DOC. NO. FT02000-R011-E0
8-09-99

FULLY AUTOMATIC PROBER

UF190/UF200

DEVICE CREATION GUIDE

TOKYO SEIMITSU CO., LTD.

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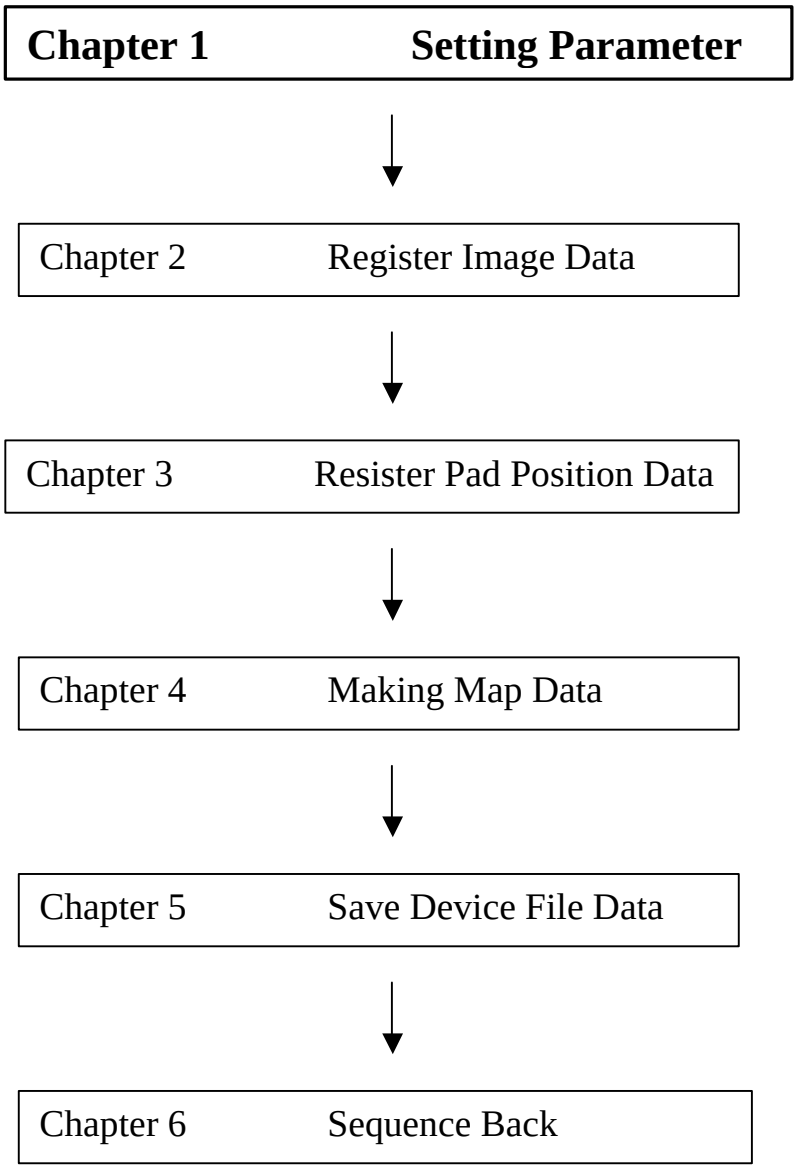
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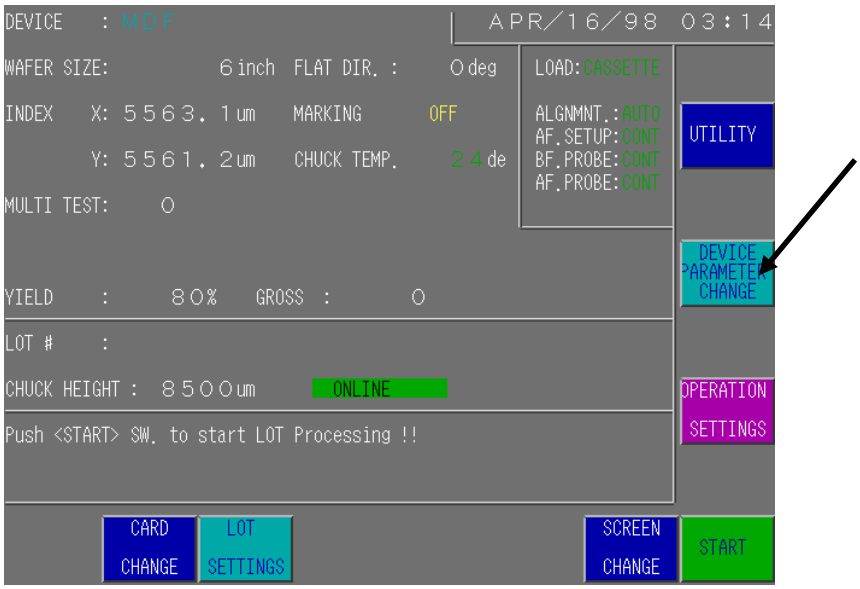
Chapter 1. Setting Parameter

It needs to set several parameters.

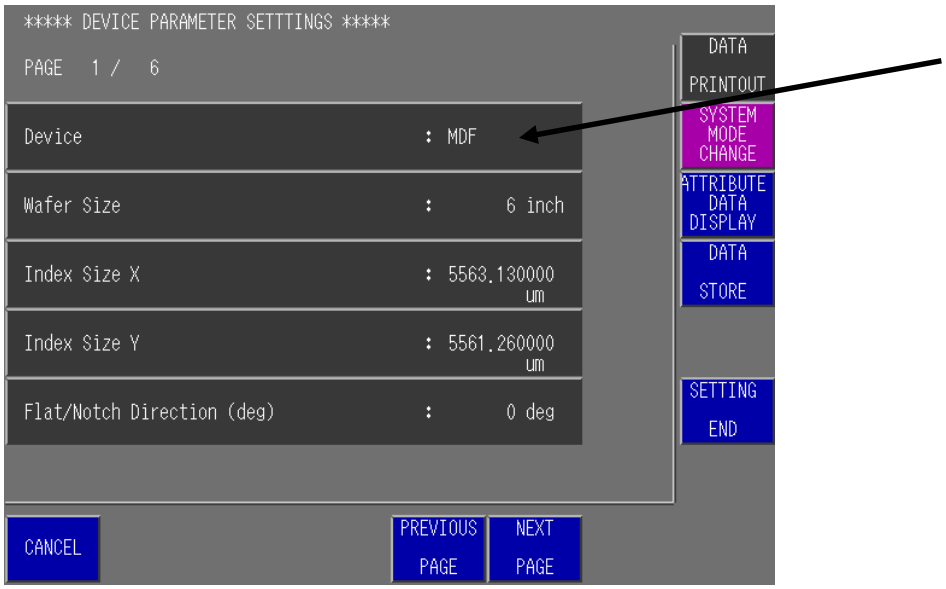
- Device name
- Device information
- Probe card information
- Mapping information

Setting Device name

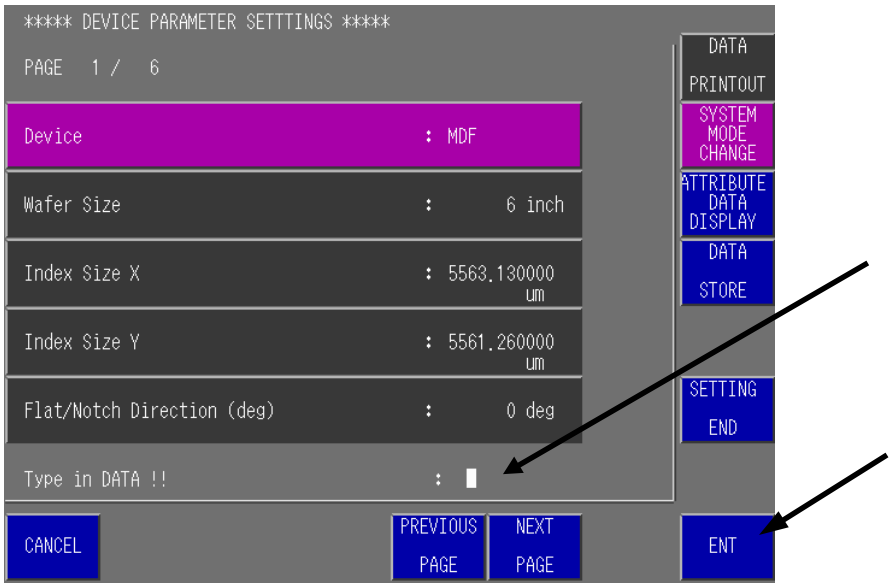
1. Push [DEVICE PARAMETER CHANGE] Switch.



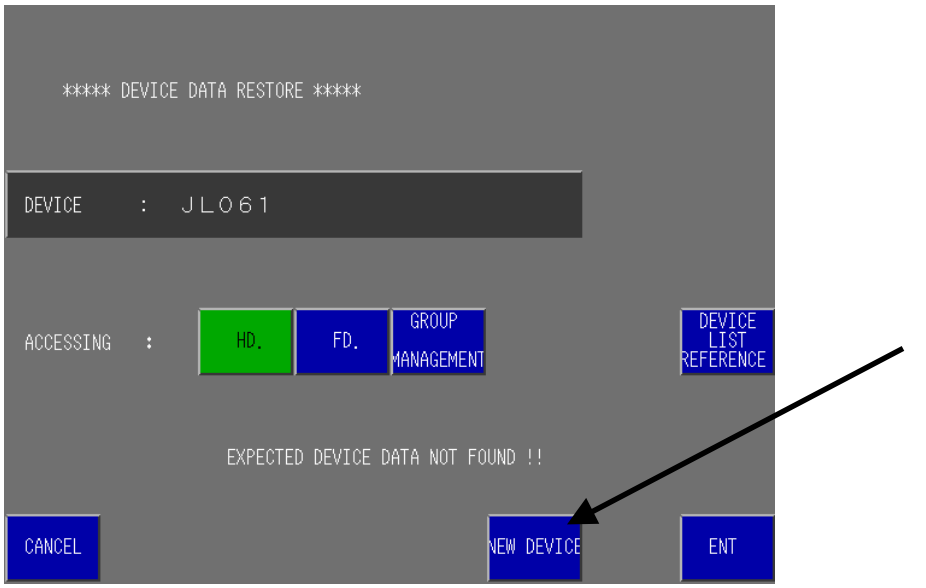
2. Push [DEVICE] Switch.



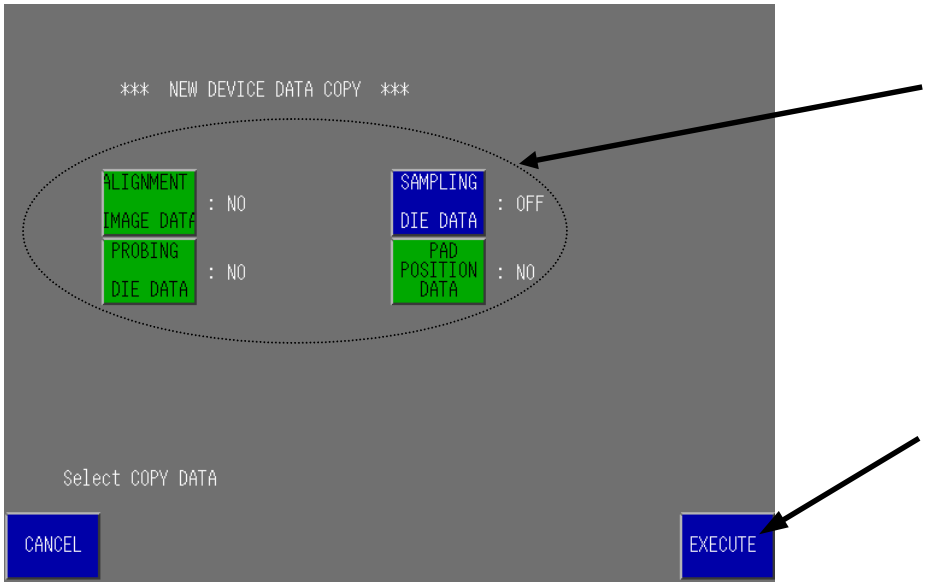
3. Type DEVICE name and push [ENT] Switch.



