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; Artisan uMIDI Relay Configuration File for the Skandia organ
; Wurlitzer 2 manual 7 rank unit orchestra Style E Op 1254
; written by Per-Olof Schultz
;
; Memory calculations for the combination action:
;
; See THE ARTISAN MICRO-MIDI CONTROL SYSTEM
; Implementing the Artisan Micro-MIDI Control System
; Version A.3.1.2 December 2, 2009
;
; Each tab requires two bits, rounded to the power of two
;
;
;           Tabs      Bits      Bytes Rounded Memory req
Memory banks
;           used      required
pistons available
;
; Mag 1  33          66      8,25   16      160
;         25
; Mag 2  32          64      8       8
80          50
;
; We only use 12 memory banks, plenty of space.
;
; Swell shades enabled. 19 March, 2014
; Crash cymbal added to Toe piston #7 29 April, 2014
; Crash cymbal not attached to Pedal Stop Crash Cymbal (ped_chrcymb)
; Coupler test. Solo 2nd stop keys used for this. Trumpet 16 -> Solo
Sub Octave,
; Tibia Clausa 8 -> Solo Octave. Sostenuito disabled and uMIDI module
nr 7
; used for Coupler test.
; Changes indicated by pszcplr. 5 September 2014
; Rearrangement of toe studs. Suggestions by Len Rawle. 23 November
2014
; New version of input boards #1 and #2. 25 January 2015
; This version is for Pedal 2nd with Select switch. 31 January 2015
; Cleaned up references to Solo 2nd. Changed relevant stop keys,
Solo octave
; couplers. 21 February 2015
; umidi modules renumbered to reflect number for the uconfig program
; Added switch for Pedal 2nd.
; Enabled Bass Drum and Kettle Drum
;
*****
*****
;
; Midi channel assignments
; Channel 1 Solo clavier
; Channel 2 Accompaniment clavier
; Channel 3 Pedal clavier
; Channel 4 Solo 2nd touch
; Channel 5 Accompaniment 2nd touch
; Channel 6 Pedal clavier 2nd touch (not used)

```

```

; Channel 7 Swell pedal
; Channel 16 Stop keys, pistons and toe studs and other controls.
;
;
*****
*****
; Midi assignments
;
; Function                                MIDI
Message
;
; Solo clavier                            Channel 01 Note 36-96
; Accompaniment clavier                   Channel 02 Note 36-96
; Pedal                                    Channel 03 Note
36-67
;
; Solo 2nd                                Channel 04 Note
36-96
; Accompaniment 2nd                       Channel 05 Note 36-96
; Pedal 2nd                               Channel 06 Note
68(Presently not used)
;
; Door Bell                               Channel 16 Note
22
; Swell pedal                             Channel 07 Controller 11
; Swell shades                             Channel 07 Note 47-57
;
; Stops Second Touch, trem                Channel 16 Note 14-21
; Pedal stops                             Channel 16 Note 23-33
; Accompaniment Stops                     Channel 16 Note 34-56
; Stops Solo                              Channel 16 Note 57-79
; Acc Sostenuto Switch                    Channel 16 Note 91
; Solo Sostenuto Switch                   Channel 16 Note 90
; Pedal 2nd touch Switch Channel 19 Note 92
;
; Pistons                                 Channel 16 PC
1-10
; General Cancel                          Channel 16 PC 11
; Piston Set                              Channel 16 Note 12
; Stop Keys Map                            Channel 16 Note 13
; Memory Select, 12 pos                    Channel 16 Controller 20 Data
00-11
;
;
*****
*****
; Following statements within the console
;
*****
*****
;
*umidi_module_b ; Console #0
;
*HV64 ; Input Board #1

```

```

;
; Inputs from pistons, set, map and memory select
;
; Solo pistons
;
          *input_bit=solps_1 *bit=1  *midi_channel=16
*program_change=1
          *input_bit=solps_2 *bit=2  *midi_channel=16
*program_change=2
          *input_bit=solps_3 *bit=3  *midi_channel=16
*program_change=3
          *input_bit=solps_4 *bit=4  *midi_channel=16
*program_change=4
          *input_bit=solps_5 *bit=5  *midi_channel=16
*program_change=5
;
; Accompaniment pistons
;
          *input_bit=accps_1 *bit=6  *midi_channel=16
*program_change=6
          *input_bit=accps_2 *bit=7  *midi_channel=16
*program_change=7
          *input_bit=accps_3 *bit=8  *midi_channel=16
*program_change=8
          *input_bit=accps_4 *bit=9  *midi_channel=16
*program_change=9
          *input_bit=accps_5 *bit=10 *midi_channel=16
*program_change=10
;
;
*****
*****
; Additional pistons (hardware) are added to the console, junk board
;
          *input_bit=gen_cancel *bit=11 *midi_channel=16
*program_change=11
;
; Two special-purpose switches allow the organist to set the pistons
; and to map which pistons affect which stops. Located on junk board
;
          *input_bit=set_button *bit=12 *midi_channel=16
*midi_note=12
          *input_bit=map_switch *bit=13 *midi_channel=16
*midi_note=13
;
; Memory select knob, 12 positions, located on junk board
;
          *control=memselect_knob *one_of_n=14,12
*midi_channel=16
          *midi_controller=20
;
; Bits      14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
; Mem pos   03, 04, 00, 05, 02, 01, 11, 07, 10, 09, 08, 06
;

