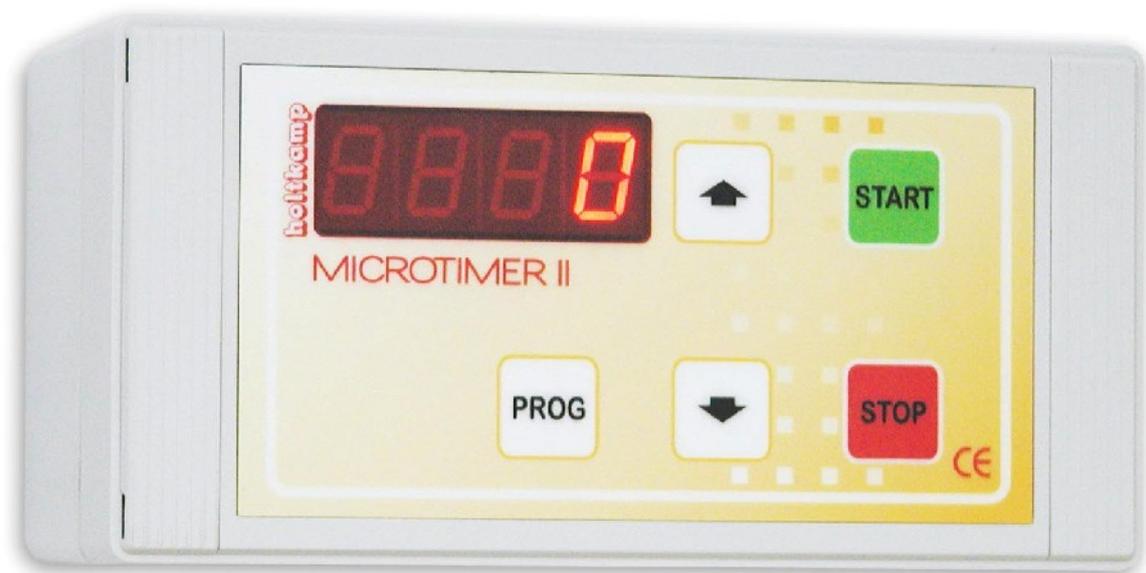


MICROTIMER



Operating instruction

For timing of sun beds and other devices

English

EU-Declaration of conformity

For the product described as follows

Time-control, type "MICROTIMER II" With emergency stop timer (110%)-function

This is to certify that the model type produced by us complies with the standards stated bellow.

This declaration applies to all our models which have been manufactured to the same technical standards, as in the, as part of this declaration, enclosed documents.

Relevant EU Guidelines:

1. 73/23/EWG (low voltage guidelines)
altered by
93/68/EWG

2. 89/336/EWG (EMV Guidelines)
altered by
91/263/EWG; 92/31/EWG; 93/68/EWG

Agreed standards applied:

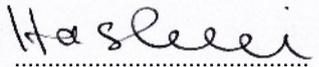
- EN 60335-1 from 10/95 (Security)
- EN 55022 from 11/2001 (Emissions)
- EN 61000-3, Part 2 + 3 from 12/2001 and 05/2002 (Emissions)
- EN 61000-6, Part 1 + 2 from 08/2002 and 03/2000 (Immunity)

This declaration is the responsibility of the manufacturer

Manfred Holtkamp Elektronik GmbH
Suedstraße 40 in 49084 Osnabrueck

Presented by:

Dipl.-Ing. M. Hashemizadeh (EMV Representative)



(valid signature)

Osnabrueck, 20.04.2003

.....

Device specific data

Software version (The display appears it for a short time, 2 seconds after activate)	
Serial-Number (written on the type plate)	
Commission	
Trader	

The rights for the containing control and memory parts of the software are reserved exclusively for the producer. Copying and reading of the program content are basically forbidden.