4. Push [NEW DEVICE] Switch.



5. If you need to copy part of old Device file , you should choose data. And then push [EXECUTE] Switch.

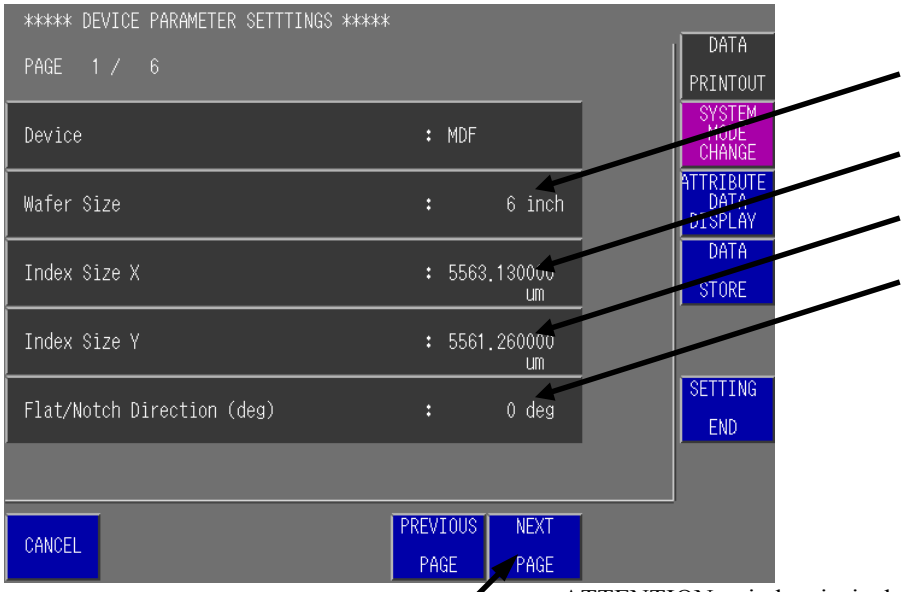


ALIGNMENT IMAGE DATA : wafer image data (for wafer alignment)
PROBING DIE DATA : wafer map data
SAMPLING DIE DATA : sample probing die position data
PAD POSITION DATA : registered pad position data

<<< FOR EXAMPLE >>>
In case of modifying wafer map data , you can copy [IMAGE DATA] [PAD POSITION DATA].

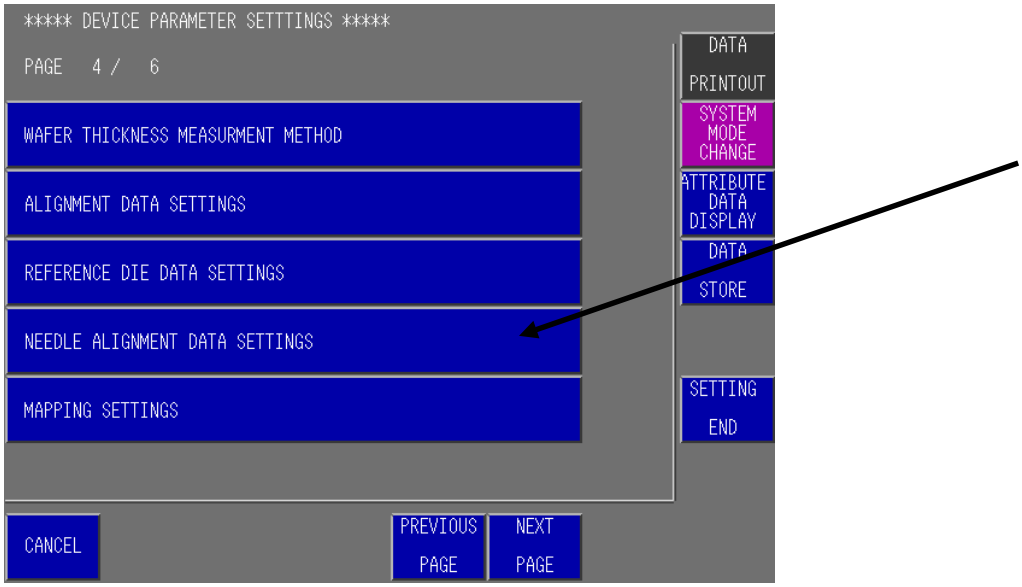
Setting Device Information

1. Type Device data (wafer size , die size , flat or notch direction).



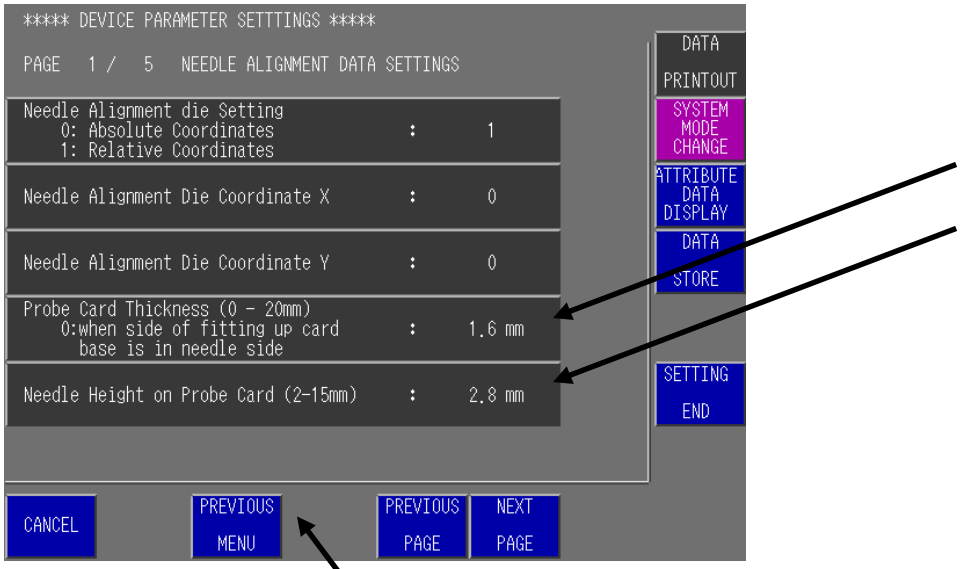
ATTENTION : index is include street width.

2. Push [NEXT PAGE]SW.
   Look for [NEEDLE ALIGNMENT DATA SETTING]parameter.
   Push that Switch.

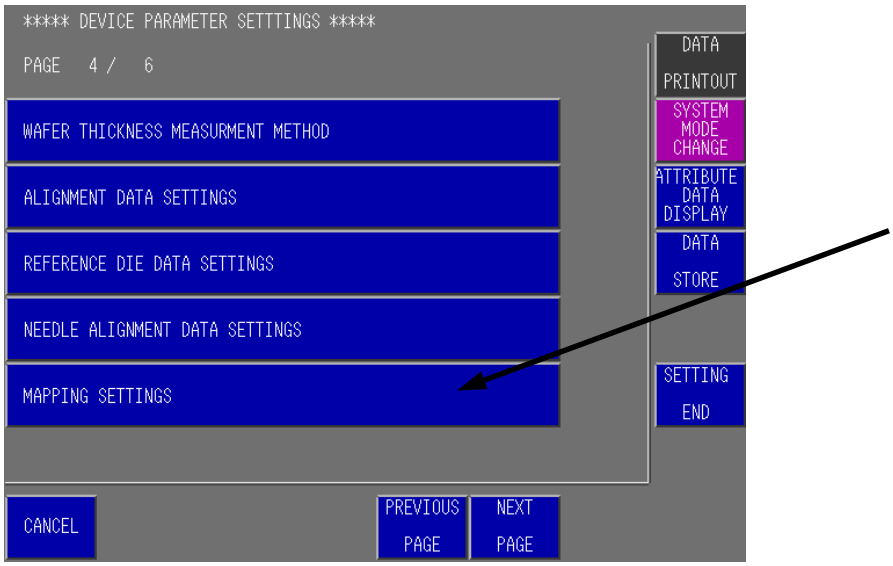


Setting Probe card Information

1. Setting [Probe Card Thickness] and [Needle Height on Probe Card] parameter. See detail “USER’S MANUAL ON CONTROL PARAMETERS”.

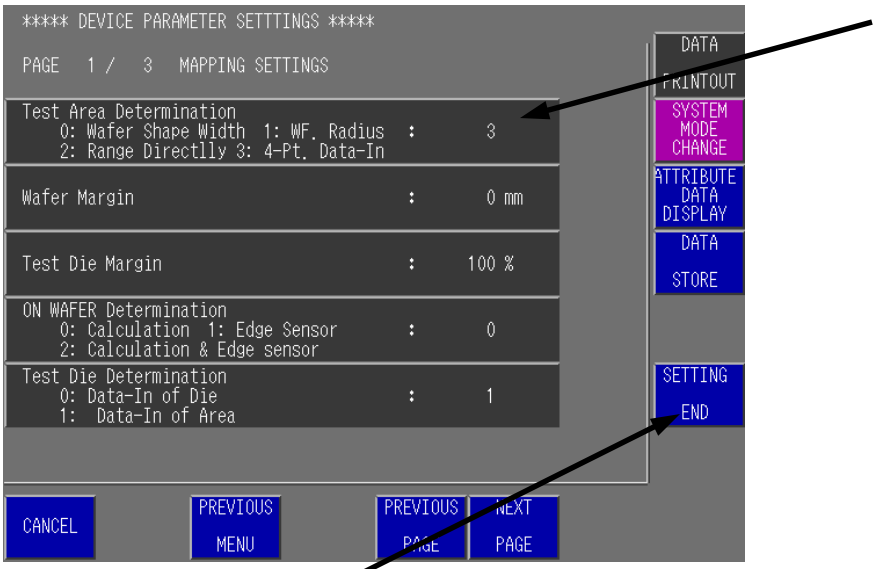


2. Push[PREVIOUS MENU] Switch.
Look for [MAPPING SETTINGS]parameter.
Push that Switch.

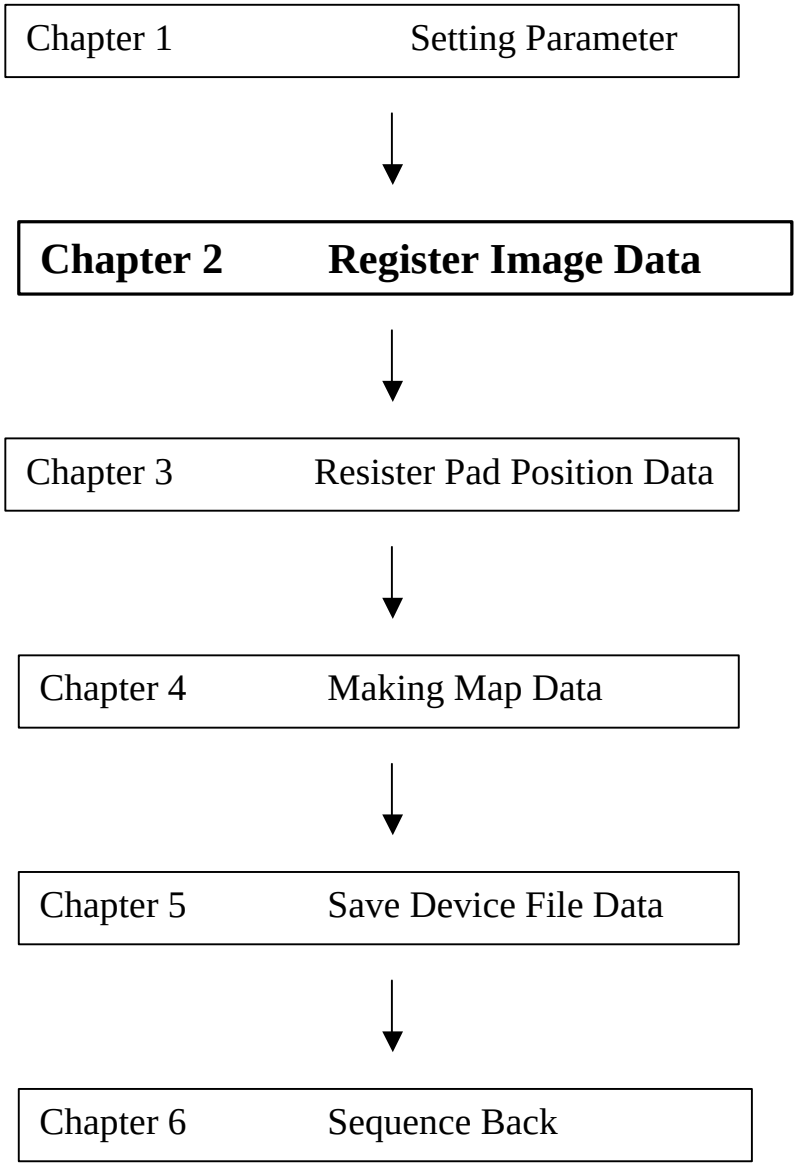


Setting Mapping Information

1. Select method of making map data.



2. Push [SETTING END] Switch after choosing method.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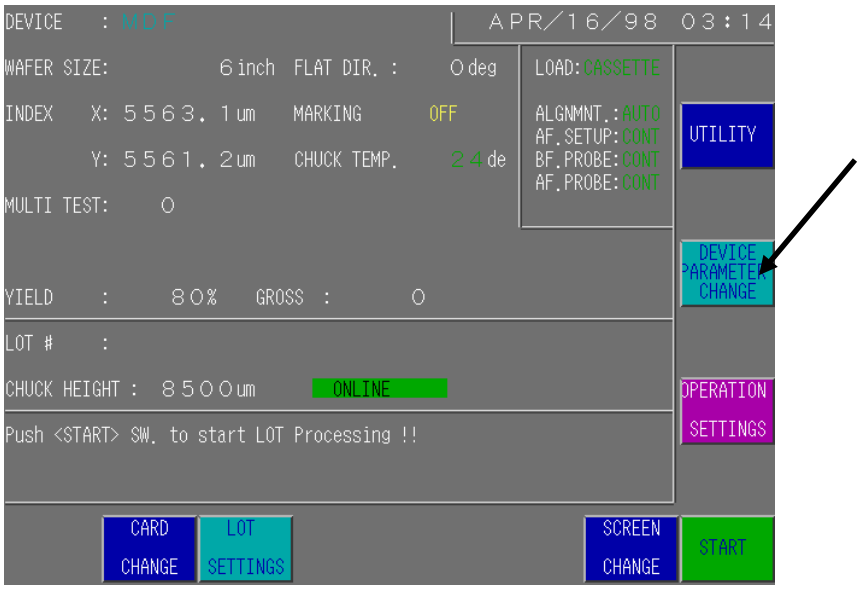
Chapter 2. Register Image Data

It is possible to choose how to register Image Data , by Auto mode or Manual mode.