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; Mem knob    4, 5, 1, 6, 3, 2, 12, 8, 11, 10, 9, 7
; Midi data  00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11
;
*****
*****
;
; Spare 26
;
; Pedal 11 stops, Accompaniment 23 stops, Solo 23 stops, Trem 2
stops,
; 2nd 6 stops, total 65 stops
;
; Accompaniment second touch
;
          *input_bit=acc2_trump_8           *bit=27
*midi_channel=16 *midi_note=14
          *input_bit=acc2_tibia_8         *bit=28
*midi_channel=16 *midi_note=15
          *input_bit=acc2_chimes         *bit=29
*midi_channel=16 *midi_note=16
          *input_bit=acc2_triangular     *bit=30
*midi_channel=16 *midi_note=17
;
; Solo Couplers
;
          *input_bit=solo_sub             *bit=31
*midi_channel=16 *midi_note=18
          *input_bit=solo_octave         *bit=32
*midi_channel=16 *midi_note=19
;
; Tremulants
;
          *input_bit=main_trem           *bit=33
*midi_channel=16 *midi_note=20
          *input_bit=vox_trem            *bit=34
*midi_channel=16 *midi_note=21
;
; Door bell, right key cheek accompaniment
;
          *input_bit=door                 *bit=35
*midi_channel=16 *midi_note=22
;
; Spares 36-64
;
; Here comes the Stop Key information
; Second input board
;
          *HV64      ; Input Board #2
;
;      11 stops
          *input_bit=ped_diap_16         *bit=57
*midi_channel=16 *midi_note=23
          *input_bit=ped_bour_16        *bit=56
*midi_channel=16 *midi_note=24

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```

        *input_bit=ped_trump_8                *bit=55
*midi_channel=16 *midi_note=25
        *input_bit=ped_diap_8                *bit=54
*midi_channel=16 *midi_note=26
        *input_bit=ped_tibia_8              *bit=53
*midi_channel=16 *midi_note=27
        *input_bit=ped_flute_8              *bit=52
*midi_channel=16 *midi_note=28
        *input_bit=ped_cello_8              *bit=51
*midi_channel=16 *midi_note=29
;
; Pedal traps, (Second touch and First selectable with a switch)
;
        *input_bit=ped_bassdrum             *bit=50
*midi_channel=16 *midi_note=30
        *input_bit=ped_kttldrum             *bit=49
*midi_channel=16 *midi_note=31
        *input_bit=ped_chrcymb              *bit=48
*midi_channel=16 *midi_note=32
        *input_bit=ped_cymb                  *bit=47
*midi_channel=16 *midi_note=33
;
; Accompaniment stop keys, first touch
;      23 stops
        *input_bit=acc_viol_16              *bit=46
*midi_channel=16 *midi_note=34
        *input_bit=acc_vox_16               *bit=45
*midi_channel=16 *midi_note=35
        *input_bit=acc_trump_8              *bit=44
*midi_channel=16 *midi_note=36
        *input_bit=acc_diap_8               *bit=43
*midi_channel=16 *midi_note=37
        *input_bit=acc_tibia_8              *bit=42
*midi_channel=16 *midi_note=38
        *input_bit=acc_viol_8               *bit=41
*midi_channel=16 *midi_note=39
        *input_bit=acc_cele_8               *bit=40
*midi_channel=16 *midi_note=40
        *input_bit=acc_flute_8              *bit=39
*midi_channel=16 *midi_note=41
        *input_bit=acc_vox_8                *bit=38
*midi_channel=16 *midi_note=42
        *input_bit=acc_octav_4              *bit=37
*midi_channel=16 *midi_note=43
        *input_bit=acc_picc_4               *bit=36
*midi_channel=16 *midi_note=44
        *input_bit=acc_viol_4               *bit=35
*midi_channel=16 *midi_note=45
        *input_bit=acc_cele_4               *bit=34
*midi_channel=16 *midi_note=46
        *input_bit=acc_flute_4              *bit=33
*midi_channel=16 *midi_note=47
        *input_bit=acc_vox_4                *bit=32
*midi_channel=16 *midi_note=48