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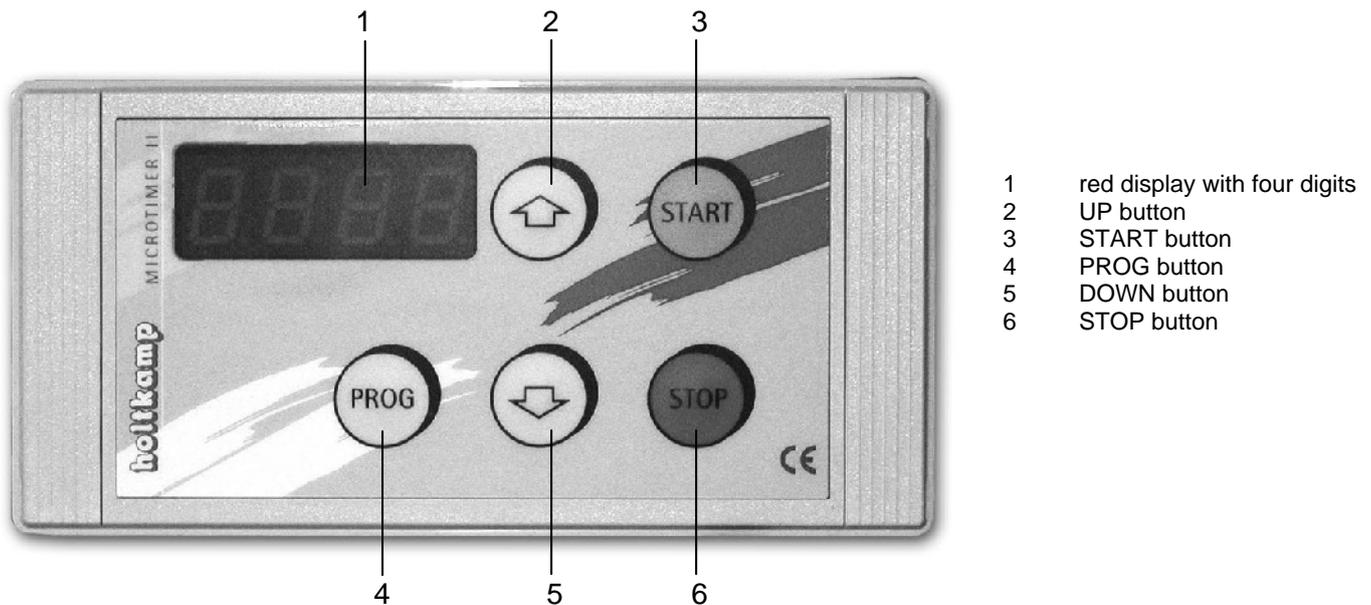
1 Foreword

The Holtkamp MICROTIMER is particularly designed for the personnel-served timing of sun beds. It was revised fundamentally and offers the following innovations

- Safety disconnection (110%-emergency stop timer) with specially relays: If the microprocessor should fail or should stick the main relay, the sun bed is switched off safely.
- Improved and clearer menu guidance.

The MICROTIMER is connection and installation-compatibly to the MICROTIMER of the 1. Generation. It is developed compactly, transformer, relay and electronics is completely on a printed circuit board.

