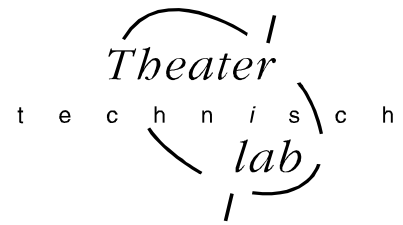


# MANUAL SPRING

software version 2.0



## General

The SPRING is a 24 channel memory lighting control desk with a DMX512 output and a analogue output. The SPRING has two faderbanks with 24 faders, a split up crossfader and a MASTER fader. Each channel has a levelled and a push button. These buttons are channel pointers for: level flash, level view/preview and DMX softpatch. This desk is designed to play back manual made presets as well as presets recorded in memory.

You can store 200 presets in memory. You can fade in these presets with the crossfader or with a GO-button action in a programmable fade time. The SPRING has a LOOP/chase mode. You can add 3 pre-programmed or user defined loops to the present light scene. Only the user defined loop's are build up with scene's This scenes follow each other by crossfade in the programmed fade times. You get a stepped chase by giving the rhythm with the TEMPO button.

The SPRING has several possibilities for remote control: external GO-button, preset controller and MIDI.

The SPRING has three users levels: so you can reduce the control possibilities and adjust the user interface to the experience of the user (see under set up).

## User situations:

- **MANUAL PLAY**

The SPRING has two faderbanks, called A and B. Each bank has 24 fader and a red indication led in the middle. This led indicates whether the faders of the corresponding bank are in control or not. The faderbank that isn't in control is available for making a preset. You can make a preset visible on stage with the crossfader or with a GO-button action in a programmable fade time. The output levelleds indicate the output level of each channel. Each channel has a button, that makes it possible to flash the channel output level (put directly on 100%) or you can see the output level in percents at the display of the present scene (view output) or of the preset (preview output). It depends on the choice you have made with the function-SET-button.

- **MEMORY PLAY**

The SPRING can store 200 presets in its memory. Its memory is divided into 4 pages. You can select a preset with the two scroll buttons. The general indication for a preset is: Y:XX. For example: "2:34" is the 34<sup>th</sup> recorded scene on page 2. You can make a recorded preset visible on stage with the crossfader or a GO button action, just like you make a manual made preset visible. You can directly change the channel levels of the present scene by using the faders of the bank that is in control. (red led is on) With the other faderbank you can change the channel level output of the selected recorded presets. You have to use 'preview output'. You can directly switch to manual play anytime you want.

- **STORE SCENE / DEFINE LOOP**

In this mode you can store a preset (channel level setting) in memory as "Y:XX". Y=1, 2, 3 or 4. X=1, 2,...up until 50. It is also possible to change or copy a record made before. You can define a loop of existing scene records on page 4. You record the first and the last memory preset of the sequence. You can program 3 loops.

- **FADE TIME:**

In this mode you can set the fade in time and the fade out time separately for each preset or scene and you can look at previous recorded times.

- **INSERT / DELETE SCENE:**

In this mode it is possible to insert a memory preset. The inserted scene gets the selected number. All the earlier made scenes, that follow the inserted scene on that page get automatically a new number: the old number increased by 1. In the delete mode you can remove a memory preset.

- **SOFT PATCH / SET-UP:**

In this mode you can define the softpatch between 24 control channels and 512 DMX channels. The set-up possibilities are: to block softpatch changing, to block channel flashing, to choose between MIDI or remote preset controller and to choose between 3 user levels.

## Finally

By power-on the software version is displayed for 2 seconds. After that the SPRING automatically fades in the latest used memory preset. Was the SPRING in 'manual play' when turned off, than the desk automatically goes back to manual play after power on. All channel levels are processed 40 times a second and send through the DMX exit. The DMX data-rate =40[1/s]. The SPRING can store 200 presets and the data-retention is more then 10 years.

The possible fade times are: 0,0 0,1 0,2 0,3 0,4 0,5 0,6 0,8 1,0 1,2 1,5 2,0 2,5 3,0 4,0 4,5 5,0 6,0 7,0.....20 22 24 .....60 63 68 71 78 82 86 91 96 100 110 120 130 140 150 170 180 210 230 270 330 410 550 820 seconds.

