I ♥ D4C proudly presents…

Hercules

for controlling SSDR FlexRadio by a
«*Hercules DJControl Starlight*»
console for Windows

V.1.0 20240306

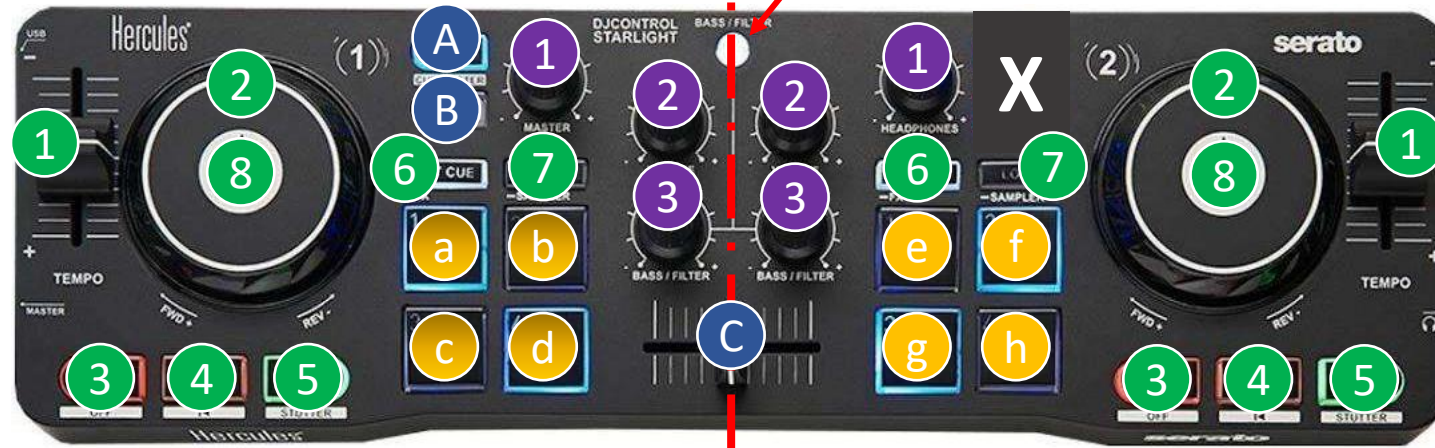I ❤ D4C proudly presents...

SLICE A

Switch „on"

SLICE B

X

-1- RIT
-2- Turn for VFO
-3- PTT Slice X
-4- RX-A/B Tx Antof-A/B
-5- Toggle Tx Ant1/2
-6- Select CueBtns
-7- Select LoopBtns
-8- Tap for center in Pan

Cue-Btns
a) Mode
b) Filter
c) PanBW
d) Step-Size

Loop-Btns Sl.A	Sl.B
a) CWMakro1	e) CWMakro5
b) CWMakro2	f) CWMakro6
c) CWMakro3	g) CWMakro7
d) CWMakro4	h) CWMakro8

-1- AGC-Lev.
-2- Volume
-3- Variable Filter

Global:
-A- MON
-B- Swap Slice A|B<->B|A
-C- Pan L/R Sl.A/B

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«Switch&Control up to 8 different FlexRadios»

Configuration-Mode <marked actors only>

Ⓐ Press to enter config mode

Your flex is in your local network? PERFECT!

You think about portforwarding or DynDns? FOREGT IT! SECURITY ISSUE!!!

Take a look at zerotier! With Zerotier, you can have a secure VPN + SmartLink is not needed (Layer-2 VPN, all is running local)

Questions? Mail us!

Preparation Step 1: „Adjust public/globals.json"
1. configs => How many configs shd be mapped (1…8)
2. default => which one shd be default? Must be less or equal configs!
Just 1 Flex? Set „configs" : 1 & „default" : 1 in globals.json and edit just the file „config1.json" in Step 2.

