8.7 "GET" and "PUT"

⚠	**⚠ CAUTION**
	"GET" / "PUT" is the robot arm operation to get / put the wafer. Erroneous operation of "GET" / "PUT" may cause of damage of the robot arm and wafer. Also it may cause of damage and performance decrement of the equipment.
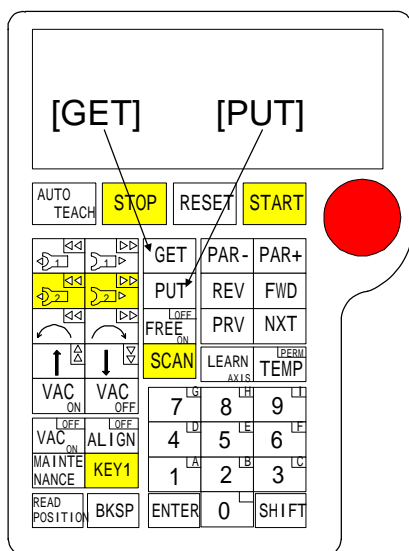
TEACH PENDANT

The function of "GET":
  Simulates the robot arm gets a wafer from the specified places (cassette or aligner)
  You can specify the slot number to get the wafer.

The function of "PUT":
  Simulates the robot arm puts a wafer to the specified place (cassette, aligner and chuck table)
  You can specify the slot number to put the wafer.

<Objectives of "GET" / "PUT">
  The robot arm motions are shown below during auto operation.
      (1) "GET" the wafer from the cassette.
      (2) "PUT" the wafer to the aligner pad.
      (3) "GET" the wafer from the aligner after the alignment has finished.
      (4) "PUT" the wafer onto the chuck table.
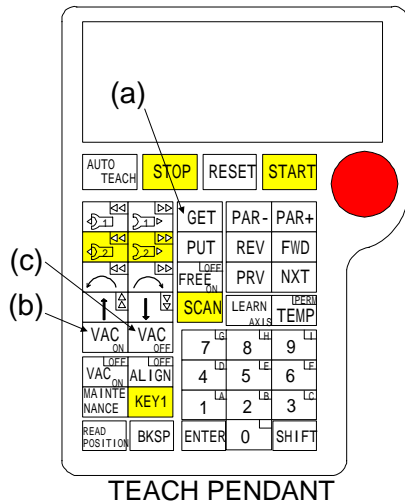   (5) "PUT" the wafer into the cassette.

  "GET" and "PUT" are to judge the robot arm motions are correct or not.
  Keep the following rules.
        - Do not simulate the robot motion that is not done actually.
          (Example: After getting the wafer from the cassette, puts the wafer on the chuck table)
        - Perform the alignment after the wafer is put on the aligner.

8.7 "GET" and "PUT" (Continued)

<Keys for "GET">

TEACH PENDANT

(a) [GET] key:
   Pressing the key selects the position where the robot arm gets the wafer.
(b) [VAC$_{ON}$] key:
   Pressing the key turns on vacuum of the robot arm.
(c) [VAC$_{OFF}$] key:
   Pressing the key turns off the vacuum of the robot arm.
   To release the wafer from the robot arm, press this key.

<"GET" Procedure>
Perform "8.2 Preparation for robot teaching".

(1) Place a wafer to the slot you want to get with the robot, and set the cassette on the cassette table.

(2) Press [RESET] key to move the robot to the original point.

(3) Press [AUTO / TEACH] key to switch "RANDOM" to "THCRBT" mode.

(4) Enter "746" and press [OK]. The robot arm vacuum is turned on.

(5) Press "GET" key (a).

(6) Enter "Cass / Stage" to "GET", and press [ENTER] key.

(7) Enter "Slot" (lowest slot = 1st slot).
   Enter "0" when the robot gets the wafer from the aligner.

(8) Press [ENTER] key to perform "GET".