## Legend

[.....] points to a button, <.....> points to a led and “...” is a displayed text.

## Definitions

A **SCENE** is the (on stage) visible result of the setting of 24 control channels.

A **PRESET** is a level setting of 24 control channels, made with the faders on the bank whose led doesn't burn (manual preset).

The result becomes visible after a crossfade; **PRESET=NEXT SCENE**.

A **MEMORY** is a preset stored in memory.

A **LOOP** is a repeated automatically sequence of some memories fading in.

**CHASE-mode** of a loop is the situation in which memories follow up each other step by step (no crossfade)

The **FADERBUTTONS** are the squared black buttons below the faders. They serve as pointing devices.

Attention: during playing back the leddisplay always shows the number of next scene. Is “-0-“ on the display than the next scene is a manual made preset.

## BASIC OPERATIONS

### The SPRING as a manual desk

- **CREATE & CHANGE A SCENE**

Select with [select PLAY mode] manual play, (yellow led burns), the display shows “-0-“ (level-2)

Check the crossfader: both parts must be together in the same end position. You can directly create a light-scene visible on stage (live level control) on the faderbank whose led burns. Which faderbank that will be depends on the position of the crossfader.

- **CREATE & CHANGE A PRESET**

Select with [select PLAY mode] manual play, (yellow led burns), the display shows “-0-“ (level-2)

Check the crossfader: both parts must be together in the same end position. You can make a preset on the faderbank whose led doesn't burn. You put the faders in the right position. To get the exact channel level output in percents on display: see below

- **MANUAL CROSSFADE**

To make a preset visible on stage: move both faders of the crossfader in the direction of the burning crossfader led. The crossfader part whose led burns makes all channel level increases visible. The other crossfader part makes all channel level decreases visible. As soon as both crossfader parts are on the side of the burning led, this led goes off and the other one goes on; the crossfade is finished, the faderbanks exchange their function.

- **AUTOMATIC CROSSFADE**

Push [GO/stop]: now there is an automatic crossfade. The present scene disappears and the preset appears on stage. The default fade in and fade out times 3[s] or 0[s]. You can set this default in Set-up mode. How to change fade times: see below.

Notice the faderbanks don't exchange their function when the autocrossfade is finished.

Ofcourse you can change a channel level. First you have to check if the fader is active: the channel level must correspondent with the faders position: move the fader up/down till you have picked up the level. To do it smoothly you can check the former channel level in percents on the display (see below)

- **TO VIEW AND TO SET CHANNEL LEVEL IN PERCENTS**

Viewing the output level:

At the right side of the fader buttons you find [SET]. Select option: ‘view output’ (yellow led is off). Push the faderbutton of the channel you want to view or change. At the display you see the corresponding channel output level. If you move the fader on the faderbank whose red led burns you see the value at the display changing.

Viewing the preset level:

At the right side of the fader buttons you find [SET]. Select option: ‘preview output’ (yellow led burns). Push the faderbutton of the channel you want to view or change. At the display you see the corresponding channel output level. If you move the fader on the faderbank whose led is off, you see the value at the display changing.

- **TO FLASH A CHANNEL OUTPUT LEVEL**

At the right side of the fader buttons you find [SET]. Select option: ‘flash channel’ You have to push the button for 2 seconds (yellow led blinks). Push the faderbutton of the channel you want to flash. You put the channel output level at once at 100%.

## **The SPRING as memory control desk (level-2)**

- **TO CREATE A MEMORY (PRESET)**

Select with [select PLAY mode] manual play (yellow led burns), the display shows “-0-“. Create a scene on the faderbank whose led burns. Push [store scene]. Led <store scene> burns. Select a memory number with the scrollbuttons [<<] and [>>]. Numbers with a decimal dot at the end are already in use. Confirm your choice by pushing [DO IT!] for 1second. The display shows “REC.”(record). Led <store scene> blinks. The SPRING returns to manual play. You can quit this mode by pushing [select PLAY mode]

- **TO CHANGE A MEMORY**

Select with [select PLAY mode] memory play (green led burns). The display shows the number of a memory. Select the number of the memory you want to change with the scrollbuttons [<<] and [>>]. For example 2:40. Show the memory on stage. Use the faderbank whose led burns to change the scene. Push [store scene]. Led <store scene> burns. The display shows “2:40.” Push [DO IT!] for 1second. The display shows “Chg.” (change). Led <store scene> blinks. The SPRING returns to memory play.

