Setup procedure for the shaft encoder using the Skycom Win software

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To programme the shaft encoder using Skycom Win and to run the system there needs to be a 2 wire CAN connection made between the shaft encoder and the Skycom. This connection is made using the CAN 3 port and then the data is transferred via the RS232 up to the PC, or from the PC down to the shaftencoder. Shown below is the shaft encoder setup screen, and it is within this screen that all the programming is carried out. It is important to remember to download all changes that have been made on the screen to the shaft encoder and to save the file once the setting up is complete. The upload and download for the shaft encoder is separate to the Skycom upload and download as shown in the transfer menu.
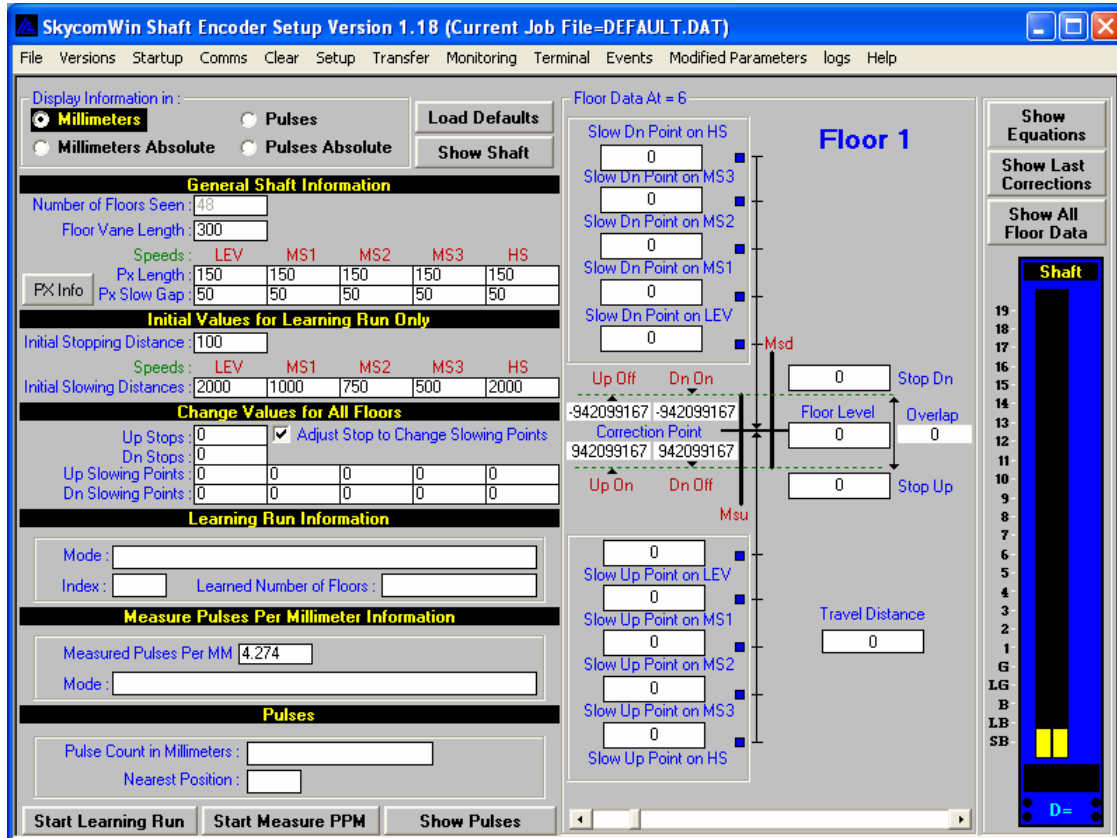
<u>Procedure for the learning run</u>

1)   Put the lift on test control.

2)   Manually enter the number of pulses per millimetre in the box 'Measured Pulses Per mm'. When using the Bode overspeed governor with an encoder, the pulses per mm are 4.274. If the value is unknown the pulses can be learnt using the calibration tool provided which has two magnets 150mm apart.
       A)   Place tool on the guide
       B)   Click the 'Start Measure PPM' tab
       C)   Drive the lift over the tool
       D)   An upload will automatically happen inserting the measured figure in the 'Measured Pulses Per mm' box.

3)   Next the shaft data can be entered.
       A)   'Initial Stopping Distance' this is the distance from the second vane to floor level. Typically 70mm for Omron inverters and 100mm for Loher inverters.
       B)   'Floor Vane Length' this is the length of the floor level vanes. Typically the stopping distance is multiplied by 3.
       C)   'PX Length' this is the length of the slowing vane. Typically 150mm for lift speeds up to 2.5 m/s. The same value should be entered across all speeds.
       D)   'PX Slow Gap' this should be set to 50mm across all speeds unless the manufacturers are consulted.
       E)   'Initial Slowing Distance' this is the slowing distance to floor level for each speed. The HS should be set relative to the highest speed of the lift. If there is a medium speed the MS1 should be set relative to the required speed.
           For speeds of 2.5 m/s 5000mm
           For speeds of 2.0 m/s 3400mm
           For speeds of 1.6 m/s 2300mm
           For speeds of 1.0 m/s 1200mm
           For speeds of 0.5 m/s 400mm

       F)   The data programmed on the PC now needs to be downloaded to the shaftencoder board using the transfer menu.

4) The learning run can now be carried out.
    A) Drive the lift down to the bottom floor until it stops on the terminal limit. The limit should be positioned below the terminal floor such that when the lift has stopped on the limit it is at least 20mm out of range of the correction magnet at the terminal floor level. The RSD input should be energised on the Skycom processor.
    B) The 'Start Learning Run' tab can now be clicked.
    C) The lift is now run to the top of the shaft until it stops on the terminal limit. The limit should be positioned above the terminal floor such that when the lift has stopped on the limit it is at least 20mm out of range of the correction magnet at the terminal floor level. The RSU input should be energised on the Skycom processor.
    D) The lift is now run back down to the bottom floor until it stops on the terminal limit.
    E) The learning run is now complete. The software will automatically carry out an upload from the shaft encoder (you will see this on the screen). The learned number of floors in the up should equal that in the down.

5) The lift can now be run to all floors and the floor levels measured and then adjusted on the software. The 'Adjust Stop to Change Slowing Points' box can be ticked in order to move the slowing point automatically at the same time as the floor level is adjusted. Adjusting the floor levels is as follows: -
    A) Using the scroll bar at the bottom of the screen on the right hand side, select the floor that needs adjusting, the floor level is also displayed in blue text at the top of the screen.
    B) For setting the floor level when travelling in the down direction, click in the box 'Stop Dn' and enter the amount you want to change the level by. If the lift is stopping high in the down put a minus sign in front of the value if it is stopping low just enter the number for a positive value. The enter key must be pressed after entering the value to update the level.
    C) For setting the floor level when travelling in the up direction, click in the box 'Stop Up' and enter the amount you want to change the level by. If the lift is stopping low in the up put a minus sign in front of the value if it is stopping high just enter the number for a positive value.
    D) Once all the levels have been adjusted on the PC download the settings to the shaft encoder then re-check all the levels.
    E) Save the file or adjust as before and then save the file.