   * In the case of "Slot = 0":
   Pressing [ENTER] key indicates "T=".
   Select appropriate mode from T1, T2, and T3, then press [ENTER] key.

<"GET" Procedure>

TCHRBT

⇩ [GET]

GET
Cass / Stage =

⇩ [4], [ENTER]

GET
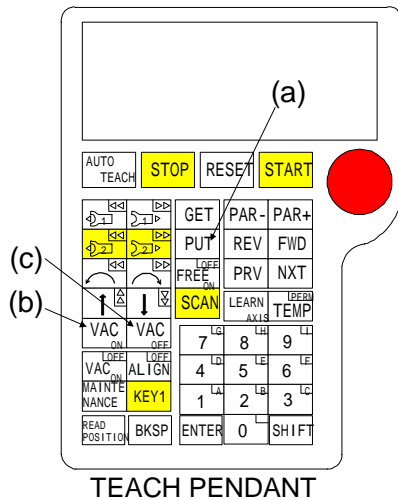Cass / Stage = 4
        Slot =

⇩ [10], [ENTER]

GET
Cass / Stage = 4
        Slot = 10

⇩ [ENTER]

The robot arm gets the wafer.

8.7 "GET" and "PUT" (Continued)

<Keys for "PUT">

TEACH PENDANT

(a) [PUT] key:
Pressing the key selects the position where the robot arm puts the wafer.

(b) [VAC_ON] key:
Pressing the key turns on vacuum of the robot arm.

(c) [VAC_OFF] key:
Pressing the key turns off the vacuum of the robot arm.
To release the wafer from the robot arm, press this key.

<"PUT" Procedure>

Perform the operation with the robot arm chucking the wafer.

Perform "8.2 Preparation for robot teaching".

(1) Confirm the slot to "PUT" the wafer is empty, and set the cassette on the cassette table.

(2) Press "PUT" key (a).

(3) Enter "Cass / Stage" to "PUT", and press [ENTER] key.

(4) Enter "Slot" (lowest slot = 1st slot).
Enter "0" when the robot puts the wafer to the aligner and chuck table.

(5) Press [ENTER] key to perform "PUT".

 * In the case of the "Slot = 0":
Press [ENTER] key indicates "T=".
Select appropriate mode from T1, T2, and T3, then press [ENTER] key.

<"PUT" Procedure>

```
TCHRBT
```

⇩ [GET]

```
PUT
Cass / Stage =
```

⇩ [4], [ENTER]

```
PUT
Cass / Stage = 4
        Slot =
```

⇩ [10], [ENTER]

```
PUT
Cass / Stage = 4
        Slot = 10
```

⇩ [ENTER]

The robot arm puts the wafer

8.7 "GET" and "PUT" (Continued)

<Table 1>

CASS. #	Wafer size	Cassette table	Cass / Stage	Slot
CASS 1	4-inch	Right	1	Enter the slot number of the cassette. (The lowest slot = 1st slot)
CASS 2	5-inch		2	
CASS 3	6-inch		3	
CASS 4	8-inch		4	
CASS 5	4-inch	Left	5	
CASS 6	5-inch		6	
CASS 7	6-inch		7	
CASS 8	8-inch		8	
CASS 9	4-inch	Right	9	
CASS 10	5-inch		10	
CASS 11	6-inch		11	
CASS 12	8-inch		12	
CASS 13	4-inch	Left	13	
CASS 14	5-inch		14	
CASS 15	6-inch		15	
CASS 16	8-inch		16	
CASS 17	4-inch	Right	17	
CASS 18	5-inch		18	
CASS 19	6-inch		19	
CASS 20	8-inch		20	
CASS 21	4-inch	Left	21	
CASS 22	5-inch		22	
CASS 23	6-inch		23	
CASS 24	8-inch		24	

STAGE #	STAGE POISITION	Cass / Stage	Slot
STAGE 1	Aligner GET / PUT	1	0
STAGE 2	Chuck table PUT	2	0
STAGE 6	CHUCK TABLE GET	6	0