

MovieBird Straight Line Compensation (SLC) – Operating Manual



Warning!!!

- Arm calibration (Learning Mode) is performed by engaging the front limit switch only (arm fully retracted)

System parts:

- SLC BOX
- Touchscreen + Ethernet cable
- TILT Arm encoder + cable
- PAN Arm encoder + cable
- Leveling head cable extension
- Joystick + cable
- Motor cable (military connectors)
- Power cable

Touchscreen



Pic_1

- 1 – Switches „MANUAL END STOPS”
- 2 – Position selection buttons „P1, P2, P3”
- 3 – Arm extension [mm]
- 4 – Tilt axis angle
- 5 – PAN axis angle
- 6 – Soft Stop level indicator (adjustable via SLC BOX buttons)
- 7 – Damping level slider
- 8 – STANDBY mode switch
- 9 – Mode selection tab/indicator
- 10 – Service data

Setting up:

- connect all of the above system parts according to labels on the boxes
- manually extend the arm so that it doesn't engage the front limit switch
- power up the SLC Box
- wait 20s, after that the touchscreen should display „STANDBY“
- simultaneously press both „STANDBY“ buttons on the SLC Box
- wait for the Joystick to power up
- the ECU is in the „Learning mode“
- using the joystick, slowly retract the arm until the end switch engages
- extend the arm so that it clears the end switch. The ECU is now in the „Normal mode“ and the calibration is finished.

Modes of operation:

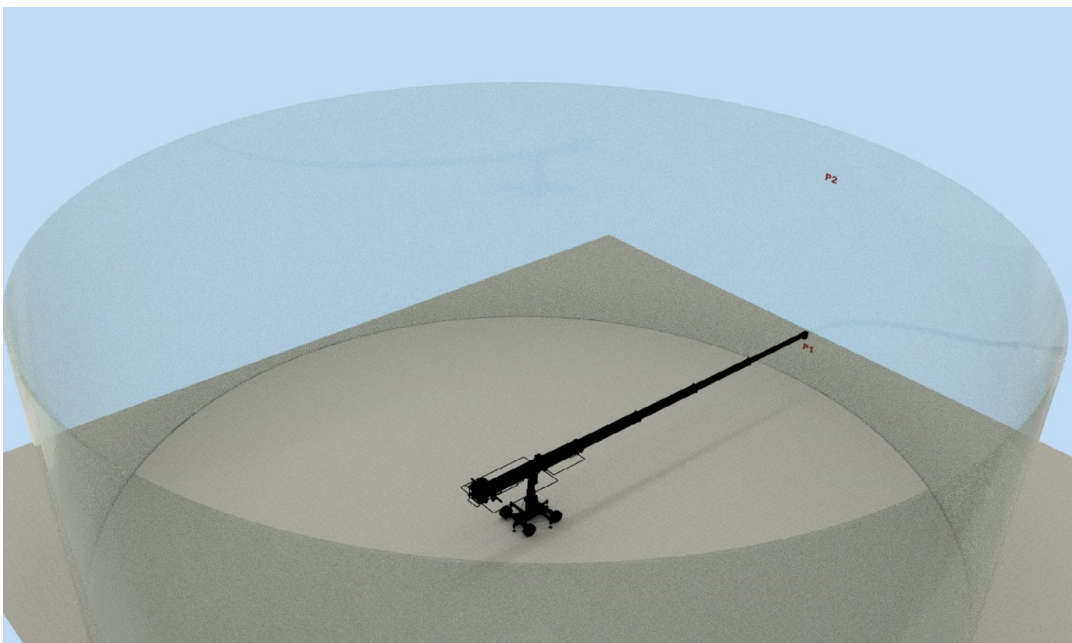
- Learning mode

Calibration of arm extension range **CAUTION!!!** Arm calibration is performed by engaging the front limit switch only.

