CASH-Interface MC8 [CHANGER]

User manual
Software version v1.62
Date: 08.02.2018

Content

1. DESCRIPTION

The credits for every coin and bill, as well as the coin value of the hopper are adjusted in the service menu. The display shows "READY". Inserting money the corresponding credits are added and shown in the LCD display. There are two different payout modes, default or user select mode selectable in the settings. With user select mode the customer can select via push button what type of coin he wants to change. For example hopper 1 holds 1 Euro coins and hopper 2 holds 2 Euro coins. The push buttons are illuminated showing the coin type is ready to payout. If a hopper is empty the button is not illuminated and it is not possible to select that coin type. With the SINGLE COIN setting the customer can select what hopper to pay out from as long as he has credits left.

In default mode the corresponding amount of coins is paid out directly, without a push button. The amount is reduced and shown on the display by every paid coin. It is possible to change bills to coins and small coins to bigger coins or even bills. Using 3 hoppers there can be paid out 3 different coins or bills. In the service menu the amount of coins for hopper 1-3 can be adjusted for every coin and bill separately.

HINT: The hopper value must be always ascending, that means the smallest coin in hopper 1. Using same coin value for the hoppers will payout alternately with an other hopper for every job.

Example change bill to coins
(hopper1=0,50 EUR, hopper2=1 EUR, hopper3=2 EUR):
5 EUR bill:
Pay out 10x 0,50 EUR
or
Pay out 5x 1 EUR
or
Pay out 3x 1 EUR + 1x 2 EUR
or
Pay out 1x 1 EUR + 2x 2 EUR
or
Pay out 2x 0,50 EUR + 2x 2 EUR

The number of coins per hopper can be set separately for each bill, as well as the 1 EUR and 2 EUR coin. Thus, any constellation of output is possible.

Example change coins into coins
(hopper1=0,50 EUR, hopper2=1 EUR, hopper3=2 EUR):
Small coins are inserted, e.g. 10 cent. Reaching a total of 0,50 EUR and no more pay in within 4 seconds a 0,50 EUR coin is paid out, else reaching the total of 1 EUR a 1 EUR coin is paid out, otherwise upon reaching 2 EUR a 2 EUR coin is paid out. The time to wait is adjustable, default is 4 seconds.

Example change coins into bill
(hopper 3 note dispenser = 10 EUR):
Coins are thrown in. Reaching a total of 10 EUR a 10 EUR bill is paid out.

It is possible to control 3 hoppers (coin or note dispenser). Every hopper connection can be used for coin or bill pay out. The corresponding coin or bill value can be adjusted in the service menu.

Every of the 3 hoppers is monitored for EMPTY and FULL, that means if one hopper is empty the acceptance of money is disabled and shown in the LCD display. The FULL signal can control a coin sorter and redirect the coin to the main cash box instead to the hopper. The EMPTY and FULL control can be activated for every connected hopper by jumper on the board. There is a separate error signal output to control other applications, e.g. send an SMS or e-mail on hopper empty.

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.

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

2.1 Menu items

1: SOFTWARE and VERSION
2: STATUS H-EMPTY (E=EMPTY, F=FULL)
3: CREDIT (LongInt -2147483648..2147483647)
4: TOTAL (LongWord 0..4294967295)
5: HOPPER1 OUT (LongWord 0..4294967295)
6: HOPPER2 OUT (LongWord 0..4294967295)
7: HOPPER3 OUT (LongWord 0..4294967295)
8: HOPPER1 PAYOUT 20 COINS
9: HOPPER2 PAYOUT 20 COINS
10: HOPPER3 PAYOUT 20 COINS
11: EXIT CLOSE SERVICE, exits the SERVICE-MENU and saves all settings
12: BILL1 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
13: BILL1 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
14: BILL1 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
15: BILL2 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
16: BILL2 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
17: BILL2 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
18: BILL3 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
19: BILL3 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0

