



## Programming Manual for Coin Acceptors



Via Cà Bianca, 421 - 40024  
Castel San Pietro Terme (BO) - Italy

Progettazione e produzione di sistemi di pagamento per l'Intrattenimento, i Lavaggi automatici, e il Vending  
Design and manufacture of payment solutions for the Amusement, Gaming, Car-Wash, Laundries, and Vending

Tel.: +39.051.944300  
Fax.: +39.051.944594

Web: [www.alberici.net](http://www.alberici.net)  
E.mail: [info@alberici.net](mailto:info@alberici.net)



# CONTENTS

1.	PREPARATORY OPERATIONS .....	5
2.	SETTING THE DIP SWITCH ROWS .....	6
3.	USING THE PROGRAMMING SOFTWARE.....	7
4.	ACCOUNT RECORDS (STATISTICS).....	30
5.	TESTING ACCEPTANCE AND OPERATION.....	31
6.	SETTING SORTER PATHS.....	32
7.	MENU UPPER BAR.....	35
8.	DISPLAY SETTING (only for FG coin acceptors).....	35
9.	MANUAL PROGRAMMING BY THE ON-BOARD DIP SWITCHES .....	39
10.	TEST THE HARDWARE .....	40

STORICO REVISIONI			
Revisione n°	Data	Modifica	Note
Creazione v. 1.00	13.10.2019	Creazione (adozione sw per processore ARM)	Fw: u1.5 A1.0.4 (AL55) , u1.5 A1.1.0 (AL66), u1.5 A1.0.5 (FG), u1.5 A1.1.2 (SV)
Revisione v. 1.01	21.11.2020	ARM 2 / ARM 3: auto-ripristino dopo accciamento (Pulse e ccTalk) + Gestione diagnostica e separatori iS Pulse (ccTalk)	Fw: u1.6 A2.0.4 (AL66), u1.6 A2.0.6 (FG), u1.5 A2.1.1 (SV)
Revisione v. 1.02	12.01.2023	ARM 4: introdotto Bonus (Pulse) + address change (ccTalk) + opzione eco (USB)	Fw: u1.8 A4.0.9 (AL55), u1.8 A4.1.9 (AL66), u1.8 A4.1.7 (FG)

**Images are up-to-date to the AlbericiCoinSelector programming software v. 2.1.9.1.**  
*Instruction is up-to-date to AL55 software release v. u1.8 A4.1.0.*

## NOTICE


Every possible care has been taken in drafting this manual. Nevertheless, it is not possible to guarantee at all times the absolute correspondence of the descriptions contained therein with the characteristics of the product.

Alberici S.p.A. declines any and all responsibility towards the user with reference to damages, losses, or claims by third parties, consequent to the use of the product or caused by incorrect interpretations of this manual.

Alberici S.p.A. reserves the right to modify, without notice and in any way, any part of this manual and its technical specifications, as part of the continuous pursuit of improvement of its products.

This manual illustrates in detail the procedure for reading the configurations of Alberici coin mechanisms; the procedures for modifying them according to the communication needs with the Host board of the device in which the coin mechanism is to be integrated; save the configuration files, to download them to other coin acceptors (“cloning”); the process of memorizing the denominations of coins or tokens to be accepted or rejected; read acceptance statistics; test the state and functioning of the coin mechanisms; program the coin separators; configure the display; manually program the coin mechanisms with the on-board dip-switches.

## 1. PREPARATORY OPERATIONS

- Before installing the software and the drivers for the programming interface, verify that your PC must have the Framework 3.5 from Microsoft. If not, download it from the web.
- If your PC does not contain the drivers for the programming interface (file “Driver Silicon Labs”), please download them: they are supplied with the CD- software provided with the programming Kit, or they are available in the Download Area of our web site [www.alberici.it](http://www.alberici.it), under 'Programming Kit' / 'Drivers universal kit'.
- Download the “Software - AL55/AL66/FG - Pulse/ccTalk vv. 2,3” package from the Download section of any of the following pages: [AL55 - Alberici S.p.A.](#) or [AL66 - Alberici S.p.A.](#), or [AL66 FG - Alberici S.p.A.](#) .
- Unzip the directory “Software - AL55/AL66/FG - Pulse/ccTalk vv. 2,3” on your PC, then  extract the application file “AlbericiCoinSelector.exe” and its initialization file “Config.ini”.

Any of the following two interface tools can be used:

- if updating on the machine, the grey USB Pendrive with its 4p/4p cable (cod. no. K-P2C-000003) or the yellow USB Pendrive (cod. no. K-P2C-000002) are the handiest solution; *or else*:
- if updating the validator on a working bench, the Universal programming kit (code no. K-P10-000009) will prove to be most convenient.



If the USB pendrive is used, go to A) UPDATE BY USB PENDRIVE.

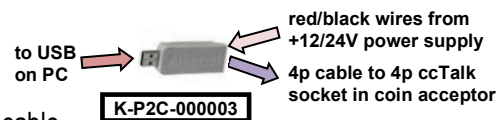
If the Universal kit is used, go to B) UPDATE BY UNIVERSAL PROGRAMMING KIT.

When programming FG USB coin acceptors, use the 4p cctalk socket. Do not use the on-board USB Mini-B socket!

### A) UPDATE BY USB PENDRIVE

A1- Insert the Pendrive on a USB port of the PC, and fit the cable 4p/4p to the 4p cctalk socket of the coin acceptor.

If the grey pen is used, power it +12/24V through the red/black cable.



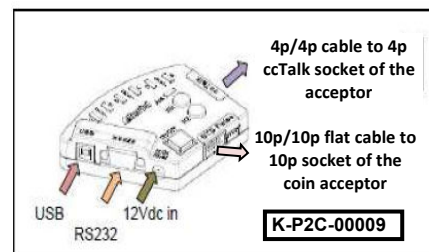
A2- Check the COM port to which the PC detects the Pendrive (check your PC: Control Panel / Device Manager); in case, the correct port number must be entered by the Settings menu.

### B) UPDATE BY UNIVERSAL PROGRAMMING KIT

B1- Connect the power supply box to the 24Vdc input on the slant side of the programmer box.



B2- Connect the USB cable between the PC and the USB-A slot on the slant side of the programmer box, *or else* connect the RS232 cable between the PC and the socket located on the slant side of the programmer box.



B3- Connect the 10p/10p cable between the 10p socket of the coin acceptor and the 10p connector on the Pulse side of the programmer box. Also connect the 4p/4p cable between the 4p socket on the cctalk side and the 4p cctalk socket of the coin acceptor.

B4- Make sure that the set COM Port is the one where the PC detects the programming interface (check Control Panel / Device Management on your PC); if necessary, change the setting to the correct Port no.

B5- Turn power on in the programming box (press green switch).

## 2. SETTING THE DIP SWITCH ROWS

The AL66 v. 2 and the FG acceptors incorporate two Dip-Switch Rows: SW1, by which programmed denominations can be disabled, and SW2, by which a variety of functions can be set. The AL55 v. 2 incorporates only SW1. Explanation of available functions is given here and in chapter 9. MANUAL PROGRAMMING.

### Row SW 1

The Dip Switches in this row can be used to disable the acceptance of the denominations programmed in the first 6 channel(s). The Dip-Switch 1 of row SW1 must be set to ON to accept the denomination programmed in channel 1; it must be set to OFF to reject it. Same as with the other Dip-Switches of Row SW1.

SW1 Dip-Switch Row	DS1	DS2	DS3	DS4	DS5	DS6
ON	Enable CH1	Enable CH2	Enable CH3	Enable CH4	Enable CH5	Enable CH6
OFF	Disable CH1	Disable CH2	Disable CH3	Disable CH4	Disable CH5	Disable CH6

NOTICE : if a token or different coin mint has been programmed in a channel from 7 to 16, with the same value as one of the denominations programmed in channels 1-6, such denomination parameters will not be overwritten and the relevant piece will still be accepted.

### Row SW 2

DS1 & DS2: allow to set the communication protocol

- SW1 = OFF, DS2 = OFF > PULSE
- SW1 = ON, DS2 = OFF > CCTALK
- SW1 = OFF, DS2 = ON > MDB (only on FG)
- SW1 = ON, DS2 = ON > SAS [not yet available]

DS3

- DS3 = OFF > Multi-pulse totalizer, OUTPUT as per programmed setting (ex. OUT 7)
- DS3 = ON > Multi-pulse totalizer on OUTPUT 3

DS4 & SW5: allows to multiply/divide the totalizer credit value

- DS4 = OFF, DS5 = OFF > multiplies by 1
- DS4 = OFF, DS5 = ON > multiplies by 2
- DS4 = ON, DS5 = OFF > multiplies by 4
- DS4 = ON, DS5 = ON > divides by 10

DS6

- DS6 = ON HIGH Discrimination
- DS6 = OFF STANDARD Discrimination

SW2 Dip-Switch Row	DS2 OFF	DS2 ON	DS4 OFF	DS4 ON	
DS1 OFF	PULSE	MDB			
DS1 ON	CCTALK	SAS			
DS3 OFF					Multi-pulse totalizer, OUTPUT as per programmed setting
DS3 ON					Multi-pulse totalizer on OUTPUT 3
DS5 OFF			x 1	x 4	
DS5 ON			x 2	: 10	
DS6 OFF					STANDARD Discrimination (L / SLC)
DS6 ON					HIGH Discrimination (H / SLC)


**Notice:** the functions allowed by the SW2 Row are not available in the AL55 coin acceptor, because the AL55 includes the SW1 row only. Switch between Pulse mode and ccTalk mode in AL55 can be made only by PC and programming tool/sw (see section 3.3).

**MANUAL PROGRAMMING OF COINS:** it is also possible to program new coins in the already programmed channels by using the on-board Dip-Switches. See section 9.1 'MANUAL' AUTO-PROGRAMMING INSTRUCTIONS.

