POWER UP PROGRAMMING.CX8 12-31-98

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I. STOP and COUPLER HARDWARE DEFINITION

Choice of stop actions with on/off coils or momentary contacts with indicator lights is available. The default is stop actions with on/off coils. If momentary contacts are used it is necessary to tell the system once during the powerup programming cycle. The two possible choices can be toggled back and forth as many times as you like with the last choice being held in memory.

METHOD OF PROGRAMMING

To enable momentary contact stops and couplers, hold the Great keys 10,11,12,13 and 22 down while turning the power on. The indicator lights for this type of stop are wired to the on coil pins.re

To enable stop actions with on/off coils, hold the Great keys 9,10,11,12, and 21 down while turning the power on.

II. PISTON and COUPLER PROGRAMMING

Since pistons and couplers (Wiring Outline IV. Inputs:) are wired in no specific order within their proper row on the console box backplane, it is necessary to program or assign the defined functions to the same labeled inputs.

METHOD OF PROGRAMMING

1. Hold the Great keys 1(c) and 14(c#) down while turning the power on.
   The LCD will read Line 1: PISTON & COUPLER
   Line 2: Dec:K1 Inc:K2
   Line 3: Enter:Select Inp
   Line 4: ProgPiston1

   Note: If any Great key, coupler, or piston is on, line 4 will be blank and programming will not be possible until all these inputs are off.

2. Defined functions are scrolled through using Great keys 1(C) for decrement, and 2(C#) for increment. These functions are displayed on line 4 of the LCD.

3. Selection is made by turning **ON** the proper input. This will cause the LCD line 4 to go blank and the programming to be done. When this input is turned **OFF** line 4 will display the next defined function.
   Note: Each time a function is programmed the LCD line 4 displays the next defined function. If more than one input is labeled with this function, dec with Great key 1(C) as in step 2 and select the duplicate input(step 3).

4. Go to step 2 to continue programming.

5. Turn off power to exit.

NOTE PROGREV 1-8: ProgRev 1&2 are organist programmable as combination action on all memory levels and ProgRev 3-8 are builder programmable during powerup programming.

NOTE TEST: Test of these selections is entered by Great Key 8 while the 4th line reads TEST: K8. The LCD will read
Line 1: TEST
Line 2: Select Input
Line 3: Exit: K1
When any piston, or coupler is selected, what is programmed in memory will be displayed on line 4 of the LCD. If more than one is selected at the same time the LCD will read input error. If the memory does not match a defined possiblity the LCD will read memory error. To get back to programming mode select Great Key 1(C).

NOTE GENERALS 27-31, GENERALS 32-36: These groups of general pistons exchange with each other when using the French manual interchange.

III. FIELD ASSIGNMEMTS to PISTONS and REVERSIBLES

This is the process of writing into memory the field of stops and couplers that a particular piston will be allowed to operate within. This is also the process of writing into memory the stops and/or couplers that progrev 3 thru 8 will turn on and off. In either case this is done using the method of a capture combination action, that is while holding in the set piston, the desired piston is hit which writes the field of stops and couplers into memory.

METHOD OF PROGRAMMING

1. Hold the Great key 2(c#) and 14(d) down while turning the power on.
   The LCD will read Line 1: FIELD ASSIGNMENT
   Line 2: Pistons & PRev
   Line 3:
   Line 4: Exit: Power Off

2. Select the stops and couplers desired for a piston.

3. Program this piston using the method of a capture combination action. Cancel the stops and couplers with the cancel piston. Hit the piston to display the field of stops and couplers that will be operated within by this piston.

4. Turn off power to exit.

NOTE: ProgRev 1&2 cannot be programmed at this time because they are organist programmable with a field of all stops and couplers.

NOTE: ProgRev 3-8 are to be programmed at this time. The couplers and stops to reversed, are programmed by steps 2 and 3 above. Any additional couplers and stops to be turned off, if they are on as well as the above reversed stops and couplers, are programmed by steps 2 and 3 above except that the ML UP piston is used instead of the SET piston. To display these additional couplers and stops to be turned off, if they are on, hold in the FFF piston while hitting the reversible.

