

DOCUMENT TITLE: **TEST PROC.,2690 CAROUSEL/CARRIER MECH**

SYSTEM/ASSEMBLY NAME: **269X CCD MECHANISM**

PART NUMBER AFFECTED **WAT271290, WAT270928**

TEST EQUIPMENT NAME: **ALLIANCE CCD TESTER**

TEST EQUIPMENT NUMBER: **TE82520 (TOOL 119828)**

TEST SOFTWARE:



AUTHOR(S): **STEPHEN WRIGHT**

DATE: **September 01, 2000**

REVISED BY: **CHAU NGUYEN**

DATE: **October 10, 2017**

EQUIPMENT REQUIRED

Quantity	Part Number	Description
1	TE82520 / 119828	Alignment Fixture, 2690 Carousel/Carrier Mechanism
1		Torx Driver, T10
1	WAT073970	Label, Tested

SPECIFICATIONS

- The ram should be positioned 1.90 inches above the skid plate in the **alliance**.
- When the carrier is correctly aligned, when after homing the carrier, the indicator falls within the 5/64" range of the simulated carousel 3 out of 3 times. See Figure 1.
- The indicator should be inline directly with the longest line on the modified carousel 'A'. See Figure 2.
- ID sensor verification

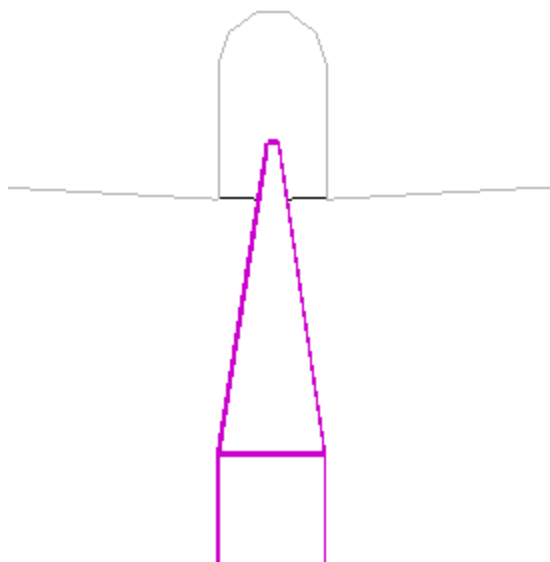


Figure 1

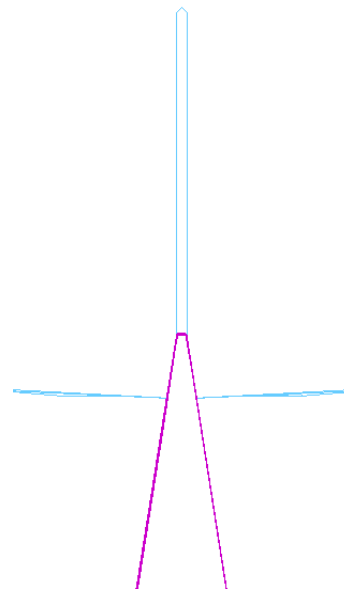
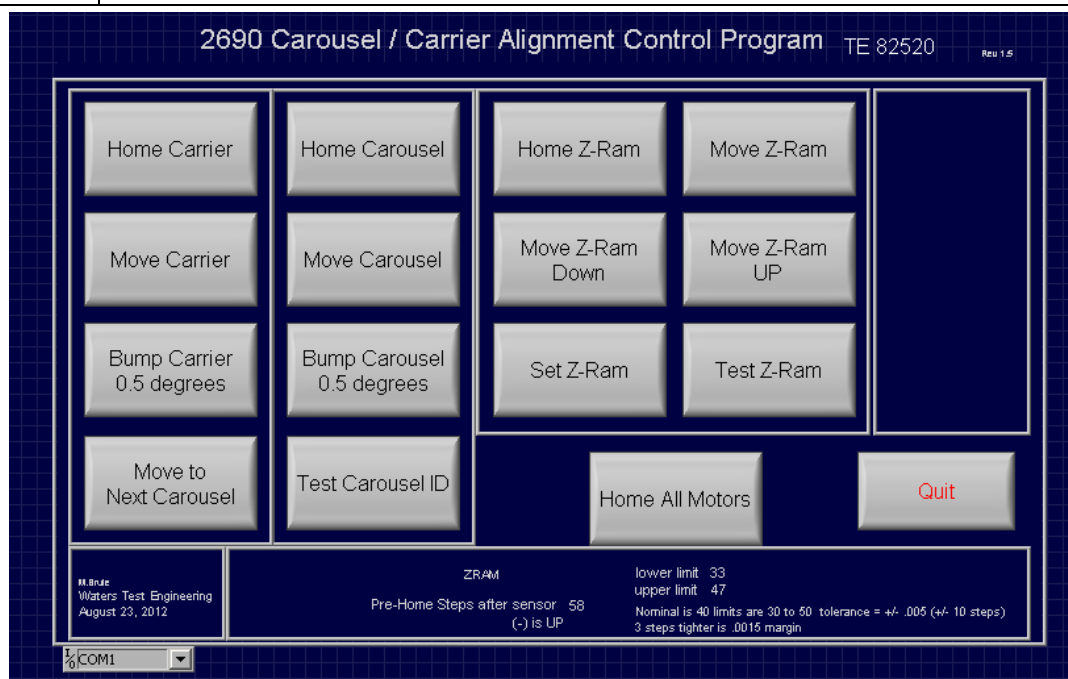