20: BILL3 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
21: BILL4 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
22: BILL4 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
23: BILL4 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
24: BILL5 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
25: BILL5 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
26: BILL5 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
27: BILL6 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
28: BILL6 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
29: BILL6 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
30: BILL7 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
31: BILL7 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
32: BILL7 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
33: EUR 1 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
34: EUR 1 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
35: EUR 1 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
36: EUR 2 - HOPPER1 (Byte 0..255), Setting range 0-250, default setting 0
37: EUR 2 - HOPPER2 (Byte 0..255), Setting range 0-250, default setting 0
38: EUR 2 - HOPPER3 (Byte 0..255), Setting range 0-250, default setting 0
39: COIN #1 (Integer 0..65535), Setting range 0-50000, default setting 50 (0,50 EUR)
40: COIN #2 (Integer 0..65535), Setting range 0-50000, default setting 100 (1 EUR)
41: COIN #3 (Integer 0..65535), Setting range 0-50000, default setting 200 (2 EUR)
42: COIN #4 (Integer 0..65535), Setting range 0-50000, default setting 0
43: COIN #5 (Integer 0..65535), Setting range 0-50000, default setting 0
44: COIN #6 (Integer 0..65535), Setting range 0-50000, default setting 0
45: COIN #7 (Integer 0..65535), Setting range 0-50000, default setting 0
46: BILL #1 (Integer 0..65535), Setting range 0-50000, default setting 500 (5 EUR)
47: BILL #2 (Integer 0..65535), Setting range 0-50000, default setting 1000 (10 EUR)
48: BILL #3 (Integer 0..65535), Setting range 0-50000, default setting 2000 (20 EUR)
49: BILL #4 (Integer 0..65535), Setting range 0-50000, default setting 0
50: BILL #5 (Integer 0..65535), Setting range 0-50000, default setting 0
51: BILL #6 (Integer 0..65535), Setting range 0-50000, default setting 0
52: BILL #7 (Integer 0..65535), Setting range 0-50000, default setting 0
53: COIN PROTOCOL (Byte 0..255), PARALLEL or BINARY, default setting PARALLEL
54: BILL PROTOCOL (Byte 0..255), PARALLEL or BINARY, default setting PARALLEL
55: B-PULSE (Integer 0..65535), Setting range 1-50000, default setting 0 (use with pulse)
56: HOPPER1 VALUE (Integer 0..65535), Setting range 1-50000, default setting 100
57: HOPPER2 VALUE (Integer 0..65535), Setting range 1-50000, default setting 0
58: HOPPER3 VALUE (Integer 0..65535), Setting range 1-50000, default setting 0
59: MONITOR H1, OFF or ON, default setting OFF
60: MONITOR H2, OFF or ON, default setting OFF
61: MONITOR H3, OFF or ON, default setting OFF
62: HOPPER USER SELECT, OFF or ON, default setting OFF
63: SINGLE COIN, OFF or ON, default setting OFF
64: H-PULSE LENGTH (Integer 0..65535), Setting range 1-500, default setting 50
65: PRINTER RECEIPT, OFF or ON, default setting OFF

66: P-PULSE VALUE (Integer 0..65535), Setting range 1-50000, default setting 100
67: DELAY VALUE (Integer 1..65535), Setting range 1-10, default setting 4
68: RELAYS VALUE (Integer 1..65535), Setting range 1-10, default setting 4
69: LINGO, ENGLISH or DEUTSCH, default setting ENGLISH
70: SHOW, CHANGER READY or READY, default setting CHANGER READY
71: SETTINGS BACKUP, backup all settings
72: SETTINGS RESTORE, restore all settings
73: EXIT CLOSE SERVICE, exits the SERVICE-MENU 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.

The protocol for coin and bill validator can be separately selected (PAR or. BIN).

Coin validator in PARALLEL protocol: 3 coins possible (#1 - #3)
Coin validator in BINARY protocol: 7 coins possible (#1 - #3 BINARY CODED)

Bill validator in PARALLEL protocol: 4 bills possible (#1 - #4)
Bill validator in BINARY protocol: 15 bills possible (#1 - #4 BINARY CODED)

If bill validator works with PARALLEL or BINARY protocol, the value for B-PULSE must be set to 0 !!!