Step 2: „Edit each public/config<nr>.json
1. Edit each of the config<nr> you want to use.
2. Start with config1.json
3. Next config2.json and so on until <nr> = Globals.configs!!!

What must i edit in a config<nr>.json?
„FlexIP" : „<ipadress of the flex you want to control>", e.g. „192.168.0.100"

Should i edit the other properies?
Answer:
NO NO NO NO. If you want to remap functions to actors, thats done in the hercules.xlsx. Normally you do not have to change anything! Screw it up on your own ☺

Up to 8 differerent radios!
config<nr>.json for each flex => <nr> starting at 1
C - CUE   **L-Loop**
1,2,3,4   5,6,7,8

After entering configuration mode (base led = PURPLE) and selecting your config, controller is trying to connect to the radio. If there is an error, base led will turn RED.

If all went well, it connects and base led will stay GREEN

«Layer 1 and Layer 2 – Double your controls! »

Select Layer off/Layer 1 & blue/Layer 2

B Press to change layer

ADVANCED

You want more! More! More?
- Maybe you want to have more functions mapped
- Maybe you want to have on mapping for contest, one mapping for dx
- Maybe you enjoy screwing up everything,hi

Layer 1 will use the mapping in sheet „midimap" of public/hercules.xlsx

Layer 2 will use the mapping in sheet „midimap2" of public/hercules.xlsx (default: same as in Layer 1)
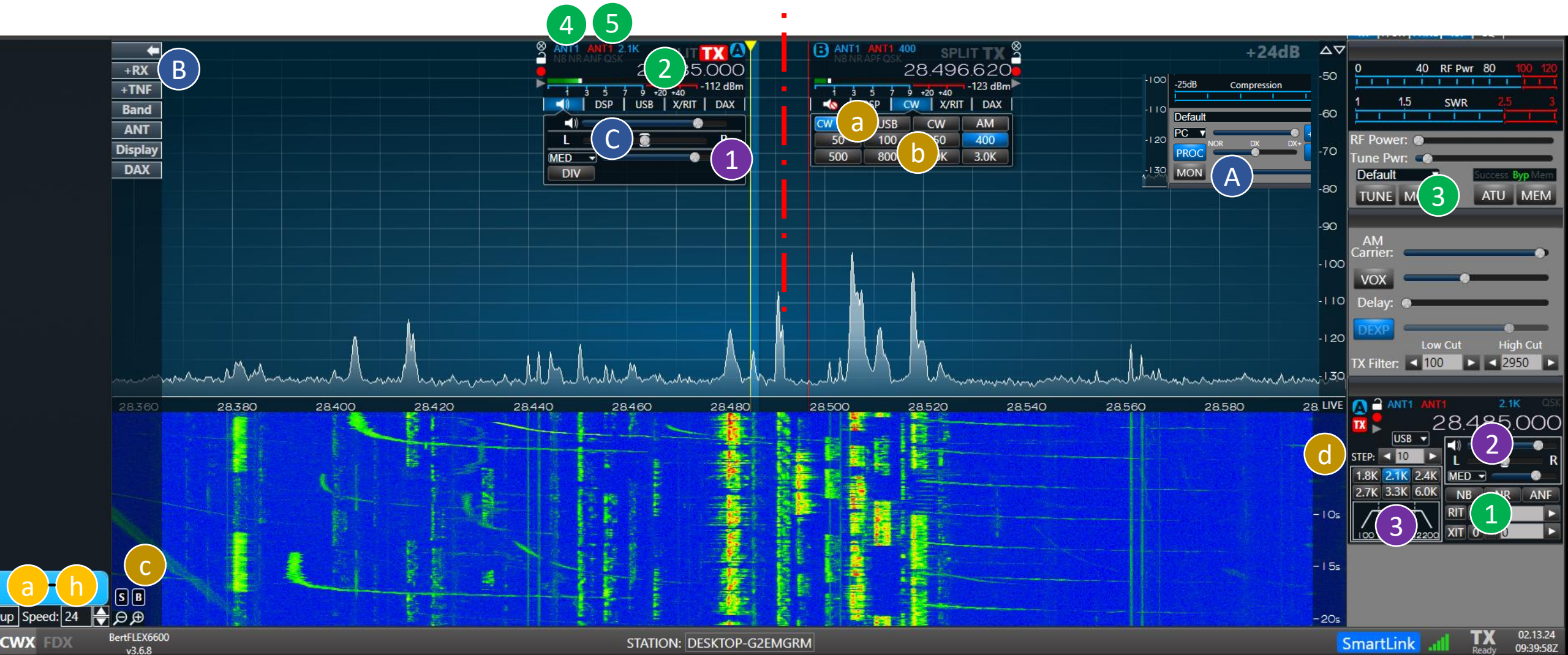
WARNING
- Keep in mind: Less is more. This is an add on, not an add-everything-is-possible thing :P
- Not every function can be remapped to everything, especially if it's coming down for led-btns-states
- Best praticse: reduce complexity, but extend to 2 layers.
- Having less used or new functionality makes more sense to have on layer2
- We learn from you: Request new funcionality and it might show up soon ☺