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```

        *input_bit=acc_picc_2                *bit=31
*midi_channel=16 *midi_note=49
        *input_bit=acc_chrys                *bit=30
*midi_channel=16 *midi_note=50
;
; Accompaniment traps, first touch
        *input_bit=acc_sndrum                *bit=29
*midi_channel=16 *midi_note=51
        *input_bit=acc_tamb                  *bit=28
*midi_channel=16 *midi_note=52
        *input_bit=acc_cast                  *bit=27
*midi_channel=16 *midi_note=53
        *input_bit=acc_chblock              *bit=26
*midi_channel=16 *midi_note=54
        *input_bit=acc_tom                  *bit=25
*midi_channel=16 *midi_note=55
        *input_bit=acc_sleigh              *bit=24
*midi_channel=16 *midi_note=56
;
; Solo stop keys, first touch
;      23 stops
        *input_bit=solo_diap_16             *bit=23
*midi_channel=16 *midi_note=57
        *input_bit=solo_tibia_16           *bit=22 *midi_channel=16
*midi_note=58
        *input_bit=solo_bour_16            *bit=21
*midi_channel=16 *midi_note=59
        *input_bit=solo_vox_16             *bit=20
*midi_channel=16 *midi_note=60
        *input_bit=solo_trump_8            *bit=19
*midi_channel=16 *midi_note=61
        *input_bit=solo_diap_8             *bit=18
*midi_channel=16 *midi_note=62
        *input_bit=solo_tibia_8            *bit=17
*midi_channel=16 *midi_note=63
        *input_bit=solo_viol_8             *bit=16
*midi_channel=16 *midi_note=64
        *input_bit=solo_cele_8             *bit=15
*midi_channel=16 *midi_note=65
        *input_bit=solo_flute_8            *bit=14
*midi_channel=16 *midi_note=66
        *input_bit=solo_vox_8              *bit=13
*midi_channel=16 *midi_note=67
        *input_bit=solo_octav_4            *bit=12
*midi_channel=16 *midi_note=68
        *input_bit=solo_picc_4             *bit=11
*midi_channel=16 *midi_note=69
        *input_bit=solo_viol_4             *bit=10
*midi_channel=16 *midi_note=70
        *input_bit=solo_cele_4             *bit=9
*midi_channel=16 *midi_note=71
        *input_bit=solo_flute_4            *bit=8
*midi_channel=16 *midi_note=72
        *input_bit=solo_twelfth            *bit=7

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*midi_channel=16 *midi_note=73
*input_bit=solo_picc_2 *bit=6
*midi_channel=16 *midi_note=74
*input_bit=solo_tierce *bit=5
*midi_channel=16 *midi_note=75
*input_bit=solo_chimes *bit=4
*midi_channel=16 *midi_note=76
*input_bit=solo_xylo *bit=3
*midi_channel=16 *midi_note=77
*input_bit=solo_glock *bit=2
*midi_channel=16 *midi_note=78
*input_bit=solo_chrys *bit=1
*midi_channel=16 *midi_note=79
;
; Spare 58-64
;
; Stop magnet drivers for combination action
;
*****
*****
;
*umidi_module_b ; Console #1
;
*rank_driver=mag_1 ;Driver Board #1
;
;
*****
*****
;
*umidi_module_b ; Console #2
;
*rank_driver=mag_2 ;Driver Board #2
;
;
*****
*****
;
; Manuals and pedal + toe studs and swell pedal
;
*umidi_module_b ; Console #3
;
*input_64 ; Input Board #3
; Located within the pedal board assembly
;
; Pedal clavier, first touch
;
*division=pedal *midi_channel=3 *midi_note=36
*bits=1,32
;
; Pedal clavier, second touch. Only one contact needed since there
are only traps
; on second touch. All 32 contacts on second touch are wired in
parallel.
;