- Normal mode

Standard arm operation (without SLC functionality, just like any other MovieBird crane)

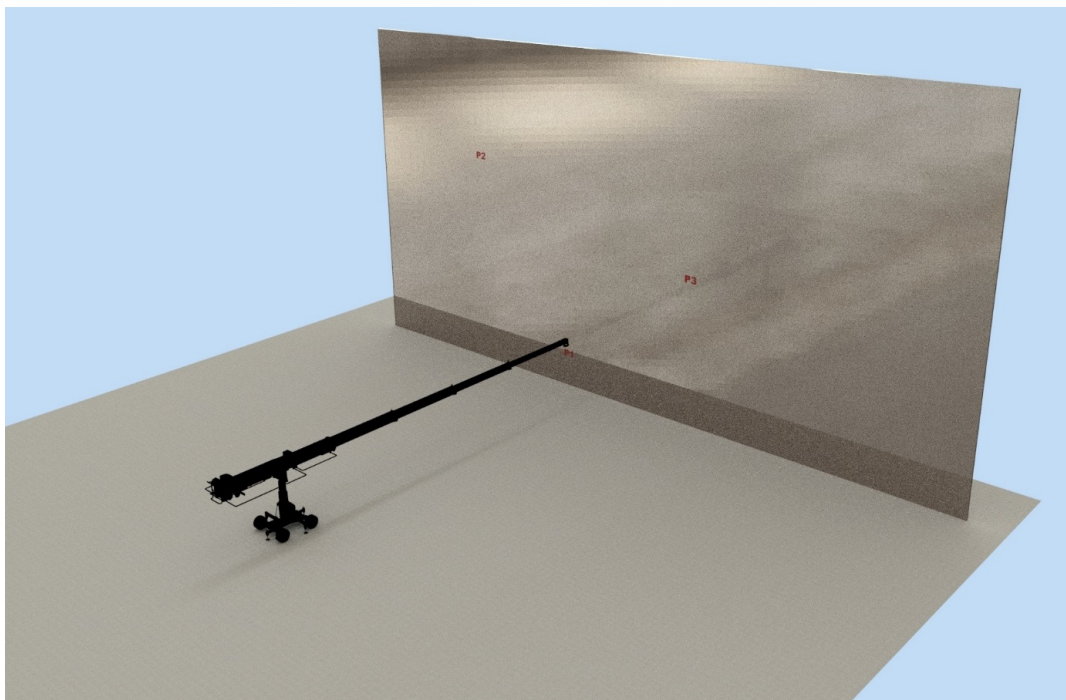
- Vertical mode



Pic_2

SLC mode allowing the arm to follow a vertical cylinder defined by 2 points (pic_2).

- 3D mode



Pic_3

SLC mode allowing the arm to follow a planar surface defined by 3 points (pic_3).

Defining P1, P2 and P3 points

Position the end of the arm in the requested point and press on of the P1/P2/P3 buttons on the touchscreen (pic_1, '2')

Pressing one of the previously defined buttons erases its value.

Caution!!! Erasing any of the defined points while operating in one of the SLC modes will automatically change the mode of operation to Normal Mode !

Changing modes of operation

All of the SLC functionality is performed through the touchscreen.

Depending on the requested mode of operation define P1 and P2 (for Vertical Mode, Pic_2) or P1, P2 and P3 (for 3D Mode, Pic_3)

Press the Mode Switch/Indicator ("9", Pic_1) and select requested mode.

With the requested mode selected, set speed '9' on the joystick and press and hold the joystick rocker switch responsible for arm extension („W"). Holding the rocker switch 'W' is required for the arm to follow the defined planar/cylindrical surface in any of the SLC modes.

Remember:

- Going back to STANDBY will erase all P1/P2/P3 points and switch the arm to „Learning Mode'

• **CAUTION!** :Going back from Normal Mode to any of the SLC modes will result in the arm automatically moving to the defined Surface of operation. If the defined Surface is beyond current arm position, the operator will need to press and hold the „W" rocker switch. If the defined position is between current arm position and Yoke center then the arm will automatically retract at full speed.