Figure 2

1. CONTROLLER USAGE

1.1. Each button performs the task as it is labeled.

Home Carrier	Homes the Carrier (make sure ZRAM is up)
Home Carousel	Homes the Carousel
Home ZRAM	Homes the ZRAM
Move Carrier	Moves the carrier the number of degrees specified (.5-359.5)
Move Carousel	Moves the carousel the number of degrees specified (.5-359.5)
Move to Next Carousel	Moves the Carrier 72 degrees to the next carousel position, (assumes already at a carousel position)
Move ZRAM	Moves ZRAM up or Down -1200 – 1200 steps
Move ZRAM Down	Moves ZRAM to bottom (1200 Steps)
Move ZRAM UP	Moves ZRAM to top (1200 Steps)
Bump Carrier 0.5 Degrees	Moves carrier 0.5 degrees
Bump Carrousel 0.5 Degrees	Moves carousel 0.5 degrees
Set ZRAM	Positions ZRAM for operator to set sensor
Test ZRAM	Verifies proper setting of sensor (ZRAM must be homed first!)
Test Carousel ID	Positions carousel with magnet under sensor so operator can verify
Home all Motors	Homes Carrier, carousel, and ZRAM
Quit	Stops and closes program



- 1.1. Wait for current task to complete before beginning another. Completion is indicated by lack of movement in the UUT **AND** controls not grayed out. Note that there may be a delay in controls becoming active after an action. The control is not interactive and the controller simply waits a predetermined amount of time before enabling the control.

2. UUT SETUP

- 2.1. *The top plate of the alignment fixture should be free and clear of all debris.*

Cleanliness of this top plate as well as the bottom surfaces of the UUT is very important to successfully setting the ZRAM home sensor correctly.

- 2.2. Place the UUT in the set up block.

