Instruction Manual

PowerBox Systems®

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Power Supply Systems

Door Sequencer "Install Wizard" for the PowerBox Cockpit

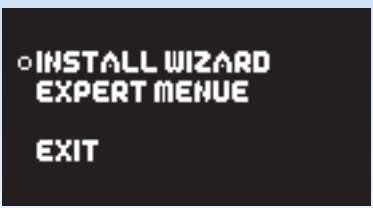
The **“Install Wizard”** is a new function in the **PowerBox Cockpit** and **PowerBox Cockpit SRS** which significantly simplifies the door sequencer function compared with the previous version. The **“Install Wizard”** is not a new door sequencer; its purpose is to describe the “tasks” in the previous door sequencer in accordance with your inputs. This also means that you can supplement or alter undercarriage or door functions in Expert mode at any time.
The Wizard guides you through the settings, and everything which has to be done is described on-screen. The only purpose of these printed instructions is to supply information which cannot be displayed on the **PowerBox** screen because of its size.

1. Preliminary work

- The **PowerBox** should be set up to the point where all the other functions are working as required, i.e. the radio control system is set up correctly, and the control surfaces respond to stick commands.
- Do not connect any servos or valves to the door sequencer at this stage.
- At the transmitter a switch should be programmed to a vacant channel. Travel on the selected channel must be set to -100% to +100%. In the case of Futaba systems DG1 or DG2 can also be used.
- If you wish to use pneumatic valves, please ensure that the system is already under pressure, to avoid problems during the programming procedure.

2. Programming

Enter the **PowerBox** menu system and select the Sequencer point. You will now see the following screen display:

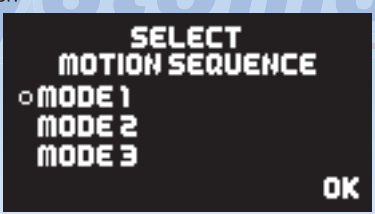


If you select Expert mode, you will arrive at the Task menu, which will be familiar to you from the **Cockpit / Cockpit SRS** operating instructions.
Use the **SET** button to select the ***INSTALL WIZARD***.

In the next menu the system is informed which switch is assigned to the sequencer:

Select the function by pressing the **SET** button**.** If you now locate the switch on the transmitter which you have assigned to the retract system, and operate it, the **PowerBox** will automatically detect the switch, and the arrows on the screen should move to ***UP / DOWN*****.** If you find that your retract switch operates in the wrong direction, change it at this point by reversing the corres-ponding output at the transmitter**.**
Press the **SET** button again to quit the function, and move the cursor to ***OK*****.**

The following function is used to select the method of operation of the door sequencer:



The following sequences are available:

Mode 1:

Extend undercarriage:
Open wheel doors -> extend undercarriage

Retract undercarriage:
Retract undercarriage -> close wheel doors

Mode 2:

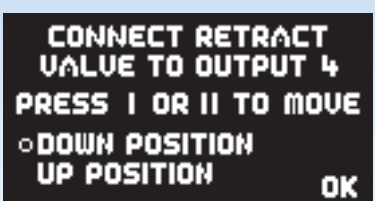
Extend undercarriage:
Open nosewheel doors -> extend nosewheel
Open main wheel doors -> extend main undercarriage -> close main wheel doors

Retract undercarriage:
Open nosewheel doors -> retract nosewheel
Open main wheel doors -> retract main undercarriage -> close main wheel doors

Mode 3:

Extend undercarriage:
Open nosewheel doors -> extend nosewheel -> close nosewheel doors
Open main wheel doors -> extend main undercarriage -> close main wheel doors

Retract undercarriage:
Open nosewheel doors -> retract nosewheel -> close nosewheel doors
Open main wheel doors -> retract main undercarriage -> close main wheel doors
Move the cursor to the mode you wish to use, and confirm your choice by pressing the **SET** button**.** Select ***OK*** to move on to the next screen display:

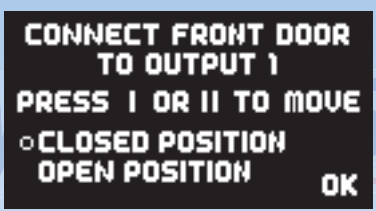


As you can see in the screen shot above, you should now connect your retract valve to the DS4 output. One of the following actions will now occur, depending on the way your valve is programmed:

Valve switches: use the **SET** button to select ***DOWN POSITION***. Locate button II on your SensorSwitch and hold it pressed in until the undercarriage extends again. Quit the ***DOWN POSITION*** point, and select the ***UP POSITION*** point: the undercarriage should now retract.

Valve does not switch: use the **SET** button to select ***UP POSITION***: the undercarriage should now retract.
If the retract valve does not respond, you need to recalibrate its switching points. It should switch reliably when set to -100% and +100%.

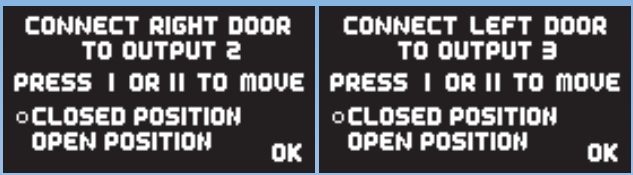
Move the cursor to ***OK*** to move on to the next screen display.



Connect the servo or valve which operates the nosewheel doors to socket DS1. Move the cursor to ***CLOSE POSITION*** and press the **SET** button to select it. Hold button I or II on the **SensorSwitch** pressed in until the nosewheel door closes.

Now quit this menu point and select ***OPEN POSITION***. Press button I or II to move the wheel door to the opened position.

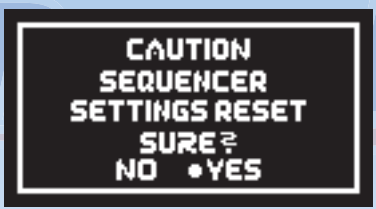
Select ***OK*** to move to the next two menu points:



Connect the servos or valves to the appropriate sockets DS2 and DS3, and proceed exactly as described for the nosewheel door**.**

Note: if you are only using one valve for all the wheel doors, you can skip these two points and move on by selecting ***OK.***

All settings are now complete, and the following security query appears on the screen:



Since the door sequence describes the required tasks anew, you are requested to confirm that you agree with the changes**.** The **Install Wizard** sets up the tasks exactly as described in the **Cockpit / Cockpit SRS** instructions**.**

Caution: this process overwrites all previous door sequencer settings !

Select ***YES*** to confirm your choice**.** The door sequencer is now programmed and ready for use**.** If other parameters such as pauses, opening and closing speeds etc**.** are not as you wish, you can adjust them at any time in the ***EXPERT MENU.***

If you have further queries, please make use of our Support Forum, which is available at:

forum.powerbox-systems.com

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