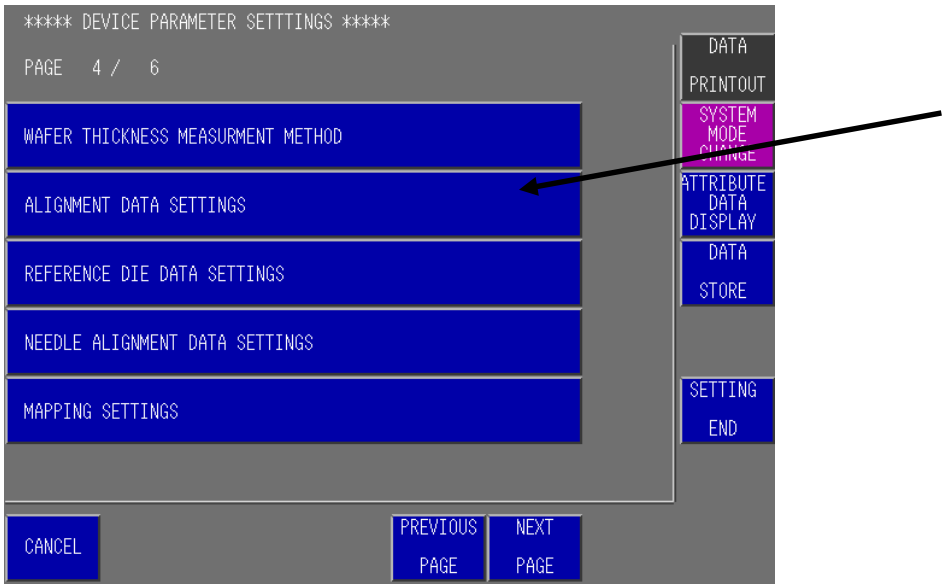
- Choose register mode
- Register image data by Auto mode
- Register image data by Manual mode

Choose Register mode

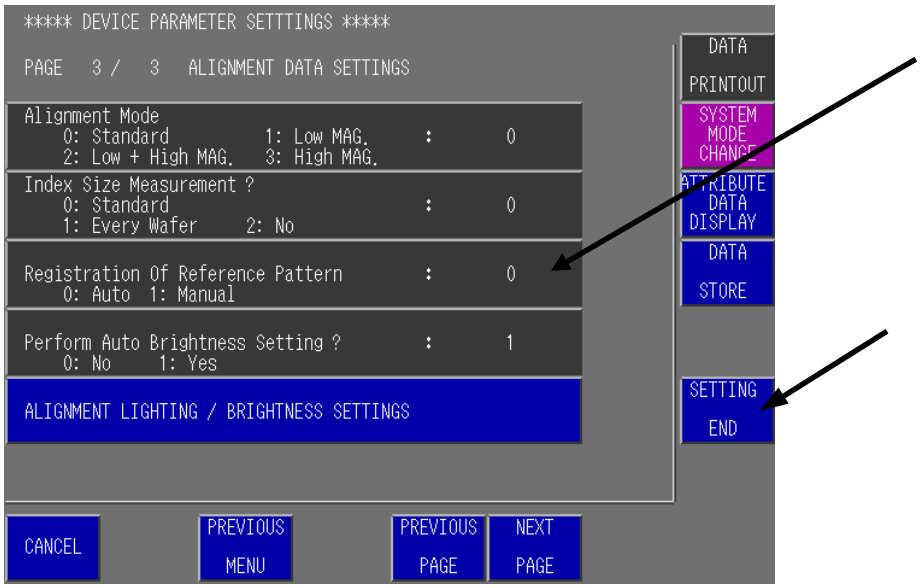
1. Push [DEVICE PARAMETER CHANGE] Switch.



2. Push [NEXT] Switch.
Look for [ALIGNMENT DATA Setting] parameter.
Push that Switch.

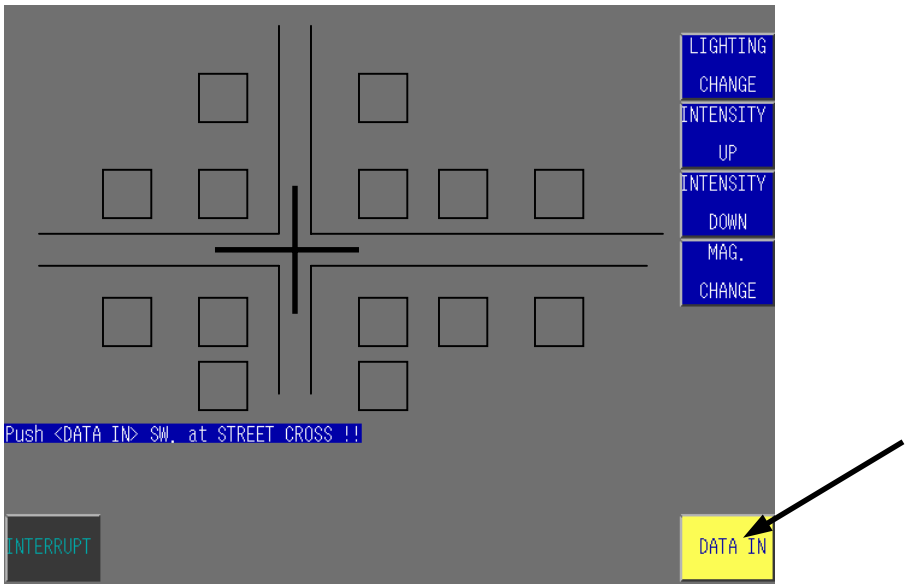


3. Choose AUTO mode or MANUAL mode.
And then push [SETTING END].



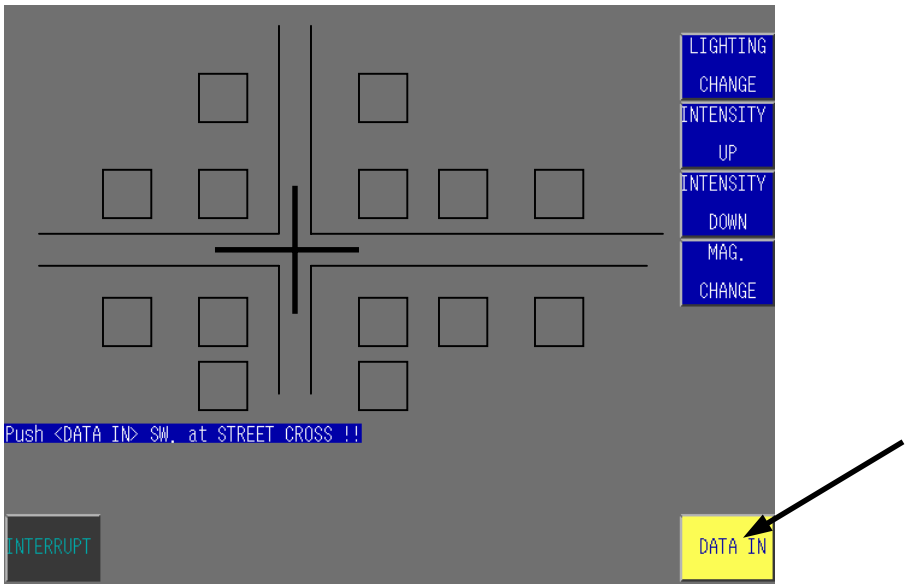
Registering Image Data by AUTO mode

1. Load wafer.
   Prober stops and buzzer sounds.
   Push J/S.
   Move CROSS MARK to street cross by J/S and then push [DATA IN] Switch.

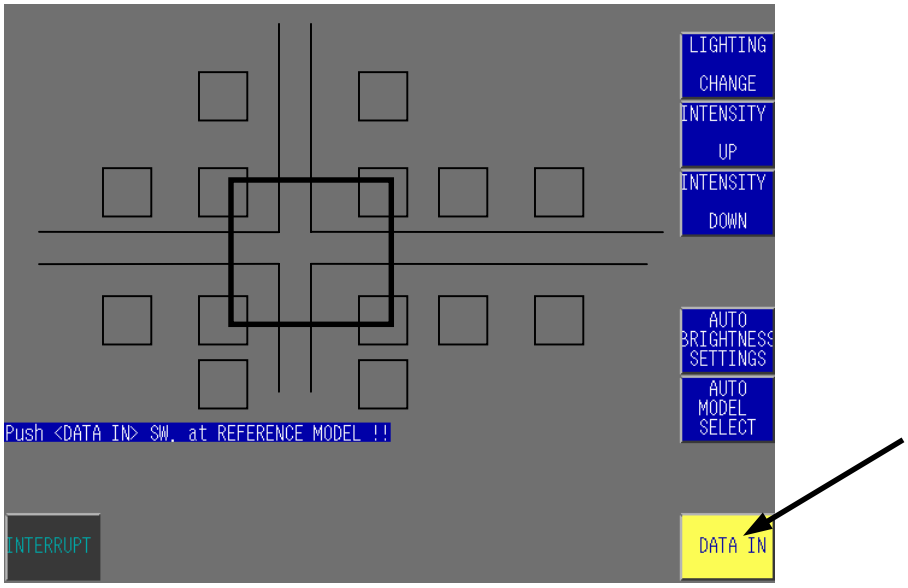


Registering Image Data by MANUAL mode

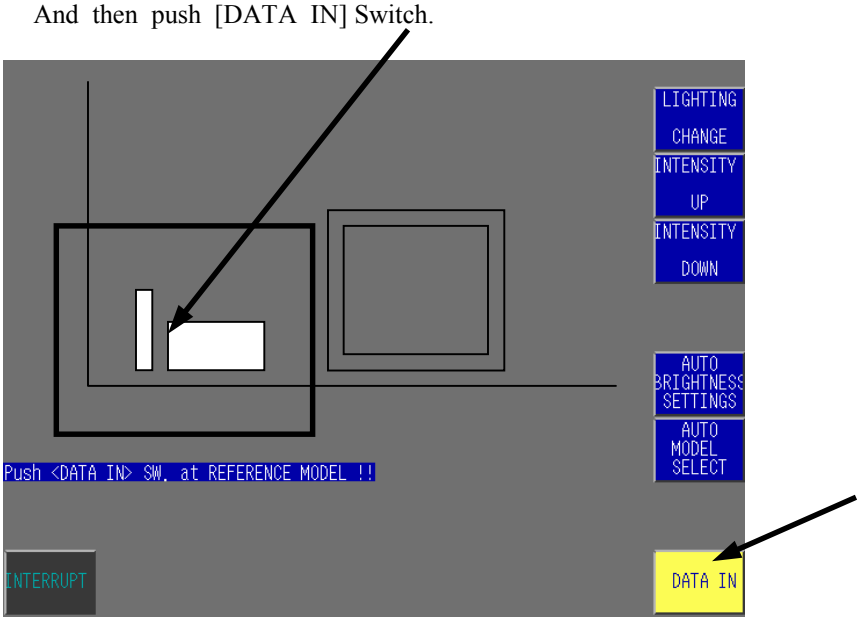
1. Load wafer.
   Prober stops and buzzer sounds.
   Push J/S.
   Move CROSS MARK to street cross by J/S and then push [DATA IN] Switch.

