

## CHAPTER 2

### BASIC OPERATION FLOW

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**[Exp. 8] Mounting**

Operation	Reference
Make sure no error indication lamps (orange) are lighted. Check for error messages displayed on the CRT screen.	See chap. 3-2-4, "Errors During Operation".

**[Exp. 9] STOP**

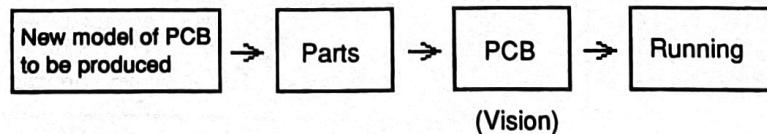
Operation	Reference
"Press the "STOP" key.	The message "----11: Running----" disappears from the CRT screen. The "Running" lamp (green) doesn't light.

**[Exp. 10] Power Supply OFF**

Operation	Reference
Turn off the main power switch on the front of the machine.	Check that all CRT displays disappear.

**[Exp. 11] Data preparation (see Chapter 3)**

To produce a new PCB model, the parts data must be created first. Check to make sure all of the parts on the new models of PCB have been registered as data, and then create the data for the PCB. After that, select the work conditions on the Run Screen and start the dispensing.



**[Exp. 4] Work PCB Change**

The currently selected PCB is highlighted on the mount PCB selection screen (see Chapter 3-5). If the highlighted PCB is the one on which mounting is to be carried out, no operations are required on this screen.  
To change the PCB for mounting, move the highlighted display to the desired PCB. Then follow the setup changing procedures outlined in Explanation 5.

**[Exp. 5] Changing the Setup**

Operation	Reference
Replace the nozzles and chuck on the head.	Chapter4 Section2,3
Change the conveyor width.	Chapter4 Section1
Change the position and height of the PCB locating pins.	Chapter4 Section1
Change the position of the PCB supporter.	Chapter4 Section1
Adjust the sensor for negative picking pressure.	Chapter4 Section2
Replace the feeder.	Chapter4 Section4
Change the edge position (option).	Chapter4 Section1
Change the position and height of the PCB pushup rod (option).	Chapter4 Section1
Change the position of the PCB sub-stopper (option).	Chapter4 Section1
Change the parts data file (if necessary).	Chapter3 Section3

**[Exp. 6] Operations Conditions Selection**

Select the desired conditions as indicated on the work conditions screen (Chapter 3-2-2).

**[Exp. 7] RUN**

Operation	Reference
Press the "RUN" key.	Make sure the "Running" display lamp (green) lights. The message "-----11: RUNNING-----" is displayed on the CRT screen.