### 3. USING THE PROGRAMMING SOFTWARE

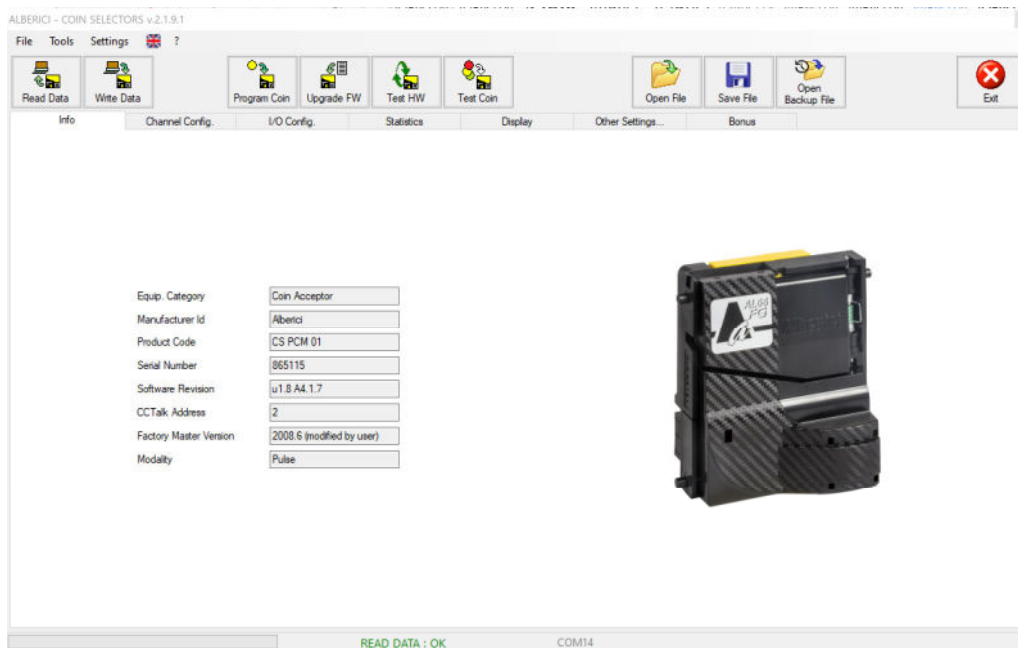
#### 3.1 READ THE EXISTING CONFIGURATION

Launch the application “AlbericiCoinSelector.exe”. The software will automatically identify the type of coin acceptor connected. It will also automatically read its configuration, *if there is at least* one programmed channel. The software will show the identification data of the acceptor under the ‘Info’ tag.

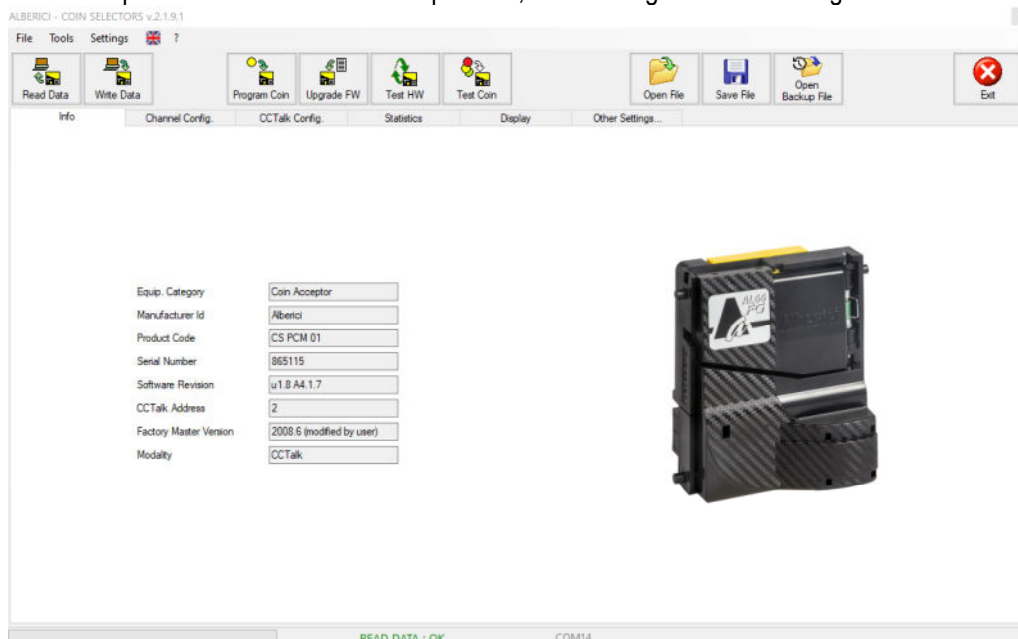
NOTICE: if all channels are empty, the warning “ERROR 9: Wrong configuration/settings” will be displayed; click on the OK button in the warning box, and select ‘Read Data’  to upload the acceptor configuration.

When the reading has been completed, the message ‘READ DATA: OK’ will appear at the foot of the window. The associated COM PORT will be shown as well.

The coin acceptor data appear at the screen left side. If the acceptor has been set to Pulse operation (see Chapter 2. USING THE DIP SWITCH ROWS), the ‘Modality’ box will show “Pulse”:



If instead the coin acceptor has been set to ccTalk operation, the third tag will show ‘Config. CCTalk’:

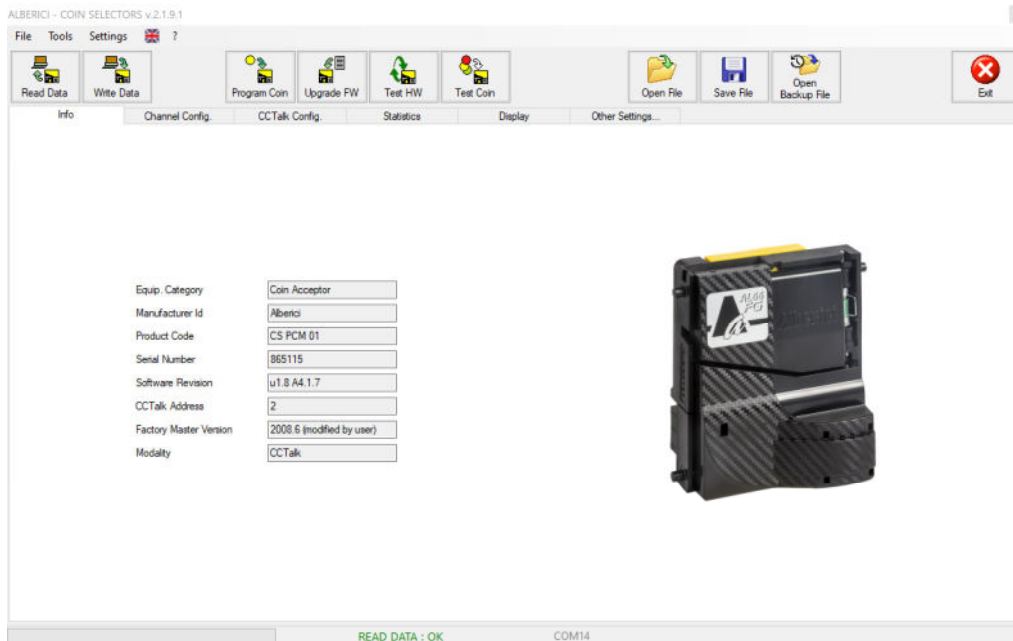


Click on the tag ‘Channel Config.’ to read the programmed channels. The coin acceptor can be preset to operate either by Pulse or by ccTalk standard (modifiable data). For AL66 and AL66 FG this presetting depends on the position of DS1 in SW2 row (DS1 OFF = Pulse, DS1 ON = ccTalk). As to AL55, switching between Pulse and ccTalk can be done only through the programming software (see section 3.5).

### 3.2 MODIFY THE DEFAULT CONFIGURATION when in ccTalk mode (standard modifiable protocol)

*N.B.: this ccTalk protocol cannot be used in Italy and other Countries in those devices or equipment for which fixed (non-modifiable) ccTalk is requested by law .*

The “Config. ccTalk” tag in the picture below shows that this coin acceptor has been preset for ccTalk operation:



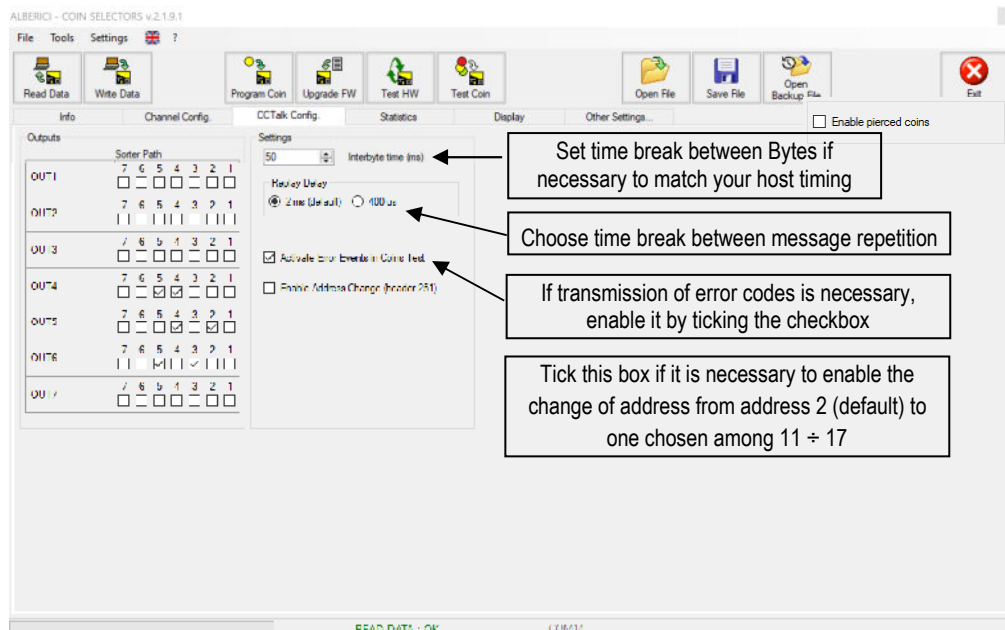
There are 6 programmed channels (A...F), all of them “Enabled”, containing the six Euro denomination coins from the higher to the lowest value (200 = 2 €, 100 = 1 €, ....., 5 = 0,05 €).