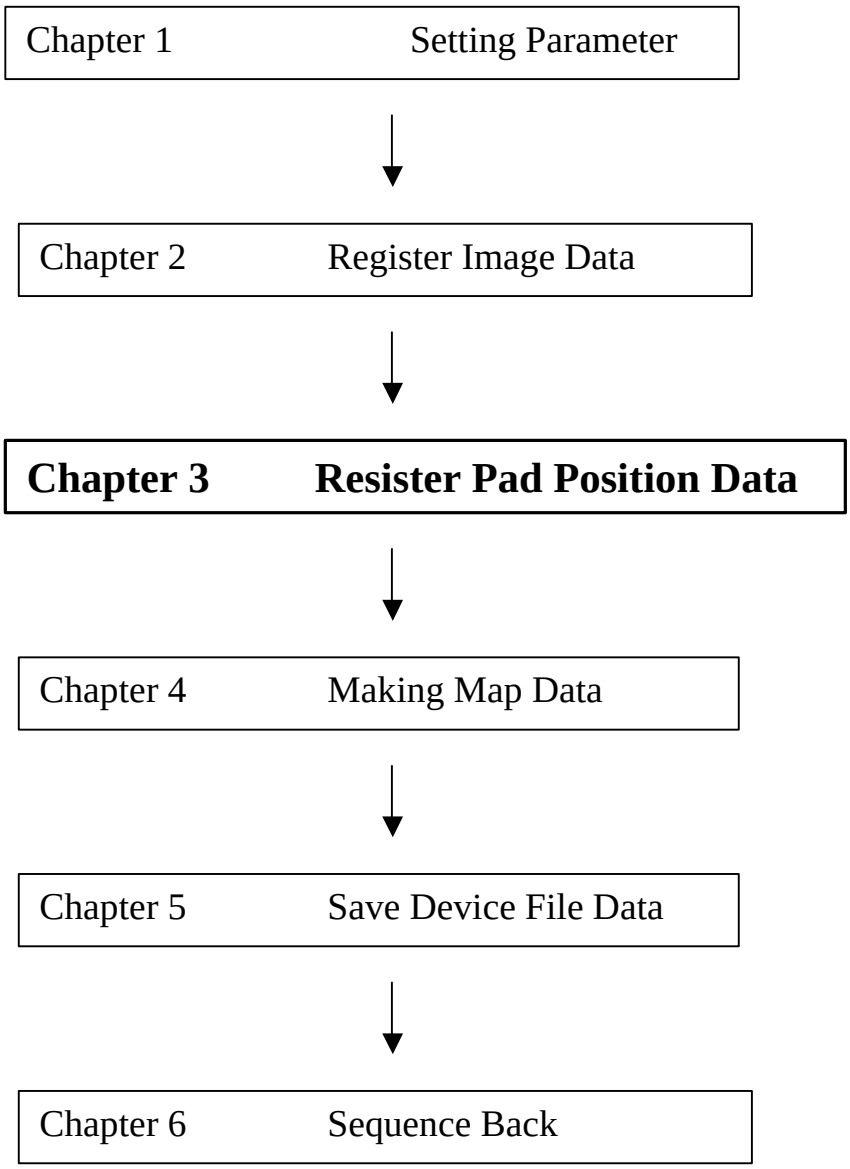


2. Push [DATA IN] Switch at reference point.



3. Prober switches high magnification.
Look for unique point inside die
And then push [DATA IN] Switch.

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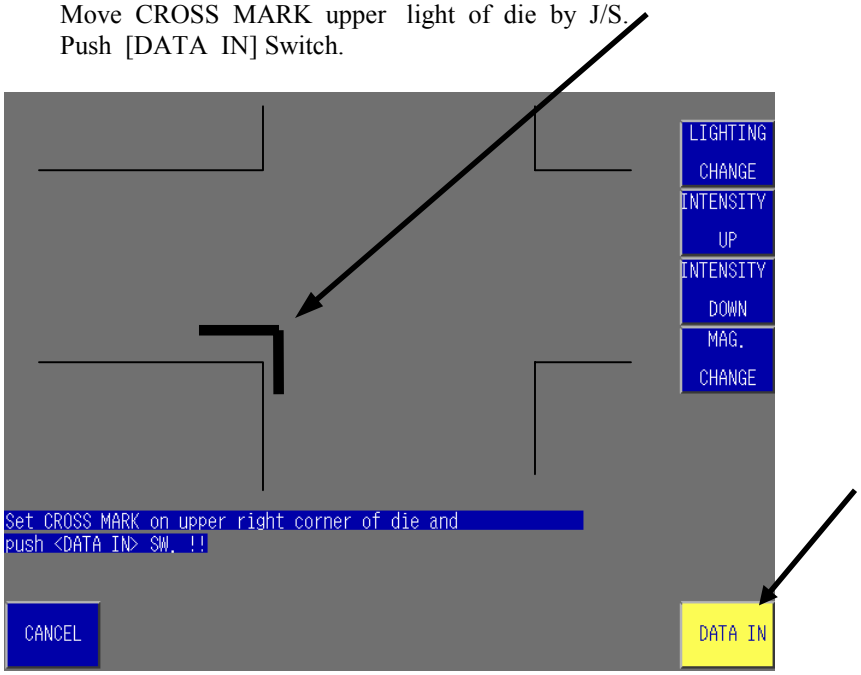
Chapter 3. Register Pad Position Data

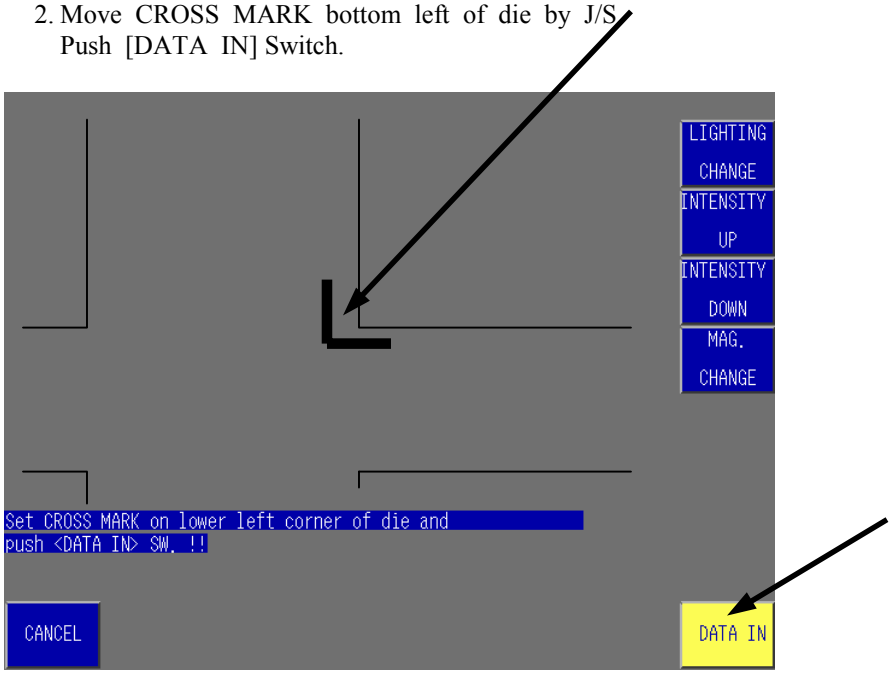
- Register probing area in die
- Register pad position
- Confirm pad position

Register probing area in die

1. Prober stops and buzzer sounds.
   Push J/S.
   Move CROSS MARK upper light of die by J/S.
   Push [DATA IN] Switch.



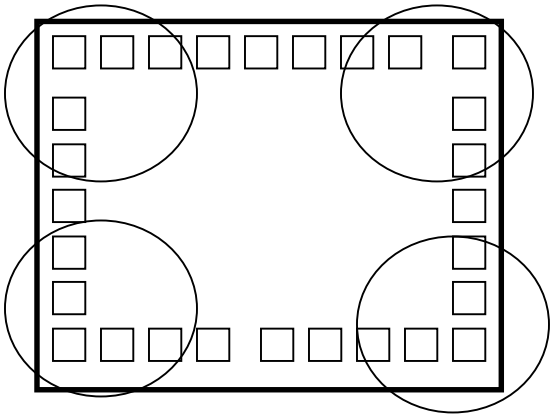
2. Move CROSS MARK bottom left of die by J/S. Push [DATA IN] Switch.



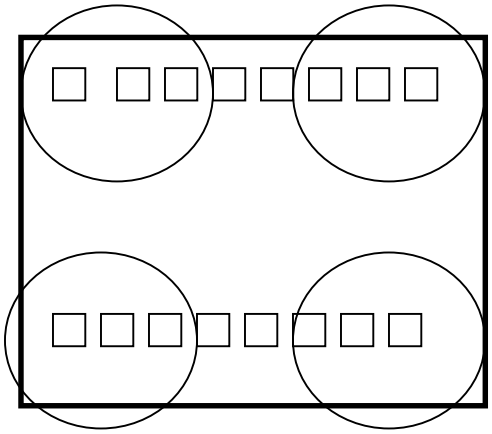
Registering Pad Position

We recommend…

Choose 4 corners (each 5 pads).

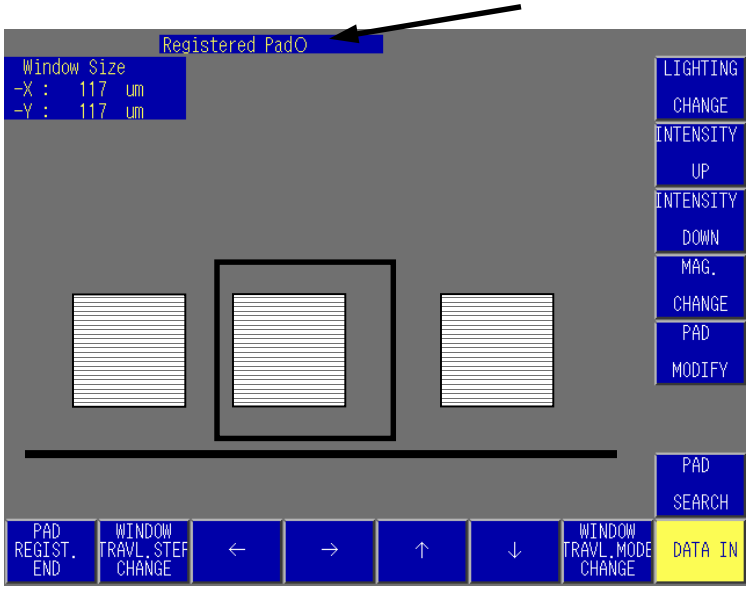


Choose both side.



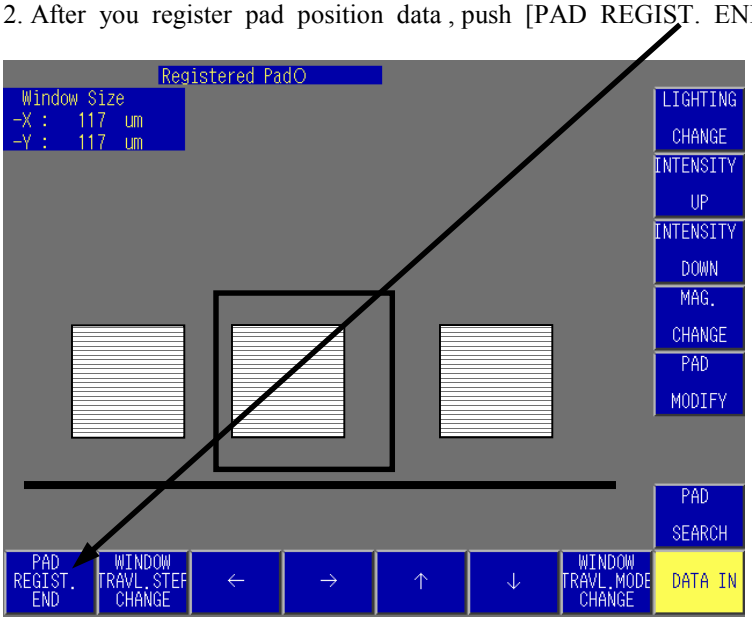
1. Move WINDOW to Pad by J/S.
   Change WINDOW size to Pad size by arrow Switch.
   Push [DATA IN] Switch.
   Move next pad by J/S.

(It is possible to check how many pads registered.)

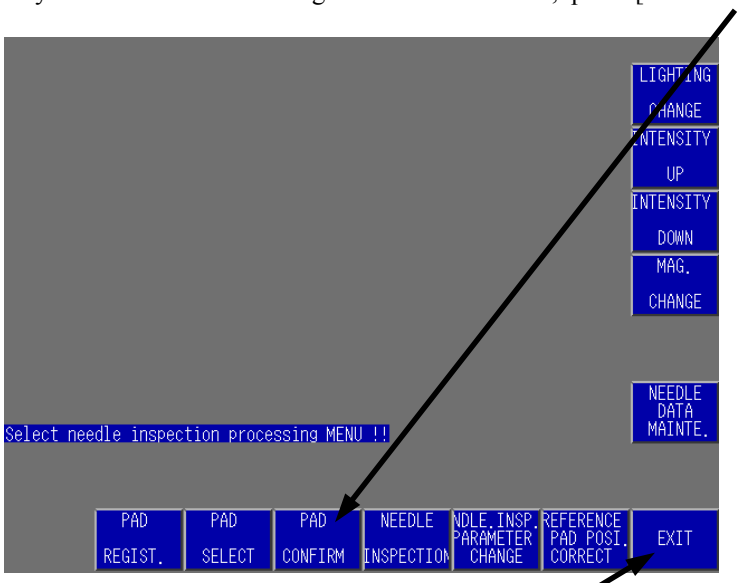


[WINDOW TRAVL.STEP CAHNGE] : Allows you to change Cross mark moving speed.
[Arrow key] : Allows you to change WINDOW size.
(Cross mark moves.)
[WINDOW TRAVL.MODE CHANGE] : Allows you to move Cross mark position.
[PAD SEARCH] : Allows you to search pad by automatic.