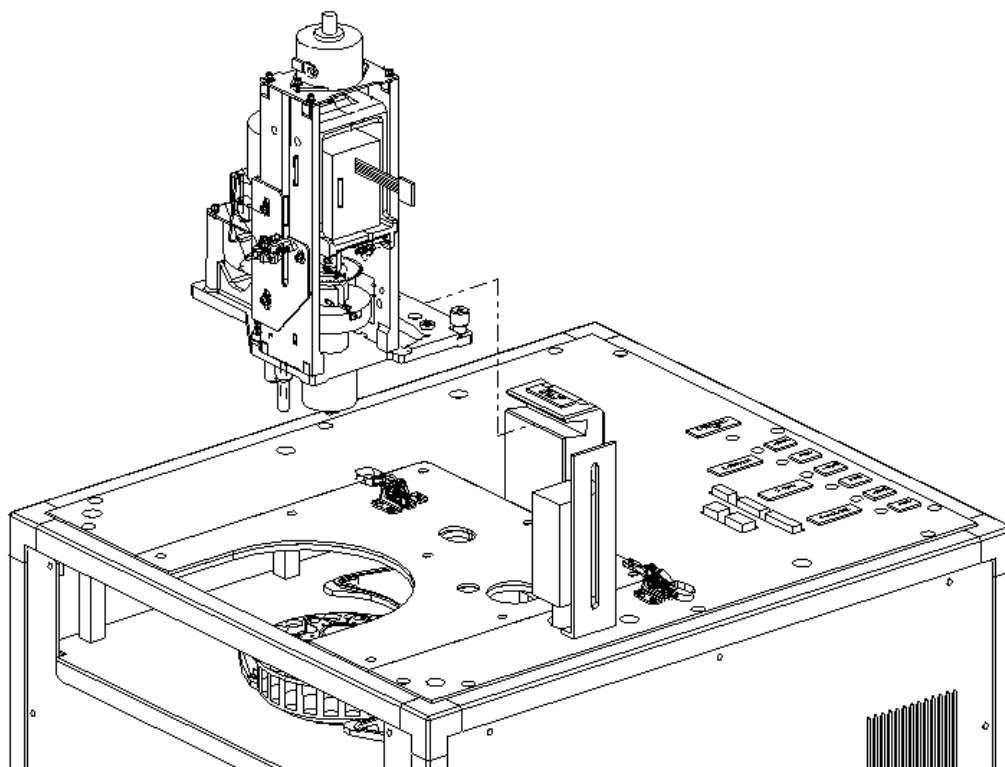


Figure 3

- 2.3. Plug in all connectors.
- 2.4. Power up the alignment fixture, computer and monitors.
- 2.5. Wait 45 seconds for initialization.
- 2.6. Carousel 'A' should be visible through opening in alignment fixture top plate, If not rotate carrier plate until carousel 'A' is in position.
- 2.7. Press the **HOME ALL MOTORS** button. All motors should home. This positions all motors close to their respective home positions, enabling installation of UUT into the fixture. Note that all home indicators may or may not be lit as the system is not adjusted and operating without load.
- 2.8. Being careful to align the slot in the carrier motor with the pin in the carrier, install the UUT in the fixture verify that it is sitting on the top plate and secure the two toggle clamps.

