

CASH-Interface MC8 [TIMER]

User manual

Board version: 4.12

Software version v1.26

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1. DESCRIPTION

With the CI MC8 [TIMER] board you can set up a simple and reliable time control, e.g. for car wash, laundromats or a tanning salons. The system can be used anywhere where billing has to be processed automatically by time.

Connection options for bill validator, coin validator, receipt printer, LCD display, push buttons and switches, as well as a relay output for switching any device by time.

Additionally a cashless system like [Nayax](#) , [OTI](#) , [USA Technologies](#) , [Sacoa](#) or [Ingenico](#) can be used.

The costs for 1 hour is adjusted in the service menu, so the board can calculate the time per credit. For example 1 hour shall cost 6 Euro, we have to set 600 for the "COSTS P/HOUR" setting in the service menu. If we insert 1 Euro (100 Cent) we get 10 minutes (600 seconds) time credits: $3600 \text{ Seconds} \div 600 \text{ cent} = 6 \text{ seconds per cent}$. $100 \text{ cent} * 6 \text{ seconds} = 600 \text{ seconds} = 10 \text{ Minutes}$.

A bonus value can be set in seconds for each coin and bank note. For example the customer gets 3 minutes for 0,50 EUR. 60 seconds is set as a bonus for 1 EUR, which means the customer gets 6 minutes + 60 seconds bonus = 7 minutes in total for 1 EUR.



When the system is ready the display shows "SYSTEM READY" and "CREDIT: 0.00".

Inserting money the corresponding time credits are added and shown in the display, e.g.:

Display row 1: "TIMER ACTIVE", Display row 2: "TIME: 00:10:00"

The system can be started automatically on Credit in, or manually by the customer pressing a push button. If the system is set up to be started manually the display shows "PRESS START" in the first row, and shows the credits in the 2nd row. The "PRESS START" text is blinking until the customer starts the system.



The relays switches to on as long as there are credits left. Reaching 0 credit the relays switches to off again. The time credits are subtracted and shown every second. Inserting money is possible all the time and credits are simply added.

There can be set a START value, for example 400 means the customer must insert at least 4 Euro before the timer control becomes active. With the AUTOSTART setting the timer can be started automatically or via external push button by the customer.

Text can be set to either "TIMER ACTIVE" or "TIME IS RUNNING".

With the "delay time function" a certain time can be set after which the real time really

starts. If a delay time of 30 seconds is set, this time is counted down in the display and then the real timer is started.

It is possible to print a receipt on customer request. If the printer is activated the customer can request a receipt by a push button. The push button gets illuminated after cash in and signals printing of receipt is possible. Pressing the push button a receipt is printed and the print push button illumination goes off.

It is possible to reset the time and stop the system via push button on input A5, means the customer can stop the system when he has finished but still time left. This saves energy and our planet.

2. SERVICE MENU

The SERVICE menu is activated via the SERVICE button on the board. It is possible to connect an external push button to jumper JP 1.5. Select the menu items by further pressing the SERVICE button. Hold down the SERVICE button to automatically switch through all menu items. With the SERVICE button you move forward, with the LEFT button you move backwards thru all menu settings.

Change settings of the active menu item with the START button (increase or toggle value, or select function), or with the DOWN button (decrease or toggle value, or select function). It is possible to connect an external push button to jumper JP 1.4. Hold down the START or DOWN button for repeat function (very fast count after 100 steps).

Push LEFT and SERVICE button at the same time exists the service menu, this is the same then using EXIT. If there are credits left on leaving the service menu, the time count down continues.

2.1 Menu items

Currently the SERVICE menu contains 45 menu items.

#####

1: SOFTWARE and VERSION

shows the software and version number, e.g. CI MC8 TIMER, VERSION: 1.26

2: TOTAL - IN

shows how much money was totally inserted (cash register counter)

3: TIME - TIME CLEAR

shows the current time credit, e.g. 00:04:00 . Can be cleared by UP/DOWN button

4: TIME - TIME ADD

shows the current time credit, e.g. 00:04:00 . Can be changed by UP/DOWN button

5: COSTS - PER HOUR

Price setting per hour, indicated in Cent, e.g. 600 = 6 Euro per hour

The time credit for inserting money is calculated using this value.

6: START - VALUE

Start amount in Cent, e.g. 100 means the customer has to insert min. 1 EUR to start the and use the system.

7: START - AUTOSTART

System starts automatically or manually START by push button.

AUTOSTART = 0 means the customer must press a START button.

8: START - DELAY SEC

Number of seconds before the real time starts to count down (Lead time).

9: BONUS - COIN1

Bonus seconds on inserting COIN1 value (is added).

10: BONUS - COIN2

Bonus seconds on inserting COIN2 value (is added).

11: BONUS - COIN3

Bonus seconds on inserting COIN3 value (is added).

12: BONUS - COIN4

Bonus seconds on inserting COIN4 value (is added).

13: BONUS - COIN5

Bonus seconds on inserting COIN5 value (is added).

14: BONUS - COIN6

Bonus seconds on inserting COIN6 value (is added).

15: BONUS - COIN7

Bonus seconds on inserting COIN7 value (is added).

16: BONUS - BILL1

Bonus seconds on inserting BILL1 value (is added).

17: BONUS - BILL2

Bonus seconds on inserting BILL2 value (is added).

18: BONUS - BILL3

Bonus seconds on inserting BILL3 value (is added).

19: BONUS - BILL4

Bonus seconds on inserting BILL4 value (is added).

20: BONUS - BILL5

Bonus seconds on inserting BILL5 value (is added).

21: BONUS - BILL6

Bonus seconds on inserting BILL6 value (is added).

