

# PITTSBURGH SPACE COMMAND

## PSC/Wilson Wireless Operating Instructions:

- The LCO Control Box is connected to an outboard transceiver box by way of an adapter: once power is connected to the adapter the transceiver's red LED will blink repeatedly, indicating the Controller is powered up (i.e.: power is connected). The transceiver's Green LEDs provide an indication of relative transmission field strength and **only** come on when receiving commands.
- Each pad spider box (MID (Controller Bank C) and FAR (Controller Bank F)) contains its own transceiver. Likewise, when power is connected to a pad spider box, its small Red LED will blink repeatedly, indicating the pad spider box is powered up. The pad box transceiver's Green LEDs provide an indication of relative transmission field strength and **only** come on when receiving commands.
- When ready to launch, the Control Box Key Switch is turned to the ON position. This causes the Control Box Yellow Indicator to flash about once every two seconds. This indicates only that the Control Box has been ARMED.
- Selecting a Bank switch and a Pad switch on the Control Box will cause the corresponding pad spider box to emit an audible tone and its big red Indicator to illuminate – this indicates only that the selected box/Bank/pad is ARMED. It is NOT an indication of continuity. Also note that the LCO Control Box DOES NOT emit an audible tone; only the pad spider boxes does so when ARMED.
- Selecting a Bank switch/pad switch combination while the Control Box is ON also causes the Controller to automatically perform a continuity check for the selected Bank/pad combination. If continuity at the selected pad is present, then the Control Box Yellow indicator will illuminate with a steady light. If continuity is not present at the selected pad, then the Yellow indicator will flash rapidly.
- If the LCO has more than one Bank switch selected at the same time then the system will be disabled, and will remain in this state until only one Bank is selected. Note that the **only** indication of this condition is the failure of the system to enable a spider box (no tone, no red light); the Controller's Yellow indicator will continue to flash about once every two seconds, simply indicating the Controller is ON.
- A Bank/spider box is ARMED when the Controller is ON and a bank/pad switch combination is selected on the Control Box. In which case, the spider box will emit an audible tone and illuminate its big red indicator. The audible tone in this case does NOT indicate continuity; it only indicates the box is active.
- Continuity can be determined in two ways
  - It can be checked locally on the spider box by pressing the pushbutton corresponding to the desired pad. This will cause the spider box to emit an audible tone if continuity is present. The Control Box **DOES NOT** need to be on to perform this local check.
  - It can be checked remotely by the LCO by selecting the relevant bank/pad combination. This activates the spider box (tone, red light on the pad box) and will cause the Control Box Yellow indicator to present a **steady light if continuity is present**. If continuity is not

present, the Yellow indicator will flash rapidly. The LCO may well hear the audible tone from the spider box, but that just means the spider box is ARMED. **The LCO can only rely on the Yellow indicator for continuity indication.**

Flyers should be encouraged to check their continuity locally so that the LCO Control Box is only turned on for launch operations.

### **Battery Voltage Check Indication**

The Wilson system makes provision to check and report the voltage status of the battery connected to a pad spider box. There is no provision made for the system to report the status of the LCO Control Box battery.

- When a battery is first connected to a pad spider box, the box will emit a series of audible beeps indicating the voltage level. One counts the series of beeps to determine the value, the same as one would do with audible altimeters.
- After the pad spider box is set up and power is connected, the voltage level can be checked locally anytime by pressing the "Volts" button on the pad spider box. The unit will again emit a series of beeps indicating the voltage level.
- The voltage level can also be checked remotely by the LCO from the Control Box. To do this, the LCO first ensures all switches are in the OFF position. The LCO then turns the Control Box to ON with the Key Switch, then selects the Bank switch for the spider box in question (in our case, for example, Bank C for the MID range box). The LCO then holds the TEACH/VOLTS switch in the "VOLTS" position. The Yellow indicator will then indicate the voltage level in a series of flashes.

### **The Control Box Yellow Indicator**

The Wilson system uses the LCO Control Box Yellow indicator to communicate a variety of status indications. Because of its multi-use operation its behavior can be confusing. So summarized below are the indications and their meaning that this very busy indicator can provide:

1. One flash approximately every 2 seconds: This means the Control Box is ON.
2. When a Bank and pad are selected: A steady indication means continuity is present at the selected pad. A rapidly flashing indication means there is no continuity.
3. When multiple pads are selected for a drag race: the indicator will flash slowly. The normal continuity check indication is not provided in this mode; continuity should be checked for each pad first before setting all the pad switches for the drag race.
4. When checking a remote pad spider box battery: the indicator will indicate the voltage level in a series of flashes.