- **TO COPY A MEMORY**

Select with [select PLAY mode] memory play (green led burns). The display shows the number of a memory. Select the number of the memory you want to copy with the scrollbuttons [<<] and [>>]. For example 2:40. Show the memory on stage. Push [store scene]. Led <store scene> burns. The display shows “2:40.” Use the scrollbuttons [<<] and [>>] to select the number for the copy. Push [DO IT!] for 1second. The display shows “REC.”(record). Led <store scene> blinks. The SPRING returns to memory play.

- **TO INSERT A MEMORY**

Create the scene you want to insert. You can make a new scene in manual play or you can change a memory in memory play. Push [insert scene]. Led <insert scene> lights up. The display shows the number of the first existing memory. Select with [<<] or [>>] the number you like to give that new memory you want to insert. Attention you can only select numbers of existing memories. Confirm your choice by pushing [DO IT!] for 1 second. The display shows “INS.”(insert). First led <insert scene> starts flashing, than led <store scene> flashes. The SPRING leaves this mode automatically: the inserted scene has the selected number and all memories that follow the inserted scene on that page get automatically a new number: the old number increased by 1. Attention: this process can take 32 seconds. You can quit this mode by pushing [select PLAY mode]

- **TO DELETE A MEMORY**

Keep [insert scene] pushed till led <insert scene > blinks. The led display shows the number of the first existing memory. Select with [<<] or [>>] the number you like to delete. Confirm your choice by pushing [DO IT!] The display shows “DEL.”. Keep the button pushed until “DEL” disappears. Push [select play mode] to quite the delete mode.

- **TO CHANGE / VIEW THE FADE IN TIME.**

Select the preset whose fade-in time you want to change by pushing [<<] or [>>]. Push [fade in time]. The display shows the current fade time. Change the displayed time with [<<] or [>>]. Push [DO it]. In case of a memory preset the changed value will be stored. In case of a manual preset (“-0-”) the setting is only for the next fade-in. The SPRING returns automatically to the previous mode.

- **TO CHANGE / VIEW THE FADE OUT TIME.**

Select the preset whose fade-out time you want to change by pushing [<<] or [>>]. Keep [fade in time] pushed for 1 second. The display first shows the current fade in time, than the current fade out time. Change the displayed fade out time with [<<] or [>>]. Push [DO it]. In case of a memory preset the changed value will be stored. In case of a manual preset (“-0-”) the setting is only for the next fade-in. The SPRING returns automatically to the previous mode.

- **TO MAKE A MEMORY PRESET VISIBLE ON STAGE.**

Select with [select PLAY mode] memory play (green led burns). Select for ‘next scene’ a memory by pushing [<<] or [>>]. Manual fade-in: move the crossfader in the direction of the crossfader led that burns. Automatically: push on [GO/stop]; flashing display dots indicate the going fade. The preset becomes visible (if the MASTER is set open).

- **GO-FADE: STOP/CANCEL/OVERRULE**

To stop a going autofade push once again on [GO/stop]; with this button you can toggle between GO and stop. In case of ‘stop’ the last display dot keeps flashing. To cancel a fade push on [<<] or [>>] or change the play mode with [select PLAY mode]. ‘Overrule’ takes place as you move the crossfader to the crossfader led that burns; with overrule you can only speed up the crossfade time. By stopping the fade and make a overrule the auto fade is changed in a manual crossfade, so now you can complete or undo the fade-in.

- **TO SET / VIEW AUTOFOLLOW**

Select with [select PLAY mode] memory play (green led burns). Select for ‘next scene’ a memory by pushing [<<] or [>>]. At the left top side of the display you find the ‘autofollow dot’. With [toggle autofollow] you can turn on or of autofollow. If autofollow is set for a certain scene (you can see the dot), the fade in of this scene starts automatically after the previous scene has finished.

- **CREATE A USER DEFINED LOOP**

You can define a loop by simply pointing the first and the last one of a group of succeeding memories.

