

Denso Robotics

RC8/RC8A Calset Procedure

****Attention****

Read this resource material carefully and in its entirety before use to ensure it is understood and used properly. Failure to properly follow the instructions in the resource materials DENSO provides may result in damage to your equipment. As a result, by using the resource materials, you are assuming the risks associated with modifying your equipment. DENSO holds no liability, implied or otherwise, for damage, injury or any legal responsibility incurred, directly or indirectly from the use of the resource materials, including any loss of data or damage to property which may occur by your use of the resource materials. The use of the resource materials is not recommended unless you have technical knowledge and functional experience with the equipment and related software. DENSO is unable to provide support, remote or otherwise, for the information included in the resource material, nor for the ancillary topics relating to the information included in the resource materials. Therefore, if you are not fully comfortable with it, we strongly recommend that you send your unit to one of our Regional Support Centers for repair. The information contained in the resource materials are subject to change at the sole discretion of DENSO.

Necessary Equipment

- RC8/8A Controller with Teach Pendant

CALSET Operation Method:

CALSET refers to calibration of relationship between the position data recognized by robot and actual robot position. CALSET is necessary when position data in encoder was erased after the motor was replaced, or the encoder backup batteries are dead. Executing CALSET will restore the robot calibration data in the controller. This data is referred to as CALSET data. The CALSET data varies for each robot.

CAUTION:

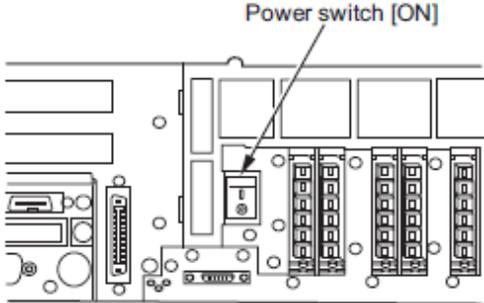
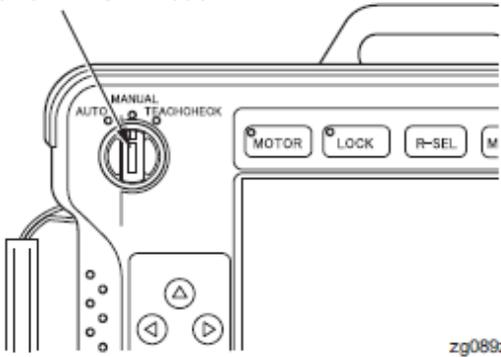
After completing CALSET, make sure, using manual operation, that the axis stops immediately before they touch the mechanical end by the software limit.

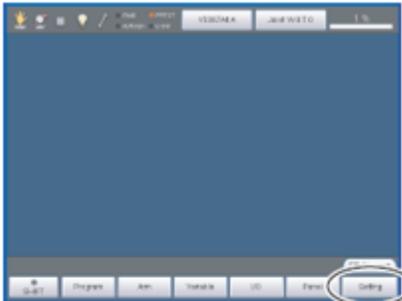
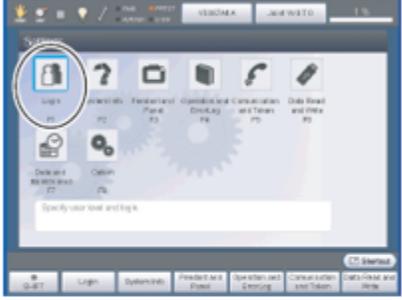


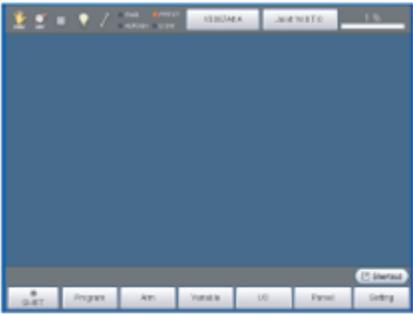
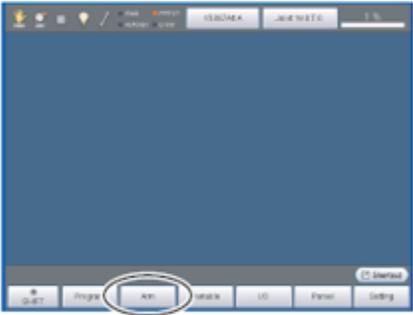
Contents

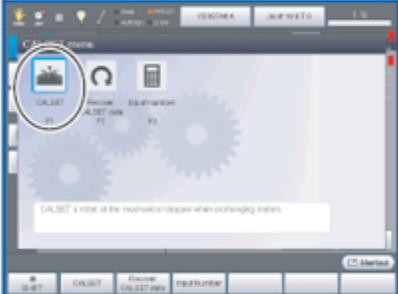
1. CALSET Operation Procedure.....	5
------------------------------------	---