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SLICE A | SLICE B

«Functions to map: OVERVIEW»

Function			
agc			Modify the AGC slider-Value. Does not change the "Slow/Med/Fast" setting
center			Center the panaroma window to the Frequency of Slice A or Slice B
configMode			Enable/Disable config mode to select up to 8 different config<nr>-jsons using Hot CUE/Loop and Btns1-4
cwxLoopBtnL			Fire CW msgs while Left Loop-Btn is selected using Btns1-4
cwxLoopBtnR			Fire CW msgs while Right Loop-Btn is selected using Btns1-4
fadePan			Use the crossfade to move Slice 1 Audio to the left or Slice 2 Audio to the right. Other audio Slice-Pan-Setting will be untouched
fadeSO2R			Fader complete Left=R1 Both ears. Fader complete Right=R2 Both ears. Fader in between: R1=Left, R2=Right
fadeSO2RMix			Like fadeSO2R, but in between fadePan behavoir
filters			Jump through the different predefined Fiters. Btn press= next filter
freeFilter			Modify the Filter Bandwith with a poti
modes			Jump through the different predefined Modes. Btn press= next filter
monitor			Switch on/of MON
panBW			Jump through the predefined Panoarama-Fall BW
rit			Change the RIT of Slice 0 or 1 with left or right Tempo Fader
setdefault			Remove both Slices and create new (buggy)
steps			Jump through the different predefined step width to make the frequency change
toggleLayer			Toggle the controllers actor settings between layer 1 and layer 2
toggleRXANT			Toggle between RX_A and TX-Ant of Slice A or Toggle between RX_B and TX-Ant of Slice B
toggleTXANT			Toggle between TX-Ant1/2 of Slice A or between Ant2/1 of Slice B
toggleSlices			Toggle order of the two slices
vfo			Change VFO of Slice A / B
volume			Change Audio Volume aof Slice A / B
xmit			Set TX to Slice A and MOX or Set TX to Slice B and MOX

General Information:
- See hercules.xlsx -> function (sheet) for the newest function
- Only functions mentioned here can be mapped
- Not all functions can be mapped to a different kind of actor (buttons, sliders, crossfader, jogwheel...)
- Keep in mind, that you can also change the behaviour of a button (led), but the behaviour might be in the code
- Normally functions do not change their behaviour, new or different functions will be added (except: bug fixing)
- Not all methods work stable (acually „setdefault" behaves strange ans was removed from the mapping fix->tbd.)

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«public/global.json »

```
{

        "configs" : 2,

        "default" : 2

}
```

How many config<nr> you want to use.
2 means config1.json+config2.json
3 would be config1, config2 &config3
…
(see config<nr>.json slide)

Which of the config<nr>.json should be set as **default** when starting the software.