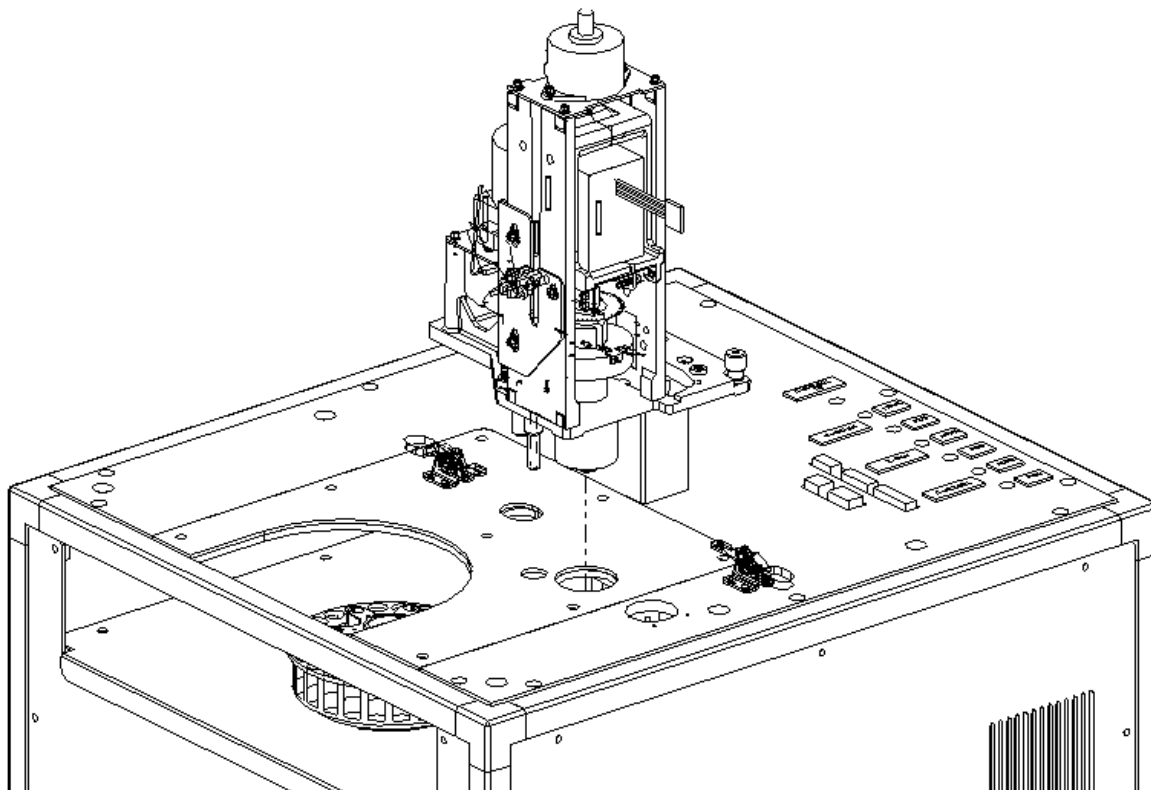


Figure 4

3. Z-RAM ADJUSTMENT

- 3.1. Press the **SET Z-RAM** key. This command will position the Z-RAM to the correct height.
- 3.2. When the Z-RAM is at the correct height, move the sensor bracket down until Z-RAM HOME light just barely turns on.
- 3.3. Slowly secure the sensor bracket. The light should remain on after the screw has been tightened.
- 3.4. Press the **HOME Z-RAM** key.
- 3.5. Press the **TEST Z-RAM** key, the system will check the ZRAM adjustment ZRAM OK Light will be red or green. Green indicates proper setting. Red indicates improper setting, 'ZRAM TOO HIGH' or 'ZRAM TOO LOW' will appear on the display and also be red.
- 3.6. If the ZRAM is improperly adjusted, repeat steps 3.1 through 3.5, otherwise continue

4. CARRIER ALIGNMENT

- 4.1. Press the **HOME CARRIER** key.
- 4.2. Use the **MOVE CARRIER** and or **Bump Carrier 0.5 Degrees** function(s) to align the indicator within the 5/64" range on the simulated carousel. The smallest increment the carrier can be moved is 0.5° and the largest is 359.5°.
- 4.3. When the indicator is in the range (See Figure 1), adjust the sensor bracket so that the CARRIER HOME and CARRIER POSITION lights are on.

- 4.4. Slowly secure the sensor bracket. The lights should remain on after the screw has been tightened.
- 4.5. Verify the carrier alignment (see Figure 1) .
 - 4.5.1. Press the **HOME CARRIER** button. When the carrier has homed, verify that the pointer is aligned within the 5/64" range on the modified carrier (Master Carrier), and CARRIER HOME/POSITION lights should be lighted. Home the carrier 3 times.
 - 4.5.2. If carrier is not aligned in one of those 3 times in step 4.5.1, repeat step 4.2 to 4.5.
- 4.6. Press the **MOVE TO NEXT CAROUSEL** button.
- 4.7. Press the **MOVE ZRAM DOWN** key, Z-RAM should engage the carousel smoothly, and should not move the carrier plate to the left at all when the ZRam engages.
- 4.8. Press the **MOVE ZRAM UP**. Z-Ram will move back up.
- 4.9. Repeat steps 4.6 to 4.8 for the next 3 carousels.
- 4.10. Home the carrier by pressing the **HOME CARRIER** key.
- 4.11. Press the **MOVE TO NEXT CAROUSEL** button..

5. CAROUSEL ALIGNMENT

- 5.1. Press the **MOVE ZRAM DOWN** key ZRAM will move to bottom.
- 5.2. Press the **HOME CAROUSEL** key.
- 5.3. To move the carousel, use the **MOVE CAROUSEL** and / or **BUMP Carousel 0.5 degrees** function. The smallest increment is 0.5° and the largest is 359.5°.
- 5.4. Move the carousel until the indicator is aligned to the line on the modified carousel 'A'. See Figure 2.
- 5.5. Adjust the carousel bracket until both the Carousel Home and Carousel Pos lights are on. When tightening the screw ensure that the lights stay on.
- 5.6. Verify the carousel alignment (see Figure 2).
 - 5.6.1. Press the **HOME CAROUSEL** button. When the carousel has homed, verify that the pointer is aligned to the line on the modified carousel 'A' (Master Carousel) and CAROUSEL HOME/POSITION lights are lighted.
 - 5.6.2. If carousel is not aligned, repeat step 5.3 to step 5.6.

6. CAROUSEL ID

- 6.1. Press **TEST CAROUSEL ID** button.
- 6.2. The assembly will position the carousel with the magnet under the ID sensor. After about 2 minutes, the Red LED should light, if not verify proper positioning, improper height of ID sensor, or defective ID sensor
- 6.3. Press **HOME all MOTORS** button. Allow about 2 minutes for all motors to home.

ALIGNMENT COMPLETE: TURN THE POWER OFF. UNPLUG UUT. PLACE A TESTED LABEL ON THE UUT AND INITIAL