The Longwood Organ Console Unusual Features, 2018

1. **EXPRESSION MATRIX** – The seven enclosed divisions and the Variable Tremolo can be assigned to one or more of nine control devices (Shoes I-V, the Crescendo Shoe (CR), and expression Thumb Slides on three keyboards (CH, GR, SW). A "standard" arrangement of expression Shoes is selected when the organ is turned on and may be restored by pressing the **EXPRESSION MATRIX STD** tablet at the top left of the left stop jamb.

    Divisions may be assigned to more than one Shoe or Thumb Slide. For example, the Swell shades might be assigned to both Shoe IV and the Swell Thumb Slide. In this case, the most "open" device dominates. The Crescendo Pedal (CR) is also assignable, automatically disengaging the Crescendo function and darkening the digital Crescendo display when assigned another function.

    The bottom row of the Matrix consists of a yellow SET button and green preset buttons 1-8. Any expression arrangement may be set on any preset. A rotary switch in the drawer at the bottom of the left stop jamb provides 12 memory levels for the Matrix presets.

    In order to make the expression presets settable on combination pistons, the green preset buttons are duplicated as stop tablets at the top of the left stop jamb, engraved as follows. Pressing one of these tablets is the same as pressing a green preset button.

    > EXPRESSION MATRIX STD
    > EXPRESSION MATRIX 1
    > EXPRESSION MATRIX 2
    >   *etc., through...*
    > EXPRESSION MATRIX 8

    To set one of these tablets on a combination piston, select the desired stops and couplers, hold the SET piston beneath the Choir manual, turn on the desired EXPRESSION MATRIX tablet, and press the piston being set.

2. **ALL SWELLS** – There are five All Swells controls as follows, activated by stop tablets in the Choir division and by three pistons on the Great Manual. When one of the All Swells is ON, all matrix assignments are disabled and red LEDs illuminate the Matrix designation strip from behind.

    > ALL SWELLS TO SHOE IV (ALSO ACTIVATED BY REVERSIBLE PISTON ON GREAT MANUAL)
    > ALL SWELLS TO SHOE V (ALSO ACTIVATED BY REVERSIBLE PISTON ON GREAT MANUAL)
    > ALL SWELLS TO CHOIR SLIDE
    > ALL SWELLS TO GREAT SLIDE (ALSO ACTIVATED BY REVERSIBLE PISTON ON GREAT MANUAL)
    > ALL SWELLS TO SWELL SLIDE

3.   **EXPRESSION THUMB SLIDES**, located beneath the Choir, Great, and Swell keys, function much like expression Shoes, sliding to the left for "closed" and to the right for "open." Designated CH, GR, and SW on the Expression Matrix, they may be assigned to affect the shades of any division or the speed of the Variable Tremolo. Using the All Swells tablets, they can affect all divisions simultaneously. If a division is assigned to more than one Shoe or Slide, the farthest open will override (dominate) the others.

4.   **STRING EXPRESSION REVERSE** tablet reverses operation of String shades (i.e., String shades close when shoe or thumb slide is opened and *vice versa*.)

5.   **VARIABLE TREMOLOS** are available on five divisions (Choir, Great, Swell, Solo, String). These divisions have both fixed and variable tremolos. When on, the Variable Tremolo tablet deactivates the regular Tremolo. To use, assign **TREMOLO** on the Matrix to the desired expression Shoe or Thumb Slide. The position of the Shoe or Slide determines the tremolo speed: fully closed = off; fully open = maximum speed.

6.   **SOSTENUTO** affects Choir, Great, or Swell keyboards. Turn on with reversible thumb pistons or toe spoons. When engaged, played notes are sustained. Playing other notes or chords releases sustained notes. Turn off with same control or with General Cancel.

7.   **PIZZICATO BASS** plucks the Pedal Octave 8 momentarily to help define the bass line, giving it a plucked feel even though the organist is playing legato.

8.   **HARPS** – the manual 4' Harps start at bottom C and run the full compass of the keyboard; the 8' Harps start only at Tenor C. The 4' Harp in the Pedal runs full compass; there is no 8' Harp in the Pedal.

9.   **PEDAL DIVIDE** – Manual-to-Pedal couplers play only on the top half of the pedalboard compass (for the right foot). Pedal stops play only on the bottom half (for the left foot). The default separation is between B and C but can be raised up to G using the knob in drawer on left stop jamb. This is not settable in the combination action, so you need to visually check the setting.

10.   **PEDAL TRAPS** normally play from 1st touch on the pedalboard. They can be transferred to 2nd Touch by engaging the PEDAL TRAPS 2ND TOUCH tablet or using the TRAPS 2ND TOUCH toe stud reverser. Pressing pedal keys with extra force sounds the 2nd touch.

11.   **PERCUSSION ON PEDAL** tablet in the Choir division transfers the untuned percussions from the Choir to the Pedal.

12.   **SOLO TO GREAT SFZ TOE STUD** or **FANFARE TO GREAT SFZ TOE STUD** tablets cause the Solo-to-Great 8' or Fanfare-to-Great 8' couplers to momentarily engage as long as the SFZ toe stud is depressed.

13. **MELODIC PEDAL BASS TO SOLO** – the lowest note played on the Solo keyboard below Middle C sounds whatever Pedal stops are on.

14. **SOLO MELODY TO GREAT** – the top note played on the Great keyboard sounds whatever Solo stops are on.

15. **PEDAL TO CHOIR** coupler in the Choir division functions as expected.

16. **TUTTIS –** There are two: "Tutti I" as a thumb piston, "Tutti II" as a toe stud. Each can be set independently on any Memory Level.

17. **STRING PISTONS TO SW, GR,** or **CH** reversible thumb pistons allow divisional pistons to affect String stops by coupling String pistons 1-8 to Swell, Great, or Choir pistons 1-8.

18. **SETTABLE REVERSIBLES**, R 1-4 for hands, R 5-12 for feet, can be set to bring on/off individual stops or couplers or even groups of stops to flip combinations. To set, select desired stop(s) or coupler(s), hold SET, press the desired reverser.

19. **RESTORE** piston is used to restore the stops on the console to the current memory position. The use of **RESTORE** is prompted when the current stop positions do not agree with the memory, e.g., extra tablets have been turned on or off manually but you forgot which ones. In Normal Mode (combinations used routinely), the RESTORE piston will cancel any stops changed by hand but not yet set onto a combination. R> displays on the readout only if you have the Sequencer Display on (different from Normal Mode). In this case, as soon as the position of the stop tablets is different from the memory for the last general pressed, R > is displayed in front of the last general number. This is to warn you that although a piston number is displayed it is not the sound you are hearing. If the RESTORE piston is pressed, it will restore the console to the piston setting by moving the tabs. Setting the piston will also remove the R> display since the memory now agrees with the stops. (There is one anomaly on the Longwood console. Because some stops have been subsequently rewired, when a piston is pressed sometimes the stop that is stored is no longer there and so the capture system shows the error with the R> display. In this case if everything looks and sounds correct, go ahead and set the piston to update the memory.)

20. **COPY** and **PASTE** pistons on the Choir manual allow all pistons set on one Memory Level to be copied and pasted into any other Memory Level. To use, select the memory level to be copied, hold SET and press COPY. Select destination memory level, hold SET and press PASTE. This can also be used to copy Memory Levels from LIVE mode on USB sticks to the main memory (except to Levels 1 to 32 of the main memory, which must first be copied to levels above 32 in the main memory then re-copied to 1 to 32 once the LIVE mode is disengaged and the USB stick is removed).

21. **RECORDER** – There is an internal recorder that can be used to capture every nuance of a live performance for study or later playback.