22: BONUS - BILL7

Bonus seconds on inserting BILL7 value (is added).

23: COIN #1, Setting range 0-50000, default setting 50 (0,50 EUR)
value for coin channel 1.

24: COIN #2, Setting range 0-50000, default setting 100 (1 EUR)
value for coin channel 2.

25: COIN #3, Setting range 0-50000, default setting 200 (2 EUR)
value for coin channel 3.

26: COIN #4, Setting range 0-50000, default setting 0
value for coin channel 4. Hint: needs to use BINARY protocol

27: COIN #5, Setting range 0-50000, default setting 0
value for coin channel 5. Hint: needs to use BINARY protocol

- 28: COIN #6, Setting range 0-50000, default setting 0
value for coin channel 6. Hint: needs to use BINARY protocol
- 29: COIN #7, Setting range 0-50000, default setting 0
value for coin channel 7. Hint: needs to use BINARY protocol
- 30: BILL #1, Setting range 0-50000, default setting 500 (5 EUR)
value for bill channel 1.
- 31: BILL #2, Setting range 0-50000, default setting 1000 (10 EUR)
value for bill channel 2.
- 32: BILL #3, Setting range 0-50000, default setting 2000 (20 EUR)
value for bill channel 3.
- 33: BILL #4, Setting range 0-50000, default setting 0
value for bill channel 4.
- 34: BILL #5, Setting range 0-50000, default setting 0
value for bill channel 5. Hint: needs to use BINARY protocol
- 35: BILL #6, Setting range 0-50000, default setting 0
value for bill channel 6. Hint: needs to use BINARY protocol
- 36: BILL #7, Setting range 0-50000, default setting 0
value for bill channel 7. Hint: needs to use BINARY protocol
- 37: COIN - PROTOCOL, PARALLEL or BINARY, default setting PARALLEL
coin validator transmission protocol. More than 3 coins needs to use BINARY protocol
- 38: BILL - PROTOCOL, PARALLEL or BINARY, default setting PARALLEL
bill validator transmission protocol. More than 4 bills needs to use BINARY protocol
- 39: PRINTER RECEIPT, OFF or ON, default setting OFF
receipt printer, must support pulse interface, e.g. ICT-SP1
- 40: P-PULSE VALUE, Setting range 1-50000, default setting 50
receipt printer pulse value
- 41: BLINK, READY BLINK, ON/OFF, default setting OFF
Display "READY" blinking or no blinking.
- 42: TEXT1, default setting "READY"
Display shows "READY" or "SYSTEM READY".
- 43: TEXT2, default setting "TIMER ACTIVE"
Display shows "TIMER ACTIVE" or "TIME IS RUNNING".
- 44: LINGO, ENGLISH or DEUTSCH, default setting ENGLISH
customer language used in the LCD display. Menu language is always English
- 45: EXIT - CLOSE SERVICE
Exits SERVICE and saves all settings.

#####

Acceptance of money is disabled while service.

All data and settings are saved when you EXIT the service menu, means you have to leave the service menu always by EXIT or made changes are lost.

3. DEVICES

3.1 Bill validator

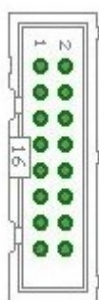
Of the type NV9, NV10 or pin compatible.

GBA HR1/ST1/ST2 via adapter possible.

Protocol: PARALLEL (default), PULSE or BINARY.

Hint: Using the PULSE protocol, the pulse value must be set on B-PULSE setting!

Pin out of the BILL plug:



Pin 1 = +12V DC
 Pin 2 = 0V
 Pin 3,4,5,6 = MDB (not used)
 Pin 7 = Busy (act. low)
 Pin 8 = Escrow (not used)
 Pin 9,10,11,12 = Inhibit 1-4 (blocking = High, accept = Low)
 Pin 13 = Vend 3 (Note channel 3, act. low)
 Pin 14 = Vend 4 (Note channel 4, act. low)
 Pin 15 = Vend 1 (Note channel 1, act. low)
 Pin 16 = Vend 2 (Note channel 2, act. low)

Using the bill validator with PARALLEL protocol only line 1-3 can be evaluated. With more than 4 banknotes the bill validator should be used with BINARY protocol. This way with the 3 output lines #1-#3 it is possible to detect 7 different banknotes.

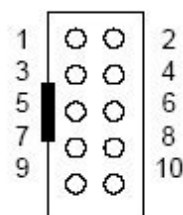
3.2 Coin validator

Of the type NRI-G13, RM5, EMP800 or pin compatible.

Protocol: PARALLEL (default), PULSE or BINARY.

Pin out of the COIN plug:

pin	assignment	potential
1	GND	low
2	UB +12V DC	high
3	output line 5	act. low
4	output line 6	act. low
5	return	act. low
6	total blocking	act. high
7	output line 1	act. low
8	output line 2	act. low
9	output line 3	act. low
10	output line 4	act. low



Using the coin validator with PARALLEL protocol only line 1-3 can be evaluated. With more than 3 coins the coin validator should be used with BINARY protocol. This way with the 3 output lines #1-#3 it is possible to detect 7 different coins.

For coin and bill validator the interface can be set separately, PARALLEL or BINARY (PAR o. BIN).

3.3 Printer

It is possible to connect a receipt printer to the JP2-9 connector. The printer must work with PULSE protocol, e.g. the printer ICT SP1. In the SERVICE menu the printer can be activated and the pulse value can be adjusted. Default value 50, this means there is one pulse on JP2-9 for 50 credit. If printing receipt is activated the customer can select to print a receipt via the START push button (connected to HOPPER2 connector). The push button can also be illuminated via HOPPER2 output.