2. After you register pad position data , push [PAD REGIST. END] Switch.



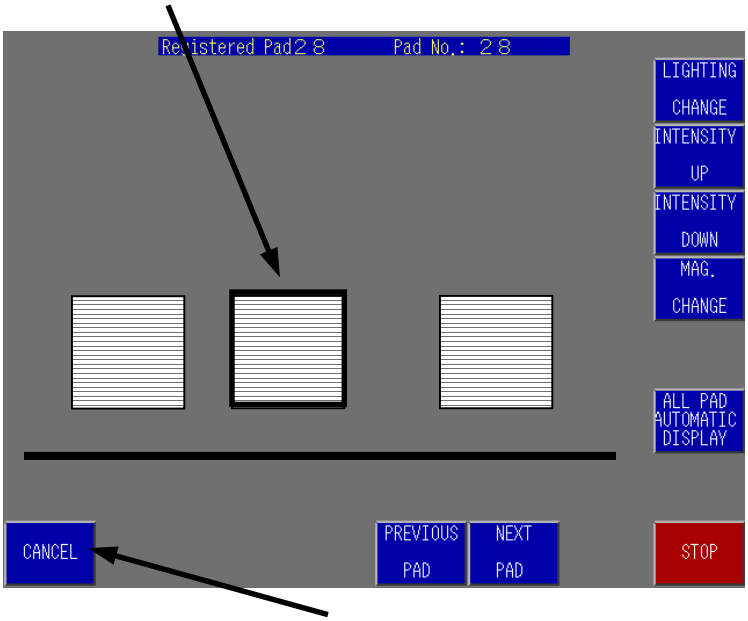
3. If you need to confirm Registered Pad Position, push [PAD CONFIRM] Switch.



If you need to start needle alignment , push [EXIT] Switch.

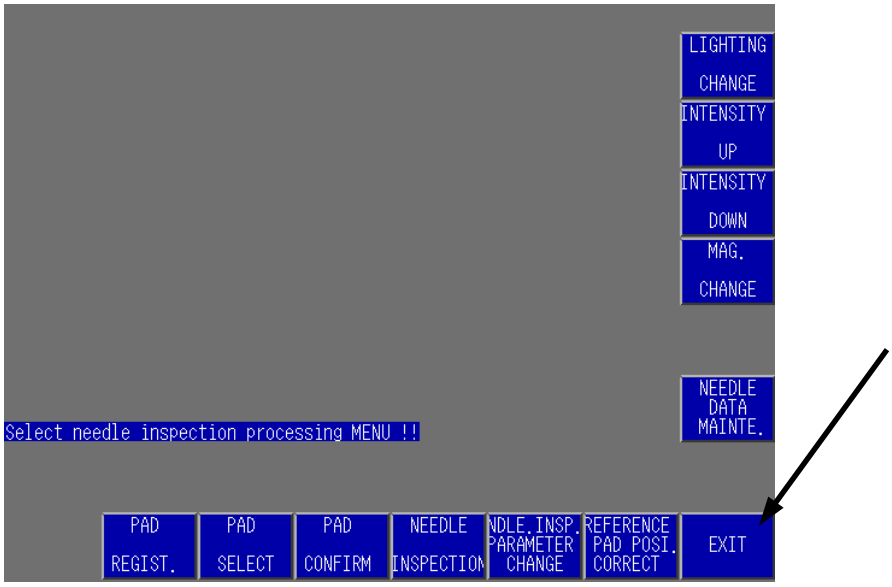
Confirm Pad Position

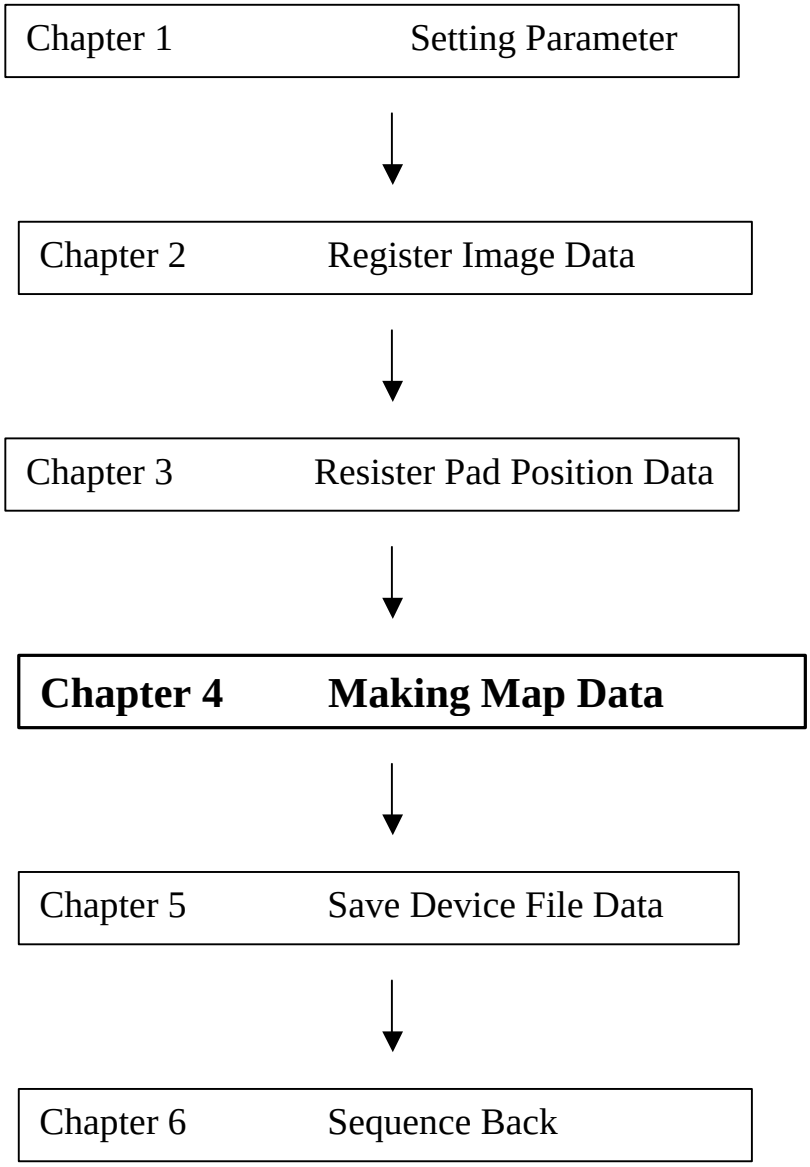
1. Push [NEXT PAD] or [PREVIOUS PAD] Switch.
   Registered window is moved by that Switch.



2. After confirmation , push [CANCEL] Switch.

3. Push [EXIT] Switch.

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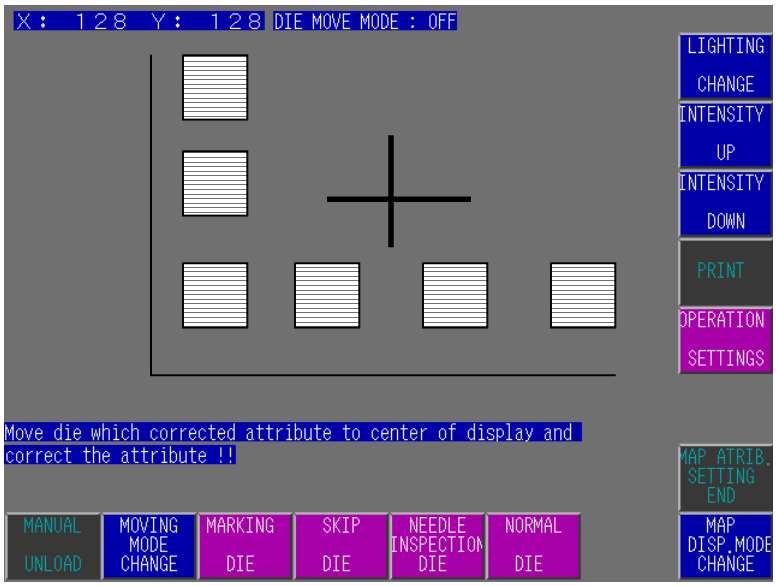
Chapter 4. Making Map Data

- Wafer Shape Width mode
- Wafer Radius mode
- Range Directly mode
- 4 Pt data in mode

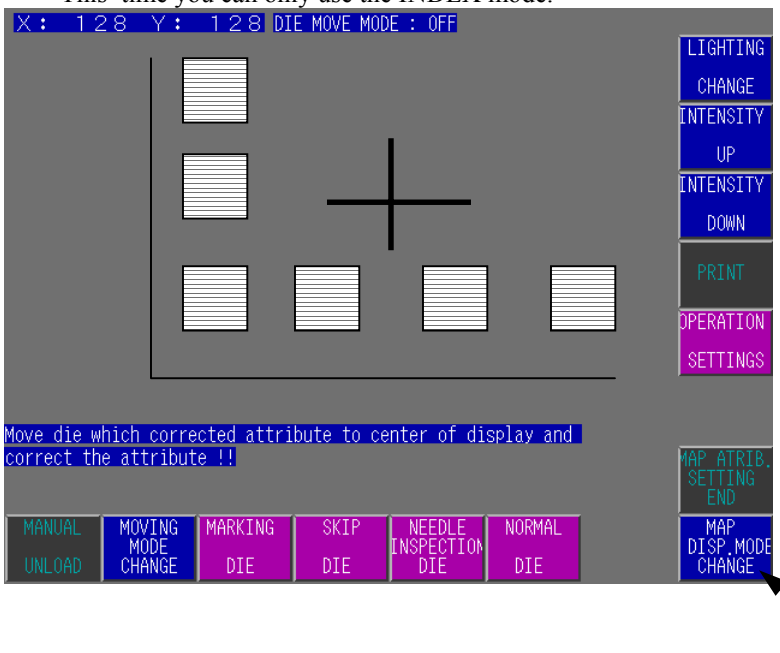
Instructions for switches



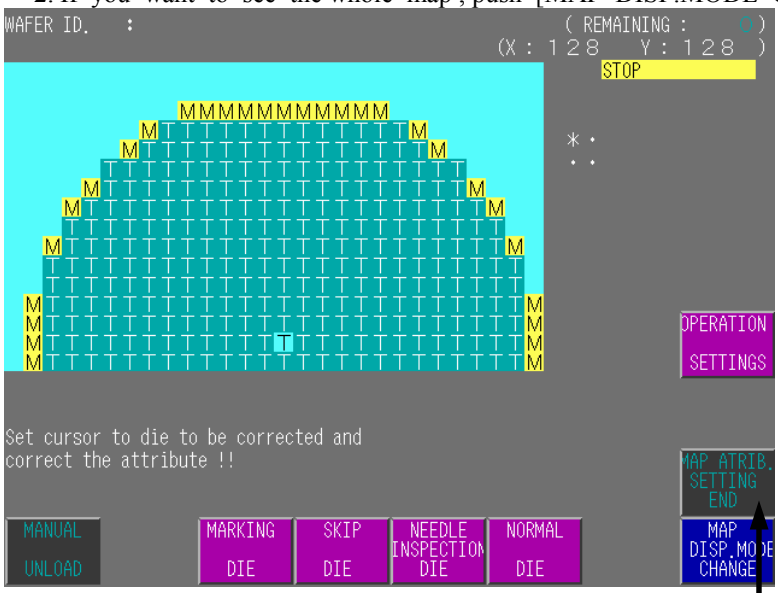
[MOVING MODE CHANGE]SW : Allows you to see each corner.
[MARKING DIE] SW. : Allows you to set Marking(Inking) die.
[SKIP DIE]SW. : Allows you to set Skip die.
[NEEDLE INSPECTION DIE] SW. : Allows you to set Needle Inspection die.
[NORMAL DIE] SW. : Allows you to set Normal(Probing) die.
[MAP DISP.MODE CHANGE] SW. : Allows you to see whole map.
[MAP ATRIB.SETTING END] SW. : Allows you to finish making map.

Wafer Shape Width Mode

1. Prober stops and buzzer sounds, after needle alignment.
   Push J/S.
   Move CROSS MARK to die by J/S as you want to modify die (skip , marking , probing).
   This time you can only use the INDEX mode.



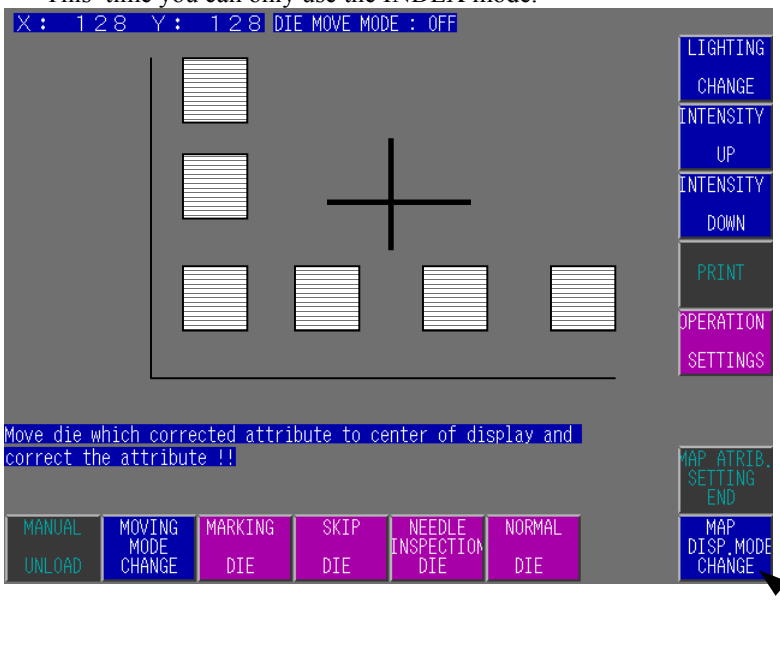
2. If you want to see the whole map , push [MAP DISP.MODE CHANGE] Switch.