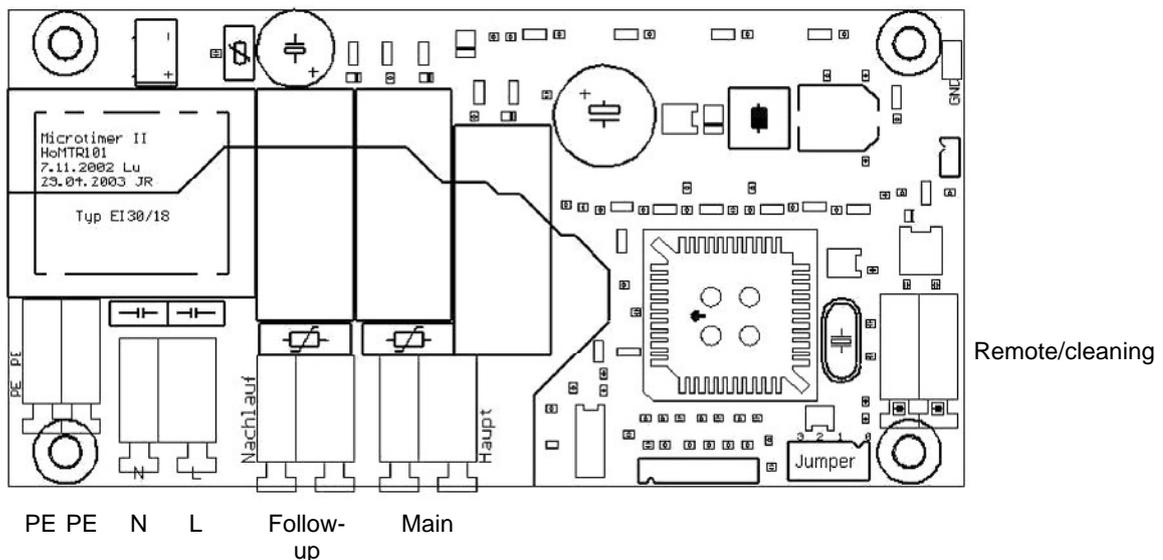
2 Illustration of the device



3 Technical data and electrical connection

! Connection only considering the VDE regulations of a specialist to accomplish leave!

Back of the MICROTIMER printed circuit board:



Connections

a) Version 230 V (Standard)

PE: Earth wire

N and L: 230 VAC / 50-60 Hz supply of voltage (ca. 3 VA)

b) Version 24 V (special equipment)

PE: Earth wire

N and L: 24 VAC / 50-60 Hz supply of voltage (ca. 3 VA)

c) Generally (230 V and 24 V)

Main: potential free contacts of main relay, switched power max. 250 V / 6,3 A by $\cos \phi = 1$

Follow-up: potential free contacts of follow-up relay, switched power max. 250 V / 6,3 A by $\cos \phi = 1$

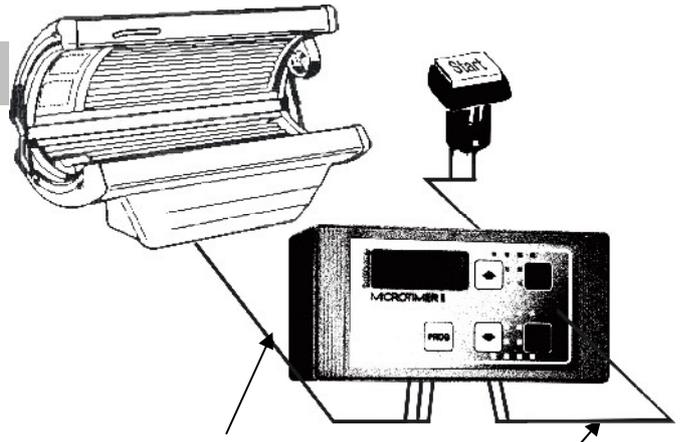
! If with the relay contacts the contactors are addressed, the contactor coils with a RC combination must be bridged. Otherwise when switching off the sparks at the relay contacts can develop, which can lead to loss the equipment!

Remote/cleaning: Connection for floating remote start and/or cleaning button (this connection included harmless safe voltage leads!)

3.1 Electrical connection

! The electrical connection can only be carried out by authorized and qualified personnel!

The electrical connection can only be carried out by the local VDE regulations. With a permanent connection, an all pole mains separator with at least 3 mm contact gap must be used. Before starting the electric circuit must be disconnected. Shut down the mains input by activating the separator switch, remove the fuse or release the main safety fuse. Mains and low voltage cable must be spaced apart. Low voltage cables should be generally spaced as screened cables.



! Control cable and remote start connection have to be kept away from each other.