If the printer is activated the customer can request a receipt by a push button. If printing is possible the push button will be illuminated to signal printing an receipt can be started. Pressing the push button a receipt is printed and the illumination of the button is turned off. See chapter 5.8 for exact wiring of the printer.

We have made a PDF (German only) with detailed instructions for printer setup here:

https://www.casino-software.de/download/anleitung_pulse-drucker.pdf

An ICT SP1 pulse printer is available in the Web-Shop at www.casino-software.de/shop

3.4 LCD-Display

Type 162 with 44780 controller via 10 pin flat ribbon cable + LCD Interface or compatible, e.g. OLED with KS0070 or KS0073 controller.

Newer OLED displays are preferable to older LCD Displays.

We offer different LCD and OLED displays (normal size / big size) in the Web-Shop at www.casino-software.de/shop

3.5 Relays output

Closer contact, NO 200 VDC, 15 Watts.

An external relay must be connected downstream for larger loads or mains voltage!

3.6 Cashless systems

Currently the following credit and smart card systems can be connected:

[Nayax cashless payments vpos](#)

[Otiglobal cashless payment systems otipulse](#)

[USA Technologies ePort G9](#) and [ePort G10-S](#)

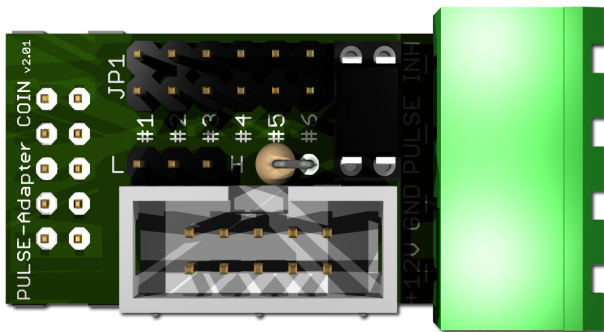
[Sacoa Debit Card, POS and Redemption System](#)

[Ingenico pos solutions smart pos self-service](#)

Please inform about the exact features of the cashless systems directly at the manufacturer. The above listed devices can be connected without any problems to the CI MC8 board. The device must work with PULSE Interface. Further information on the wiring of the corresponding system can be obtained from us on request.

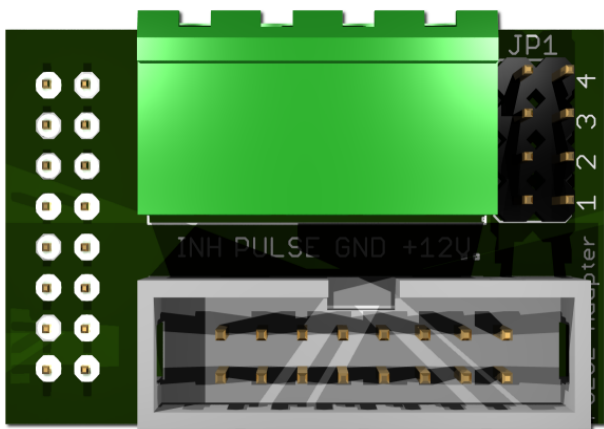
3.7 PULSE-Adapter

Another possibility to connect the Nayax (or other cashless system) PULSE wire is to use our PULSE-Adapter. There are two types of the PULSE-Adapter available, a COIN and a BILL version.



an INHIBIT out, to control the acceptance of the Nayax device.

The **PULSE-Adapter COIN** has a 10 pin connector that fits to default coin plugs, and offers again a 10 pin coin plug to plug in the originally coin acceptor cable, so you do not lose the coin acceptor connector. The cashless device can be connected easily via plugable terminal connector. With a jumper you can select the coin channel on which the external credit signal is transferred. Additionally there is