In the service menu the hopper 1-3 empty state is shown. Additionally there can be 20 coins paid for every hopper, e.g. this is useful to empty a hopper.

If there are more then 10 coins to pay out via a hopper we do a 2 seconds delay between every 10 coins to avoid coin jam.

Delay setting is the time to wait on insert coins, before the pay out job starts, e.g. if there are several 50 cent coins are inserted.

RELAYS setting is the time the relays stays on after a payout job, e.g. to illuminate the output shaft.

55: Bill validator in PULSE protocol set the value with B-PULSE, e.g. if the bill validator gives out one pulse per Euro set B-PULSE to 100.

63: If user select is on, SINGLE COIN means user have to push a push button for every single coin, so he can select e.g. 2 coins hopper2 and 1 coin hopper1. If this is off user selects the hopper and complete credit is paid from that hopper.

67: Delay before payout job starts, e.g. if coins are used we have to accumulate credits.

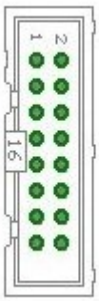
68: Time the relays is still on after a payout job has finished

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.

Pin out of the BILL plug:

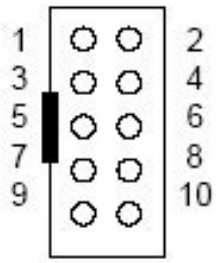


Pin 1 = +12V DC
Pin 2 = 0V
Pin 3,4,5,6 = MDB (not used)
Pin 7 = Busy (act. low)
Pin 8 = Escrow (not used)
Pin 9,10,11,12 = Inhibit 1-4 (blocking = High, accept = Low)
Pin 13 = Vend 3 (Note channel 3, act. low)
Pin 14 = Vend 4 (Note channel 4, act. low)
Pin 15 = Vend 1 (Note channel 1, act. low)
Pin 16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

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

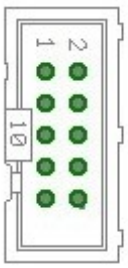


A coin sorter can be directed to the main cash box via hopper full signal,
e.g. EMP 800.00/P V6 /O or. /N /X Pin4 Low sorter control and SRT 800.2X or SRT 800.3X

3.3 Hopper

Hopper of the type Azkoyen U-II, Flow-Hopper, Hopper HS-2012 (STD) via MK4 adapter, MK2/3/4 via MK4 adapter, Note dispenser ND300KM via ND300KM adapter,
Protocol: PULSE

Pin out of the HOPPER plug:



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

If a hopper becomes empty while pay out process, e.g. a 500 Euro banknote shall be changed into 2 Euro coins (corresponds to 250 coins), the control tries to pay out the remaining coins by the next hopper. Is the coins count bigger or equal than 10 coins, the hopper empty detection will be monitored again every 10 coins and pay out is changed to the next hopper if needed.

If all hoppers become empty while pay out process, the control signals “HOPPER EMPTY”. In the second row of the LCD display the remaining credits are still shown. Now the service personal must fill up the hoppers. To continue the pay out of the remaining coins, the service personal must push a button connected to the A.5 input, or the START button on the CI MC8 board, after the fill up job is finished. The input A.5 (JP2.6) normally is the “OUT OF SERVICE” trigger, but if there are credits left, the pay out job continues.

3.4 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 GP-58. In the SERVICE menu the printer can be activated and the pulse value can be adjusted. Default value 100, this means there is one pulse on JP2-9 for 100 credit. If printing receipt is activated the customer can select to print a receipt via the START push button (jumper JP1.4). The push button can be illuminated via RELAYS output (jumper JP1.1 is the relays closer contact). Pressing the START push button the RELAYS is active for 60 seconds and signals printing of a receipt. If the printer is not selected in the settings, the RELAYS is active while payout and can be used for illumination of the output shaft.

If the printer is not selected in the settings, the RELAYS is active while payout and can be used for illumination of the output shaft. The time for the relays can be set in the SERVICE MENU, “RELAYS” setting.