In our example:
- config1.json & config2.json are configured.
- config2.json will be default

Name	Datum	Typ
config_flex.PNG	14.02.2024 20:40	PNG-Datei
config1.json	14.02.2024 20:30	JSON-Quelldatei
config2.json	12.02.2024 18:10	JSON-Quelldatei
config3.json	14.02.2024 18:15	JSON-Quelldatei
config4.json	14.02.2024 18:15	JSON-Quelldatei
config5.json	14.02.2024 18:15	JSON-Quelldatei
config6.json	12.02.2024 18:10	JSON-Quelldatei
config7.json	12.02.2024 18:10	JSON-Quelldatei
config8.json	12.02.2024 18:10	JSON-Quelldatei
defaults.json	16.02.2024 13:15	JSON-Quelldatei
global.json	14.02.2024 18:11	JSON-Quelldatei
hercules.xlsx	15.02.2024 13:30	Microsoft Excel-A...
layer.PNG	15.02.2024 13:40	PNG-Datei
menu.PNG	14.02.2024 20:40	PNG-Datei
overview.PNG	14.02.2024 20:40	PNG-Datei
rh.pdf	16.02.2024 10:51	Microsoft Edge P...
xxHercules.PNG	14.02.2024 20:40	PNG-Datei
xxHerculesshop.PNG	12.02.2024 20:25	PNG-Datei

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«public/config<nr>.json »

```json
{
    "Debug" : false,
    "FlexIP" : "192.168.0.110",
    "FlexPort" : 4992,
    "JogCoolDown" : 100,
    "MidimapFile" : "hercules.xlsx",
    "WindowsMidiName" : "DJControl Starlight"
}
```

This is the (local) IP to your Flex you want to control. More Flex => u need more configs activated and edited! (*)

FlexPort for Kommunikation, default

JogCoolDown = Testvalue JogWheel

Name of the Mapping-Excel u want tu use

Midi-DriverName in your Windows, default

(*) ONLY VALUE YOU MUST CHANGE
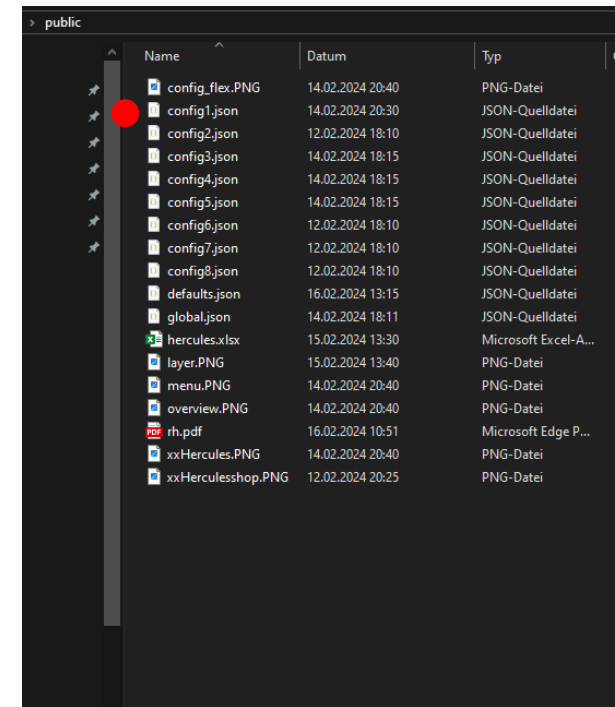Normally nothing to change in other properties

Example:
config1.json => 1st Flex with 192.168.0.110
config2.json => 2nd Flex with 192.168.0.111
....