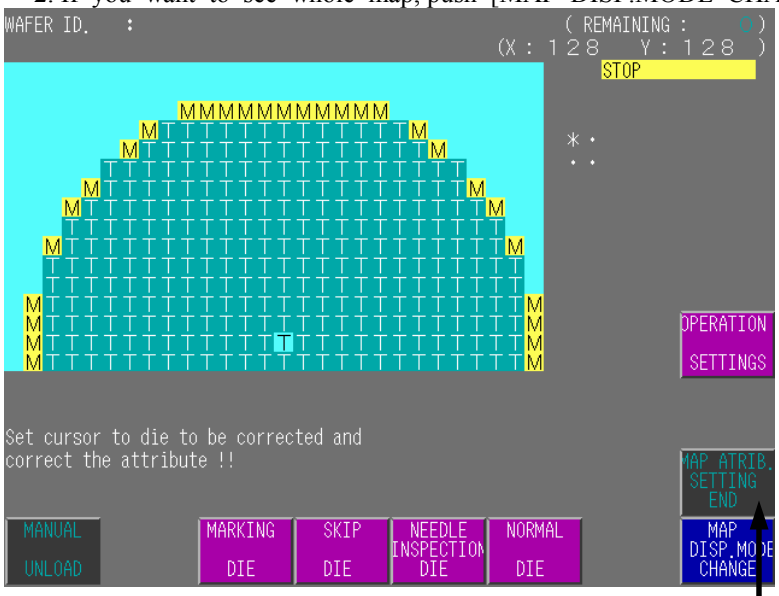
3. After you confirm the map, push [MAP ATRIB. SETTING END] Switch.

Wafer Radius Mode

1. Prober stops and buzzer sounds, after needle alignment.
   Push J/S.
   Move CROSS MARK to die by J/S as you want to modify die (skip , marking , probing).
   This time you can only use the INDEX mode.



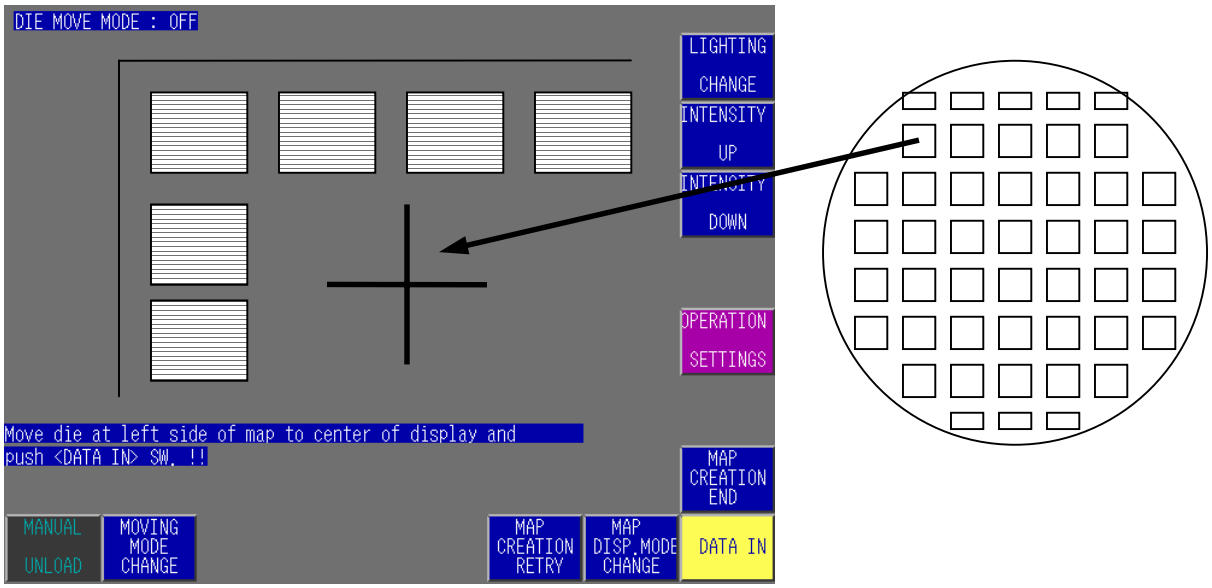
2. If you want to see whole map, push [MAP DISP.MODE CHANGE] Switch.



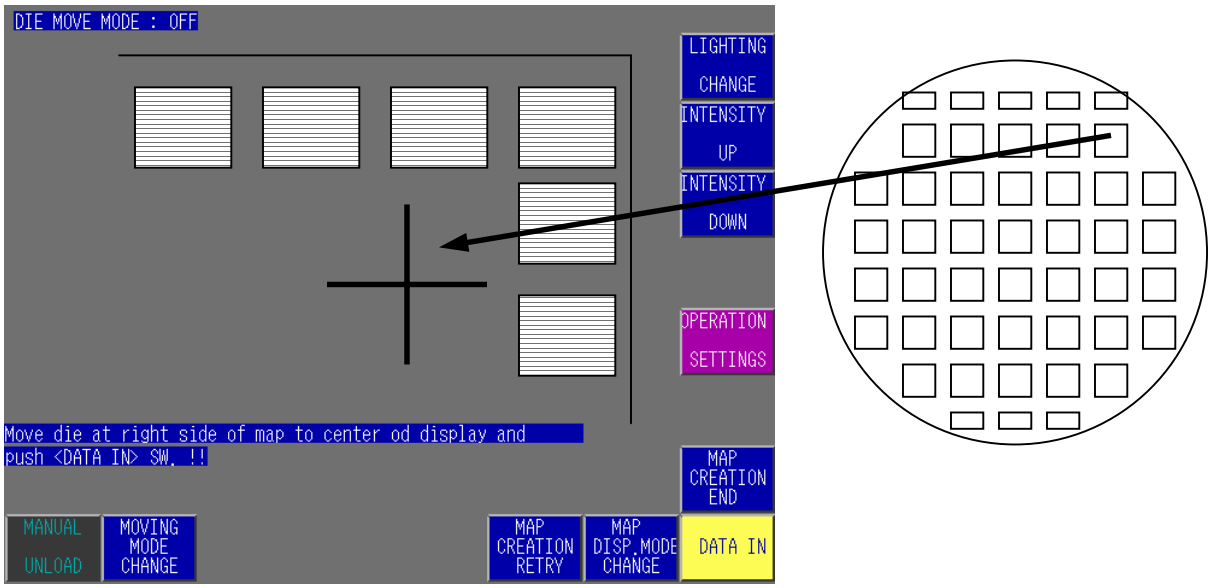
3. After confirm map , push [MAP ATRIB. SETTING END] Switch.

Range Directly Mode

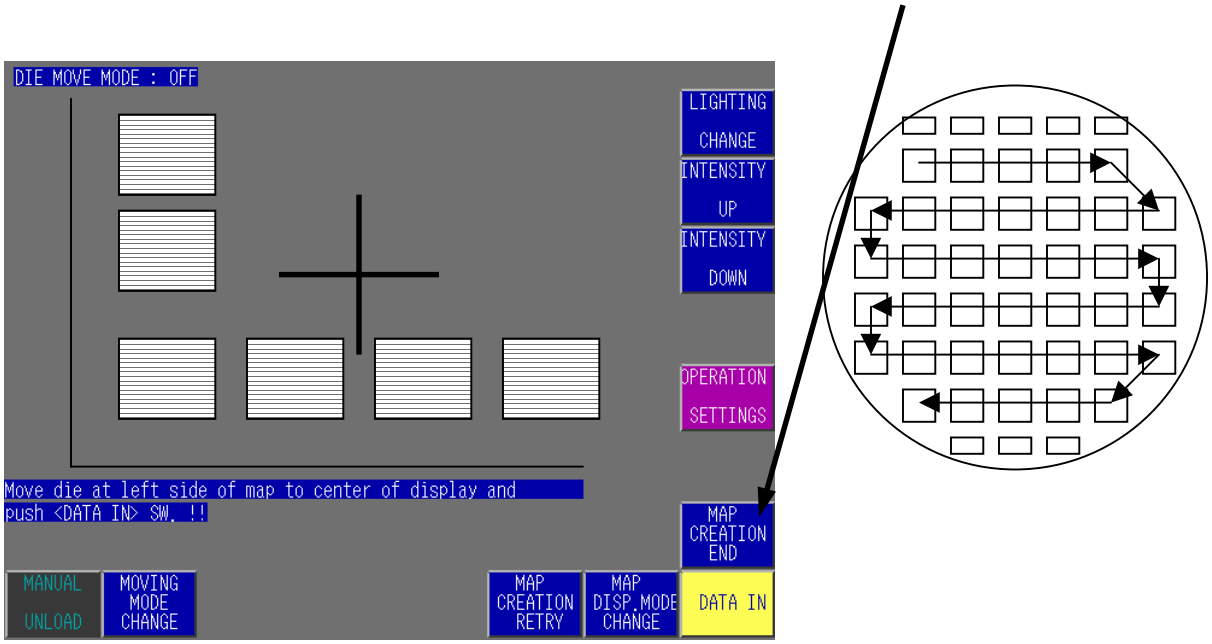
1. Prober stops and buzzer sounds, after needle alignment.
   Push J/S.
   Move CROSS MARK to the top of the left side of wafer map.
   Push [DATA IN] Switch.
   This time you can only use the INDEX mode.



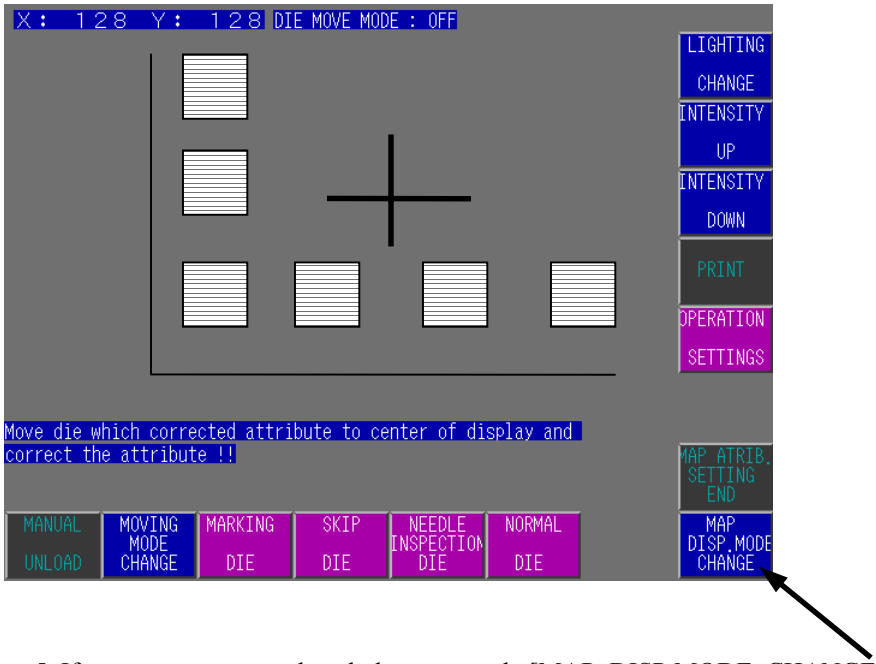
2. CROSS MARK is moved to right side automatically.
   Push [DATA IN] Switch, after confirming that the die is right side die.



3. CROSS MARK is moved side by side.
   Push [DATA IN] Switch row by row.
   After CROSS MARK reaches the bottom row , push [MAP CREATION END] Switch.

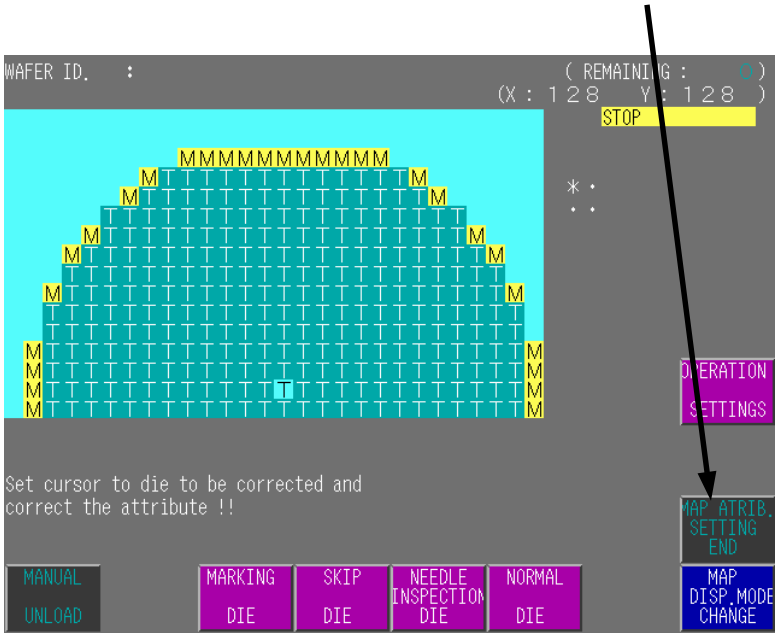


4. Move CROSS MARK to die by J/S as you want to modify die (skip , marking , probing).
   This time you can only use the INDEX mode.