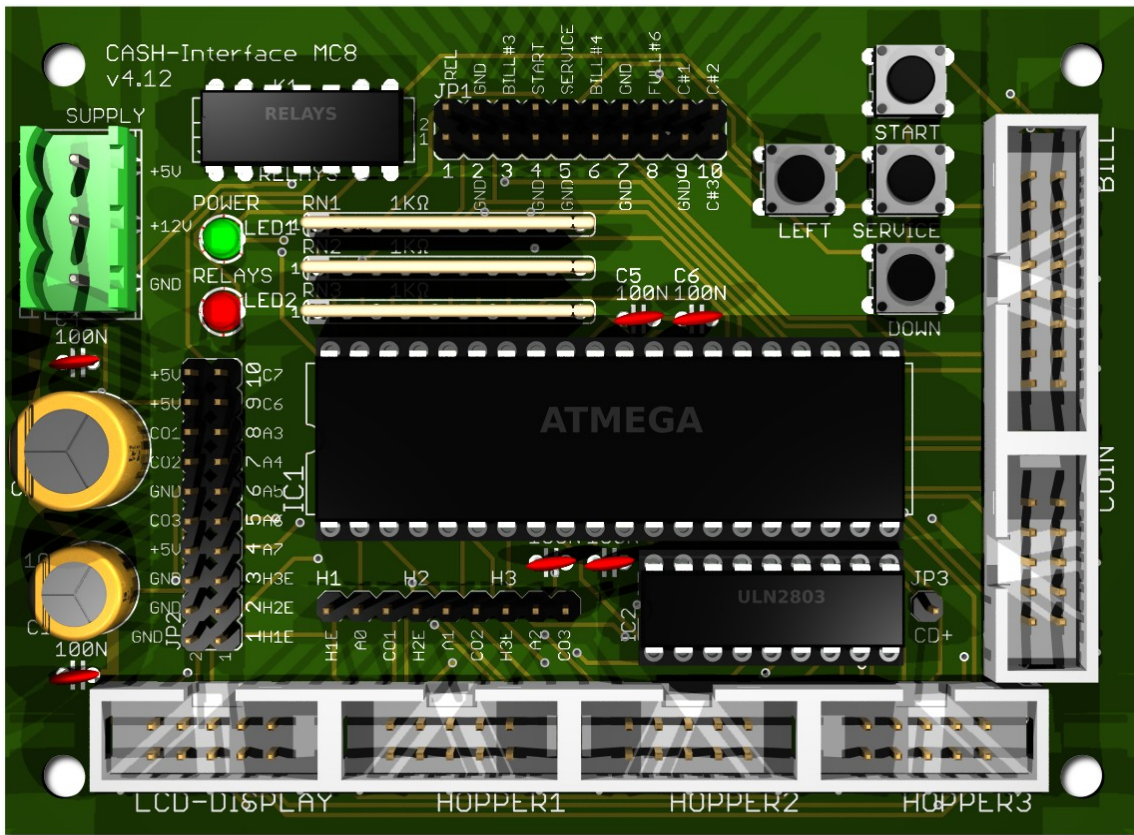


The **PULSE-Adapter BILL** has a 16 pin connector that fits to default NV9/NV10 plugs, and offers again a 16 pin plug to plug in the originally bill acceptor cable, so you do not lose the bill acceptor connector.

The PULSE-Adapter BILL offers the same options as the above PULSE-Adapter COIN, select the bill channel by jumper and a INHIBIT output.

The PULSE-Adapter is available in the Web-Shop at www.casino-software.de/shop

4. CASH-INTERFACE MC8 BOARD



4.1 Jumper

JP1.1 - RELAYS, Pin1=K1/14, Pin2=K1/8
 JP1.2 - GND, Pin3=GND, Pin4=GND
 JP1.3 - C.2, Pin5=bill #3, Pin6=C.2
 JP1.4 - START, Pin7=GND, Pin8=C.4
 JP1.5 - SERVICE, Pin9=GND, Pin10=C.5
 JP1.6 - C.3, Pin11=bill #4, Pin12=C.3
 JP1.7 - GND, Pin13=GND, Pin14=GND
 JP1.8 - Hopper Full, Pin15=coin #6, Pin16=H1-H3 FULL
 JP1.9 - COIN, Pin17=GND, Pin18=coin#1
 JP1.10 - COIN, Pin19=coin#2, Pin20=coin#3

Relays closer contact (NO)
 GND
 monitor bill #3
 external START button
 external SERVICE button
 monitor bill #4
 GND
 COIN#1
 COIN#2 + COIN#3

JP2.1 - Pin1=Hopper1 EMPTY, Pin2=COIN1 SIGNAL
 JP2.2 - Pin3=Hopper2 EMPTY, Pin4=COIN2 SIGNAL
 JP2.3 - Pin5=Hopper3 EMPTY, Pin6=COIN3 SIGNAL
 JP2.4 - A7, Pin7=A7, Pin8=+5V
 JP2.5 - Menu EXIT, Pin9=A.6, Pin10=GND
 JP2.6 - TIME RESET, Pin11=A.5, Pin12=GND
 JP2.7 - Menu value DOWN, Pin13=A.4, Pin14=GND
 JP2.8 - Menu LEFT, Pin15=A.3, Pin16=GND
 JP2.9 - Printer PULSE, Pin17=C.6, Pin18=+5V
 JP2.10 - Printer pulse total, Pin19=C.7, Pin20=+5V

Hopper1 EMPTY, Hopper1 coin signal
 Hopper2 EMPTY, Hopper2 coin signal
 Hopper3 EMPTY, Hopper3 coin signal
 Menu EXIT
 TIME RESET push button
 Menu value DOWN
 Menu LEFT
 Printer PULSE
 Printer PULSE total

4.2 Micro controller

ATMega32 (8 MHz internal clock) I/O ports:

Port A.0 - Hopper1 Empty, not empty=LOW => START button
Port A.1 - Hopper2 Empty, not empty=LOW => Select print ticket button
Port A.2 - Hopper3 Empty, not empty=LOW
Port A.3 - Menu LEFT
Port A.4 - Menu value DOWN
Port A.5 - Time RESET button => Clear time to 0 and set relays OFF
Port A.6 - Menu EXIT
Port A.7 -

Port B.0 - Coin #1, Active LOW
Port B.1 - Coin #2, Active LOW
Port B.2 - Coin #3, Active LOW
Port B.3 -
Port B.4 - Hopper1 pulse => Illumination START button
Port B.5 - Hopper2 pulse => Illumination print ticket button
Port B.6 - Accept coin and bill validator, Active LOW (INHIBIT)
Port B.7 - Relays, Active HIGH, JP1.1 is a closer contact NO

Port C.0 - Bill #1, Active LOW
Port C.1 - Bill #2, Active LOW
Port C.2 - Bill #3, Active LOW
Port C.3 - Bill #4, Active LOW
Port C.4 - Push button 1, START, JP1.4, Active LOW, (select print receipt)
Port C.5 - Push button 2, SERVICE MENU, JP1.5, Active LOW,
Port C.6 - Printer pulse
Port C.7 - Printer pulse total

Port D.0 - LCD 1, DB4
Port D.1 - LCD 1, DB5
Port D.2 - LCD 1, DB6
Port D.3 - LCD 1, DB7
Port D.4 - LCD 1, Enable
Port D.5 - LCD 1, RS
Port D.6 - LCD 1, RW
Port D.7 - LCD 2, Enable => 2 LCD