Debug = true => Enable Debu e.g. MidiMsg-Output

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«public/defaults.json »

```
{
  ❶  "StationName" : "",
  ❷  "CWMakro" : [ "DM5XX", "DM1XX", "DM2XX", "DM3XX", "ur 5nn", "tu"],
  ❸  "NotValidModes" : ["AM", "SAM", "FM", "NFM", "DFM"],
  ❹  "NotValidSteps" : [ 1,1000, 2000,3000],
  ❺  "CWFilter" : [50,100,250,400,500,800,1000,3000],
  ❻  "Filter" : [1200,1800,2100,2400,2700,2900,3300,4000,6000],
  ❼  "PanBW" : [0.005, 0.010, 0.050, 0.100, 0.250]
}
```

❶ needs to be added , if its NOT your default computer name   STATION: DESKTOP-G2EMGRM

❷ up to 8 CW-Msg (mapped to Loop a,b,c,d + e,f,g,h) (*) **CHANGE THEM**

❸ not valid modes for CUE-a

❹ not valid step size for CUE-d

❺ valid CW-Filter BW for CUE-b

❻ valid Filter BW for CUE-b

❼ valid Pan BW for CUE-c

(*) comma separated "DM5XX " – up to 8 strings.

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«public/hercules.xlsx »

❶ mapped function ❷ mode ❸ grp-#

	B	C	D	E	F	G	H	I	J	K	L
1	Tempo	Poti	cc					1	rit	0	0
2	Jog	Jog	cc					1	vfo	0	0
3	Jog	Jog	cc					1	vfo	0	0
4	JogBtn	Btn					127	1		0	0
5	Sync	Btn	noteon	1	5	127	0	1|5	xmit	3	1
6	Cue	Btn	noteon	1	6	127	0	1|6	toggleRXANT	2	1
7	Play	Btn	noteon	1	7	127	0	1|7	toggleTXANT	2	1
8	Headphone	Btn	noteon	1	12	127	0	1|12	monitor	1	0
9	Shift	Btn	noteon	0	3	127	0	0|3	setdefault	2	0
10	HotCue	Btn	noteon	1	15	127	0	1|15		0	0
11	Loop	Btn	noteon	1	16	127	0	1|16		0	0
12	CBtn1	Btn	noteon	6	0	127	0	6|0	modes	2	0
13	CBtn2	Btn	noteon	6	1	127	0	6|1	filters	2	0
14	CBtn3	Btn	noteon	6	2	127	0	6|2	panBW	1	0
15	CBtn4	Btn	noteon	6	3	127	0	6|3	steps	2	0
16	LBtn1	Btn	noteon	6	16	127	0	6|16	cwxLoopBtnL	2	2
17	LBtn2	Btn	noteon	6	17	127	0	6|17	cwxLoopBtnL	2	2
18	LBtn3	Btn	noteon	6	18	127	0	6|18	cwxLoopBtnL	2	2
19	LBtn4	Btn	noteon	6	19	127	0	6|19	cwxLoopBtnL	2	2
20	Master	Poti	cc	0	3	127	0	0|3	agc	0	0
21	Volume	Poti	cc	1	0	127	0	1|0	volume	0	0
22	Bass/Fil	Poti	cc	1	1	127	0	1|1	freeFilter	0	0
23	Tempo	Poti	cc	2	8	127	0	2|8	rit	0	0
24	Jog	Jog	cc	2	9	1	127	2|9	vfo	0	0

Controller Midi-Definition   ID

Sheets: midimap | **midimap2** | functions | Legegend

Layer 1 - Layer 2 ❹

❺

❶ mapped function for this actor

❷ Led-BTN-mode:
- 0 = no btn/not set
- 1 = Led normal on/off
- 2 = Led stays on f. 0.5s, than off
- 3 = Led stays on as long as pressed

❸ Grouped actors
- 0 = no group
- 1,2,3… = same group
- Group: Only 1 can be „on".

❹ Config-Sheet for each Layer:
- midimap = Layer 1
- midimap2 = Layer 2

❺ Valid functions to map, more info

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