4 Specifications

	MICROTIMER 8150	MICROTIMER 8250
Single device - in the plastic housing	-	●
Installed equipment for 4/6er framework	●	-
Conns 1 device	●	●
Pre-run time	●	●
Main time (1 min. - 999 min.)	●	●
Run-out time	●	●
Maximum time	●	●
LED display (real time indication)	●	●
Programming over foil keyboard	●	●
Electronic customers counter	●	●
Electronic operating hours counter	●	●
Electronic service hours counter	●	●
Remote start	●	●
Enforcement remote start	●	●
Main time modification stoppage	●	●
Timer stoppage	●	●
Switchover on memory mode	●	●
Memory for power failure	●	●
3 codes for access authorisation	●	●
Mounting kit	●	-
Connectivity for cleaning button	●	●
Security shutoff 110%	●	●
4er framework	●	-
6er framework	●	-
Blind access cover (for blank field framework)	●	-

● Standard ○ alternative

! March 2003 110% disconnection
! After norm EN 60335-2-27/A11 (VDE 0700 part 27)
! Beginning with 01 may 2003 all our XL devices are equipped with the disconnection recommended by the upper mentioned directions.

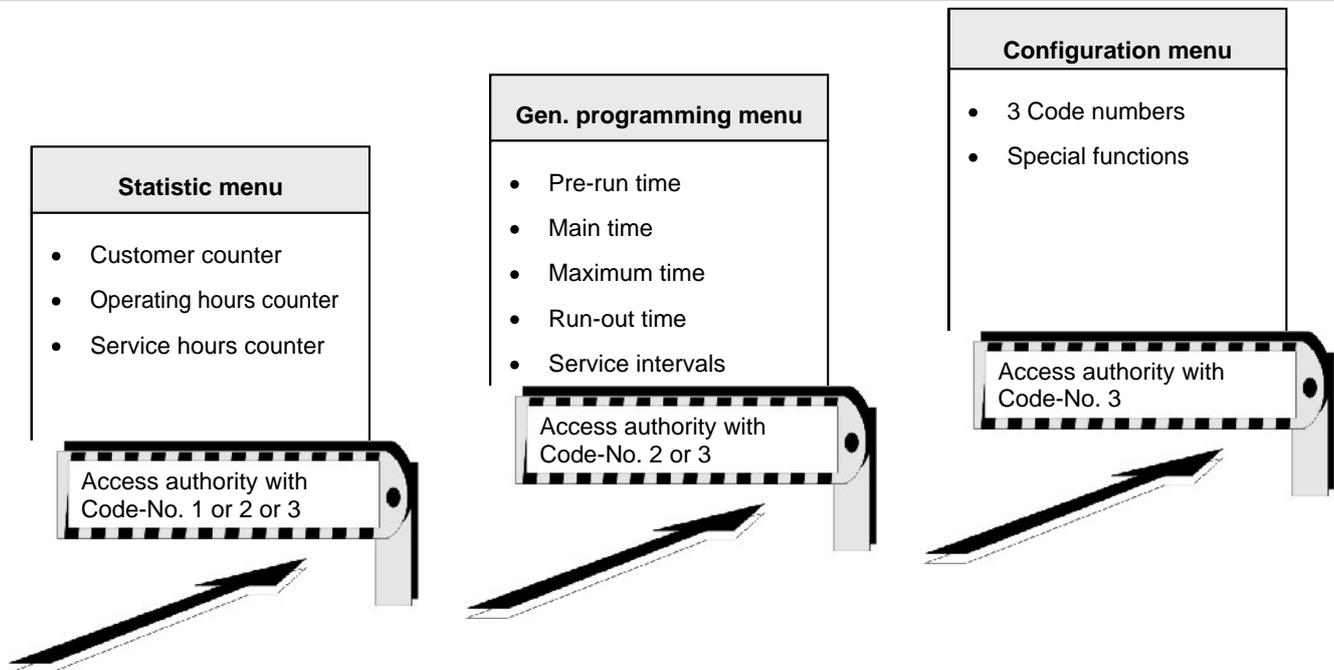
5 Programming and statistic menu

There are altogether 3 menus, which can be protected with access codes from unauthorized access:

- Statistic menu (access code 3, 2 or 1 necessarily): Here are the customer and the operation hour counters etc.
- General programming menu (access code 3 or 2 necessarily): Here the times are programmed (time delay, main time etc.)
- Configuration menu (access code 3 necessarily): Here main read functions of the MICROTIMERS are specified.