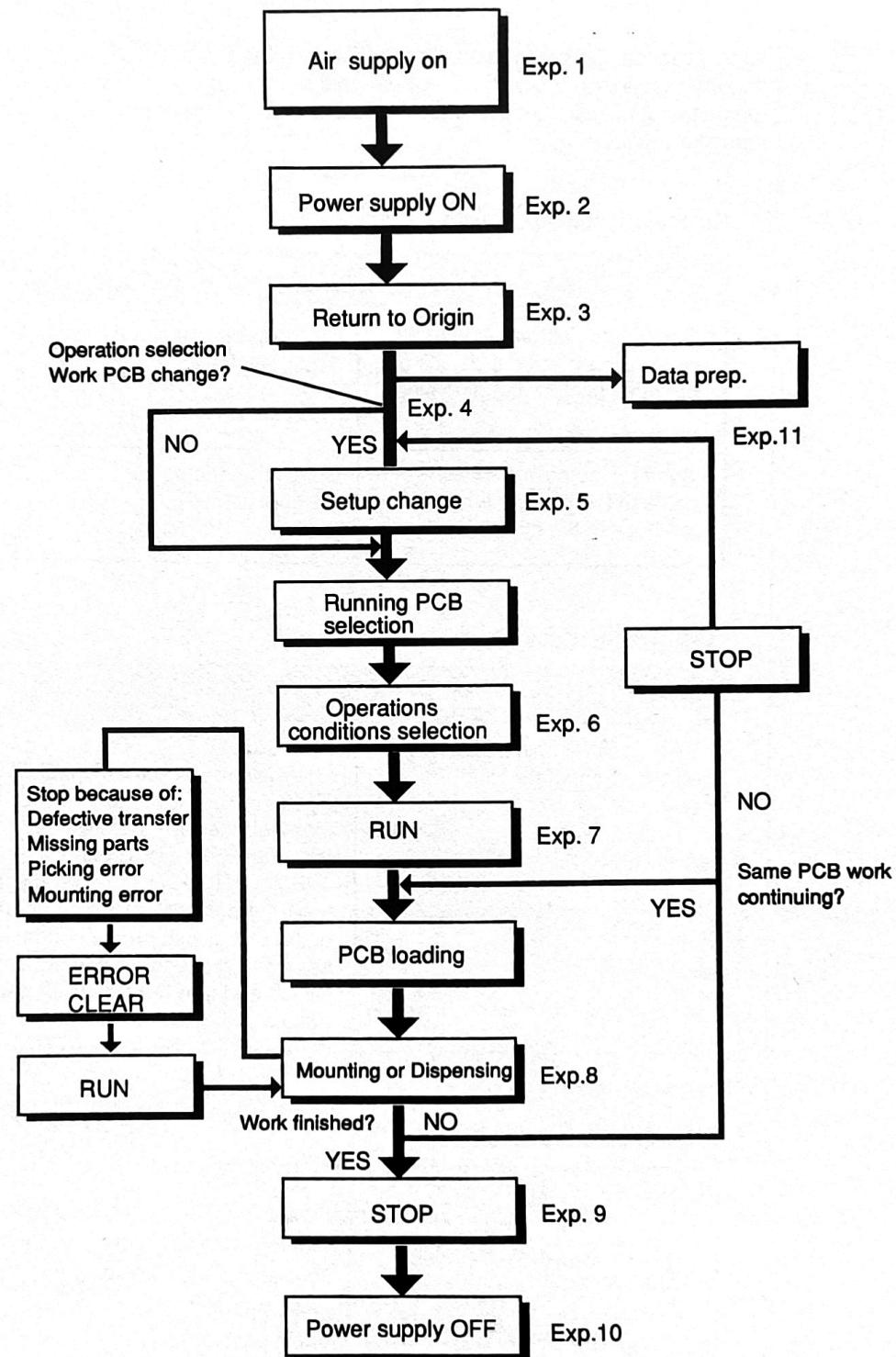
Workflow

Fig 2-1

## SECTION 1 WORKFLOW

1-1

WORKFLOW  
DIAGRAM

--- See Fig 2-1

1-2

OPERATION  
PROCEDURES

In this section, the procedures of operations necessary for actual running of the surface mounter (as illustrated by the flowchart on the next page) are explained. For the purposes of this explanation, we will assume that all necessary data (see CHAPTER 3) has already been input.

[Exp. 1] Air and Power Supply Connections

Operation	Confirmation
Connect the air hose to the air connection inlet on the back of the main unit (on the plug side).	The air pressure should be set to 5kgf/cm <sup>2</sup> 40Nl/min with a max. of (6bar).
Connect the power supply cable to the primary terminal on the back of the main unit.	Check that the power supply voltage is at the specified level.

[Exp. 2] Power Supply ON

Operation	Confirmation
Turn on the main power switch on the front of the unit.	CRT display The main menu screen should be displayed (see Chapter 3-1-3). Check that the message "32: ORIGIN INCOMPLETE" is displayed. If "EMG. STOP ON" is displayed, either the Emergency Stop button on the front of the unit or that on the control keyboard has been pressed. Reset the emergency switch and turn the power off and then on again.