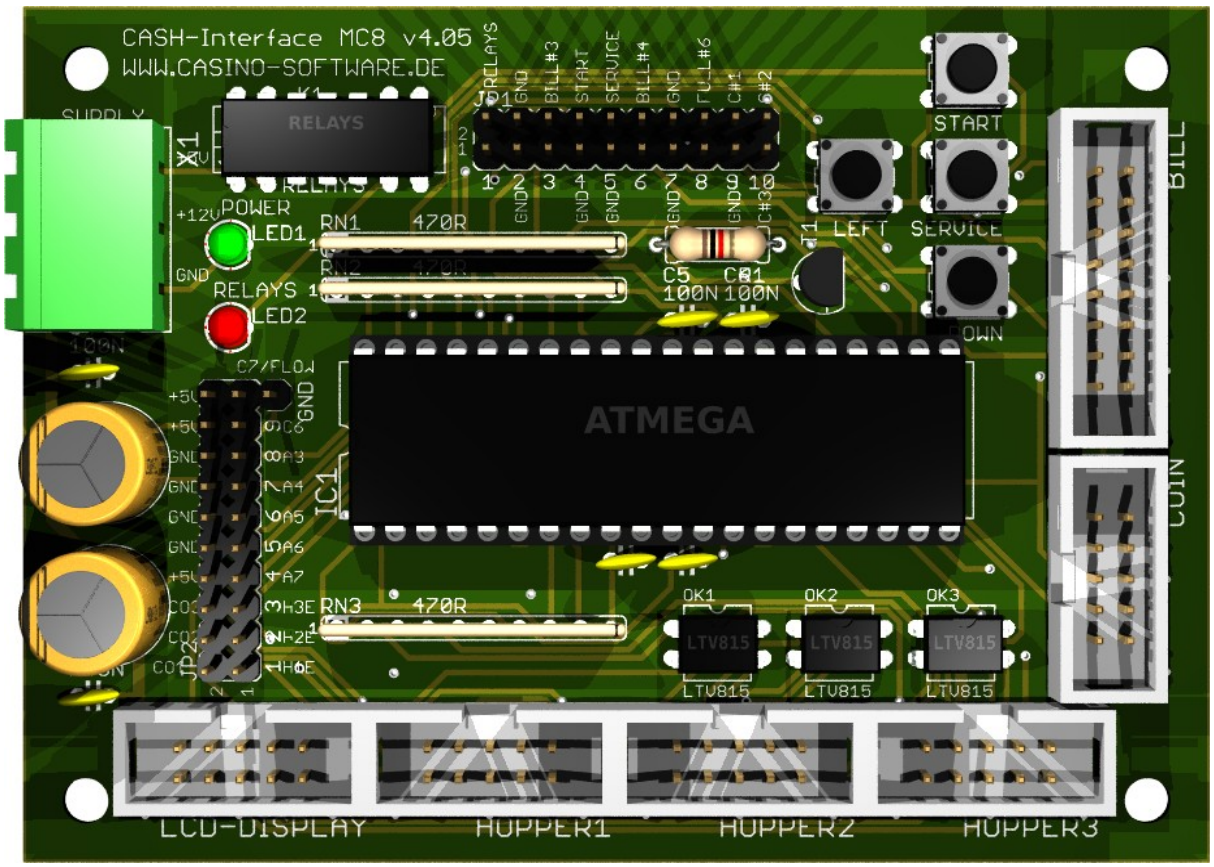
3.5 LCD-Display

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

3.6 Relays output

Closer contact, NO 200 VDC, 15W e.g. illumination output shaft.

