

TT210906 – FUP - Multiple Clock Timers

1. In many cases, you will control more than 1 equipment (e.g. AHU, Fan, etc.) in one controller. Sometimes, they all start/stop at the same time, but sometimes they have different time schedules.
2. In this document, we will show you how to use multiple “clock timer” macros and how to configure them to use the same or different time schedule (weekly clock).

Project	Testing	0						
Controller program	DDC101	-						
<input type="checkbox"/> show documentation (*.Foc)-files								
FUP page name	Status	Functionality	Object group	Date modified	Macro source PRJ	Macro source CP	Macro source FUP	
ahu.f				23.08.21 17:00				
ahu01.f01	MACRO	AHU-2F-01	HVAC	04.03.21 14:10	IMACAP.WIN	V0001	ahu01.f\$x	
alarm.f				20.04.21 16:57				
clkfree1.f00	MACRO	clock timer without additional functions	other	08.10.14 12:45	IMACLIB.WIN	V0004	clkfree1.f\$x	
clkfree1.f01	MACRO	clock timer without additional functions	other	08.10.14 12:45	IMACLIB.WIN	V0004	clkfree1.f\$x	
clkfree1.f02	MACRO	clock timer without additional functions	other	08.10.14 12:45	IMACLIB.WIN	V0004	clkfree1.f\$x	

3. For example, if you have 2 AHU and 1 fan in the controller, you can add 3 “clkfree1.f\$x” macros from the macro library (like above). Then you can assign it to your FUP page.

Customer:	Object group:	Functionality:	Comment 1:	Comment 2:
Spreadsheet: ahu.f.utf	Data path: j:\Testing\DDC101\	Status: 23.08.21 17:00	Programmer:	Module lib pa LIB01.FUP


```

AHU Supply Fan Status
INDI8012.F00:i00 - D01
AHU Supply Fan Trip
INDI8012.F00:i01 - D02
clock timer enabl.
clkfree1.f00:clock enablin
        
```

Properties CROSS REFERENCE

General Info Preview Help Text

FUP page: clkfree1.f00 (other) Reference: clock_enabling (clock timer)

Info: clock timer enabl.

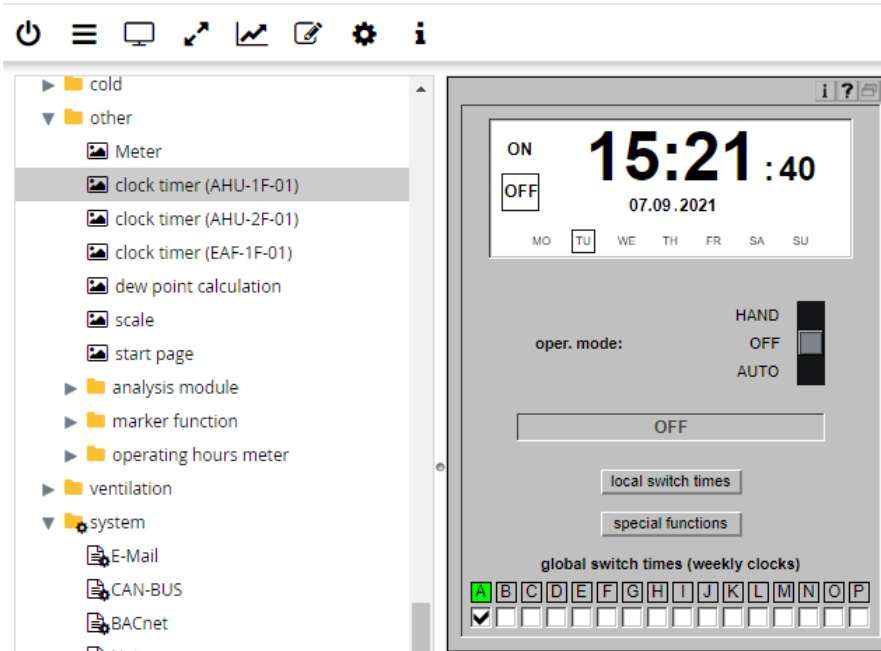
4. Or assign it to your macro, like below. So each equipment will have it's own clock timer macro.

DDC101: ahu01.f01		
Q Filter entry		
Definition	Definition specification	Comment
1		QUELLE=IMACAP.W
2		
3	def_f AHU-2F-01	Equipment ID
4	def_c 2/F AHU Room	Equipment Name
5	def_o HVAC\AHU	System Name
6		
7	def_tclk clkfree1.f02:clock_enabling	"clock timer without additional functions: clock timer enabl." Free Clock Timer
8		