5. CONNECTIONS

5.1 Power supply

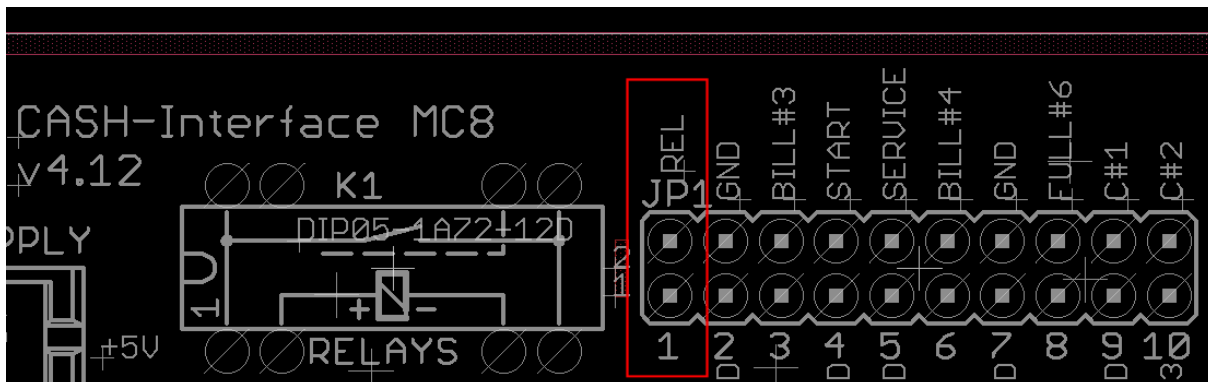


The power supply is connected to terminal plug X1.

The CASH-Interface MC8 needs a supply voltage of +5V and +12V DC. The ground connections (GND) of both voltage must be connected. The interfacing of +5V, +12V and GND is printed on the board.

5.2 Relays output

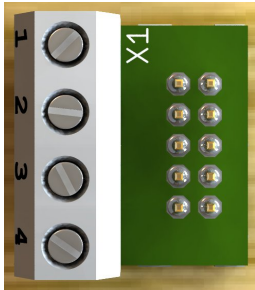
On the pcb board there is a Reed-Relays mounted, with a closer contact NO 200 VDC, 15Watts. The closer contact can be used with the REL signed pins, here marked with in red:



An external relay must be connected downstream for larger loads or mains voltage!

5.3 Illuminated START push button

The easiest way to connect a button is to use the accessory part "ND300-Adapter".

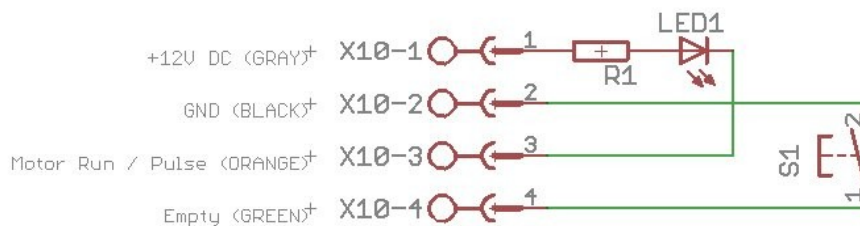


Illuminated START button connected to the HOPPER connector.

Usage:	Push Button
1 = +12V DC	Illumination PLUS connection
2 = GND	button input connection
3 = OUT	Illumination MINUS connection
4 = IN	button output connection

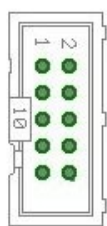
The ND300 adapter can be used to connect an illuminated START button to the HOPPER1 connection. This is needed if the customer shall start the timer manually via push button. To do this, the AUTOSTART function must be set to 0 in the SERVICE menu, means it does NOT start automatically but manually.

Connection diagram START button via ND300-Adapter at HOPPER1 connector:



You can connect the push button directly to the HOPPER plug without ND300-Adapter:

Occupation of the 10 pin plug (Azkoyen compatible):



- Pin 1,2,3 = +V (+12V or +24V DC)
- Pin 4,5 = -V (GND)
- Pin 6 = Full sensor
- Pin 7 = Motor run (IN3)
- Pin 8 = Not used (security / error)
- Pin 9 = Coin signal (select by JP2.1 or JP2.3)
- Pin 10 = Empty sensor

- S1 to GND => Pin 4
- S1 to EMPTY => Pin 10
- LED1 to +12V => Pin 1
- LED1 to MOTOR RUN => Pin 7

The display shows "PRESS START", the push button illumination is blinking. After starting the machine, the button lights up continuously as long as the time is running (operating indicator). For testing it is also possible to push the START button on the board.

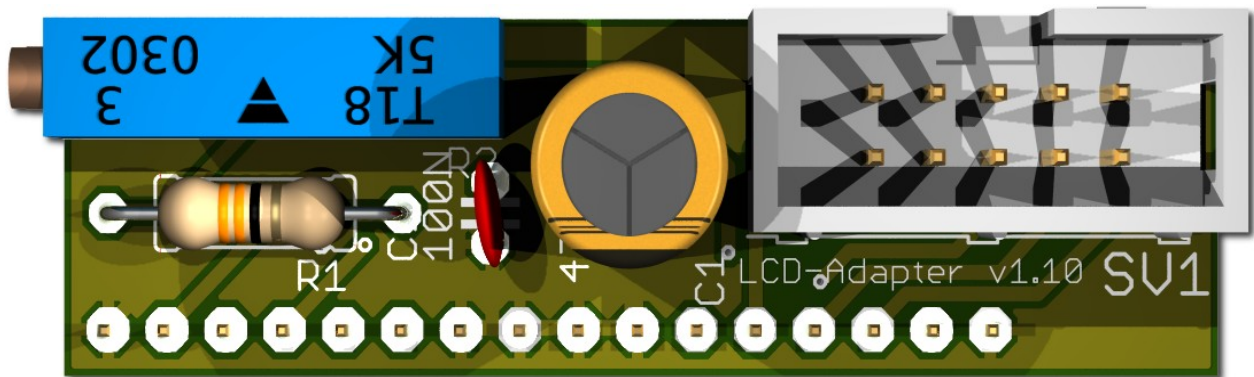
LEDs should be used for lighting as they require less electric current.