4. CASH-INTERFACE MC8 BOARD v4.05



4.1 Jumper

JP1.1 - RELAYS, Pin1=K1/14, Pin2=K1/8	closer contact for external use
JP1.2 - GND, Pin3=GND, Pin4=GND	GND
JP1.3 - C.2, Pin5=bill #3, Pin6=C.2	monitor bill #3
JP1.4 - START, Pin7=GND, Pin8=C.4	external START button
JP1.5 - SERVICE, Pin9=GND, Pin10=C.5	external SERVICE button
JP1.6 - C.3, Pin11=bill #4, Pin12=C.3	monitor bill #4
JP1.7 - GND, Pin13=GND, Pin14=GND	GND
JP1.8 - Hopper Full, Pin15=coin #6, Pin16=H1-H3 FULL	monitor Hopper FULL
JP2.1 - Pin1=Hopper1 EMPTY, Pin2=COIN1 SIGNAL	Hopper1 EMPTY, coin 1 signal
JP2.2 - Pin3=Hopper2 EMPTY, Pin4=COIN2 SIGNAL	Hopper2 EMPTY, coin 2 signal
JP2.3 - Pin5=Hopper3 EMPTY, Pin6=COIN3 SIGNAL	Hopper3 EMPTY, coin 3 signal
JP2.4 - A7, Pin7=A7, Pin8=+5V	Illumination pay out button 3 or error signal ACTIVE LOW
JP2.5 - Menu EXIT, Pin9=A.6, Pin10=GND	Menu EXIT (or pay out button 3)
JP2.6 - Out of service, Pin11=A.5, Pin12=GND	Out of service input
JP2.7 - Menu value DOWN, Pin13=A.4, Pin14=GND	Menu value DOWN
JP2.8 - Menu LEFT, Pin15=A.3, Pin16=GND	Menu LEFT
JP2.9 - Printer PULSE, Pin17=C.6, Pin18=+5V	Printer PULSE or illumination pay out button 1
JP2.10 - Printer pulse total, Pin19=C.7, Pin20=+5V	Printer PULSE total or illumination pay out button 2

4.2 Micro controller

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

Port A.0 - Hopper1 Empty, not empty=LOW
Port A.1 - Hopper2 Empty, not empty=LOW
Port A.2 - Hopper3 Empty, not empty=LOW
Port A.3 - Menu LEFT (select pay out hopper 1)
Port A.4 - Menu value DOWN (select pay out hopper 2)
Port A.5 - Out of service (pull down to GND, e.g. via daily timer or switch,
or push button to restart payout after hopper empty and refill.
Port A.6 - Menu EXIT (select pay out hopper 3)
Port A.7 - illumination pay out button 3, or error signal = ACTIVE LOW

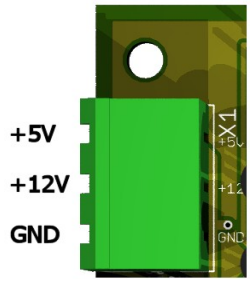
Port B.0 - Coin #1, Active LOW
Port B.1 - Coin #2, Active LOW
Port B.2 - Coin #3, Active LOW
Port B.3 - Hopper3 pulse
Port B.4 - Hopper1 pulse
Port B.5 - Hopper2 pulse
Port B.6 - Accept coin and bill validator, Active LOW
Port B.7 - Relays, Active HIGH, JP1.1 is a closer contact NO

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 (or illumination pay out button 1)
Port C.7 - Printer pulse total (or illumination pay out button 2)

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

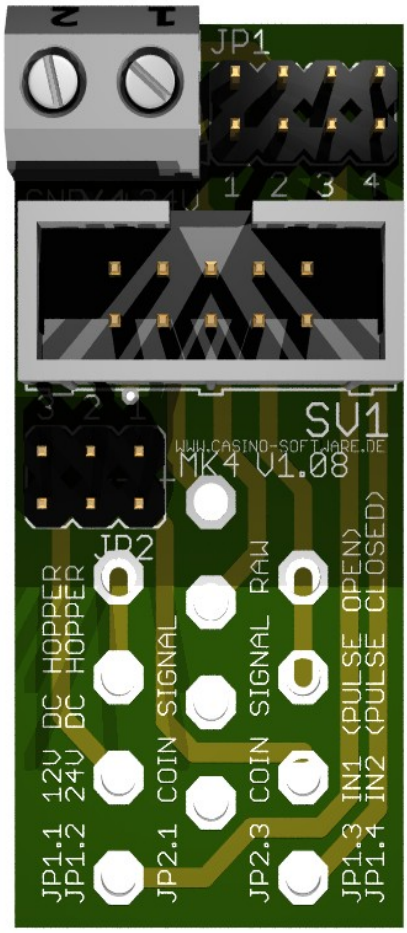
5.1 Power supply



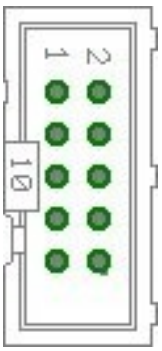
The power supply is connected to terminal plug X1.