With the distribution are programmed all 3 access codes on "0", with it all menus are freely accessible.

- ! **If the access code 3 to "0" programmed, this code with 1 and 2 is always out of operation (even if these are not programmed on "0")!**
- **If code 2 on "0" programmed, the code is 1 out of operation.**



If access code 2 is programmed, it is possible to delete the counter on the Menu1 only under the input with the access code 2 (or access code 3). With this personnel can read off the counters, but not delete.

- ! **Following to uncontrolled programming can have not desired functions. In particular, the unplanned input of the access codes entails a blocking of the programming menu, so that does not arrive anymore into the menu, without knowing the entered access code.**

For all menu applies:

With the programming button "**PROG**" the menus are reached:

- after a unique operation of the statistic menu
- after a twice operation of the general programming menu
- after a threefold operation of the configuration menu
- appears after a four times operation again the statistic menu

With the **START** button are the menu options of the current selected menu paged through. A short operated is pages forward, a long is pages (approx. 0,3 seconds) backward. From the current selected menu are the menu point number and the programming value are in the change indicated.

Automatic repeat function:

If the **START** button is pressed longer than 850 ms, the menu options are scrolled automatically. Was the button in advance pressed for a long time backwards, then the Autorepeat taken place backwards.

With the **UP** button are increased the indicated value of the current menu option in the configuration menu and in the programming menu, reduced it with the **DOWN** button. If these two buttons are pressed at the same time in the statistic menu, the indicated value is deleted.

With the **STOP** button the menus will leave. It happens also, if for a while no more button is pressed (automatic menu completion).

After the completion of the menus the **START** and **STOP** button, the UP and DOWN button still all blocked during 2 seconds long this is in order to prevent inadvertent starting/stopping/changing of the main time.

5.1 Statistic menu (bookkeeping)

The appeal of this menu takes place through pressures the **PROG** button.

With the **START** button the menu options are paged through. A manipulation for a short time leafs forward, a longer backwards. If **UP** and **DOWN** button are pressed at the same time, the indicated value is deleted. Only one pressed **DOWN** button, the mode of operation and the software-version number are indicated (mode of operation is always 6, left in the display).

In the shown rectangles the symbol indicated is specified in the display, the announcement effected witch can be programmed change with the value:

- | | |
|-------------|--|
| 1Cd | <p>Enter access code 1, 2 or 3</p> <ul style="list-style-type: none"> - This menu option appears only, if code 1, 2 and 3 to a value is unequally "0" programmed and were entered codes, sees configuration menu! - With code 1 the menu can be only deleted. Exception: The daily counters can be deleted also with code 1. |
| bC- | <p>Daily customer counter (C = Customers)</p> <ul style="list-style-type: none"> - This menu option appears only, if in the configuration menu the menu option of "daily counters" is activated.). - Continues to count always around 1, if main time is started. See also option "oS1" in the configuration menu. |
| bbE- | <p>Daily operating hour counter</p> <ul style="list-style-type: none"> - This menu option appears only, if in the configuration menu the menu option of "daily counters" is activated. - Counts during the cyclic duration of the main relay (max. 9999 Std.) - If is pressed and held the up button, instead of the hour number the minutes and seconds of the started hour are indicated, separated with a decimal point (max.59.59). |
| bC | <p>Total customers counter (C = Customers)</p> <ul style="list-style-type: none"> - Continues to count always around 1, if the main time is started. See also option oS1 in the configuration menu. |
| bbE | <p>Total operation hour counter</p> <ul style="list-style-type: none"> - Counts during the cyclic duration of the main relay (max. 9999 Std.) - If is pressed and held the up button, instead of the hour number the minutes and seconds of the started hour are indicated, separated with a decimal point (max.59.59). |
| b51 | <p>Service hour counter 1</p> <ul style="list-style-type: none"> - This menu option appears only, if generally programming the menu option "service interval of 1" is unequally programmed to a value. - Counts parallel to the operation hour counter. If a given value is reached (see to service interval 1 generally programming menu), flashes in the retirement of the MICROTIMERS, as well as if this menu option is appeal for, the decimal point of the display unit place, with which the service staff is requested for maintenance of the sun bed and resetting the service hour counter. |
| b52 | <p>Service hour counter 2</p> <ul style="list-style-type: none"> - see service hour counter 1 |
| b53 | <p>Service hour counter 3</p> <ul style="list-style-type: none"> - see service hour counter 1 |