It is possible to reject coins by ticking the corresponding “Rejected” box, or else by moving the corresponding switch to OFF (DS1 = Channel1, DS2 = Channel 2, .... DS6 = Channel 6).

#### - FURTHER MODIFIABLE FUNCTIONS AVAILABLE in CCTALK MODE

To add up new coins or tokens, see section 3.5 PROGRAMMING THE COINS.

By clicking on the tag ‘Config. CCTalk’, the coin sorting configuration will appear as well, if it has been programmed:

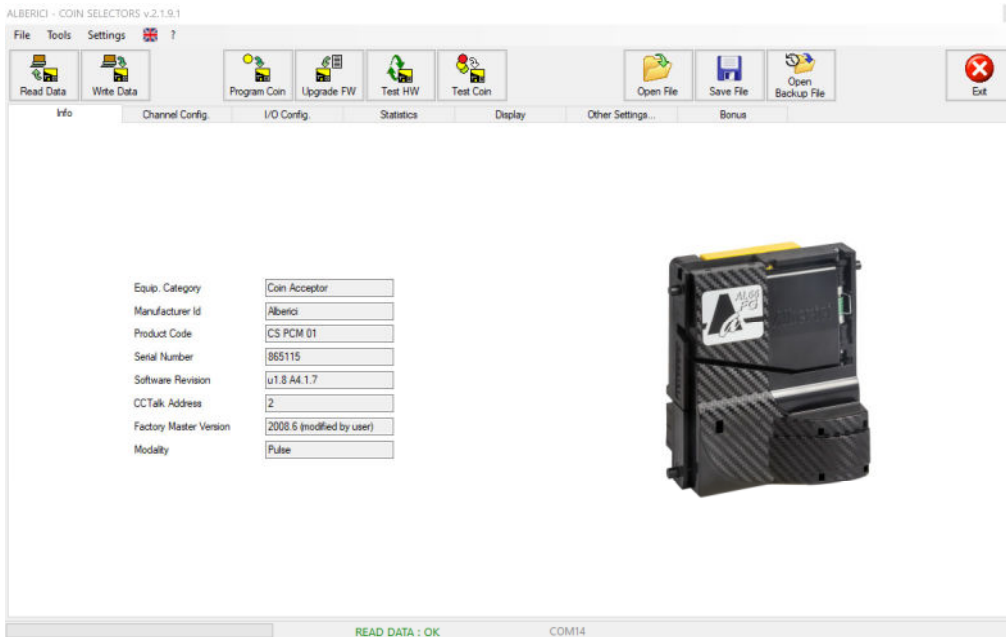


Please see Chapter 6 for instructions on how to set coin directions in the sorter.



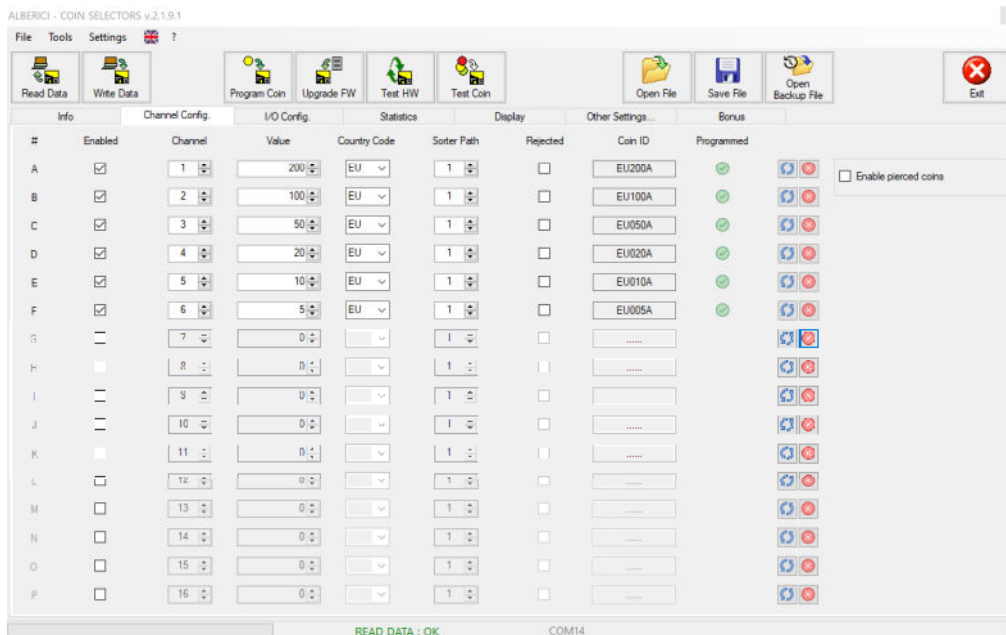
### 3.3 MODIFY THE DEFAULT CONFIGURATION when in Pulse mode

The bottom box in the picture below shows that this coin acceptor has been preset for Pulse operation, i.e. by means of combinations of pulses, which can be configured so as to be compatible with the master boards of the machines. In addition, the third label indicates “I/O Config.”.

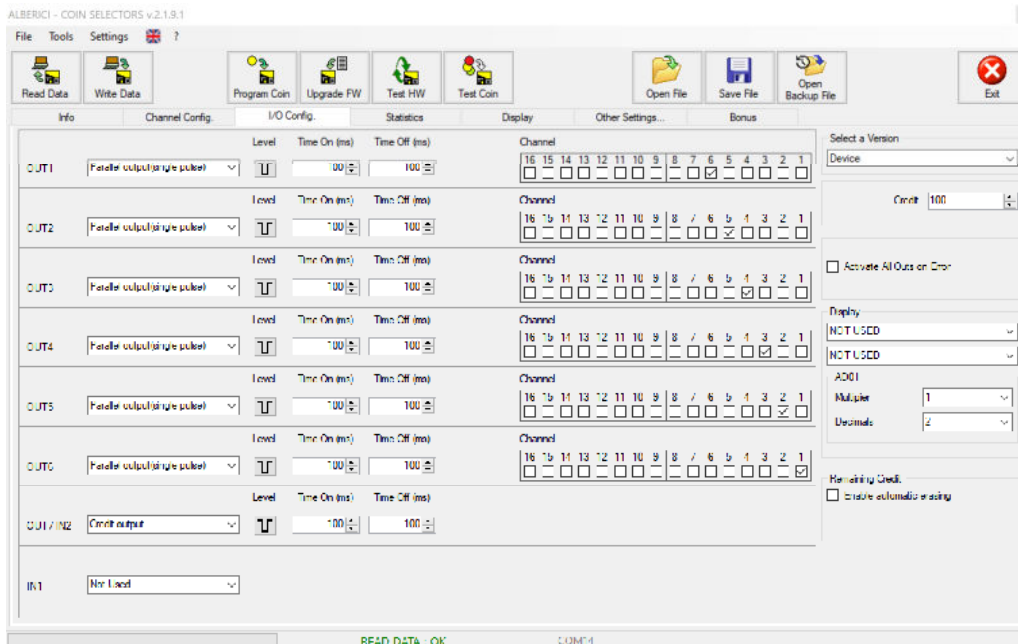


Click on the “Channel configuration” tag to check which coin denominations have been programmed in the acceptor. The settings are the typical ones: 2 € in Channel 1, 1 € in Channel 2, 0,50 € in Channel 3, 0,20 € in Channel 4, 0,10 € in Channel 5, 0,05 € in Channel 6. Sorter path is preset to path 1 by default (see section 6 for explanation of the settings). None of the denominations is set to be rejected; in case any of them must not be accepted, tick the corresponding box to disable acceptance of the coin(s). Keep in mind that the same result is obtained by moving to off the relevant dip-switches in row SW1 (as explained in page 2).

To add up new coins or tokens to the identified range, see section 3.5 PROGRAMMING THE COINS.



Click on the “I/O Config” tag to check what Input / Output configuration has been programmed in this coin acceptor.



The above picture shows that this coin acceptor has been preset as described below:

### Communication:




works through both Parallel (Outs 1-2-3-4-5-6 = pins 7-8-9-10-3-4) and Totalizer multi-pulse (Out 7 = pin 5). This means that when a coin is accepted, one pulse goes out from the relevant 1-2-3-4-5-6 output; at the same time, if the Credit value has been reached, one pulse goes out from output 7.

### Value of the credit pulse:

it is set to 50 €cents. Change it according to the price that you want to set: ex. 100 = 1 €, 200 = 2 €, but also 150 = 1,50 €, 340 = 3,40 €, and so on.

Please note: credit output must be set according to the line where the pcb is preset to read the pulse. For instance, when connecting the acceptor to the Servo-relay pcb, move the Credit Output signal from Out 7 to Out 4 = pin 10. As another example, some machines might be preset to receive the pulse from Out 3 (pin 9) or from Out 1 (pin 7).

### Active level (Low / High) and duration of the pulse signal:

- the signal pulse is set as Low Active (  ). The activation signal can be reversed to High, should the machine inputs use such type of triggering signal.
- its low (active) status lasts 100 msec, while its high (non active) status lasts 100 msec (   ).

Change these if necessary to synchronize the acceptor output signals with the machine reading pace.

### Inhibit coin acceptance:

to temporarily disable acceptance of any coins, a High signal (anything from 5Vdc to 24Vdc) must be provided to Input IN1 (pin 6), for as long as such inhibit status must be maintained. The inhibiting signal can be reversed to Low, should the machine use such type of inhibit output.