The output for the illumination can supply max. 500 mA, having higher current a external relays must be used.

Example: $0,5A * 5V = 2,5 \text{ Watts}$, means max. a 2,5 Watt light-bulb at 5V.

The ND300-Adapter is available in the Web-Shop at www.casino-software.de/shop

5.4 LCD-Adapter



Depends on the used LCD display the adapter has to be mounted on the left or right side. Some displays have the power pins on the left side others on the right side!

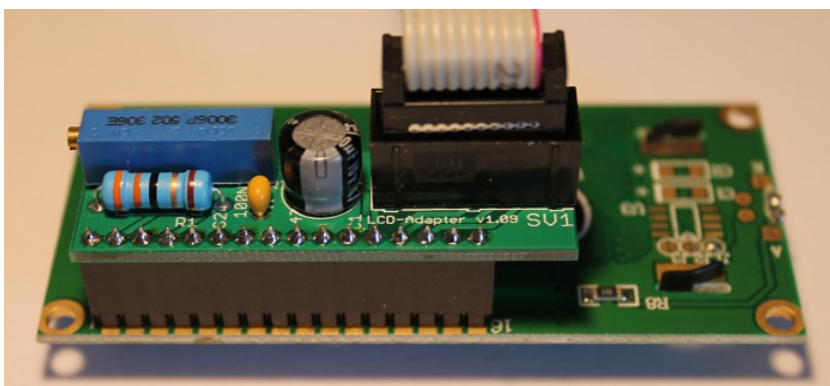
Hint: since version 1.10 the adapter has only 16 Pins, and does not fit for BIG displays. For BIG displays we supply the previous Adapter with 18 pins.

5.5 Pinout LCD-Adapter

Pin1 = LED L–	Pin10 = DB1
Pin2 = LED L+	Pin11 = DB2
Pin3 = VSS (GND)	Pin12 = DB3
Pin4 = VDD (+5V)	Pin13 = DB4
Pin5 = V Contrast	Pin14 = DB5
Pin6 = RS	Pin15 = DB6
Pin7 = R/W	Pin16 = DB7
Pin8 = E	Pin17 = LED L+ (since v1.10 no longer available)
Pin9 = DB0	Pin18 = LED L- (since v1.10 no longer available)

With the CASH-Interface MC8 the LCD-Display is controlled in 4Bit mode. The contrast is adjustable via the spindle pots. Newer OLED displays do not need contrast adjustments anymore. We recommend to use newer OLED displays.

5.6 LCD Adapter position for DISPLAYTECH 162C



The manufacturer of the LCD display suggests to NOT use flat ribbon cables longer than 10cm to avoid display problems by interfering signals! If you use longer cables and get problems change to a shorter cable length or use an shielded cable.

5.7 Shielded LCD-Cable

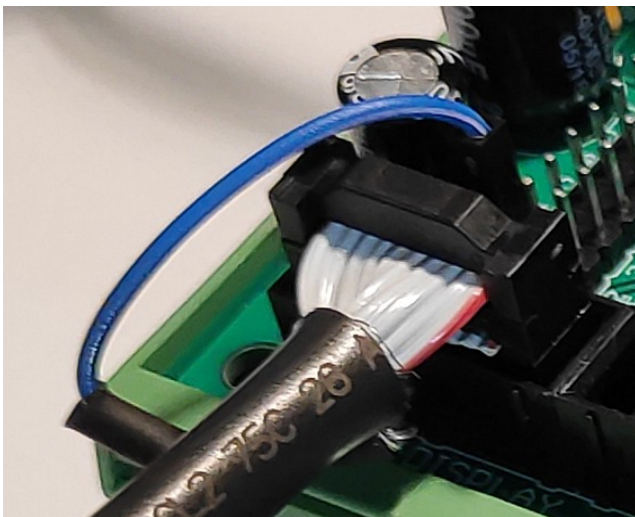
In environments with strong interfering signals, e.g. generated by motors or solenoid valves, faults in the view of the LCD or OLED display may occur!



The display shows then weird characters (hieroglyphics).

This can be remedied by usage of a shielded cable that blocks the interference signals.

We recommend the use of a shielded cable for the LCD or OLED display, to avoid problems with the display.



For the grounding of the cable shielding, the shielding is carried out on one side with a single dupont cable with an female connector, and can therefore simply be plugged onto GROUND (JP2 - GND) on the CI MC8 circuit board.