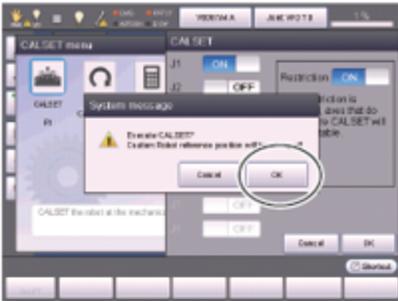
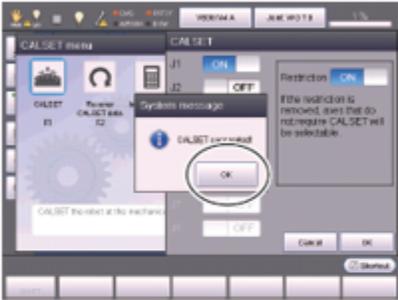
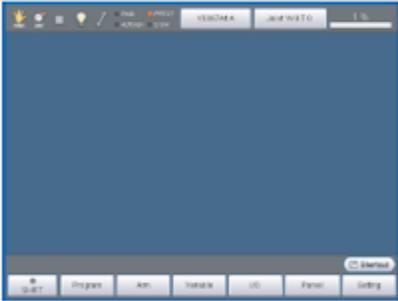
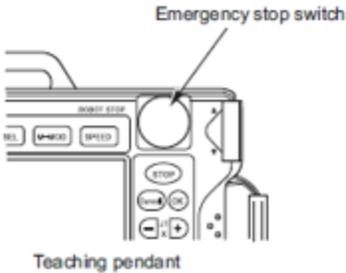
1. CALSET Operation Procedure

No.	Procedure	Illustration
1	Turn on the power switch on the controller.	 <p>The diagram shows a control panel with a power switch labeled "Power switch [ON]". The switch is a rectangular button with a power symbol (a circle with a vertical line) and is located in the center of the panel. To the right of the switch are several vertical slots, likely for modules or connectors. The label "zp1088z" is located in the bottom right corner of the illustration area.</p>
2	Set the mode selector switch on the teaching pendant to MANUAL.	 <p>The diagram shows a teaching pendant with a mode selector switch labeled "Set to MANUAL mode". The switch is a rotary switch with three positions: "AUTO", "MANUAL", and "TEACH/HECK". The "MANUAL" position is indicated by an arrow. To the right of the switch are four buttons: "MOTOR", "LOCK", "R-SEL", and "M". Below the switch are three buttons: a triangle, a left arrow, and a right arrow. The label "zg089z" is located in the bottom right corner of the illustration area.</p>

No.	Procedure	Illustration
3	Push [F6 Setting] on the pendant screen.	 <p>zp1186z</p>
4	Push [F1 Login].	 <p>zp1187z</p>
5	Select [Maintainer].	 <p>zp1188z</p>
6	Enter security code: 5593589. Then press [OK].	 <p>Enter security code: 5593589. zp1189z</p>

No.	Procedure	Illustration
7	Push [Cancel] to return to the opening screen.	 <p>zp1190z</p>
8	Release the axis motor brake for which CALSET is being performed. Caution: This operation will cause the robot to move by its own weight. Hold the robot by hand for safe operation, so that the robot does not impact peripheral devices.	
9	Manually move the corresponding axis to the mechanical end of the CALSET position. (For CALSET position see the Service Manual of each robot.)	
10	Push [F2 Arm]	 <p>zp1191z</p>
11	Push [SHIFT]	 <p>zp1192z</p>

No.	Procedure	Illustration
12	Push [F6 Maintenance]	 <p>zp1193z</p>
13	Push [F7 CALSET]	 <p>RD02094</p>
14	Push [F1 CALSET]	 <p>zp1203z</p>
15	<p>On the CALSET screen set the axis for which CALSET is to be executed to [ON] and then push [OK]</p> <p>The default is in the condition that only the axis requiring CALSET 9example: an axis that an encoder reset was executed) can be selected.</p> <p>To select an axis that CALSET is not required, set the restriction button at the top right to [OFF]</p>	 <p>RD02095</p>

No.	Procedure	Illustration
16	Push [OK]	 <p>RD02096</p>
17	Push [OK]	 <p>RD02097</p>
18	Push [Cancel] three times to return to the opening screen.	 <p>zp1185z</p>
19	Push the emergency stop switch on the teaching pendant to lock the motor brake of all axis. (After locking, release the emergency stop switch.)	 <p>Emergency stop switch</p> <p>Teaching pendant</p> <p>zp1178z</p>

No.	Procedure	Illustration
20	<p>Operate the axis for which CALSET has been executed at full stroke, and make sure that error of number 82204010s (software limits) appears immediately before the axis touches the mechanical end. CAUTION:</p> <p style="text-align: center;">Make sure the area around the robot is safe, and then set the operation speed to 20% or less.</p>	