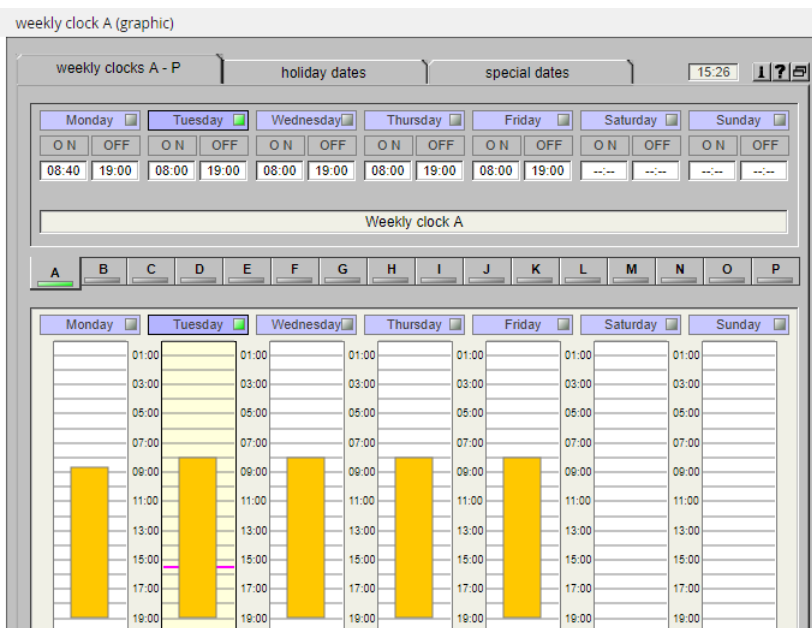
5. By default, all the “clock timer” macro has the same name “clock timer”. You can change it by double clicking on the macro, go to line 50 (def_tit01) and change the name as you like.

DDC101: clkfree1.f00		
Q Filter entry		
Definition	Definition specification	Comment
45		
46		
47	set UI page > UI-title < (maximum 21 characters)	
48		
49		
50	def_tit01 clock timer	UI page identifier
51		

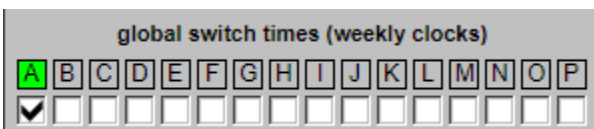
6. It's done, and you can upload it to your controller. The name for each clock timer is now changed, so you can identify them easily in OPENview.



7. By default, all clock timer macros are assigned to weekly clock “A”. So, when you change the “oper. Mode” to “AUTO”, all equipment will start/stop at the same time, based on the time you set for weekly clock “A”.

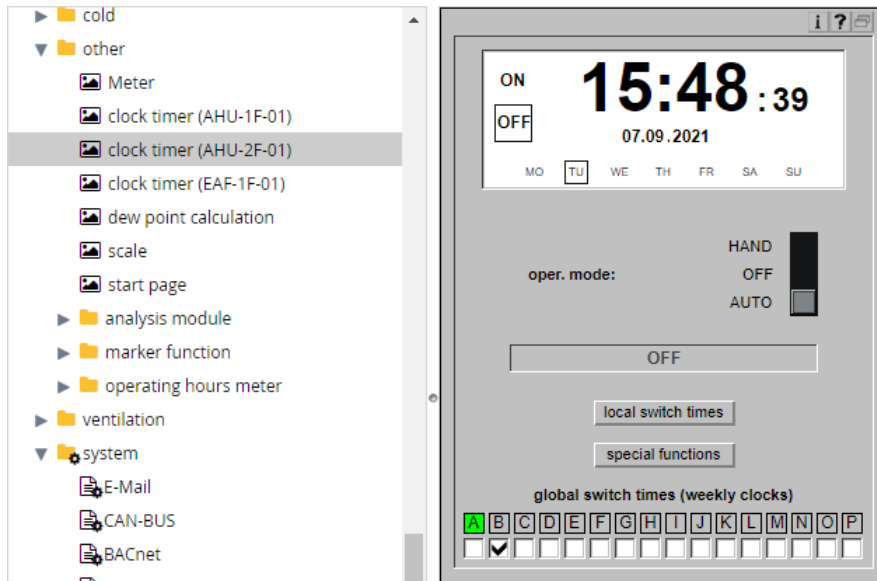


8. In each controller, there are total 16 weekly clocks (from A to P), that you can use to control the start/stop of your equipment. There is no limit on how many “clock timer” macros in the controller, so you can use them to control more than 16 equipment.



9. You can assign all the clock timer macros to weekly clock “A” (by default), so all equipment will start/stop at the same time. You can also assign each clock timer macro to have different weekly clock, and therefore they will start/stop at different time.
10. All these can be set online by the operator, so user can easily group/un-group the equipment and assign respective weekly clock to each group.

11. For example, if you want the fan to start at different time, you can assign it to weekly clock “B”. The 2 AHU will still start at the same time (weekly clock “A”).



12. Here is the summary for multiple clock timer macros

- 16 independent weekly clocks (A to P)
- Unlimited clock timer macros
- One clock timer macro for each equipment
- By default all equipment start/stop at same time (weekly clock A)
- Assign other weekly clock if you want to start/stop at different time
- For equipment that start/stop at same time, assign them to the same weekly clock