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```

*division=ped2 *midi_channel=6 *midi_note=68
*bits=33,1
;
; Spare 34
;
; Here are toe studs
;
*input_bit=toe_1 *bit=35 *midi_channel=16
*midi_note=80
*input_bit=toe_2 *bit=36 *midi_channel=16
*midi_note=81
*input_bit=toe_3 *bit=37 *midi_channel=16
*midi_note=82
*input_bit=toe_4 *bit=38 *midi_channel=16
*midi_note=83
*input_bit=toe_5 *bit=39 *midi_channel=16
*midi_note=84
*input_bit=toe_6 *bit=40 *midi_channel=16
*midi_note=85
*input_bit=toe_7 *bit=41 *midi_channel=16
*midi_note=86
*input_bit=toe_8 *bit=42 *midi_channel=16
*midi_note=87
*input_bit=toe_9 *bit=43 *midi_channel=16
*midi_note=88
;
; Pedal traps to 2nd touch switch
;
*input_bit=ped1st *bit=44 *midi_channel=16
*midi_note=90
;
*input_bit=ped2nd *bit=45 *midi_channel=16
*midi_note=91
;
; Spare 46
;
; Swell pedal
;
*input_bit=blade07 *bit=48 *midi_channel=7
*midi_note=48
*input_bit=blade06 *bit=50 *midi_channel=7
*midi_note=50
*input_bit=blade05 *bit=52 *midi_channel=7
*midi_note=52
*input_bit=blade04 *bit=54 *midi_channel=7
*midi_note=54
*input_bit=blade03 *bit=55 *midi_channel=7
*midi_note=55
*input_bit=blade02 *bit=56 *midi_channel=7
*midi_note=56
*input_bit=blade01 *bit=57 *midi_channel=7
*midi_note=57
;
;
*input_bit=swell47 *bit=47 *midi_channel=7

```



```

*midi_note=47
;
*input_bit=swell49 *bit=49 *midi_channel=7
*midi_note=49
;
*input_bit=swell51 *bit=51 *midi_channel=7
*midi_note=51
;
*input_bit=swell53 *bit=53 *midi_channel=7
*midi_note=53
;
;
;
; Spare 58-64
;
; Manuals
;
*****
*****
;
*umidi_module_b ; Console #4
;
*input_64 ; Input Board #4
;
; Solo clavier, first touch
;
*division=solo *midi_channel=1 *midi_note=36
*bits=1,61
;
; Reserved 62-64
;
*input_64 ; Input Board #5
;
; Solo clavier, second touch
;
*division=sol2 *midi_channel=4 *midi_note=36
*bits=1,61
;
; Reserved 62-64
;
*****
*****
;
*umidi_module_b ; Console #5
;
*input_64 ; Input Board #6
;
; Accompaniment clavier, first touch
;
*division=accomp *midi_channel=2 *midi_note=36
*bits=1,61
;
; Reserved 62-64
;
*input_64 ; Input Board #7
;
; Accompaniment clavier, second touch

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```

;
;          *division=acc2 *midi_channel=5 *midi_note=36
*bits=1,61
;
; Reserved 62-64
;
;
*****
*****
;
*umidi_module_b ;Console #6
;
; This is for Hauptwerk application, 10k pot on swell shoe
      *control=Swell_shoe *bit=1 *midi_channel=7
      *midi_controller=11 *range= 0,64
;
      *coupler (1) solo to solo ; This is to make the Unison
always active
      *coupler (solo_sub) solo to solo *offset=-12      ; Sub
Octave Solo
      *coupler (solo_octave) solo to solo *offset=12      ; Octave
Solo
;
;
*****
*****
; Below are components located in the pipe chamber
;
*****
*****
;
*umidi_module_b ; Chamber #7 Total 8
; Driver 85-note board
;
      *rank_driver ;Driver board chamber #1 Total 3
;
;
; Swell pedal output
      *output_bit (blade07) *bit=74      ; Blade #7
(small)
      *output_bit (blade06) *bit=75      ; Blade #6
      *output_bit (blade05) *bit=76      ; Blade #5
      *output_bit (blade04) *bit=77      ; Blade #4
      *output_bit (blade03) *bit=78      ; Blade #3
      *output_bit (blade02) *bit=79      ; Blade #2
      *output_bit (blade01) *bit=80      ; Blade #1
;
; Spare 85
;
      *rank=tibia *bits=1,73
;
; Driver positions (Bits) 1-12 go to Tibia offset, 13-73 to main
chest.
;

```