### Programming the pulse coin acceptor:

The acceptor can be programmed either by choosing any of the preset configurations available in the menu 'Select a version', if that suits the host needs, or else by programming each output according to the host needs.

### Available preset configurations:

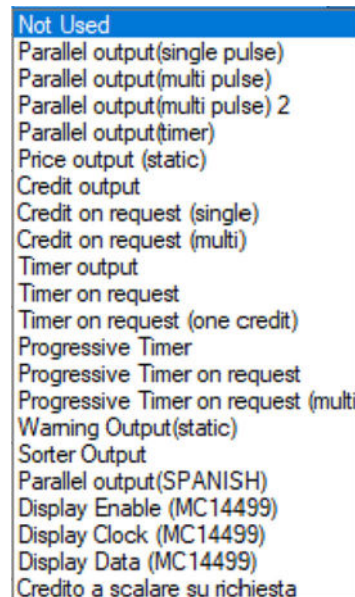
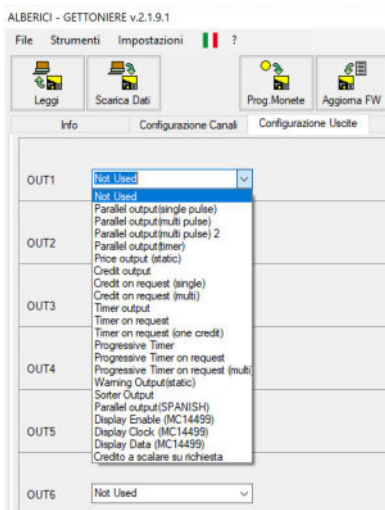
Click on the drop-down arrow in the 'Select a version' box. A list of preset communication basic set-ups will be shown:

- Device (will show in the box only in combination with fully customized configurations)
- Standard 20 [accepts 2€, 1€, 50€cent - totalizer pulse from OUT 7]
- Standard 20 [accepts 2€, 1€, 50€cent - totalizer pulse from OUT3]
- Parallel 1 [denominations top-down, ex. 2€=OUT1, ....., 0,05€=out 6]
- Parallel 2 [denominations down-top, ex. 0,05€=OUT1, ....., 2€=out 6]
- Sorter Variant [presets 5 standard sorting channels for use as totalizer or ccTalk]
- Timer (90) [accepts 2€, 1€, 50€cent - programmable length pulse from OUT 7]
- Timer on Request (60) [same as above but needs triggering pulse into IN1, when IN1 is preset for Credit Request]
- Display MC 14499

Choose the version that best fits your necessity. According to your choice, the 'Inputs/Outputs' section will show the relevant IN/OUT configuration. All OUTs and INs can be accepted as they are, or else any of them can be further adjusted to your plans. If no configuration suits your needs, choose Device and go on with your custom programming.

### Customized configuration:

It is possible to set the outputs (OUT N) and the inputs (IN N) according to the particular and specific needs of the machine software. Each Output and each Input can be set to any of the functions available in its drop-down menu, so creating more configurations than the ones readily available from the "Select a version" box, for example:



1. Parallel Output (single pulse)
2. Parallel Output (multi pulse) [one output pulse for any accepted coin]
3. Parallel Output (multi pulse) 2 [output pulses corresponding to the accepted coin]
4. Parallel Output (timer) [programmable pulse length]
5. Price Output (static)
6. Credit output [Standard 20 set-up: Totalizer output pulse from OUT 7]
7. Credit on request (single) [same as above but needs triggering pulse into IN1; preset IN1 for Credit Request]
8. Credit on request (multi) [same as above, plus it allows as many activations if credit is available]
9. Timer output [same as Totalizer, but longer programmable pulse duration from 1 second up]
10. Timer on request [same as above but needs triggering pulse into IN1; preset IN1 for Credit Request]
11. Progressive Timer [same as Timer output, but extends duration proportionally to money added during activation]
12. Progressive Timer on request [same as above but needs triggering pulse into IN1; preset IN1 for Credit Request]
13. Progressive Timer on request (multi) [same as above, plus it allows further activations if credit is available]
14. Warning Output (static)
15. Sorter output [presets basic sorting paths for Totalizer or ccTalk modes]
16. Display Enable (MC 14499)
17. Display Clock (MC 14499)
18. Display Data (MC 14499)
19. Step-down credit on request [if programmed as 7 or 12, it steps down available credit at each new activation]

Main options for Inputs are:

- A. Inhibit (all) [prevents acceptance of all coins]
- B. Credit request [enables coin acceptor to send out credit signal if enough money has been inserted]

By combining the above in the different I/O lines, it is possible to create various operating combinations. The most useful ones are explained in the following sections.

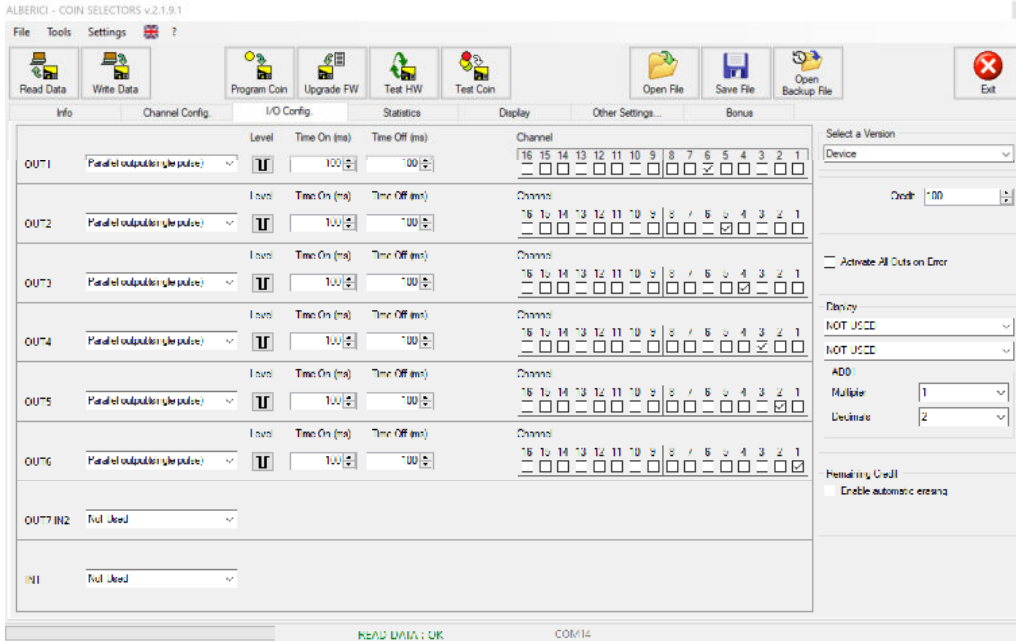
### 3.3A Pulse “Parallel” communication

#### i. Standard Parallel communication (1 denomination = 1 output = 1 pulse)

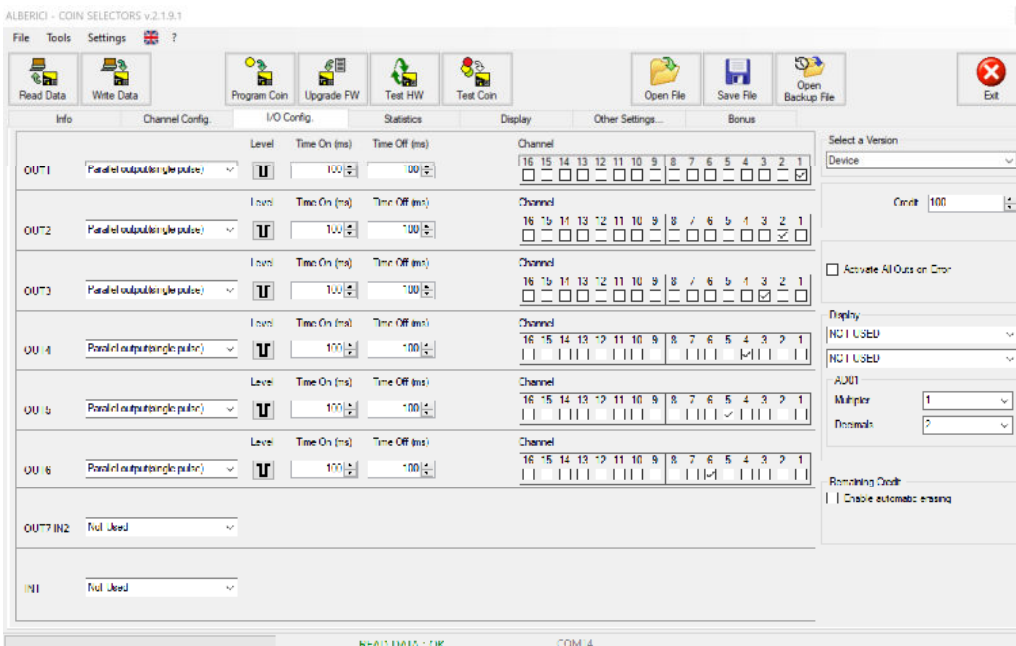
When the coin acceptor is programmed as parallel validator, it only provides, to the machine pcb, signals regarding which coin denomination has been accepted: it is then up to the machine pcb to calculate when the amount necessary to start the service has been reached.

The coin acceptor can validate the acceptance of any coin among up to six different denominations, by sending one pulse out of one preset relevant output. The default length of the active pulse is 100 msec, and the length of the idle time is likewise 100 msec.; such pulse lengths can be increased according to the needs.