5.2 General programming menu (times)

The appeal of this menu takes place through (if necessary 2 times) pressures of the **PROG** button.

With the **START** button the menu options are paged through. A manipulation for a short time leafs forward, a longer backwards.

With the **UP** button the indicated value increased, it reduced with the **DOWN** button.

In the shown rectangles the symbol is specified and indicated in the display, the announcement effected the change with the value which can be programmed:

- | | |
|------------|--|
| 2Cd | <p>Enter access code 2 or 3</p> <ul style="list-style-type: none"> - This menu option appears only, if code 2 and 3 to a value unequally "0" is programmed and were entered none of these codes, see configuration menu! |
| u | <p>Pre-run time</p> <ul style="list-style-type: none"> - This menu option appears only, if in the configuration menu is adjusted the option "oS2" to "0". - Signal delay: 0:00 to 9:59 min in second steps adjustable. If adjusted to "0" no lead the time. |

h**Main time**

- Tanning time, from 0:01 to the maximum time border adjustable (to formatting the announcement see configuration menu, option oSE and oSA)

oh**Maximum time border**

- Upper limit for the main time, if the tanning were begun with the **START** button and afterwards with **UP** and the given main time is changed (or if the main time with repeated manipulation of the **START** button is increased.)



If the maximum time border is adjusted to "0", then it is out of operation!

Here the maximally permitted tanning time must be entered, those the sun bed manufacturer indicates!!!

(to formatting the announcement see configuration menu, option "oSE" and "oSA".)

n**Ventilator Run-out time**

- 0:00 to 9:59 min. in second steps adjustable.

Si1**Service interval 1**

- If service hour counter 1 in the statistic menu present achieved the value given here, the case of service occurred. Adjustable of "0" until "9999" hours in hour steps (if on "0", then out of operation)

Service interval 2 ... 3

- analogue Serviceinterval 1

5.3 Configuration menu

To reach it, the menu takes place through (if necessary 3 times) pressure the **PROG** button.

With the **START** button the menu options are paged through. A manipulation for a short time leaves forward, a longer backwards.

With the **UP** button the indicated value increased, it reduced with the **DOWN** button.

In the shown rectangles the symbol is specified and indicated in the display, the announcement effected the change with the value which can be programmed:

3Cd**Enter access code 3**

- This menu option appears only, if the code to a value unequal "0" is programmed and were entered none of these codes, see also this menu under "Cd3".

oSE**Option "1-second pulse (on "1" or "0" adjustable)**

- 1: Expiration of main time course is accelerated around factor 60 (1-second pulse)
- 0: Expiration of main time course normally (minutes pulse)
- Dependently from this option the main time is shown and the display either as amount of minute or as amount of second.
- Independently of this attitude all operating and service hour counter always count in hour/minutes (see statistics menu).

oUF**Option "Clock format indicate" (on "1" or "0" adjustable)**

- 1: Indicate to the main time effected in the clock format: 0:00 to 9:59 hours minutes (if option oSE = 0) and/or minute/seconds (if "oSE" = 1)
- 0: Indicate to the main time effected in the simply format: 0 to 999 minutes (if option "oSE" = 0) and/or seconds (if "oSE" = 1).