Example: Great to Pedal 8' reversible with the Great to Pedal 4' to be turned off when the Great to Pedal 8' is reversed off.

1. Select the Great to Pedal 8' coupler.
2. While holding in the SET piston, hit the Great to Pedal 8' reversible piston.
3. Cancel
4. Hit the Great to Pedal 8' reversible piston. This will turn on the Great to Pedal 8' coupler.
5. Cancel
6. Select the Great to Pedal 4' coupler.
7. While holding in the ML UP piston, hit the Great to Pedal 8' reversible piston.
8. Cancel
9. While holding in the FFF piston, select the Great to Pedal 8' reversible. This will turn on the Great to Pedal 4' coupler.
10. Cancel

IV. STOP PROGRAMMING

This is the procedure to map a group of ascending consecutively wired outputs in a pipe box to: 1)a group of ascending consecutively wired inputs(straight organ control) or 2)a stop(unit organ control) in the console box. Each of these ascending groups is a programming level. When wiring the pipe boxes and console box, pin lists were obtained which are used to calculate the programming levels that are to be entered into memory by the procedure below. The parameters for programming levels are:

LVL: Number from 1 to 192 for level of programming.
S: Number from 1 to 64 for a stop which is obtained by physically selecting the stop.
This parameter is left blank for straight organ programming.
DIV: Swell: cromatic, diatonic C side, diatonic C# side
Great: cromatic, diatonic C side, diatonic C# side
Choir: cromatic, diatonic C side, diatonic C# side
Pedal: cromatic, diatonic C side, diatonic C# side
Stops
Swell Box
Swell-non coupling: cromatic, diatonic C and C# side
Great-non coupling: cromatic, diatonic C and C# side
Choir-non coupling: cromatic, diatonic C and C# side
PBADDR: Number from 0 to 31, for pipe box address which is jump soldered on the Pipe Card.
LKEY: Low key number from 1 to 61 for manual keys, or from 1 to 32 for the pedal keys.
LINP: Low input number from 1 to 64 for stop inputs, or 1 to 16 for swell boxes.
HKEY: High key number from 1 to 61 for manual keys, or from 1 to 32 for pedal keys.
HINP: High input number from 1 to 64 for stop inputs, or 1 to 16 for swell boxes.
LPIN: Number of the pin that the outputs are wired to that will correspond to the low key(LKEY) or low input(LINP).

METHOD OF PROGRAMMING

The pistons are used to enter data for programming as follows:

ProgPiston1: "Enter" for entering into memory the current parameter and bringing up the next parameter.
ProgPiston6: For clearing the current level.
ProgPiston7: "Dec" for decrementing the number of the current parameter.
ProgPiston8: "Inc" for incrementing the number of the current parameter.
Cancel: For clearing all the remaining levels that are not used.

1. Hold the Great key 8(g) and 21(g#) down while turning the power on.

2. The LCD will read Line 1: STOP PROGRAMMING

Line 2: L 1

3. Select the correct Lxxx and then use one of the following:
    a) Enter piston. The LCD reads: Line 2: Lxxx Sxx. Go to step 4.
    b) ProgPiston6 to clear this level. The LCD will read momentarily: Line 4: Clearing. The LCD will return to reading: Line 2: Lxxx. Repeat step 3.

    c) Cancel to clear all of the remaining levels that will not be used in programming. The LCD will momentarily read Line 4: Clearing. The LCD will return to reading: Line 2: Lxx. This must be done so that no unwanted programming data is stored in memory. Any level that is not used must be cleared. Exit by turning the power off.

4. Sxx will physically move the stop. Physically select the correct stop(only one will allowed on at a time) or no stop and "enter".
   The LCD reads: Line 2: Lxxx Sxx xxxxxx.

NOTE: If programming a straight organ output leave this parameter blank and "enter".

5. Select the correct division (noting whether cromatic or diatonic, and coupling or non coupling) and "enter".
   The LCD reads: Line 3: PBADDR xx.

NOTE: Non coupling divisions are indicated on the LCD with a capital **N** suffix for the division selected.