```

; Tibia relay definitions
      *relay (ped_tibia_8)      *division=pedal
*rank=tibia
      *relay (acc_tibia_8)      *division=accomp
*rank=tibia
      *relay (acc_picc_4)              *division=accomp
*rank=tibia *offset=12
      *relay (acc2_tibia_8)      *division=acc2
*rank=tibia
      *relay (solo_tibia_16)     *division=solo
*rank=tibia *offset=-12
      *relay (solo_tibia_8)      *division=solo
*rank=tibia
      *relay (solo_picc_4)       *division=solo
*rank=tibia *offset=12
;
;
; No spares
;
; Following statement blocks further propagation of swell pedal
activity
      *midi_channel_truncate=7,0
;
*umidi_module_b ; Chamber #8 total 9
; Driver Board, 85-note
;
      *rank_driver ;Driver board chamber #2 Total 4
;
; Tremulant stops
      *output_bit (main_trem) *bit=74
      *output_bit (vox_trem) *bit=75
;
      *rank=bass_violin *bits=1,12
      *rank=celeste *bits=13,61
;
; Driver positions 1-12 go to Violin/Trumpet offset
;
; Violin relay definitions
      *relay (ped_cello_8) *division=pedal
*rank=bass_violin
      *relay (acc_viol_8) *division=accomp
*rank=bass_violin
      *relay (solo_viol_8) *division=solo
*rank=bass_violin
      *relay (acc_viol_16) *division=accomp
*rank=bass_violin *offset=-12
;
; Note that the Celeste is a 4' rank. The 8' stop is a TenC stop
;
; Violin Celeste relay definitions
      *relay (acc_cele_8) *division=accomp *rank=celeste
*offset=-12
      *relay (acc_cele_4) *division=accomp *rank=celeste
      *relay (solo_cele_8) *division=solo *rank=celeste

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```

*offset=-12
                *relay (solo_cele_4) *division=solo   *rank=celeste
;
; Spares 76-85
;
*umidi_module_b ; Chamber #9 Total 10
; Driver Board, 85-note
; The Bourdon/Flute is a 97 pipe rank. The 16' extensions are placed
together with
; the Diapason rank.
;
                *rank_driver ; Driver board chamber #3 Total 5
                *rank=flute  *bits=1,85
;
; Driver positions 1-12 go to Bourdon/Flute 12 pipe offset
;
; Bourdon/Flute relay definitions
                *relay (ped_bour_16) *division=pedal *rank=flute
*offset=-12
                *relay (ped_flute_8) *division=pedal *rank=flute
                *relay (acc_flute_8) *division=accomp *rank=flute
                *relay (acc_flute_4) *division=accomp *rank=flute
*offset=12
                *relay (acc_picc_2)  *division=accomp *rank=flute
*offset=24
                *relay (solo_bour_16) *division=solo   *rank=flute
*offset=-12
                *relay (solo_flute_8) *division=solo   *rank=flute
                *relay (solo_flute_4) *division=solo   *rank=flute
*offset=12
                *relay (solo_twelfth) *division=solo   *rank=flute
*offset=19
                *relay (solo_picc_2)  *division=solo   *rank=flute
*offset=24
                *relay (solo_tierce)  *division=solo   *rank=flute
*offset=28
;
; No spares
;
*umidi_module_b ; Chamber #10 Total 11
; Driver Board, 85-note
;
; This board is also used for the 16' extension of the Flute rank
;
                *rank_driver ; Driver board chamber #4 Total 6
                *rank=diapason *bits=1,73
                *rank=bourdon  *bits=74,12
;
; Drivers 1-12 go to the Diaphone chest
; Drivers 13-19 go to the 7 rank offset
; Drivers 20-73 go to Main chest
; Drivers 74-85 go to the two 6+6 Bourdon/Flute offsets
;
; Diaphonic Diapason relay definitions

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```

        *relay (ped_diap_16) *division=pedal
*rank=diapason
        *relay (ped_diap_8) *division=pedal
*rank=diapason *offset=12
        *relay (acc_diap_8) *division=accomp
*rank=diapason *offset=12
        *relay (acc_octav_4) *division=accomp
*rank=diapason *offset=24
        *relay (solo_diap_16) *division=solo
*rank=diapason
        *relay (solo_diap_8) *division=solo
*rank=diapason *offset=12
        *relay (solo_octav_4) *division=solo
*rank=diapason *offset=24
;
; Drivers 74-85 go to Bourdon/Flute offsets 6+6
;
; Bourdon 16' extension relay definitions
        *relay (ped_bour_16) *division=pedal *rank=bourdon
        *relay (solo_bour_16) *division=solo *rank=bourdon
;
; No spares
;
*umidi_module_b ; Chamber #11 total 12
; Driver Board, 73-note
; This is a combination of the 4' extension of the Diapason rank and
; the Violin. It has been named "treble_dia" not to be confused with
; the original diapason rank.
; This corresponds to the actual Wurlitzer chest layout.
;
        *rank_driver ; Driver board chamber #5 Total 7
        *rank=violin *bits=1,61
        *rank=treble_dia *bits=62,12
;
; Violin relay definitions
        *relay (ped_cello_8) *division=pedal *rank=violin
*offset=-12
        *relay (acc_viol_16) *division=accomp *rank=violin
*offset=-24
        *relay (acc_viol_8) *division=accomp *rank=violin
*offset=-12
        *relay (acc_viol_4) *division=accomp *rank=violin
        *relay (solo_viol_8) *division=solo *rank=violin
*offset=-12
        *relay (solo_viol_4) *division=solo *rank=violin
;
; Treble diapason here
;
        *relay (acc_octav_4) *division=accomp
*rank=treble_dia *offset=-49
        *relay (solo_octav_4) *division=solo
*rank=treble_dia *offset=-49
;
; No spares

```