oSP**Option „Memory allows" (on "1" or "0" adjustable)**

- 1: repeated tapping on the **START** button adds the adjusted main time o (that is possible only during the time delay and the first minute of the main time). The time delay can be broken off only by remote **START** button.
- 0: main time is loaded only once, second operation of the **START** button terminates the time delay and starts the main time immediately

oFS**Option "Remote start" (on "1" or "0" adjustable)**

- 1: With operated of the remote start button: Abort of the time delay and start of the main time.
- 0: main time starts either at expiration of the time delay or with operated of **START** button at the equipment.

oFS2**Option "Enforcement remote start (on "1" or "0" adjustable)**

- 1: Definition by cases:
 - a) Option "oFS" is likewise adjusted to "1": the main time starts only after operated of the remote start button. Time delay and start by START button at the equipment are out of operation. After the start the display shows so long "FS" alternating with the main time, until the remote start button is pressed.
 - b) Option "oFS" is adjusted to "0": the main time starts immediately after operated of the START button at the equipment.
- 0: Sun bed can be started also by START button, the time delay thereby is broken off.

oPu**Option "Cleaning time" (on "1" or "0" adjustable)**

- 1: after use of the sun bed the start of a further main time is blocked until those was operated cleaning display flashing "PU" appears.
- 0: after use of the sun bed a further, main time can be unconditionally started.

oHOL**Option "HQL time" (on "1" or "0" adjustable)**

- 1: The main time can be loaded with the START button during the after cooling time but no started (cooling phase for HQL emitters). At course of the time delay or after remote start the possibly still running off after cooling time is indicated in the display in change with the main time, the main time starts only at their expiration.
- 0: The sun bed can be already started again during the after cooling time.

onAS**Option "Memory for power failure" (on "1" or "0" adjustable)**

- 1: If is a mains failure the timer returns to operating condition:
 - If the failure during the time delay, then the time delay is deleted and the main time can be started by operated of the START button or remote start button.
 - If the failure during the main time, the main time can be continued by operated of START button or remote start button.
 - If the failure during the Run-out time, then the Run-out time starts automatically and the follow-up relay tightens. Generally applied: With the STOP button the enterprise can be broken off.
- 0: started delay, main and after cooling time go lost with the mains failure.

oAA**Option "Released the up and down counting button after start" (on "1" or "0" adjustable)**

- 1: the main time can be changed after the start for a while
- 0: the main time cannot be changed after the start.

oUS**Option " Pre-run time stop"**

- This point have only an implication, if a Pre-run time is adjusted and the points „oSP“ = 0 and „oAA“ = 1 are adjusted in the general programming menu. In that case the Pre-run time runs at the first not after the start. With the UP and DOWN button you can change the main time. The Pre-run time begins with repeated exertion of the START button. If you push the START button a third once, the Pre-run time is broken off and the main time starts now.

oUr**Option "Follow-up relay" (on "1" or "0" adjustable)**

- 1: after cooling relay switches on at the beginning of the time delay and is continuous switched on to the end of the after cooling time
- 0: after cooling relay switches on at the beginning of the time delay and is continuous switched on to the end of the after cooling time.

o51**Option "Customers counter counts when saving only 1 time" (on "1" or "0" adjustable)**

- 1: If the main time is added by a repeated exertion of the START button (see option "oSP"), the customer counter (see statistic menu) counts only 1 time.
- 0: If the main time is added by a repeated operated of the START button, the customer counter continues counting with each addition by 1

otA**Option " Daily counter" (on "1" or "0" adjustable)**

- 1: In the statistic menu some counter appear double (daily and total counter parallel. The daily counter can be read off and deleted daily).
- 0: In the statistic menu each only counter appears simple (total counter).

Cd1**Access code 1 (for statistic menu)**

Adjustable of "0"... "9999". If a value is adjusted here between "1"... "9999", the counters of the statistic menu only can be appeal for and viewed (not to be deleted, with exception of the daily counter), if this code is entered there. (Alternatively also the access codes 2 or 3 can be entered there!).