Assuming the arrangement of the Channels as top-down denominations (2€=CH1, 1€=CH2,....., 10c=CH5, 5c= CH6), the configuration can be set either as down-to-top Outputs(es. 5 €c = OUT 1, ..... 1 € = OUT 5, 2 € = OUT 6) :



or else as top-to-down Outputs (2 € = OUT 1, 1 € = OUT 2, ....., 5 €c = OUT 6):



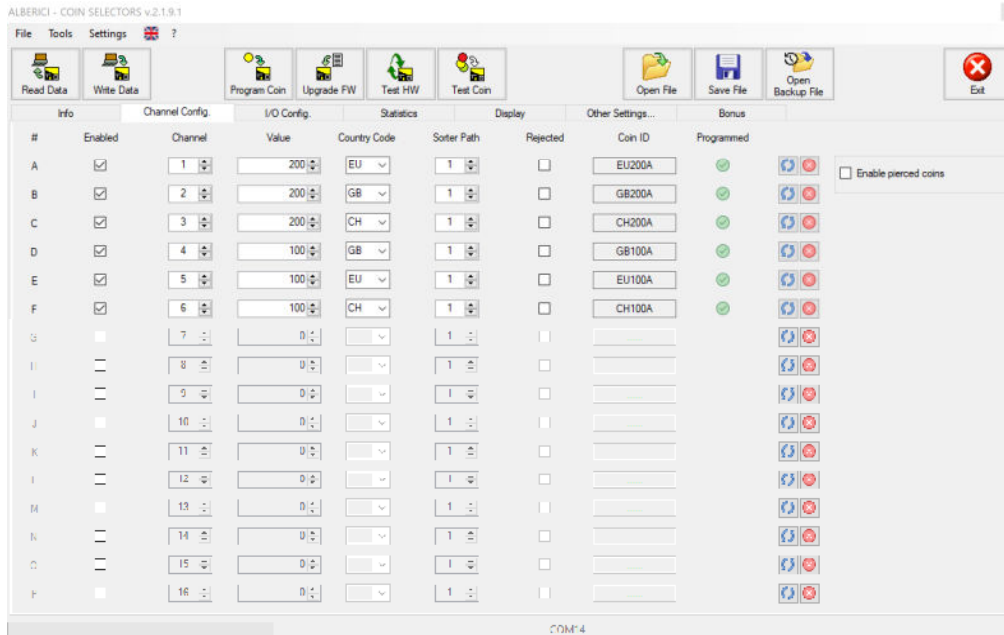
It is as well possible to subvert the linear sequence of the OUTs, for ex.: OUT 1 = 50c, OUT 2 = 10c, OUT 3 = € 2, ...).

For each OUT line, the ON/OFF time lengths of the pulse signals can be modified, according to the detection features of the machine pcb.

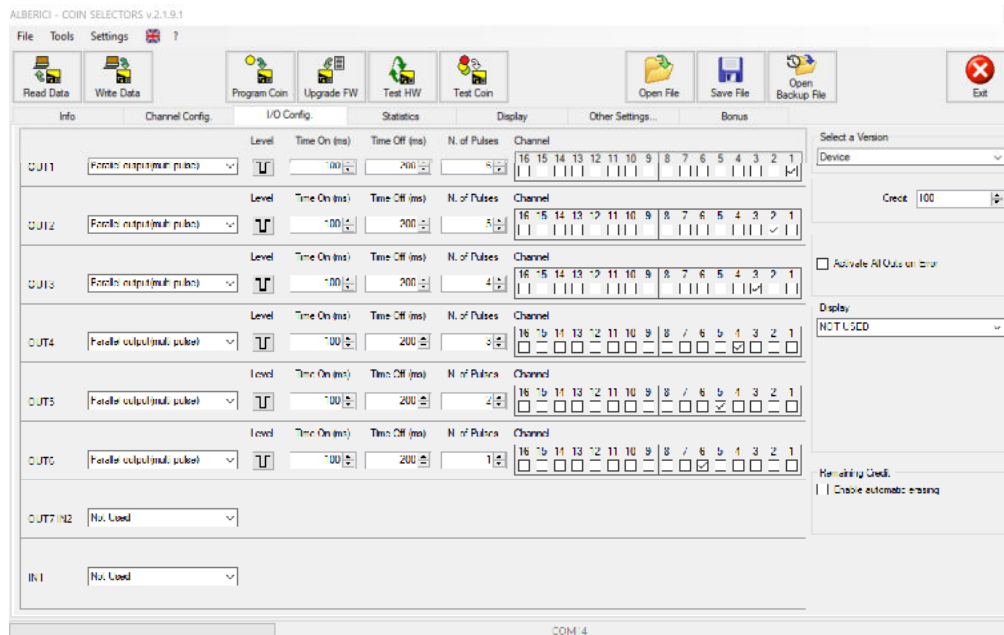
**ii. Multi-pulse Parallel communication (1 denomination = 1 output = N pulses)**

Some machines may recognize the accepted coins according to the number of pulses signalled by one Output line . This can occur especially when denominations of different currencies are accepted.

For instance, a certain machine may accept Euro coins, GBP coins, and Swiss Francs coins. It may then require that the acceptance of the 2€ coin is signalled by 6 pulses out of Out 1, that the acceptance of the 2GBP coin is signalled by 5 pulses through Out 2, that the acceptance of the 20CHF coin is signalled by 4 pulses through Out 3, that the acceptance of the 1 € coin is signalled by 3 pulses through Out 4, that the acceptance of the 1GBP coin is signalled by 2 pulses through Out 6, and that the acceptance of the 5CHF coin is signalled by 1 pulse through Out 6.



In such a case, the option “Parallel Output (multi pulse)” can be used:

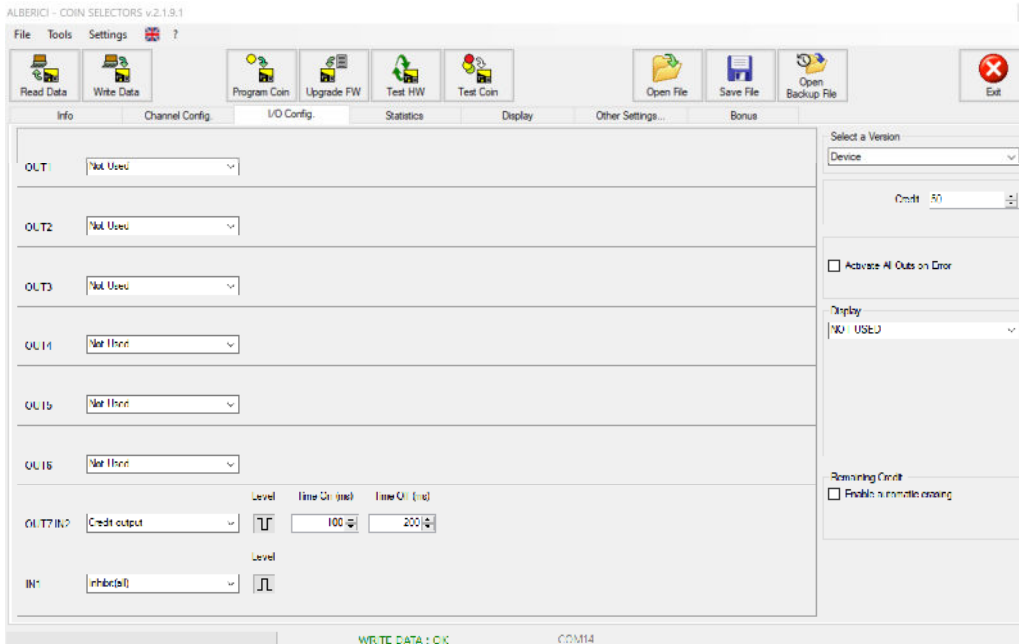


Any number of pulses can be set, depending on how the machine motherboard has been programmed, i.e. the 2 GBP could be signalled from Out 2 but with 3 pulses, the 1 CHF might be signalled still from Out 6 but with 5 pulses.

### 3.3B Totalizer communication (multi-pulse, credit output)

When the coin acceptor is programmed as multi-pulse totalizer, it provides to the machine pcb one (1) single pulse signal when the amount (credit value) necessary to start the service has been accepted. If the amount entered is double / triple /... the credit value, the coinmech provides two/three/...n (2 or 3 or n) pulse signals. If the amount accepted sums up to an amount in between two multiples, the excess amount shall be stored and summed up to the next amount received.

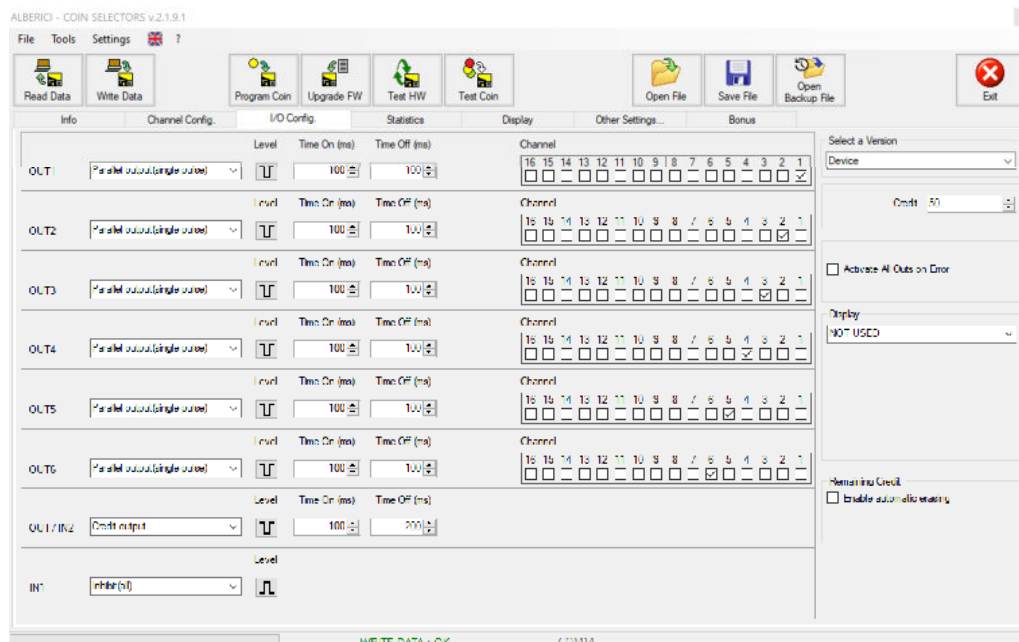
OUT7 (pin5) is the default output. Any other OUT (ex. OUT3, or OUT4) can be set as the signal output, according to the line on which the machine pcb detects the starting signal. The ON/OFF time lengths of the pulse signal can be modified.



