Electronica EL700 SDM Function

Congratulations on the purchase of your Electronica 700 series mill kit. This article addresses how to program and recall SDM (Sub Datum Memory) points.

Before starting to program SDM points, the user should first set a meaningful ABS zero point on your part. This may be on the centerpoint, bottom left corner, an easily indexable point, etc. Remember, all your SDM points index off of your ABS zero point, so it should be set to something that's easily repeatable on multiple parts.

Programming SDM points:

1. **Push the "SDM" button once.**

2. The SDM JOB menu will appear. This screen is where SDM jobs are saved. Assuming this is your first time into the SDM JOB menu, none will be listed. We need to create an SDM job first, so **press the "Setup Sheet" button once"**

3. Note the 3 available function icons above the soft buttons: The lack of a "SDM Direct" key to the far right indicates an SDM job has not been selected, and therefore must first be created.

4. **Press the "Folder"** to start the SDM "Program" screen:

5. To program SDM points, simply move the mill to the point you wish to program into SDM memory. Note the on-screen "red ball" graphically displays present position, as the mill table moves into the desired position. If it moves "off screen", simply push the "down" yellow arrow key to re-size the display window as needed. When you reach the desired SDM position, **press the "Input SDM" key.** Note the top of the display will now read SDM 1 / 1, indicating SDM point 1 has been loaded into memory.

6. To program the next SDM point, again move the mill to the next position you wish to program into SDM memory. Again, use the yellow up/down arrow keys to resize the viewing screen as necessary. When you reach the desired SDM position, **press the "Input SDM" key.** Note the top of the display will now read "SDM 2 / 2".

7. Continue programming SDM points as desired, repeating step 6 as necessary.

8. When enough SDM points have been captured to complete the project, **push the save button.**

9. On the Data Entry screen, use the directional arrow keys, followed by the "Enter" key, to name your project. Finish by **pressing the "Save" button.**

10. Note that we're in a shortened version of the SDM "Program" screen:
Push the "Exit Door" to proceed to the "SDM Run" screen:
Note the job number and project name will be in the lower middle of the screen, ie, "1:Project name"

11. Now that the job has been loaded, note that the top of the screen indicates which SDM waypoint is currently selected. "SDM 1 / 6" would mean SDM waypoint 1 is currently selected, out of a total of 6 waypoints. To choose a different waypoint, push the left/right arrow keys to "scroll" through the SDM waypoints sequentially. Alternatively, to recall a waypoint directly, rather than scrolling through the waypoints one-by-one, simply push the "SDM Direct" key , then input the desired waypoint number on the numeric keypad, followed by the enter key. Regardless of which method is used, note the top of the screen always reflects which SDM point is currently active.

12. Now that we've input which SDM point we want to go to, take a look at the X, Y and Z axis windows. The distance shown is known as the "error distance". This is the distance we're currently "away" or "from" each waypoint. To proceed to the selected waypoint, simply move the axis, until all 3 display axis read "0.0000", which indicates we've arrived at the point.

13. To proceed to another SDM waypoint, repeat the instructions in step #11 using either the "scroll" or "direct entry" SDM point recall methods.

14. To exit SDM mode, **push the "Exit" button.**   This returns us to the SDM job screen. Pushing **the "Exit" button** a second time exits us out of SDM mode completely and returns us to the ABS home screen.

Additional Features:

If at any point while running the SDM function you want to temporarily see the ABS home screen, simply push the "SDM on" button. . Note the "SDM from-to" data block above the soft button icons,

which indicates SDM function is still active. To return to the SDM mode, push the SDM button.

 is the delete job key. Pushing it deletes the highlighted job from the SDM job menu.

 is the duplicate job key. Pushing it duplicates the highlighted SDM job.

 is the re-name job key. It allows re-naming the selected SDM job.

Congratulations, you're finished!
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