Create the memories you need for your loop. This can only be memories on page 4: the numbers 4:01 up until 4:50. Push [store scene] for 2 seconds. Led <store scene> flashes and the display shows “d.L.E” (=define loop ends). To point out loop 1, 2 or 3 you must push [GO/stop] 1, 2 or 3 under ‘LOOP/chase control’. The corresponding green led burns. The display shows “F.S.=“ (first step) for 2[s] and after that it shows the first memory number on page 4, or if the loop is already been made, the memory number you programmed previously. Choose with [<<] or [>>] the memory you want for your first step. Push [DO IT!] to confirm your choice. The display shows “L.S.=“ (last step) for 2[s] and after that a memory number. Choose with [<<] or [>>] the memory you want for your last step. Push [DO IT!] to confirm your choice. The SPRING returns automatically to the previous mode.

- **START AND STOP LOOPS/CHASES**

By pushing [GO/stop] 1 (LOOP/CHASE CONTROL) you start the pre-programmed chase1. If you have created a user defined loop1, this loop will be started. If you push [GO/stop] again the chase/loop disappears from the scene. You can add three loops to the present scene at the same time. You can start the chase mode with a particular speed for a loop or only set the speed for a pre-programmed chase by pressing [TEMPO] twice in the desired rhythm while pushing the corresponding GO/stop button.

- **DELETE LOOPS**

Keep [insert scene] pushed until led <insert scene> starts blinking. Point out the loop you want to delete by pushing the corresponding [GO/stop] for 2 seconds. The display shows “DEL”. Push [select play mode] to quite the delete mode.

## SPECIAL ACTIONS

- **TO CHANGE THE SET-UP**

Keep [set up] pushed for 5 seconds. Led <set up> flashes. By pushing once again on [set up] you can select an other set-up item which is shown on the display. You can change a setting by pushing button [<<] or [>>]. The possibilities are:

“P.=y/n”; block softpatch changes, yes or no.

“F.=y/n”; enables channel flashing, yes or no.

“L.=0/1/2”; select user level, 0, 1 or 2:

level 0: only MANUAL play. The display always shows: “L=0”

level 1: MANUAL play and you can start loops, that have already been programmed (level 2). The display always shows: “L=0”

level 2: all control options are available

“r=y/n”; you can set ‘remote in’ to use a remote preset controller: select ‘y’ (‘n’ means you can use MIDI).

“C.xx”; MIDI channel number setting, xx=[1,...,16] only if “r=n” (if MIDI is possible).

Attention, if “r=y”: the SPRING is used in combination with a remote preset controller, “C.01” must be set.

“t.=x; default fade time, x=0[s] or 3[s].

Push [select play mode] to leave the set-up mode.

- **VIEW SOFTPATCH**

Push [soft patch]. The display shows “S.P.=“. To select the control channel (1,...,24) you keep pushing the corresponding fader button. Now you can see in a chase the softpatches that are already made for the selected channel. These are the numbers with the last decimal point on. Attention: “---” means ‘not patched’.

- **CHANGE SOFTPATCH (if not blocked under set-up)**

Push on button [soft patch]. The display shows “S.P.=“. To select the control channel (1,...,24) keep pushing the corresponding fader button. With [<<] or [>>] you can select now any DMX channel number from 1 till 512. A patched DMX channel number is displayed with the last decimal dot on; scrolling stops automatically at a patched DMX channel number. You can toggle between ‘patched’ and ‘not patched’ by pushing on button [DO IT!]. To leave the patch mode, push [select play mode].

- **REMOTE PRESET CONTROLLER**

Set with [set up] “r=y”. You can remotely fade-in memory 1 till 7 with a 7-button preset controller. You can connect these preset controllers with each other to get more than 7 buttons or to control the same memories from different places. \*

Attention, if the SPRING is controlled by a preset controller, the remote channel number must be set on “C.01”.