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 MK4-Adapter



Occupation of the 10 pole plug (Azkoyen compatible):



Pin 1,2,3 = +V (+12V o. +24V DC)
Pin 4,5 = -V (GND)
Pin 6 = Full Sensor
Pin 7 = Motor run
Pin 8 = Not used
Pin 9 = Coin signal
Pin 10 = Empty sensor

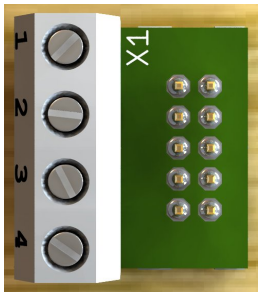
X1-1: +24V DC
X1-2: GND

JP1.1 : +12V Hopper, power from CASH-Interface
JP1.2 : +24V Hopper, power from external power supply on plug X1
JP1.3 : IN1 (mode selector)
JP1.4 : IN2 (mode selector)

Mode 0 (Direct switching 24V) : JP1.3 open + JP1.4 open
Mode 1 (Logic control / motor run) : JP1.3 closed + JP1.4 closed
Mode 2 (Coin counting / pulse) : JP1.3 open + JP1.4 closed

JP2.1 : Coin (µP Sensor Output) => short JP2.1 and JP2.2
JP2.3 : Coin raw (Raw Sensor Output) => short JP2.3 and JP2.2

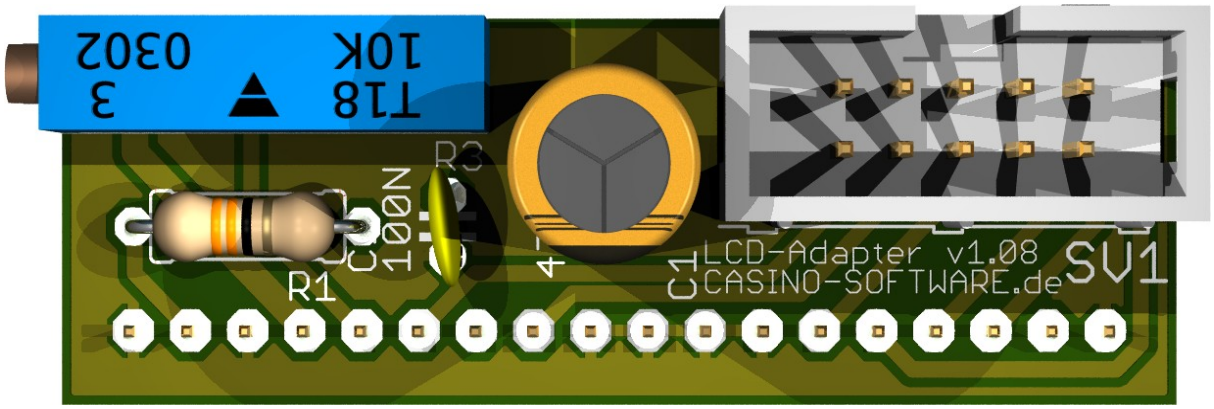
5.3 ND300-Adapter



Connects a ND300 note dispenser on the HOPPER plug.