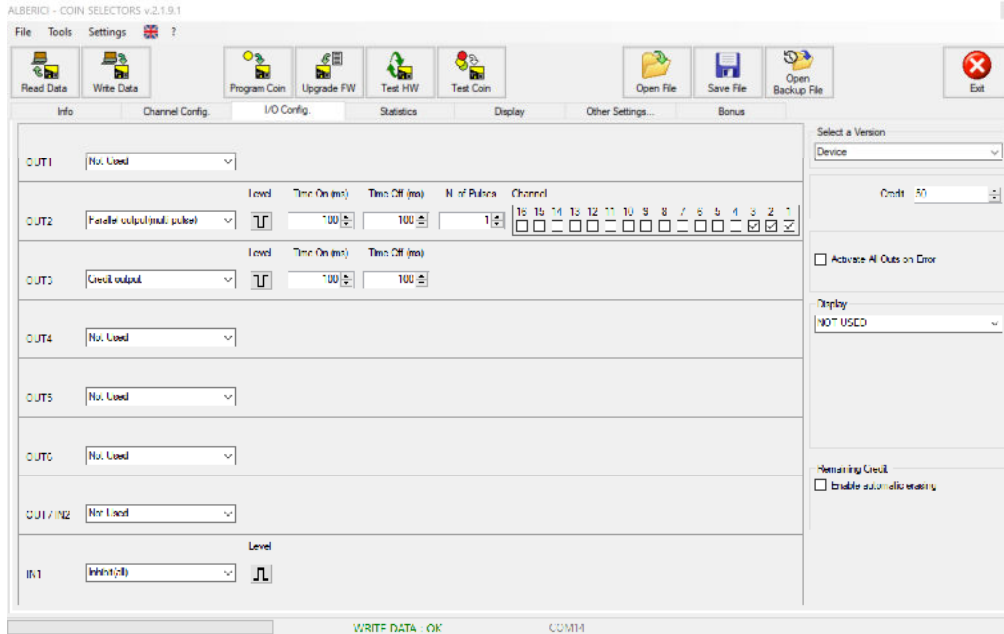
It is essential to set the amount (credit value) that the machine needs to start the service: such amount must be entered in the "Credit" box (top right corner), using the same (or proportional) Values set in the Channel Config. Tag. For example:

Service price	Set credit value as
2 €	200
50 cents	50
1,70	170
13	1300

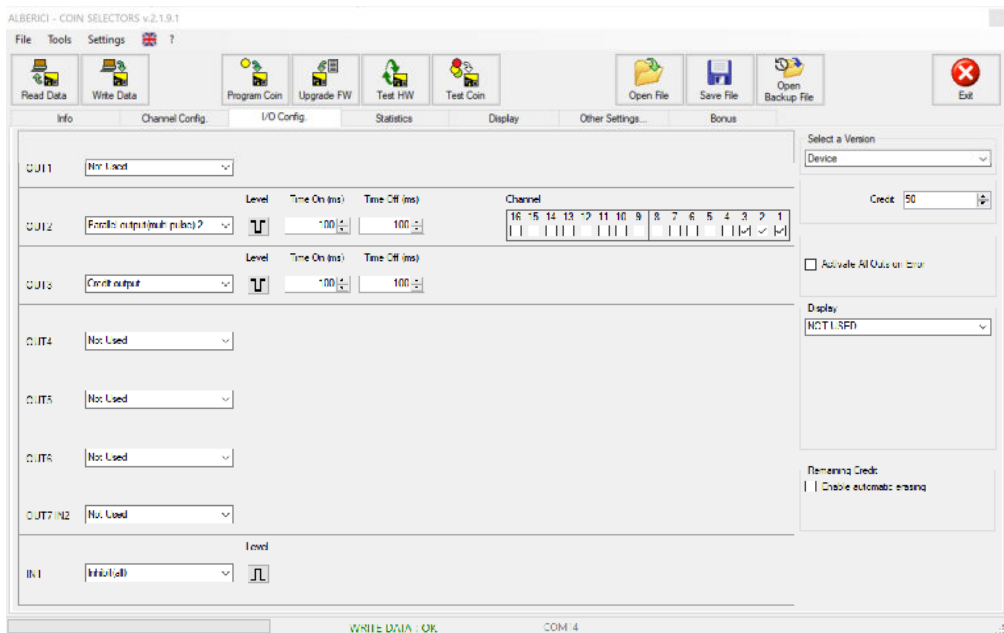
**Coin count:** some machines might need to monitor both the Totalizer Output, as well as the series of parallel OUTs; for instance, in order to keep trace of how many pieces of each coin denomination will be found in the cashbox):



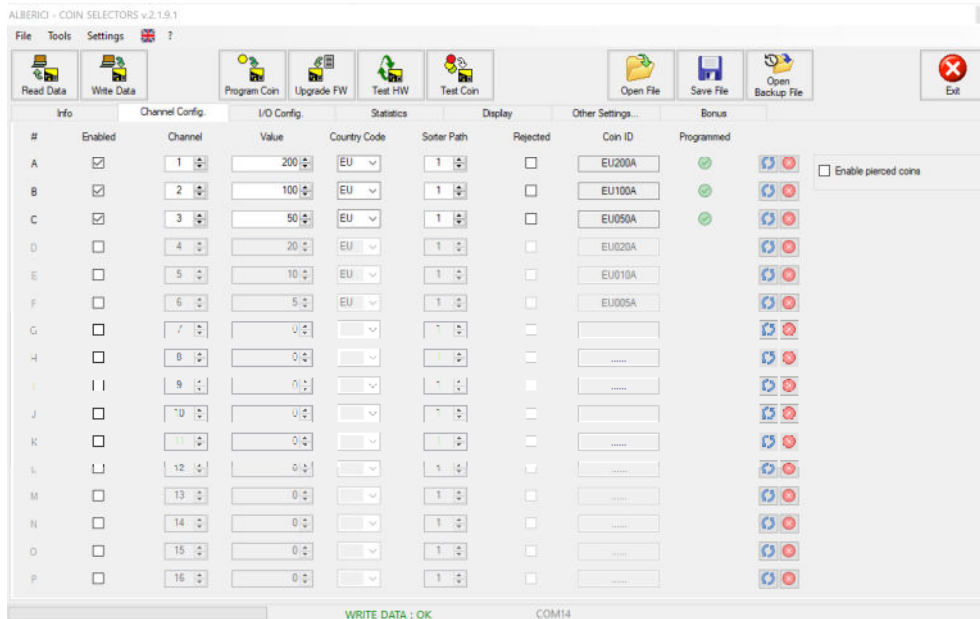
A different way of counting how many single coins are being cashed, irrespective of their relevant value, is to use one of the OUTs to transmit such information. Generally, OUT 2 is used to this purpose (credit signal on OUT 3 or on OUT 7 or on OUT 1). The OUT 2 must be set as “Parallel Output (multipulse)”, the N. of Pulses is better set to 1/accepted piece (unless the host needs more pulses). When inserting a 50c coin, OUT 2 emits 1 pulse and OUT 3 emits 1 pulse; introducing 1 €, OUT 2 emits 1 pulse and OUT 3 emits 2 pulses; by introducing 2 €, OUT 2 emits 1 pulse and OUT 3 emits 4 pulses. The Channel boxes corresponding to the denominations must always be ticked:



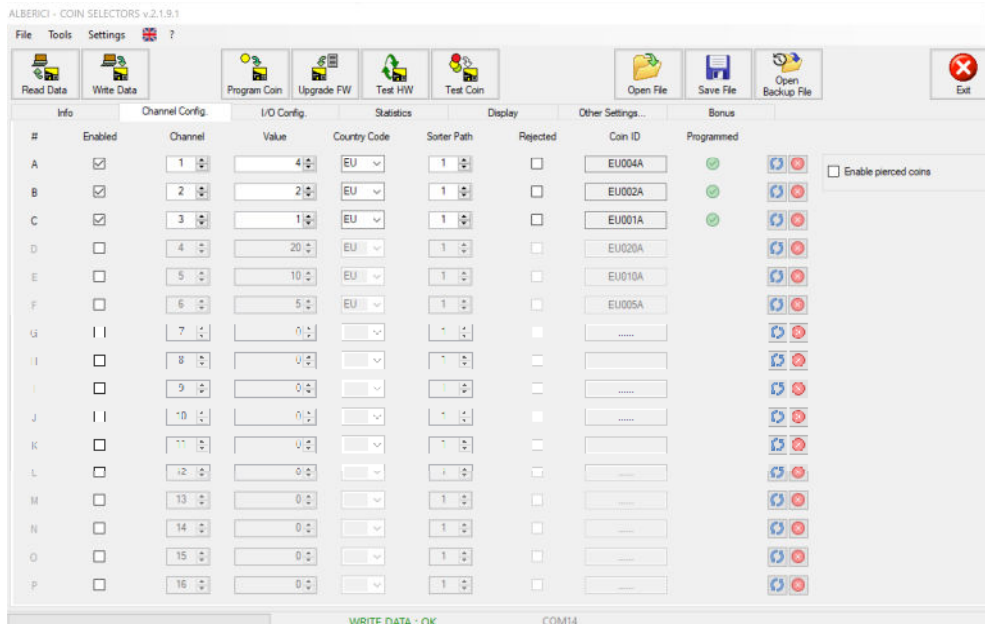
Another way of metering the validated coins on the base of the smaller accepted denomination, is to use one of the OUTs (i.e. OUT 2) to transmit such information - again, credit signal on OUT 3 or on OUT 7 or on OUT 1. In this case, OUT 2 must be set as “Parallel Output (multipulse) 2”, and the value of the smaller accepted denomination must be set to 1. Do not forget that the Credit value too must be set accordingly: i.e., if the smaller monitored denomination is 50c (value = 1), and the price is 1€, the Credit value must be = 2; or, supposing that the smaller monitored denomination is 10c (value = 1), and the price is 1€, the Credit value must be = 10. Notice: if the price of the service coincides with the value of the smaller accepted denomination, the credit output is mirrored on OUT 2; OUT 2 can then be used to record how many services have been provided. The Channel boxes corresponding to the accepted denominations must be ticked:



Notice that the default settings for the denomination values are by units, that is 2€ = 200, 1€ = 100, ..., 5c = 5. Supposing that the accepted denominations are 2€, 1€, and 50c, the default setting of the values would be:



As a consequence, to be able to use the “Parallel Output (multipulse) 2” counting option, the 2€ denomination must be set to value 4, 1€ must be set to value 2, and 50c must be set to value 1:

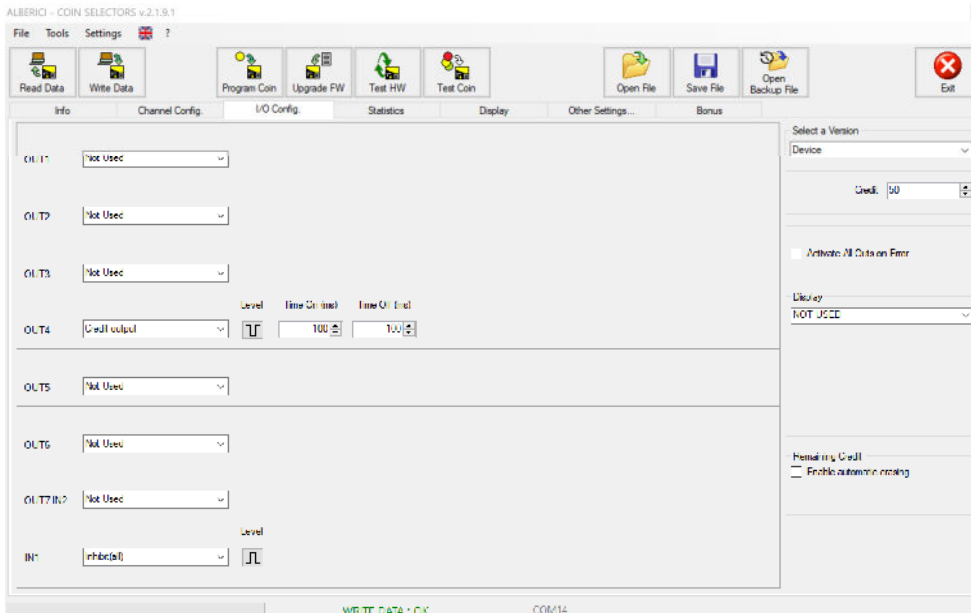


**Servo-relay pcb:** the Totalizer coin acceptor can be used to start operation of an external power line. To this purpose, the signal from the coin acceptor must drive an external relay through an interface converting the TTL signal into the power voltage necessary to activate the relay coil.

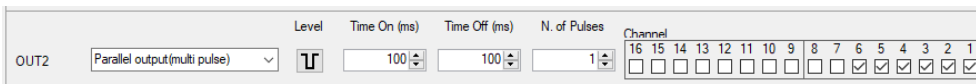
The Alberici Servo-relay pcb, apart from providing power to the Alberici coinmech, receives the signal from the coinmech and activates the on-board relay when the money introduced reaches the required price.

The Servo-relay pcb requires that the output signal is received through OUT4 (corresponding to pin10 in the 10p sockets of the coin acceptor and of the pcb). Therefore the programmed configuration must be as follows:





Also for this configuration it is possible to add the counter output (ex. OUT 2), to monitor the number of cashed coins:

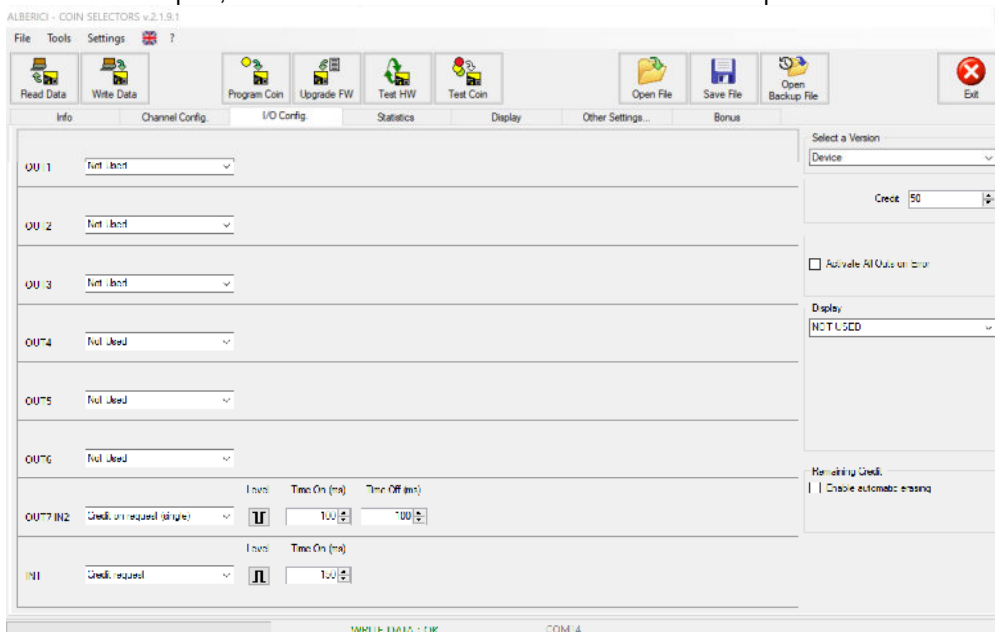


To meter through one single Output the accepted coins according to the smaller denomination, see page 10.

### 3.3C Totalizer on request (single/multi)

When the coin acceptor is programmed as totalizer on request, it will release the credit pulse to the machine pcb only upon receiving a High Level signal (+5...+24Vdc) on IN1 (pin6). Such signal can be generated by pressing a “start” pushbutton. Please set output line to “Credit On Request” (Single or Multi), and input line to “Credit Request”.

**Single mode:** once the credit amount necessary to start the service has been accepted, the coin acceptor holds back the credit pulse, and only upon receiving on IN1 (pin6) a high level signal it sends it to the machine pcb. If the amount entered is N times the credit value, the coinmech sends N signals. If the amount accepted sums up to a value in between two multiples, the excess amount shall be stored and summed up to the next amount received.

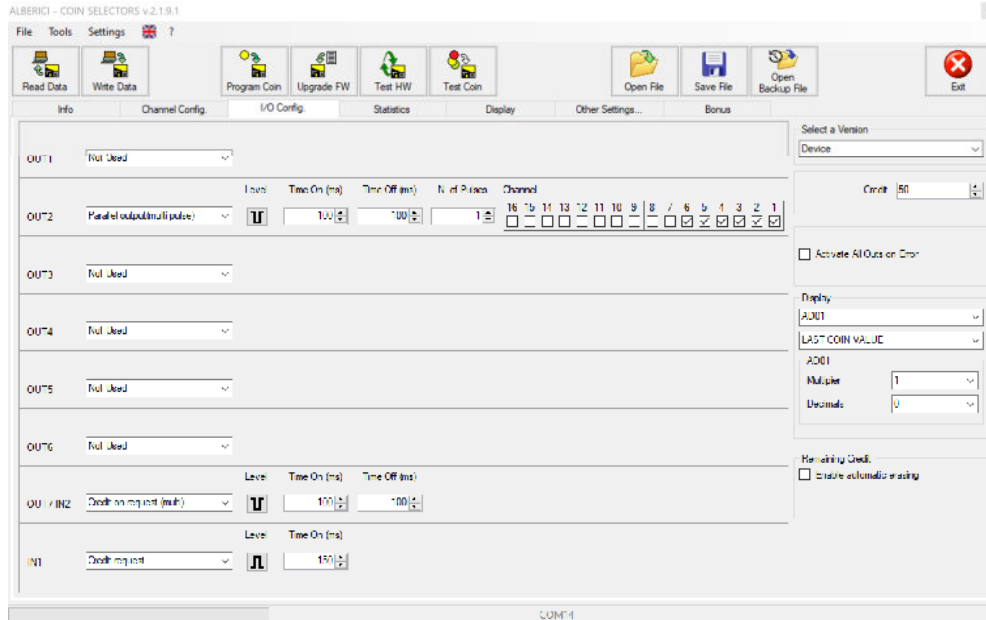


**Multi mode:** the coin acceptor holds two/three/...n (2 / 3 /n) credit pulse(s) back, depending on the amount entered, and sends one (1) pulse to the machine pcb upon receiving on IN1 (pin6) a high level signal. If a second high level signal is received into IN1, a second pulse is released; ...; if an N<sup>th</sup> high level signal is received into IN1,

an N<sup>th</sup> pulse is released. If the amount accepted sums up to an amount in between two multiples, the excess amount shall be withheld and summed up to the next amount received.

OUT7 (pin5) is the default Credit on request Output. Any other OUT (ex. OUT 1, OUT3, OUT4, ...) can be set as the signal output, according to the line where the machine pcb detects the starting signal. The signal ON/OFF time can be modified.

IN1 (pin6) is the default input for the "Credit On Request" option. In case IN1 is necessary for the inhibit signal, IN2/OUT7 can be used instead, and the Credit output can be moved to any other OUT (as an ex.: OUT3).