[Exp. 3] Return to Origin

Operation	Confirmation
Press F5 (ORG) on the main menu screen.	The return to origin starts in the axis sequence Z (CSM 84VZ only) → Y → X → R. When all axes have returned to their origin positions, make sure the message "32: ORIGIN INCOMPLETE" is no longer displayed at the upper right of the screen (see Chapter 3-1-3).

## SECTION 2 THE OPERATION KEYS AND CONTROL KEYBOARD

2-1

MAIN UNIT  
OPERATION  
PANEL

(1) Operation panel key layout --- See Fig 2-2

(2) Description of operation panel keys



: On the terminal screen for manual or data input, these keys are used to operate the main units of the CSM (raising and lowering the heads and main stopper, etc.). (See chap. 3-2-4.)

These keys are also used to move the cursor up and down, right and left, in order to select items, to advance to the next screen (F6: NEXT), to return to the machine origin (F5: ORIGN), and other movement functions. The functions change depending on the screen, so make sure you check the functions before using the keys.



: Pressing this key on any other, except edit screen, returns you to the very first screen, the Main Menu screen.



: Pressing this key displays the monitor screen for mounter input and output (DI/DO). The user can check the sensor status (DI) and whether there is any output from the controller (DO). (in any mode)



: (Function currently under development)



: Press this key to return to the screen previous to the current screen.



: This key returns operation to the beginning and resets all partially-completed operations.



: This cancels error signals.



: Press this key to start operation.(Remark: when front right bottom door is open the run button is inhibited)



: Press this key to temporarily stop operation (pause).

2-2

## Control keyb.

(1) HANDHELD CONTROL KEYBOARD layout --- See Fig 2-3

# CHAPTER 3

## Operation and Handling

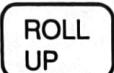
**SECTION 1**  
 An Overview  
 of Operation  
 Methods

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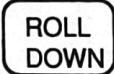


## (2) Description of keys on the control keyboard.

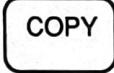
For the F1-F6, MAIN MENU, DI/DO, HELP, EXIT, RESET, ERROR CLEAR, RUN, and STOP keys, please refer to the description of the operation panel keys.



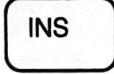
: Sends the screen upwards (scroll up).



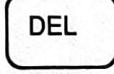
: Sends the screen downwards (scroll down).



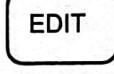
: Used to copy points (X, Y, Z, and R data), PCB files, and vision files.



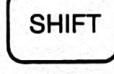
: During data creation (EDIT key), this allows insertion of alphanumeric characters.



: During data creation (EDIT key), this allows deletion of alphanumeric characters.



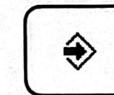
: When creating data, pressing this key initiates (or ends) input and causes the cursor to flash.



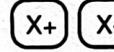
: Some keys are divided into two stages, upper and lower. Pressing this key accesses the upper function on the key.



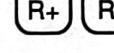
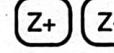
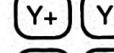
: On the operation or manual screens, the speed at which the X, Y, Z or R axis moves can be changed between 1 and 100% using this key.  
(in manual mode 0-100% of 50mm/sec  
in auto mode 0-100% of 1.2m/sec)



: Used for input of data, etc. (ENTER key)



: On the manual and data input screens, the X, Y, Z, and R axes can be moved in the + or - direction in the Utility program, using these keys. These are effective whenever the X, Y, Z or R is displayed on the CRT screen.