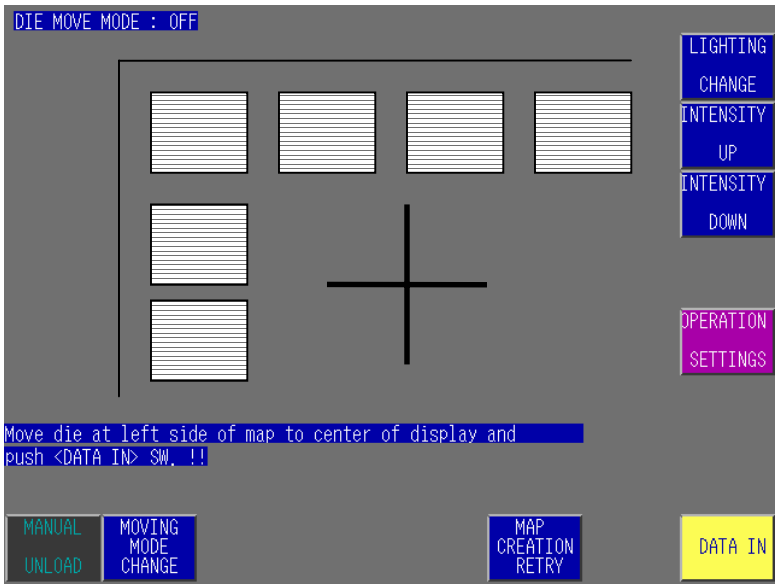
5. If you want to see the whole map, push [MAP DISP.MODE CHANGE] Switch.

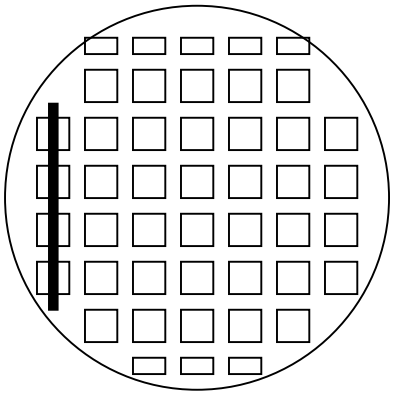
6. After confirming map , push [MAP ATRIB. SETTING END] Switch.



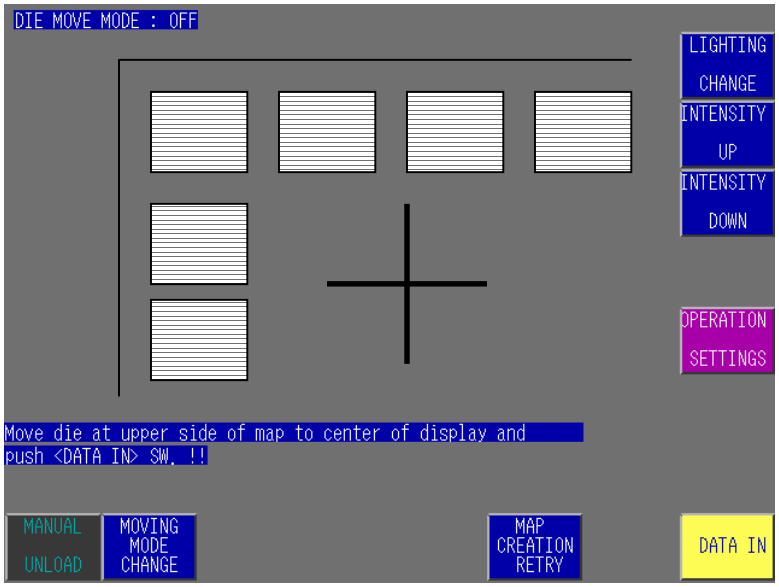
4 Point Data In Mode

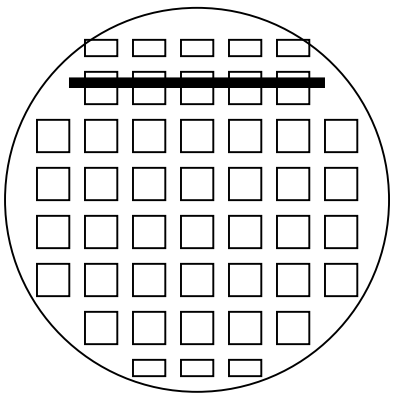
1. Prober stops and buzzer sounds, after needle alignment.
   Push J/S.
   Move CROSS MARK to left side of wafer map.
   Push [DATA IN] Switch.
   This time you can only use the INDEX mode.



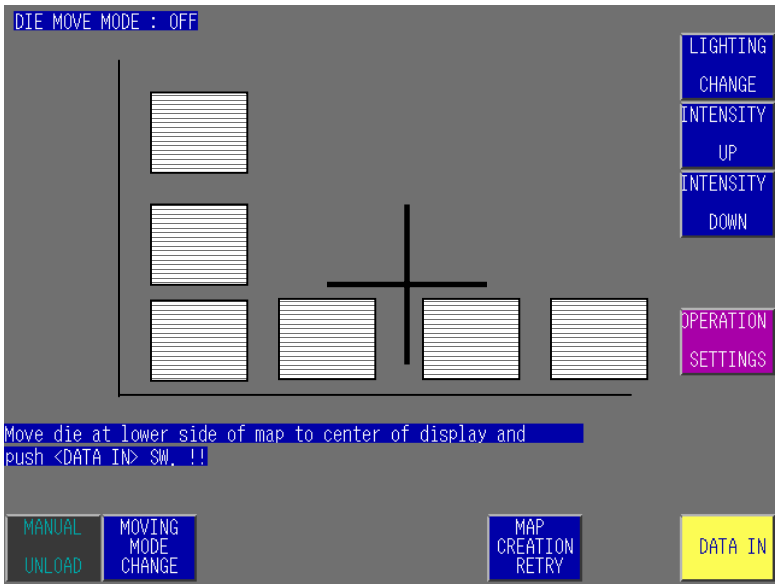


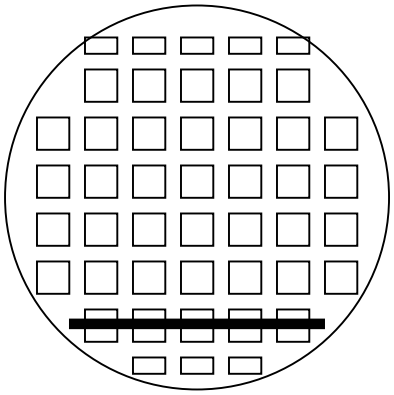
2. Move CROSS MARK to top of wafer map.
   Push [DATA IN] Switch.
   This time you can only use the INDEX mode.



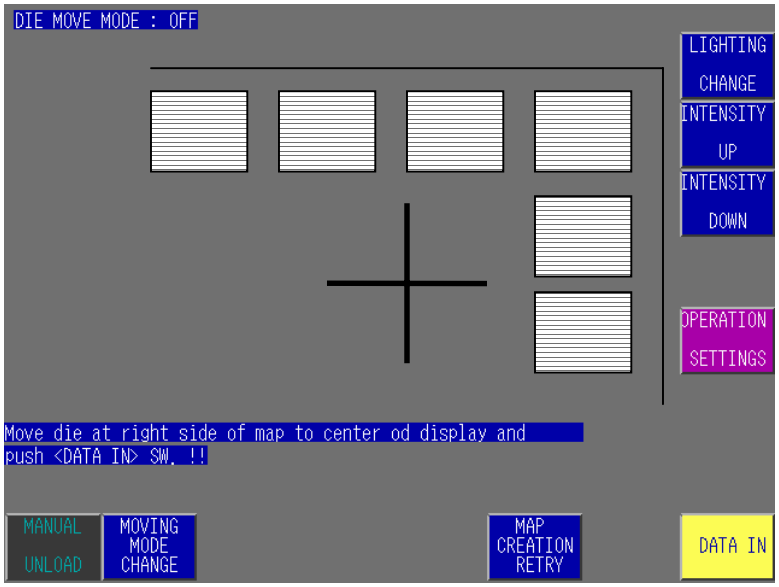


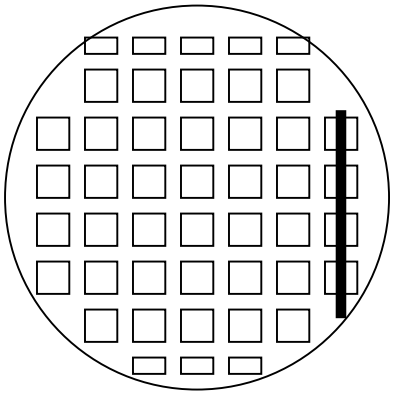
3. Move CROSS MARK to bottom of wafer map.
   Push [DATA IN] Switch.
   This time you can only use the INDEX mode.