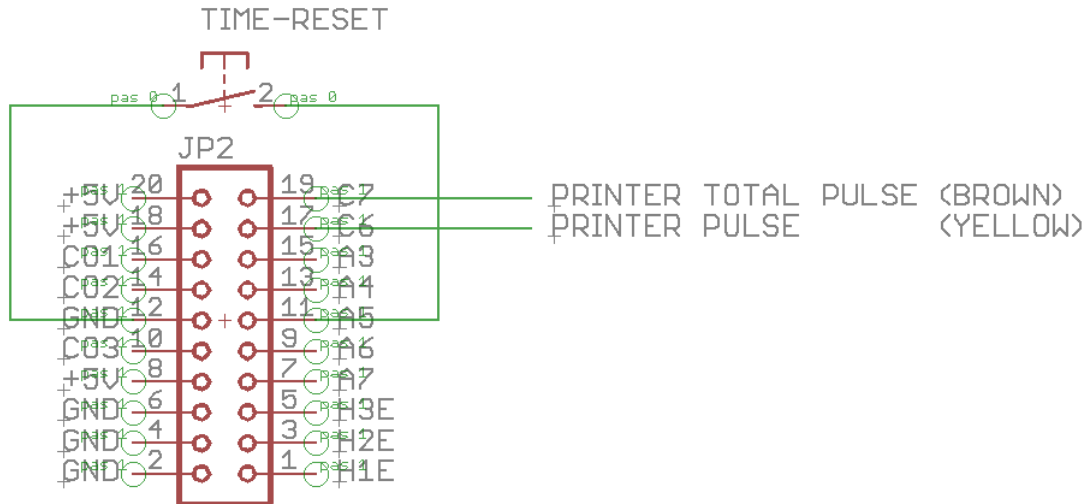
In addition, we offer Y-cables, this enables the connection of 2 displays to one LCD connector, e.g. one display on the outside visible for the customer, and a second display on the inside of the machine for SERVICE purpose.

We offer shielded flat ribbon cable, as well as Y-cables as accessories in the web shop at www.casino-software.de/shop

5.8 Receipt printer and clear time push button

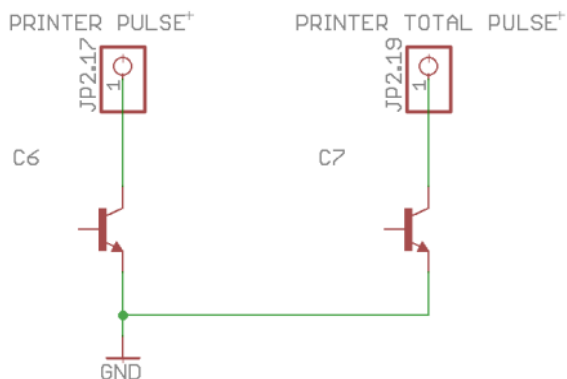
The outputs C6 and C7 are the PULSE outputs for the printer.

With A5 input it is possible to set the time to 0 and stop the system by a push button.

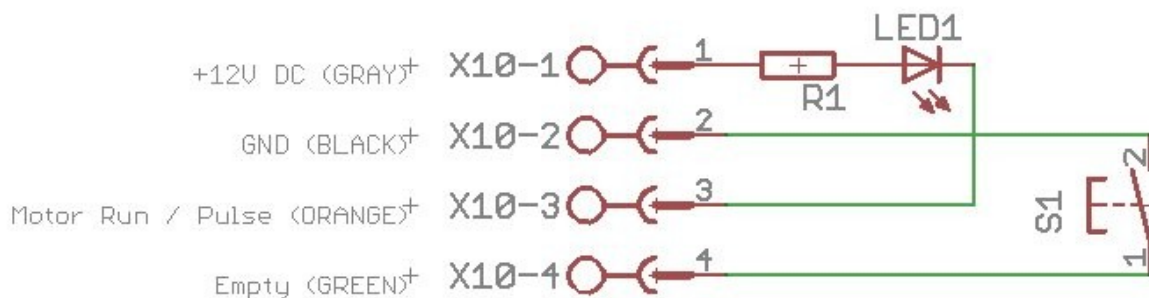


The PRINTER PULSE output is an OPEN COLLEKTOR Output, with max. 500mA current (ULN2803). Instead of a printer it is possible to connect an external counter or hard meter. If a relay is used, a free-wheeling diode must be connected parallel to the relay coil, otherwise the output will be destroyed!

Internal connection of the pulse output (OPEN COLLECTOR):



Connection diagram "PRINT TICKET BUTTON" via ND300-Adapter on HOPPER2 connector:



6. GETTING STARTED

To make the settings, the service menu is called via the SERVICE button. Press the SERVICE button to navigate to the next menu item.

First set up the coin and bill acceptor values. For COIN #1 set the value for the first coin, e.g. 10 for 10 Cent. Then for COIN #2 set the value for the second coin, e.g. 20 for 20 Cent, and so on. Same for the banknotes, for BILL #1 set the value for the first banknote, e.g. 500 for 5 Euro. For BILL #2 set the value for the second banknote, e.g. 1000 for 10 Euro, and so on.

Next set the communication protocol for the coin validator (COIN) and bill validator (BILL). Hint: using more than 3 coins or banknotes BINARY protocol must be used. Using BINARY protocol, of course the validator device must be set to BINARY, too!

The time the customer gets is set in the service menu under "COSTS PER HOUR:". The time is calculated by this setting.