- **MIDI CONTROL**

Set with [set up] “r=n” and choose the desired MIDI channel number. The SPRING can only act as a SLAVE device; it can only accept commands. The SPRING reacts on channel messages type ‘program change’. With these messages you can remotely fade-in the existing memories of the SPRING. The relation between the data byte value and the memories is simple: byte value 0 starts memory 1, value 1 starts memory 2, ....., value 127 starts memory 128. \*

- **REMOTE-GO**

The remote input accepts also a external GO-button. You have to connect it with a momentary switch between pin2 & pin3. With a jumper setting on the PCB you can set the GO-button to react as a GO/stop or as a GO button. More info about connecting an external GO-button is available on our website under ‘application guides’

- **DELETE ALL MEMORIES**

You can delete all memories at once. Push [insert scene] at power-on while the software version is displayed. The display starts showing the text “DEL”...”ALL” for 4[s]. If you push during this period on [DO IT!] all memories will be deleted. If there were

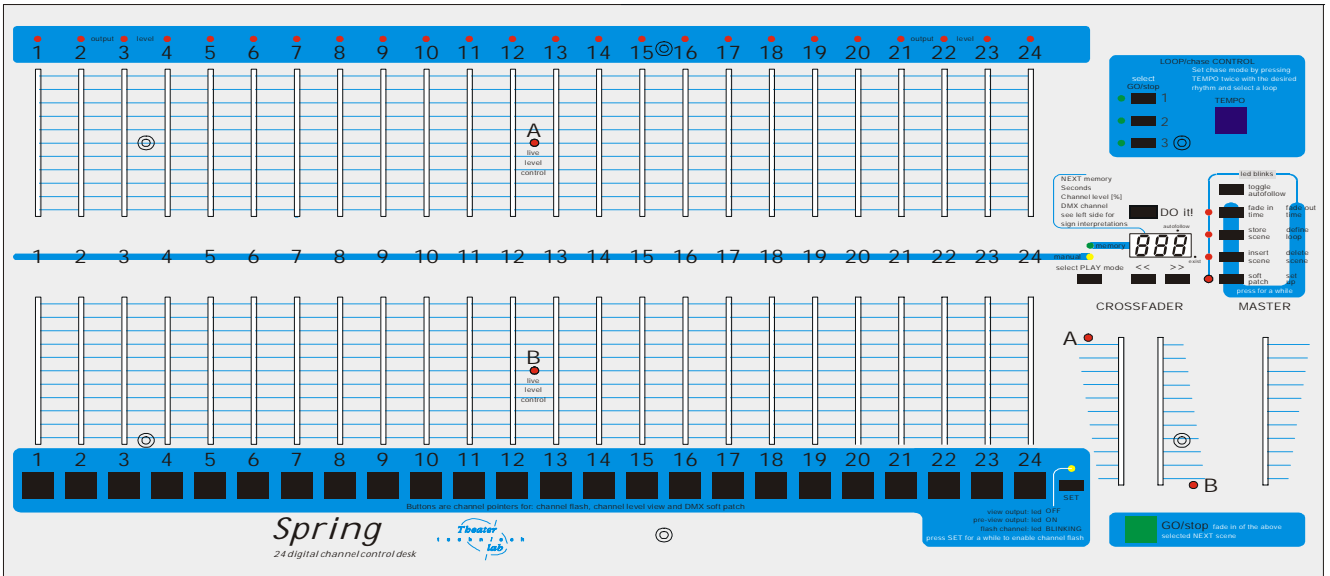
user defined loop's they will be also removed and replaced by the pre-programmed ones. After that the display shows the text "rST"... "SP. " for 4[s] (see below 'default softpatch'). Then the SPRING jumps to MANUAL mode

- **RESET SOFTPATCH**

You can set all patches to default at once. That means that control level of channel-1 is loaded in DMX data byte-1, 2 in DMX data byte 2, etc. DMX data byte (channel) 25 till 512 will be loaded with zeros.

If you push [insert scene] at power-on while the software version is displayed the display starts showing the text "dEL"... "ALL" for 4[s]. After that the display shows the text "rST"... "SP. " for 4[s]. While the SPRING displays the second text you push [DO IT!]. After that a default softpatch is set and the SPRING jumps to MANUAL mode.

Beneath you find the front layout of the SPRING. Fader buttons are not visible.



\* For more information about the remote preset controller, MIDI, de SPRING (software updates, application notes etc) you can visit our website: [www.theater-technisch-lab.nl](http://www.theater-technisch-lab.nl)