6. Select the correct PBADDR xx and "enter". The LCD reads: Line 3: PBADDR xx LKEY xx.

7. Select the correct LKEY xx and "enter". The LCD reads: Line 4: HKEY xx.

8. Select the correct HKEY xx and "enter". The LCD reads: Line 4: HKEY xx LPxxx.

9. Select the correct LPxxx and "enter". The LCD will return to step 2 with the level increased automatically by one for the next level to be programmed.

NOTE: When programming for straight organ control, the LKEY and HKEY are changed to LINP(low input) and HINP(high input) for stops and swell boxes.

NOTE: Tremolo outputs are programmed as straight organ stop outputs.

V. MIDI

This feature has to be either enabled or disabled. If enabled then all midi functions will be available. If disabled then all midi functions will be ignored and all prompts on the LCD will will skip this option.

METHOD OF PROGRAMMING

1. Hold the Great key 7(f#) and 20(g) down while turning the power on.

   The LCD will read Line 1: MIDI MASTER
   Line 2: Disabled
   Line 3:
   Line 4: Exit: Power Off

   Note: If MIDI has been previously enabled, line 2 will read Enabled and line 4 will read Continue: G1

2. Toggle between disabled and enabled by hitting General Piston 2. If disabled has been selected, then exit by turning the power off.

   If enabled has been selected, then proceed with step 3.

3. To continue with the MIDI Menu, hit General Piston 1. This will bring up MIDI VOLUME. This programs the stages of Midi main volume from the swell roller inputs on the pedal card row of the console box.

   The LCD will read Line 1: MIDI VOLUME
   Line 2: Disabled
   Line 3:
   Line 4: Exit: Power Off

   Note: Line 2 will read Enabled and line 3 will read # of stages: xx if there has been programming previously.

4. The number of stages is selected with 'G7' and 'G8'. If this feature of Midi Volume is not being used select 'Disabled' and exit with power off. The number of stages is the maximum number of swell stages that will be used. The range is from 2 to 17. Seventeen is the maximum because a stage can be defined with all the input pins off. Enter the number of stages with 'G1'

5. The LCD will now read Line 1: MIDI VOLUME
   Line 2: Input Pin Field
   Line 3: ....
   Line 4:Pin:1

   This field is the swell roller input pins from the pedal card row of the console box that will be used for midi volume. Line 3 has one place for each of these input pins, that is from 1 to 16 reading left to right. The pin number is selected with 'G7' or 'G8' and is displayed on line 4. Hitting piston 'G2' will toggle between the choice of putting a pin in or out of the field. This choice is denoted with a '1' for in the field and a 'x' for out of the field. Enter this field with 'G1'

6. The LCD will now read Line 1: MIDI VOLUME

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Line 2: ................
Line 3: ................
Line 4: Stage: 1
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Line 2 displays the swell roller data stored in memory for the stage indicated. Line 3 displays the current reading of the swell roller inputs. Any inputs that are not in the field will be indicated with a 'x'. Open contacts are displayed with a '0' and closed contacts are displayed with a '1'. Move the swell roller to the desired position for the stage indicated and select 'G1'. This will write the current input data into memory and line 2 will now display this new data in memory. The stage number is scrolled with 'G7' and 'G8'.

7. After all stages have been programmed, turn off power to exit.

VI. MEMORY MAPPING

This accesses four options of memory manipulation. These are:

1. Save to PC of powerup programming.
2. Load from PC of powerup programming.
3. Copy the crescendo stages from memory level 1 to memory levels 2 thru 9.
4. Copy the Fortissimo from memory level 1 to memory levels 2 thru 9.

METHOD OF MEMORY MAPPING

1. Hold the Great key 3(d) and d#(16) down while turning the power on.
   The LCD will read Line 1: MEMORY MAPPING
   Line 2: Scroll G7 & G8
   Line 3: Enter: G1
   Line 4: Exit: Power Off

2. Scroll through these four choices with general pistons 7 and 8. These choices will appear on the fourth line of the LCD.

3. Use general 1 to start the choice selected.

NOTE: When saving and loading with a PC you must hook up the PC to the organ console with RS232 null modem cable. Then enter the 'Player' program furnished on floppy disc.
To Save: Follow instructions from the PC screen to correctly save the programming data.
To Load: Follow instructions from the PC screen to correctly load the data.