1 - +12V DC (GRAY)
2 – GND (BLACK)
3 – Motor run / pulse (ORANGE)
4 – Empty (GREEN)

5.4 LCD-Adapter



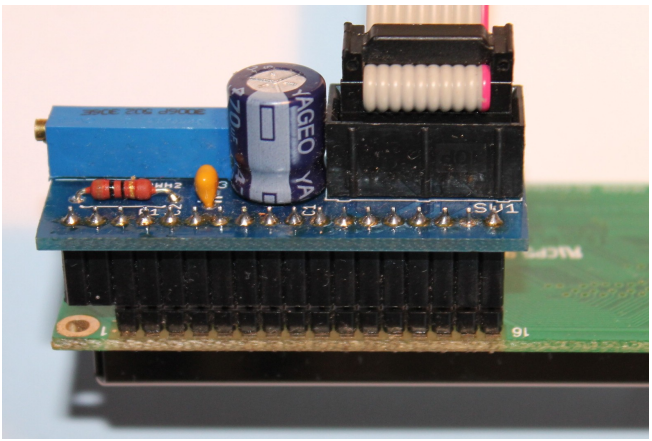
Depends on the used LCD display the adapter has to be mounted on the left or right side. Some displays have the power pins on the left side others on the right side!

5.5 Pin out 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+
Pin9 = DB0	Pin18 = LED L-

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.

5.6 LCD-Adapter position for DISPLAYTECH 162C



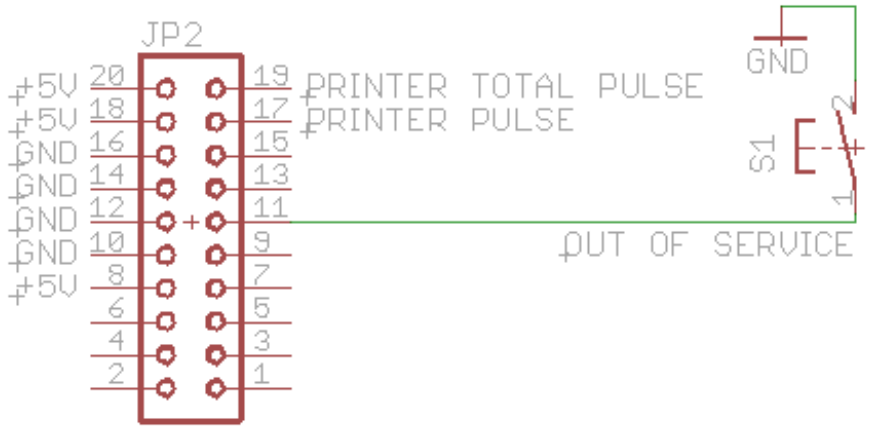
The manufacturer of the LCD display suggests to NOT use flat ribbon cables longer than 10cm to avoid display problems by interfering signals! If you use longer cables and get problems change to a shorter cable length.

5.7 Standard mode

In default mode the C6 and C7 outputs are PULSE outputs for the printer.