Example: 50 Cent shall give 4 minutes. 4 min = 240 seconds
Because the price is set per hour, the setting can be calculated like this:

a)

1 hour = 3600 seconds

$3600 : 240 = 15$ units per hour

15 units * 50 Cent = 750 cent per hour.

b)

50 cent = 4 minutes = 240 seconds

$240 \text{ div } 50 \text{ cent} = 4,8$ seconds per cent

$3600 : 4,8 = 750$ cent per hour

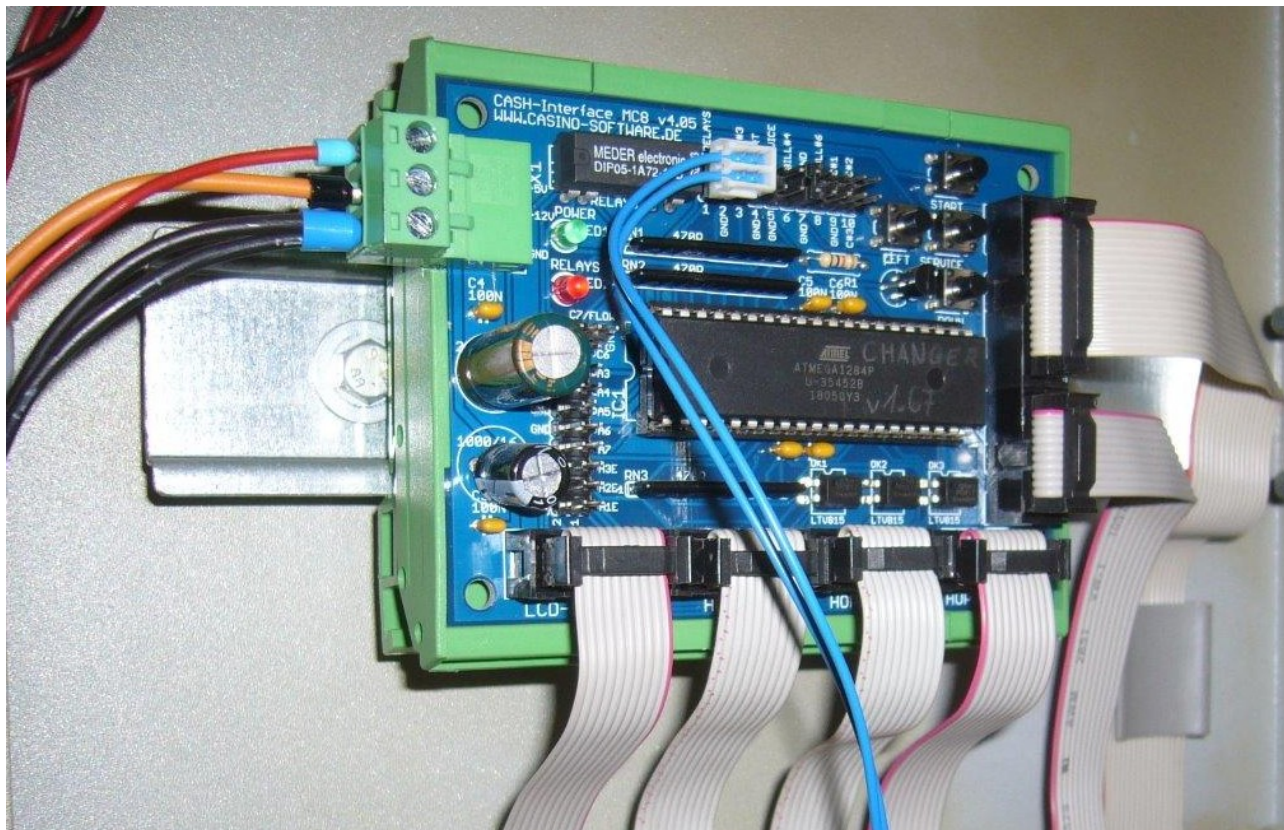
With the bonus function a bonus value can be set in seconds for each coin and banknote. For example for 0,50 EUR the customer gets 4 minutes. For 1 EUR we set as bonus time 60 seconds, means the customer gets for 1 EUR 8 minutes + 60 seconds bonus time, makes 9 minutes altogether.

For very first test run connect coin and bill acceptor and add several coins and banknotes.

In the SERVICE menu, TOTAL IN shows the sum of all incoming payments.

7. INSTALLATION IN THE CABINET

The CI MC8 board is simply clamped on a DIN rail pcb holder and wired. In this example with a bill and coin acceptor (right side) and 3x hopper:



The display is installed accordingly, maybe with its own adapter, in the cabinet's front:



8. SAFETY INSTRUCTIONS

Read the user manual completely and carefully before use. The user manual is part of the product and contains important information for correct use.

Use the product, product parts and accessories only in perfect condition. Compare the specifications of all used devices to ensure compatibility. In case of questions, defects, mechanical damage, trouble and other problems, non-recoverable by the documentation, contact your dealer or producer.

The CASH-Interface MC8 module is intended to use in a housing.

Only use the CASH-Interface MC8 module in low-voltage circuits (max. 24V). Higher voltage rates are not permissible. There is danger to life through an electric shock and a risk of fire!

Ensure that all the electrical connections and connection cables conform to the regulations.

The entire product may not be modified or reassembled. Operation is only permissible in dry indoor locations. Never operate the device immediately after bringing it from a cold to a warm room. The resulting condensation water may damage the device. Do not expose the CASH-Interface MC8 module to high temperatures, strong vibrations, high degrees of humidity or chemically aggressive dusts, gases and vapors.

Electronic components of the CASH-Interface MC8 module may heat up during operation. Ensure sufficient air circulation around the device to prevent heat build-up and overheating.

In case of damage incurred by disregarding these operating instructions, the warranty claim is void. Liability for any and all consequential damage is excluded! We do not assume any liability for damage to property or personal injury caused by improper use or the failure to observe the safety instructions!

9. DISPOSAL INSTRUCTIONS

According to the European WEEE directive, electrical and electronic equipment must not be disposed with consumers waste. Its components must be recycled or disposed apart from each other. Otherwise contaminative and hazardous substances can pollute our environment.

10. LIABILITY NOTICE

We reserve the right to printing errors and changes to product, packaging or product documentation. See our term of warranty.