



ErgoReJoy™

Drive Control Positioning Methodology

Joystick Baseline Armrest Location

1. Ask client their hand preference for joystick operation, and note their choice on the baseline Driving Assessment form. Observe the client in a resting seated posture with bilateral arm support, observing any left vs. right shoulder-height discrepancies.
2. Confirm that the 3" extension arm is installed on the underside of the platform assembly to connect the two large rubber-coated balls together, and that the excess joystick cable is neatly secured to the underside of the joystick platform. Confirm that the receiver socket is in the lowest position on the slotted socket bracket.

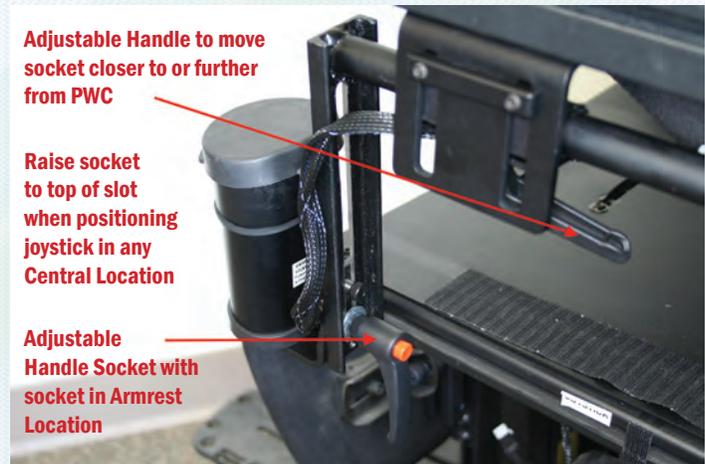


FIGURE 1

3. Insert the *ErgoReJoy* platform and joystick in left or right armrest receiver socket in the “standard” armrest driving location, in line with the armrest, and without the removable *JoyPad™* gel wrist support. Position the joystick as you would for any client. The joystick’s proximity to the armrest can be changed by adjusting the lateral location of the socket, or the height adjusted by raising or lowering the socket (refer to Figure 1).
4. Initiate the PWC test drive at a low speed setting of approximately 2 mph. **Video the test drive** while observing the upper body posture, from a posterior and anterior view, observing any left vs. right discrepancies that differ from their baseline.

The PWC user’s trunk, if well-positioned, should appear perpendicular to the floor (not leaning laterally).

Observe the following postural positions in the sagittal plane from the driving side of the PWC user during the test-drive (refer to the figures of postural positions in the Introduction):

- Bilateral shoulder height should be parallel to the floor.
- Shoulder and proximal upper extremity should be perpendicular to the floor.
- Elbow flexion of driving arm should be approximately 70-90°.
- Wrist and hand to be aligned while operating joystick.
- Distal arms, wrists and hands to be aligned and parallel to the floor.

Do not try to correct the postural positions if misaligned but record them on the Baseline Form.

TURN POWER OFF TO THE JOYSTICK

5. Score the driving ability on a scale of 1 - 5 (1 = unsafe, 5 = proficient) on the Baseline Armrest Location Assessment form.

After the test drive, with the client gripping the joystick in the posture you observed and recorded during the test-drive, photograph the client's upper body from the front. Next photograph the shoulder, elbow and wrist/hand positions from the side. **Refer to the Neutral Postures vs. Misaligned Postures diagram in the Introduction** and complete the postural results on the Baseline Armrest Driving Assessment form.



FIGURE 2

Joystick Central Location

1. Raise the height of the socket to the top of the slot of the socket bracket by loosening the two adjustment handles. Once the socket is secured in place, tighten handles firmly (refer to Figure 2).
2. Remove the 3" extension arm. Remove 8" of additional joystick cable from the cable holders under the platform (refer to figure J). Ask the client or an assistant to hold the joystick and platform.

3. Ask the client to extend their forearm and hand to a comfortable position in front of their body. Then position the client in the seat with driving elbow on armrest. Then position the joystick so the client can grasp the joystick knob. Confirm their elbow is supported by the armrest and the shoulder and upper arm are in a neutral posture. Attach the 8" arm to the mini-mast and side joystick platform ball. Allow clearance of 1"-2" over the top of the client's thighs. Tighten the 8" arm (snug, but not fully tightened). Make final adjustments to the joystick position and tighten adjustable knob.

4. Positioning the wrist support - Referring to Figure (3), install the JoyPad's small 3" extension arm on the 1" ball at the top rear part of the platform. Position the JoyPad and gel wrist support in line with the forearm and under the wrist of the client, with the elbow remaining on the armrest. Tighten the JoyPad's extension arm adjustment knob enough to hold it in place with the client's wrist on top. Solicit input from the client regarding where the joystick and wrist support are most comfortable. Firmly tighten both the JoyPad adjustment arm and the 8" joystick extension arm.



FIGURE 3

5. Assure that the client's elbow is supported on the armrest. If the client is unable to reach the joystick because of their biometrics, move the joystick to a position where it can best be operated. Then, attach the appropriate extension arm to support the joystick platform. Confirm the client's postural positions are neutral as the joystick is grasped. Reposition wrist support to make client comfortable.

6. Turn on power to the joystick. Initiate the test drive while observing the user's posture and driving performance. If the client prefers the central positioning of the joystick and JoyPad wrist support, and feels that it helps them to better operate the PWC, **Video the test drive** while observing the upper body posture by looking for any shoulder height discrepancies from a posterior and anterior view while the client is driving. The PWC user's trunk, if well-positioned, should appear perpendicular to the floor (not leaning laterally).

While continuing to record, observe the following postural positions in the sagittal plane from the joystick side of the PWC user during the test-drive:

- Bilateral shoulder height should be parallel to the floor.
- Shoulder and proximal upper extremity should be perpendicular to the floor.
- Elbow flexion of driving arm should be approximately 70-90°.
- Wrist and hand to be aligned while operating joystick.
- Distal arms, wrists and hands to be aligned and parallel to the floor.

If any of the postural positions are misaligned, turn power off to the joystick. Ask the client to reposition the part of the arm to a neutral posture, then reposition the joystick and JoyPad to the new location. Repeat test-drive after turning the joystick on.

7. After the recording is completed, turn power off to the joystick. Score the driving ability on a scale of 1 - 5 (1 = unsafe, 5 = proficient) on the Central Driving Assessment form.

After the test drive, with the client gripping the joystick in the posture you observed and recorded during the test-drive, photograph the client's upper body from the front. Next, photograph the shoulder, elbow and wrist/hand positions from the side. Refer to the Neutral Postures vs. Misaligned Postures Diagram on the cover page, and complete the postural results on the Central Driving Assessment form.

If appropriate, share the photographs and assessment results with your client to increase their understanding and comfort with the central assessment step of the protocol.

8. Ask the user which of the two locations felt most comfortable and provided them the greatest confidence while operating the PWC. If a central location was preferred, proceed to the summary.

Summary

1. To assure decision making confidence when prescribing the *ErgoReJoy* joystick platform for a central location, photograph the position of the joystick platform and wrist support pad while the user is seated in the PWC with and without their hand on the joystick.
2. Remove the *ErgoReJoy* platform and joystick assembly from the PWC and place it in the receiver socket on the opposite PWC armrest to transfer the client.

Note: A common question from the end user is where to put the *ErgoReJoy* during the transfer to the PWC. The mounting system for the end user includes a "holster" socket and bracket which can be installed in the same location as the socket on the opposite armrest of the PWC, or in any other selected locations.

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