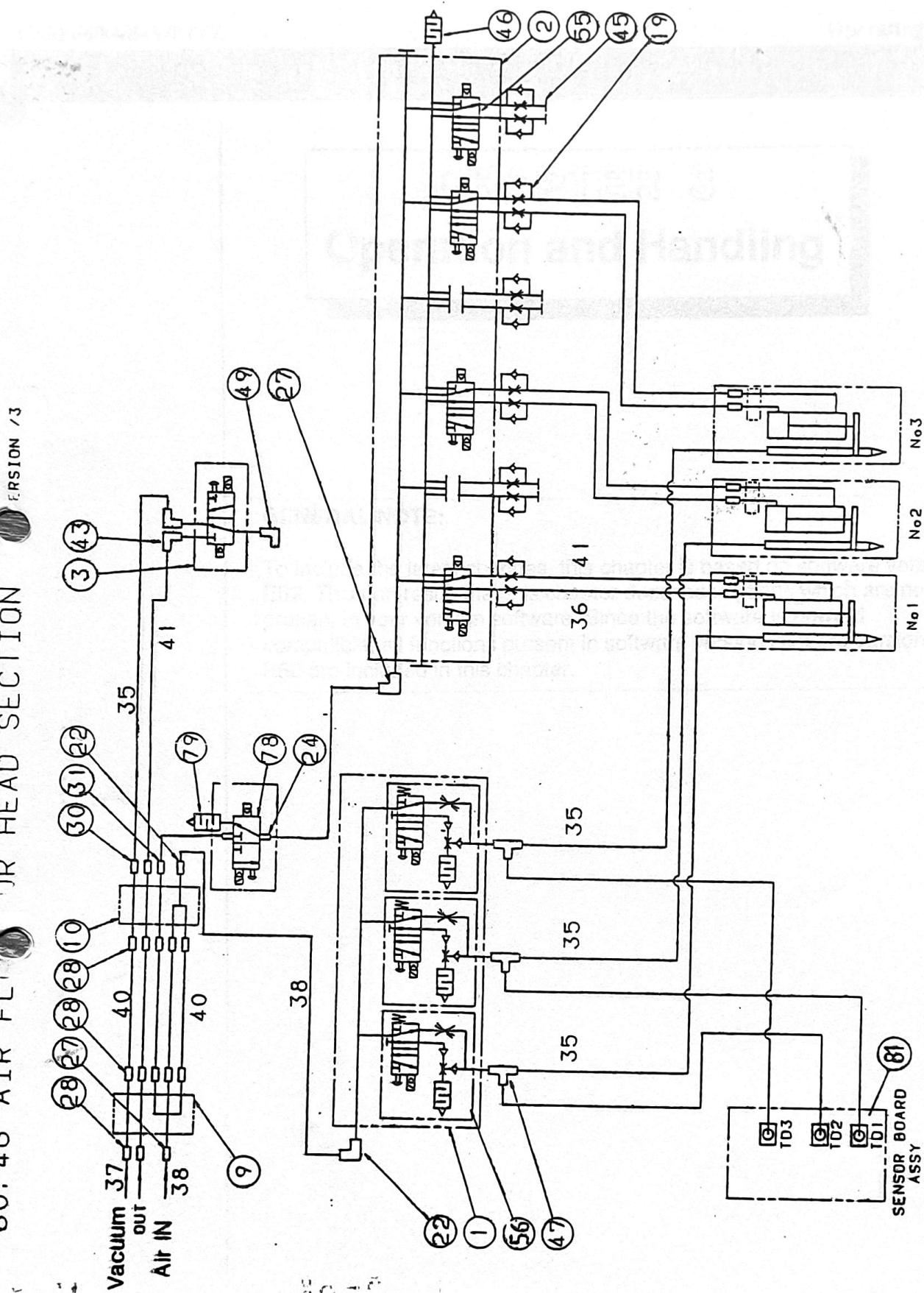
Operation panel key layout

Fig 2-2

Hand-held Control keyboard layout

Fig 2-3

60. 46 AIR FLOW HEAD SECTION



CSM46/60/3 - Air flow head section diagram

**SECTION 9**  
**VICS1000:**  
**Enhanced**  
**Vision**  
**System**

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**SBIP:**  
**Enhanced**  
**Vision**  
**System**

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