Cd2**Access code 2 (for general programming menu and statistic menu)**

- Adjustable of "0"... "9999". If a value is adjusted here between "1"... "9999", the general programming menu only can be appeal for, if this code is entered there. (Alternatively also the access code 3 can be entered there!). This code releases the deletion of the counters in the statistic menu

Cd3**Access code 3 (for configuration menu, general programming menu and statistic menu)**

- Adjustable of "0"... "9999". If a value is adjusted here between "1"... "9999", the configuration menu only can be appeal for, if this code is entered there. This code releases the general programming menu as well as the deletion of the counters in the statistic menu.

6 Operation of the MICROTIMER

Course of a tanning

The operational sequence described here can be changed by some attitudes in the configuration menu. The following example works with the attitudes, which are programmed by the factory with the distribution of the MICROTIMERS:

- By press of the **START** button timing with the programmed current values is started. Delay and main time appear in the display (time delay only if does not program on "0").

Example (START button pressed):

short indicate:	h 5.	=	main time 5 minutes
After that:	u 2.00	=	backwards running Pre-run time 2:00 minutes
After expiration of the Pre-run time:	h 5[*]	=	backwards running main time, decimal point flashes
After expiration of the main time:	n 3.00	=	backwards running Run-out time 3:00 minutes

- With the **UP** and/or **DOWN** button can be changed the pre-programmed main time for the current tanning (only during the Pre-run time and the first minute of the main time). Happens during the Pre-run time, the main time is shortly indicated. This function can be blocked in the configuration menu!
- The Pre-run time can be broken off by renewed pressing of the **START** button or by the **remote start** button. This function can be blocked in the configuration menu!
- The operating of the **STOP** button breaks lead and main time off, not however the after cooling phase.

7 By malfunctions

The MICROTIMER shows error messages on the display during faulty operation and at further opportunities. The error messages are indicated usually 3 seconds long flashing.

<i>Error code</i>	<i>Possible causes</i>
E03	EEPROM memory of the device defectively, errors with reading EEPROM conductive strips or other construction units defectively
E04	EEPROM memory of the device defectively, run time errors with writing, EEPROM conductive strips or other construction units defectively
E47	This function is blocked, because the access code necessary for it was not entered, or a wrong code was entered!

8 General technical data

	Single device MICROTIMER 82502	Installed equipment MICROTIMER 8150	Installation frame
Material casing	Polycarbonate plastic		
Material front panel	Plastic ABS	Aluminium	Aluminium
Color casing	Light-grey RAL 7035	White RAL 9016	White RAL 9016
Color foil keyboard	Light-grey, Yellow, Red, Green	Light-grey, Yellow, Red, Green	
Dimension mm:			
a) Casing	H 80 x W 160 x D 62		
b) framework size		6er H 250 x W 390	4er H 180 x W 390
c) clipping of Installed equipment		H 70 x W 150 x D45	
Installation depth	75 mm	mind. 50 mm	
Electrical Data*	230 V or 24 V, 50 Hz	230 V or 24 V, 50 Hz	
Switched power	6,3 A by cos phi = 1	6,3 A by cos phi = 1	
Power consumption	2,3 VA per Single device	2,3 VA per Single device	

* Please indicate when ordering!

Technical changes as well as technical advancements reserved.

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holtkamp

HOTLINE

For technical advice during our working hours:
Monday – Thursday 8.00 – 16.00 and Friday 8.00 – 13.00

Please dial:

+49(0)541-97120-0

For technical details beside our working hours please dial:

+49(0)171/3715670

Or visit our homepage: <http://www.holtkamp.de>
For questions, wishes, critics and suggestions also per e-mail:
info@holtkamp.de

Manfred Holtkamp Elektronik GmbH

Suedstrasse 40
D-49084 Osnabrueck
Tel.: +49(0)541/97120-0
Fax: +49(0)541/97120-40
email: info@holtkamp.de
<http://www.holtkamp.de>
<http://www.skincontrol.de>