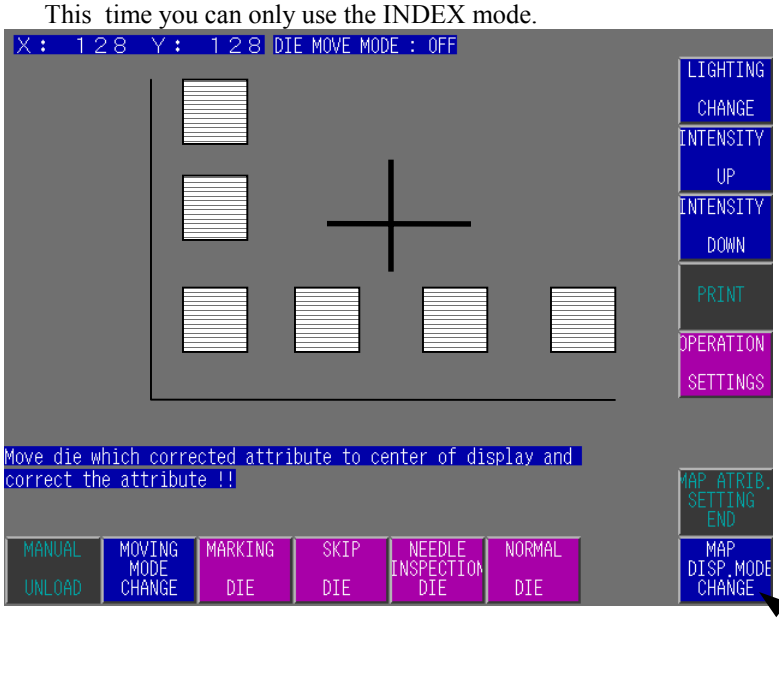


4. Move CROSS MARK to right side of wafer map.
   Push [DATA IN] Switch.
   This time you can only use the INDEX mode.

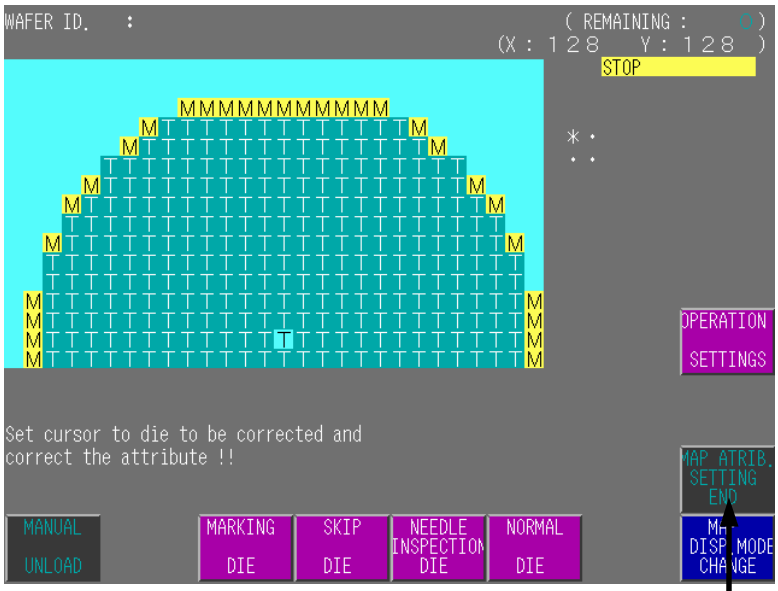




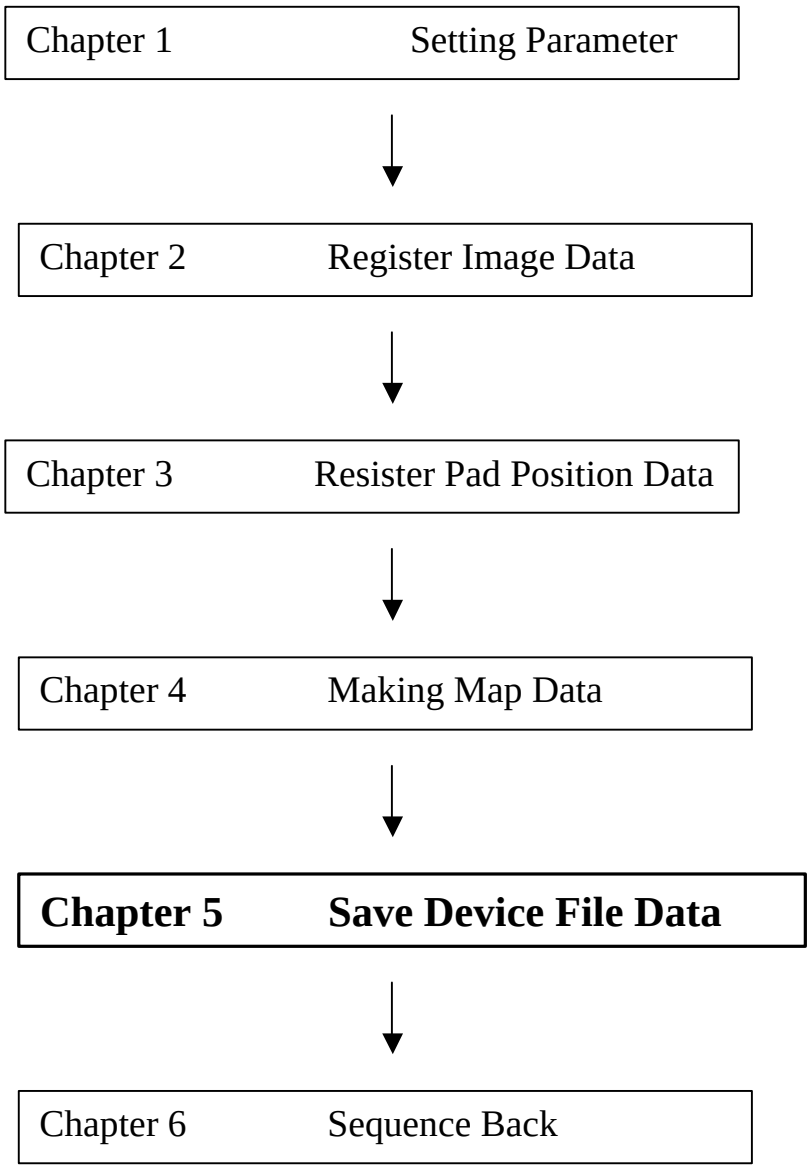
5. Move CROSS MARK to die by J/S as you want to modify die (skip , marking , probing). This time you can only use the INDEX mode.



6. If you want to see the whole map, push [MAP DISP.MODE CHANGE] Switch.



7. After confirming map, push [MAP ATRIB. SETTING END] Switch.

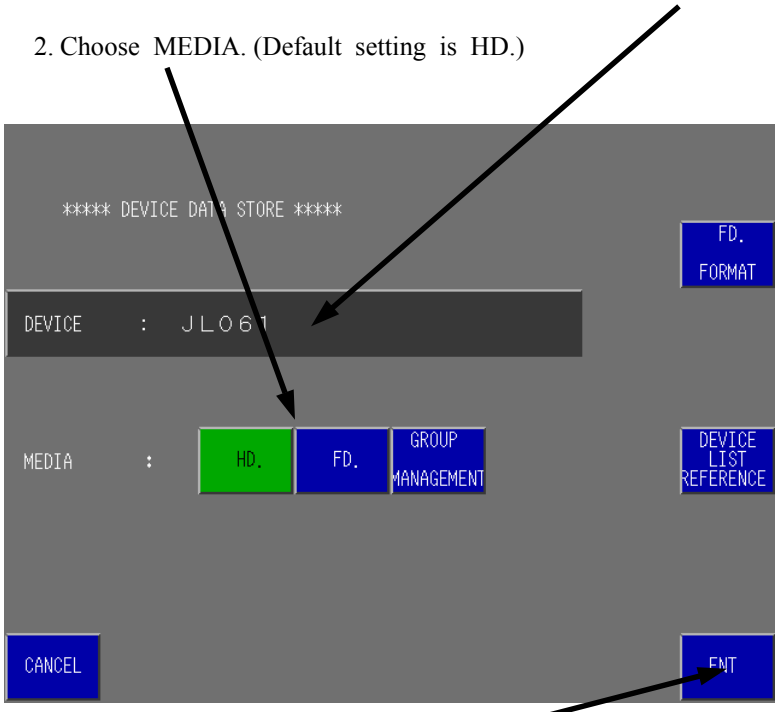

Chapter 1 Setting Parameter
Chapter 2 Register Image Data
Chapter 3 Resister Pad Position Data
Chapter 4 Making Map Data
Chapter 5 Save Device File Data
Chapter 6 Sequence Back

Chapter 5. Save Device File Data

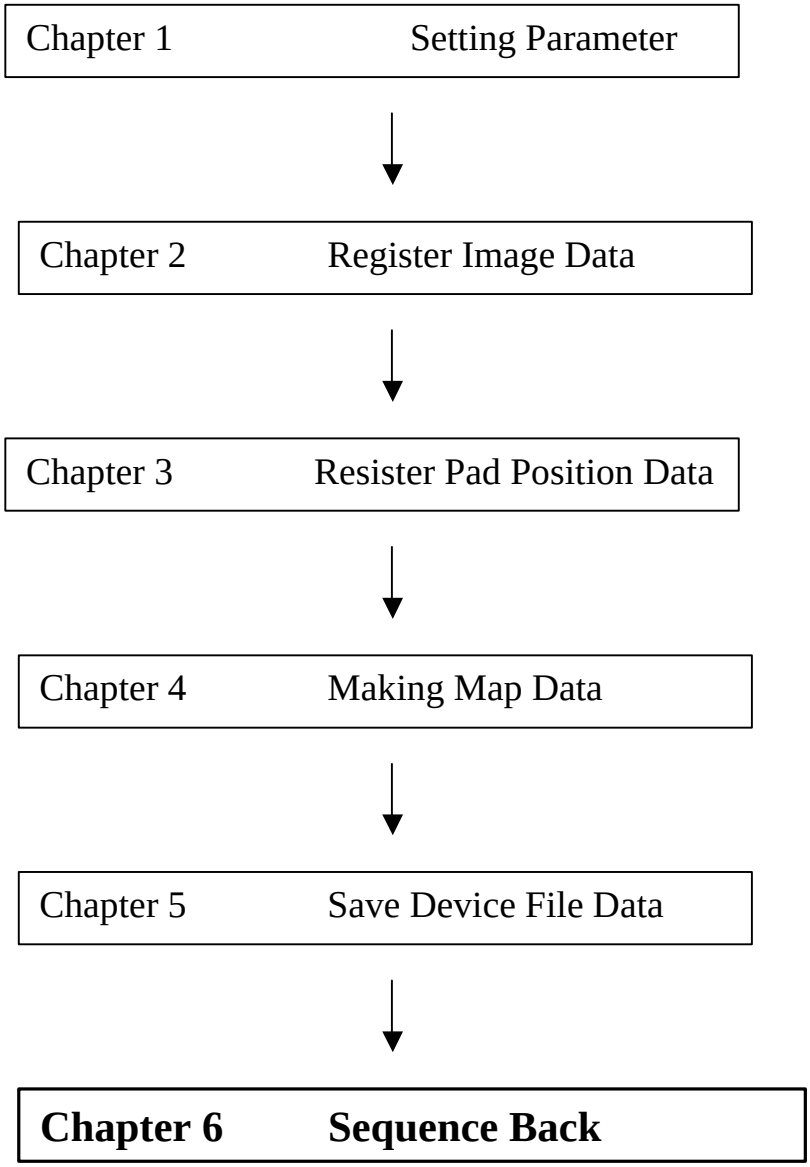
Instructions for saving device files

1. Check DEVICE name.
   If you need to change DEVICE name , push [DEVICE :] Switch. and type new DEVICE name.

2. Choose MEDIA. (Default setting is HD.)

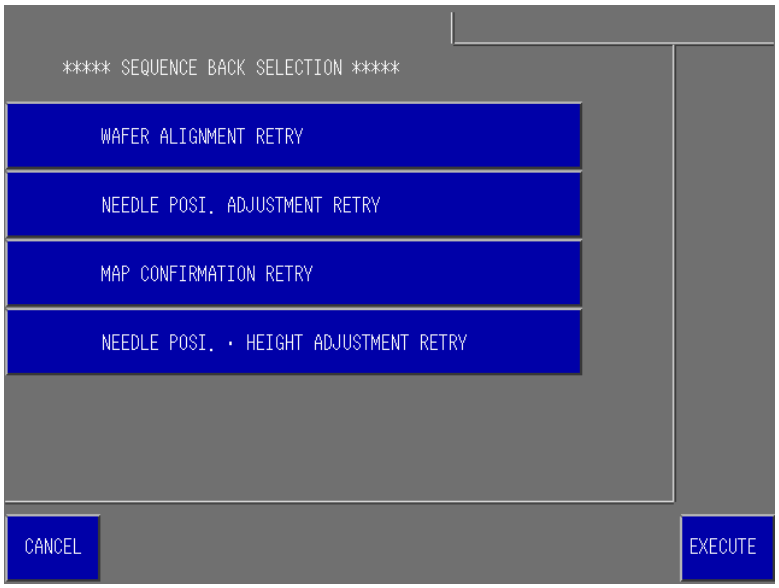


3. Push [ENT] Switch.


Chapter 1 Setting Parameter
Chapter 2 Register Image Data
Chapter 3 Resister Pad Position Data
Chapter 4 Making Map Data
Chapter 5 Save Device File Data
Chapter 6 Sequence Back

Chapter 6. Sequence Back

Instructions for Sequence Back Switch.



[WAFER ALIGNMENT RETRY] : Prober does wafer alignment again and starts probing.

[NEEDLE POSI. ADJUSTMENT RETRY] : It adjustments needle position again.

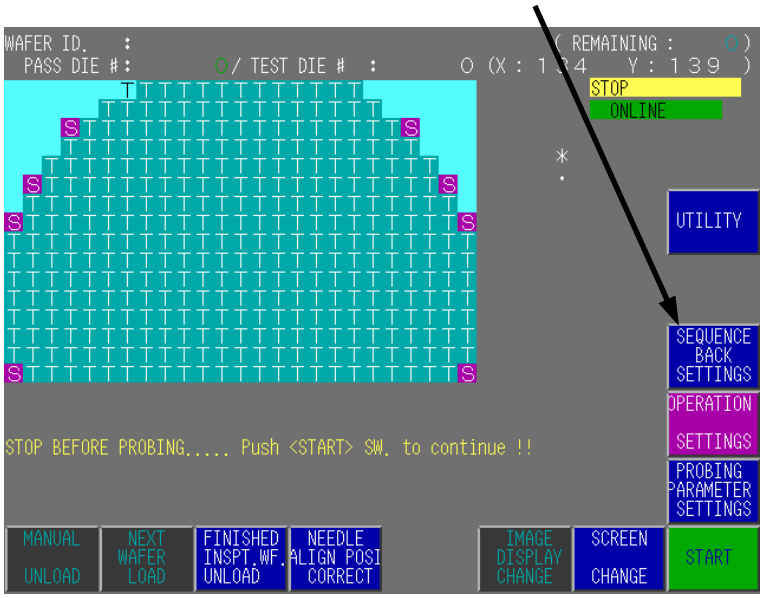
[MAP CONFIRMATION RETRY] : Modifies wafer map.

[NEEDLE POSI. HIGHT ADJUSTMENT RETRY] : Prober does needle alignment again.

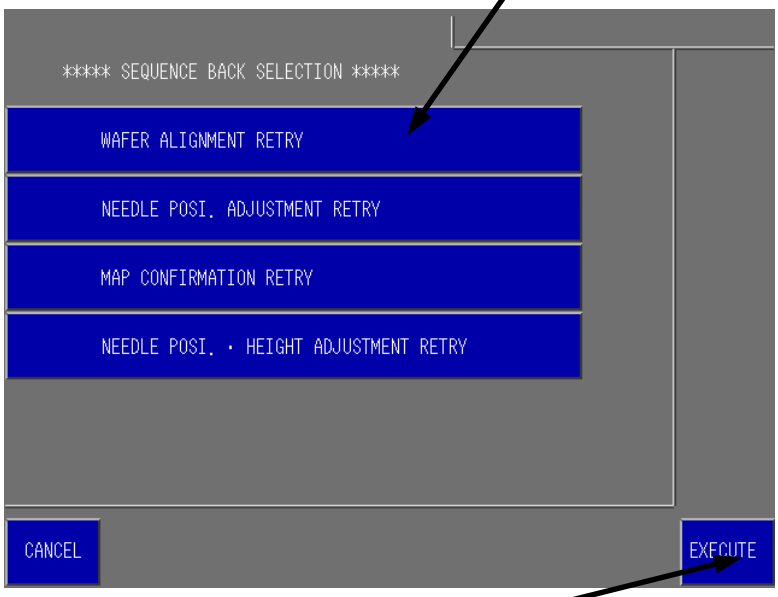
Example (How to use Sequence Back Function)

> Wafer Alignment Retry

>> Stop probing.
>> Push [SEQUENCE BACK SETTINGS] Switch.



>> Push [WAFER ALIGNMENT RETRY] Switch.



>> Push [EXECUTE] Switch.