```

;
*umidi_module_b ; Chamber #12 Total 13
; Driver Board, 61-note
;
    *rank_driver ; Driver board chamber #6 Total 8
    *rank=vox *bits=1,61
;
; Vox Humana relay definitions
    *relay (acc_vox_16)                *division=accomp
*rank=vox *offset=-12
    *relay (acc_vox_8)                 *division=accomp
*rank=vox
    *relay (acc_vox_4)                 *division=accomp
*rank=vox *offset=12
    *relay (solo_vox_16)               *division=solo
*rank=vox *offset=-12
    *relay (solo_vox_8)                *division=solo
*rank=vox
;
; No spares
;
*umidi_module_b ; Chamber #13 Total 14
; Driver Board, 61-note
;
    *rank_driver ; Driver board chamber #7 Total 9
    *rank=trumpet *bits=1,61
;
; Driver positions 1-2 go to Violin/Trumpet offset
;
; Trumpet relay definitions
    *relay (ped_trump_8)               *division=pedal
*rank=trumpet
    *relay (acc_trump_8)               *division=accomp
*rank=trumpet
    *relay (solo_trump_8)              *division=solo
*rank=trumpet
    *relay (acc2_trump_8)              *division=acc2
*rank=trumpet
;
;
; No spares
;
*umidi_module_b ; Chamber #14 Total 15
; Driver Board, 73-note
;
    *rank_driver ; Driver board chamber #8 Total 10
;
; Preliminary assignments to toy counter
;
key cheek    *output_bit (door)          *bit=62 ;Button acc left
             Toy D-sub 1
;
             *output_bit (toe_1)        *bit=67 ;Auto Horn
             Toy D-sub 10

```

```

reiterate      *output_bit (toe_2)      *bit=63 ;Fire gong
               Toy D-sub 3
               *output_bit (toe_3)      *bit=64 ;Train whistle
               Toy D-sub 4
;
               *output_bit (toe_4)      *bit=66 ;Bird
               Toy D-sub 6
               *output_bit (toe_5)      *bit=68 ;Siren
               Stand alone
               *output_bit (toe_6)      *bit=53 ;Chinese Block
               Toy D-sub 8
;
               *output_bit (toe_7)      *bit=60 ;Crash Cymbal
               Stand alone
               *output_bit (toe_8)      *bit=69 ;Surf
               Stand alone
               *output_bit (toe_9)      *bit=65 ;Horse hoofs
               Toy D-sub 5
;
               *output_bit (acc_sndrum) *bit=70 ; Snare drum
snares Toy D-sub 13
;
               *rank=chrys *bits=1,49
               *rank=traps *bits=51,11
;
; Chrysoglott relay definition
               *relay (solo_chrys)      *division=solo
*rank=chrys *offset=-7
               *relay (acc_chrys)      *division=accomp
*rank=chrys *offset=-7
;
; Cable color coding differs from bit number. For actual connection
see wiring diagram
;
; Traps relay definition
;
               *trap (acc_tamb)
               *division=accomp *rank=traps *bit=1 ;Driver 51 Toy
D-sub 14
;
               *trap (acc_cast)
               *division=accomp *rank=traps *bit=2 ;Driver 52 Toy
D-sub 7
;
               *trap (acc_chblock)
               *division=accomp *rank=traps *bit=3 ;Driver 53 Toy
D-sub 8
;
               *trap (acc2_triangu)
               *division=acc2 *rank=traps *bit=4 ;Driver 54 Toy
D-sub 9
;
               *trap (ped_cymb & !ped2nd)
               *division=pedal *rank=traps *bit=5

```