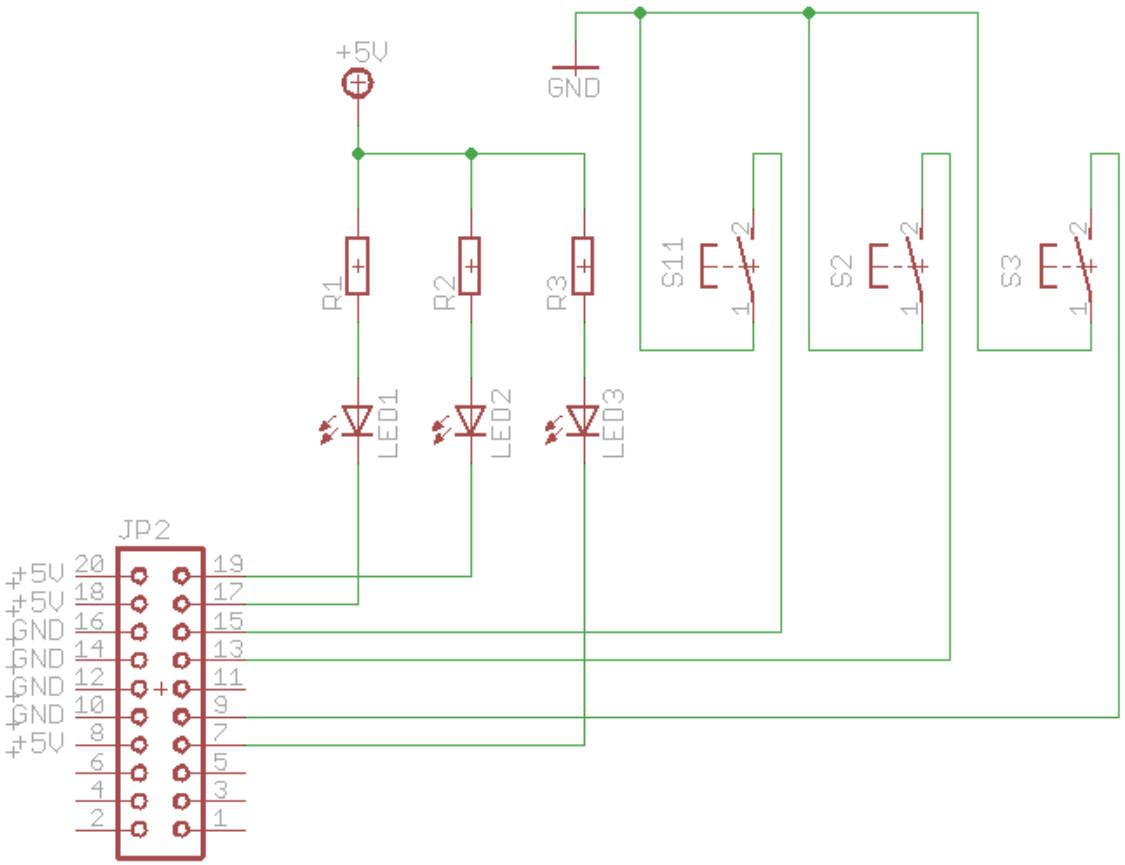
With A5 input it is possible to set the machine to “OUT OF SERVICE” state,
that means “OUT OF SERVICE” is shown in the display and acceptance of cash is disabled.
For example this is interesting in the car wash sector to disable the machine thru the night by a timer.

The A5 input is used also to restart the payout job after a hopper empty error.



5.8 User select mode

Push button connection:
S1 = push button pay out hopper 1 (e.g. 0,50 Euro coin), LED1 = illumination push button 1
S2 = push button pay out hopper 2 (e.g. 1 Euro coin), LED2 = illumination push button 2
S3 = push button pay out hopper 3 (e.g. 2 Euro coin), LED3 = illumination push button 3



To illuminate the buttons there should be LEDs used because they need less current.
Every output can supply 40mA, for higher current use an external relays.

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!

Now set the value for the hopper1-3. The smalles coin value must be placed in hopper 1, the biggest coin value in hopper 3. This way the control can calculate by itself how many coins should be paid from what hopper, starting with the biggest coin. If there are settings for BILL1-7 + HOPPER1-3 the control does not calculate the number of coins.

Next important setting is the hopper empty detection for hopper 1-3 (H1-EMPTY, H2-EMPTY, H3-EMPTY). It is recommended to activate the hopper empty detection.

For the very first test run connect coin and bill validator, as well as fully filled hoppers, and test several different banknotes.

In the service menu the sum of all pay ins is shown on the TOTAL IN entry. There is also a pay out counter for every hopper.

7. OTHER

Using the coin validator with PARALLEL protocol only line 1-3 can be evaluated due to insufficient inputs on the micro controller and because the hoppers are connected to the upper coin lines.

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 EUR 1 and EUR 2 coin it is possible to adjust the coins number for each hopper.
With a 1 or 2 EUR coin in the payout is done immediately according settings.

Using the same coins value the payout is done alternately via hopper1, hopper2 and hopper3. Settings for hopper1 is used for all hoppers. Example: hopper1=50 cent, hopper2=50 cent, setting BILL1-HOPPER1=10 (5 Euro gives 10x 50 cent). Payout is 10x 50 cent from hopper1, or 10x 50 cent from hopper2 alternately. This way the capacity for one coin or token can be increased by filling the same coin to max. 3 hopper.

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 8 channel digital IN/OUT module to high temperatures, strong vibrations, high degrees of humidity or chemically aggressive dusts, gases and vapors.

Electronic components of the 8 channel digital IN/OUT 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.