** **0** **0** **NEXT** screen appears:

```
C : 490.0      PROG : 1

3 : 000.0      4 : 000.0   mm
```

```
DISPLAY
OVER TIME
```

Reason:

1. Faulty of the encoder or the MRII PC board.

Solution:

1. Please contact the nearest dealer for service.

```
PLEASE PRESS
FAST REV KEY
```

Reason:

1. The back gauge is out of the safety length range at the front.

Solution:

1. Please press **FAST REV** to move backward the gauge into the safety length range.

```
PLEASE PRESS
FAST FWD KEY
```

Reason:

1. The back gauge is out of the safety length range at the back.

Solution:

1. Please press **FAST FWD** to move forward the gauge into the safety length range.

(III) Press **2** **0** **5** **0** **NEXT** and screen appears:

```
C : 490.0      PROG : 1
3 : 205.0      4 : 000.0   mm
```

(IV) Press **END** it will beep twice, then re-press **END** to store the program, the screen will change to:

```
C : 490.0      PROG : 1
1 : 400.0      2 : 380.0   mm
```

If you want to make a cut, press **AUTO**, the back gauge will move to the first cut position and the following screen appears:

```
C : 400.0      PROG : 1    AUTO
1 : 400.0      2 : 380.0   mm
```

Place the paper and make the first cut, when completing the cut, the back gauge moves to the second cut position.

Adjust the paper for the 2nd cut and make a cut, the back gauge moves to the 3rd cut position.

Adjust the paper for the 3rd cut and make the cut, the back gauge will then "push-out" your stack automatically. Then it moves to the first cut position and readies itself for the next cut cycle.

SPECIFICATION

490P Hydraulic and Programmatic Cutter

Cutting Width:	490 mm
Cutting Height:	80 mm
Dimensions:	102 X 115 X 136 cm
Power:	110V, 1hp / 2hp
Weight:	400 kg