```

        *trap (ped_cymb)
        *division=ped2 *rank=traps *bit=5 ;Driver 55 Toy
D-sub 11
;
        *trap (acc_sndrum & !acc_tom)
        *division=accomp *rank=traps *bit=6 ;Driver 56 Toy
D-sub 12
;
        *trap (acc_tom)
        *division=accomp *rank=traps *bit=7 ;Driver 57 Toy
D-sub 20
;
        *trap (ped_bassdrum & !ped2nd)
        *division=pedal *rank=traps *bit=8 ;Driver 58
Stand alone
        *trap (ped_bassdrum)
        *division=ped2 *rank=traps *bit=8
;
        *trap (ped_kttldrum & !ped2nd)
        *division=pedal *rank=traps *bit=9 ;Driver 59
Stand alone
        *trap (ped_kttldrum)
        *division=ped2 *rank=traps *bit=9
;
        *trap (ped_chrcymb & !ped2nd)
        *division=pedal *rank=traps *bit=10 ;Driver
60 Stand alone
        *trap (ped_chrcymb)
        *division=ped2 *rank=traps *bit=10
;
        *trap (acc_sleigh)
        *division=accomp *rank=traps *bit=11 ; Driver 61
stand alone
;
; Spares 50,72-73
;
*umidi_module_b ; Chamber #15 Total 16
; Driver Board, 85-note
;
        *rank_driver ; Driver board chamber #9 Total 11
        *rank=xylo *bits=1,37
        *rank=glock *bits=38,30
        *rank=chimes *bits=68,18
;
; The Xylophone bits 1-37 relay definitions
        *relay (solo_xylo) *division=solo
*rank=xylo *offset=-12
;
; The Glockenspiel bits 38-67 relay definitions
        *relay (solo_glock) *division=solo
*rank=glock *offset=-19
;
; The Chimes bits 68-85 relay definitions
        *relay (solo_chimes) *division=solo

```



```

*rank=chimes *offset=-24
        *relay (acc2_chimes)      *division=acc2
*rank=chimes *offset=-24
;
; No spares
;
;
*****
*****
; End of chamber definitions
;
*****
*****
;
; Now follows the combination action.
;
        *combination_action
                *set=set_button
                *map=map_switch
;
                *piston=solps_1
                *piston=solps_2
                *piston=solps_3
                *piston=solps_4
                *piston=solps_5
;
                *piston=accps_1
                *piston=accps_2
                *piston=accps_3
                *piston=accps_4
                *piston=accps_5
;
                *piston=gen_cancel
                *memory_select=memselect_knob
;
; Magnet driver definitions, milliseconds
        *dual_mag_time=255
;
; Pedal division
; This connects to the main (big) blowbox
;
                *dual_mag_tab=ped_diap_16 *on=mag_1:1  *off=mag_1:2
                *dual_mag_tab=ped_bour_16 *on=mag_1:3  *off=mag_1:4
                *dual_mag_tab=ped_trump_8 *on=mag_1:5  *off=mag_1:6
                *dual_mag_tab=ped_diap_8  *on=mag_1:7  *off=mag_1:8
                *dual_mag_tab=ped_tibia_8 *on=mag_1:9
*off=mag_1:10
                *dual_mag_tab=ped_flute_8 *on=mag_1:11
*off=mag_1:12
                *dual_mag_tab=ped_cello_8 *on=mag_1:13
*off=mag_1:14
;
; Pedal traps
;

```

```

*dual_mag_tab=ped_bassdrum *on=mag_1:15
*off=mag_1:16
*dual_mag_tab=ped_kttldrum *on=mag_1:17
*off=mag_1:18
*dual_mag_tab=ped_chrcymb *on=mag_1:19
*off=mag_1:20
*dual_mag_tab=ped_cymb *on=mag_1:21
*off=mag_1:22
;
; Accompaniment stop keys, first touch
;
*dual_mag_tab=acc_viol_16 *on=mag_1:23
*off=mag_1:24
*dual_mag_tab=acc_vox_16 *on=mag_2:25
*off=mag_2:26
*dual_mag_tab=acc_trump_8 *on=mag_2:27
*off=mag_2:28
*dual_mag_tab=acc_diap_8 *on=mag_2:29
*off=mag_2:30
*dual_mag_tab=acc_tibia_8 *on=mag_2:31
*off=mag_2:32
*dual_mag_tab=acc_viol_8 *on=mag_2:33
*off=mag_2:34
*dual_mag_tab=acc_cele_8 *on=mag_2:35
*off=mag_2:36
*dual_mag_tab=acc_flute_8 *on=mag_2:37
*off=mag_2:38
*dual_mag_tab=acc_vox_8 *on=mag_2:39
*off=mag_2:40
*dual_mag_tab=acc_octav_4 *on=mag_2:41
*off=mag_2:42
*dual_mag_tab=acc_picc_4 *on=mag_2:43
*off=mag_2:44
*dual_mag_tab=acc_viol_4 *on=mag_2:45
*off=mag_2:46
*dual_mag_tab=acc_cele_4 *on=mag_2:47
*off=mag_2:48
*dual_mag_tab=acc_flute_4 *on=mag_2:1
*off=mag_2:2
*dual_mag_tab=acc_vox_4 *on=mag_2:3
*off=mag_2:4
*dual_mag_tab=acc_picc_2 *on=mag_2:5
*off=mag_2:6
*dual_mag_tab=acc_chrys *on=mag_2:7
*off=mag_2:8
;
; Accompaniment traps, first touch
;
*dual_mag_tab=acc_sndrum *on=mag_2:9
*off=mag_2:10
*dual_mag_tab=acc_tamb *on=mag_2:11
*off=mag_2:12
*dual_mag_tab=acc_cast *on=mag_2:13
*off=mag_2:14

```

```

*dual_mag_tab=acc_chblock *on=mag_2:15
*off=mag_2:16
*dual_mag_tab=acc_tom *on=mag_2:17
*off=mag_2:18
*dual_mag_tab=acc_sleigh *on=mag_2:19
*off=mag_2:20
;
; Solo stop keys, first touch
;
*dual_mag_tab=solo_diap_16 *on=mag_2:21
*off=mag_2:22
*dual_mag_tab=solo_tibia_16 *on=mag_2:23
*off=mag_2:24
*dual_mag_tab=solo_bour_16 *on=mag_1:25
*off=mag_1:26
*dual_mag_tab=solo_vox_16 *on=mag_1:27
*off=mag_1:28
*dual_mag_tab=solo_trump_8 *on=mag_1:29
*off=mag_1:30
*dual_mag_tab=solo_diap_8 *on=mag_1:31
*off=mag_1:32
*dual_mag_tab=solo_tibia_8 *on=mag_1:33
*off=mag_1:34
*dual_mag_tab=solo_viol_8 *on=mag_1:35
*off=mag_1:36
*dual_mag_tab=solo_cele_8 *on=mag_1:37
*off=mag_1:38
*dual_mag_tab=solo_flute_8 *on=mag_1:39
*off=mag_1:40
*dual_mag_tab=solo_vox_8 *on=mag_1:41
*off=mag_1:42
*dual_mag_tab=solo_octav_4 *on=mag_1:43
*off=mag_1:44
*dual_mag_tab=solo_picc_4 *on=mag_1:45
*off=mag_1:46
*dual_mag_tab=solo_viol_4 *on=mag_1:47
*off=mag_1:48
*dual_mag_tab=solo_cele_4 *on=mag_1:49
*off=mag_1:50
*dual_mag_tab=solo_flute_4 *on=mag_1:51
*off=mag_1:52
*dual_mag_tab=solo_twelfth *on=mag_1:53
*off=mag_1:54
*dual_mag_tab=solo_picc_2 *on=mag_1:55
*off=mag_1:56
*dual_mag_tab=solo_tierce *on=mag_1:57
*off=mag_1:58
*dual_mag_tab=solo_chimes *on=mag_1:59
*off=mag_1:60
*dual_mag_tab=solo_xylo *on=mag_1:61
*off=mag_1:62
*dual_mag_tab=solo_glock *on=mag_1:63
*off=mag_1:64
*dual_mag_tab=solo_chrys *on=mag_1:65

```

```

*off=mag_1:66
;
; This connects to the small blowbox
;
; Tremulants
*off=mag_2:50      *dual_mag_tab=vox_trem          *on=mag_2:49
*off=mag_2:50      *dual_mag_tab=main_trem        *on=mag_2:51
*off=mag_2:52
;
; Solo
*off=mag_2:54      *dual_mag_tab=solo_octave *on=mag_2:53
*off=mag_2:54      *dual_mag_tab=solo_sub          *on=mag_2:55
*off=mag_2:56
;
; Accompaniment second touch
*off=mag_2:58      *dual_mag_tab=acc2_triangular *on=mag_2:57
*off=mag_2:58      *dual_mag_tab=acc2_chimes *on=mag_2:59
*off=mag_2:60      *dual_mag_tab=acc2_tibia_8      *on=mag_2:61
*off=mag_2:62      *dual_mag_tab=acc2_trump_8      *on=mag_2:63
*off=mag_2:64
;
; Spares mag_1 67-80
; Spares mag_2 65-80
*end

```