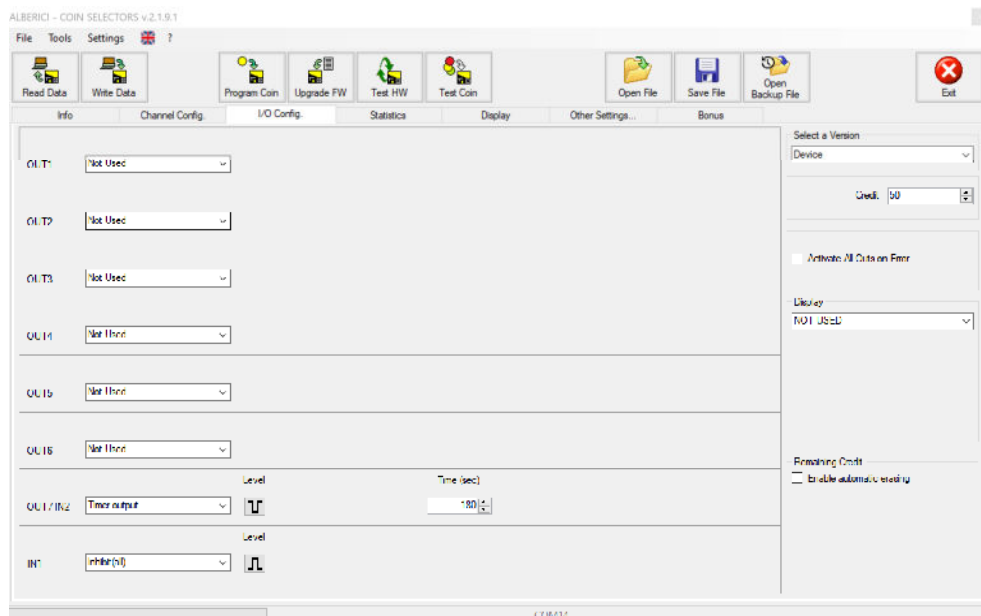
As an example, the counter output (OUT 2) in the above configuration is set to detect the quantity of coins cashed. To count how many coins get cashed, but based on the smallest accepted denomination, see the "Parallel Output (multi pulse 2)" option at page 10.

### 3.3D Timer (simple/progressive)

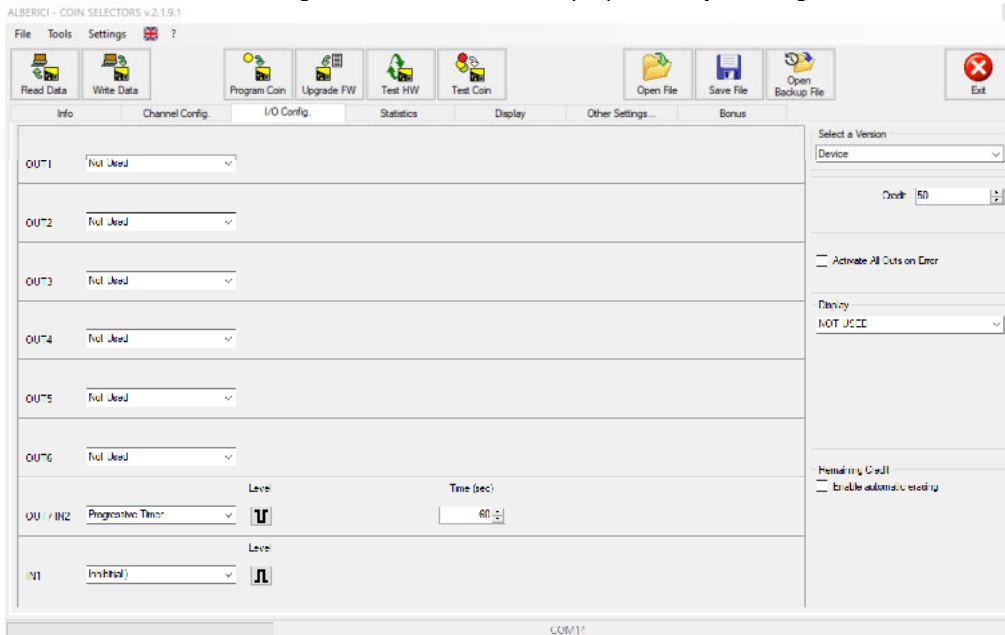
When the coin acceptor is programmed as Timer, it provides to the machine pcb one (1) pulse signal when the amount (credit value) necessary to start the service has been accepted.

The duration of such signal can be adjusted from 1 second up to approx. 8 hours.

- **Simple Timer:** if output has been set to simple **Timer output**, money eventually added during activation is rejected.



- **Progressive Timer:** if the output has been set to **Progressive Timer**, the coin acceptor processes any money eventually amounts that are added during activation, and extends proportionally the length of the activation itself:

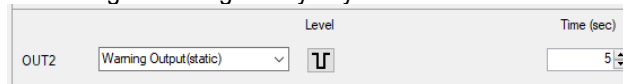


As usual, OUT7 (pin5) is the default Timer output. Any other OUT (OUT3, or OUT4) can be set as the signal output, according to the line on which the machine pcb detects the activation signal.

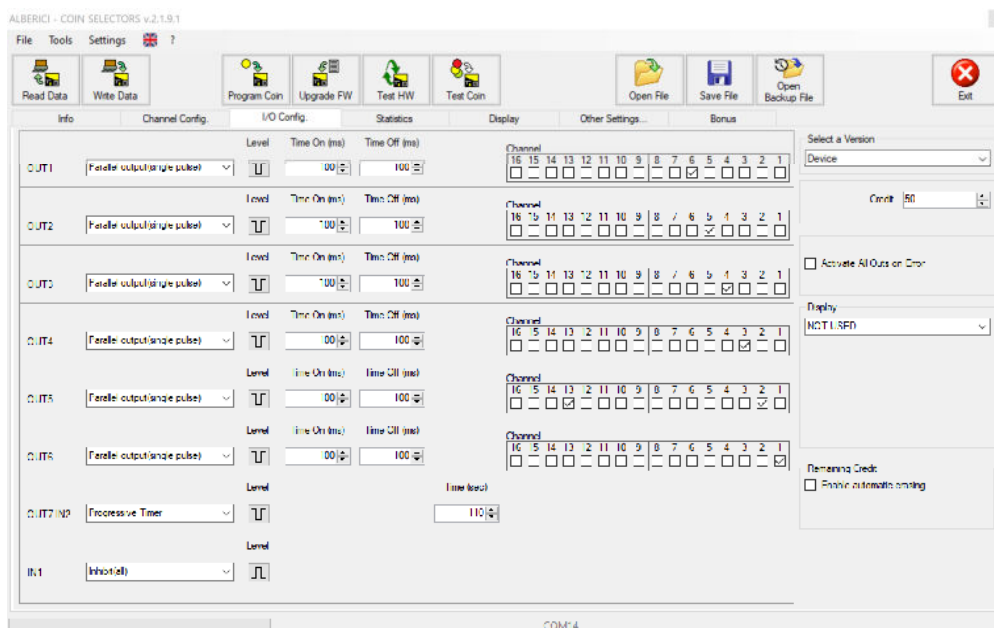
It is essential to set the amount (credit value) that the machine needs to start the service: such amount must be entered in the "Credit" box (top right corner), using the same Values set in the Channel Config. Tag:

Service price	Set credit value as
2 €	200
50 cents	50
1,70	170
13	1300

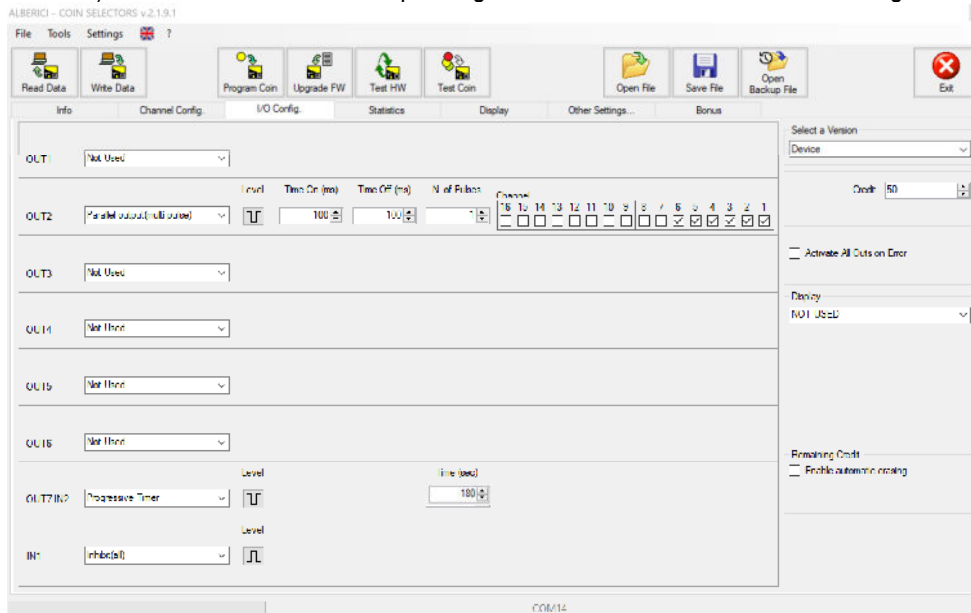
**Warning signal:** it is possible to set a signal to be given by any wished OUT when the time approaches to end.



**Coin count:** some machines might need to monitor both the Timer Output, as well as the series of parallel OUTs; for instance, in order to keep trace of how many pieces of each coin denomination will be found in the cashbox):



A different way of counting how many single coins are being cashed, irrespective of their relevant value, is to use one of the OUTs to transmit such information. Generally, OUT 2 is used to this purpose (credit signal on OUT 3 or on OUT 7 or on OUT 1). The Channel boxes corresponding to the denominations under monitoring must be ticked:

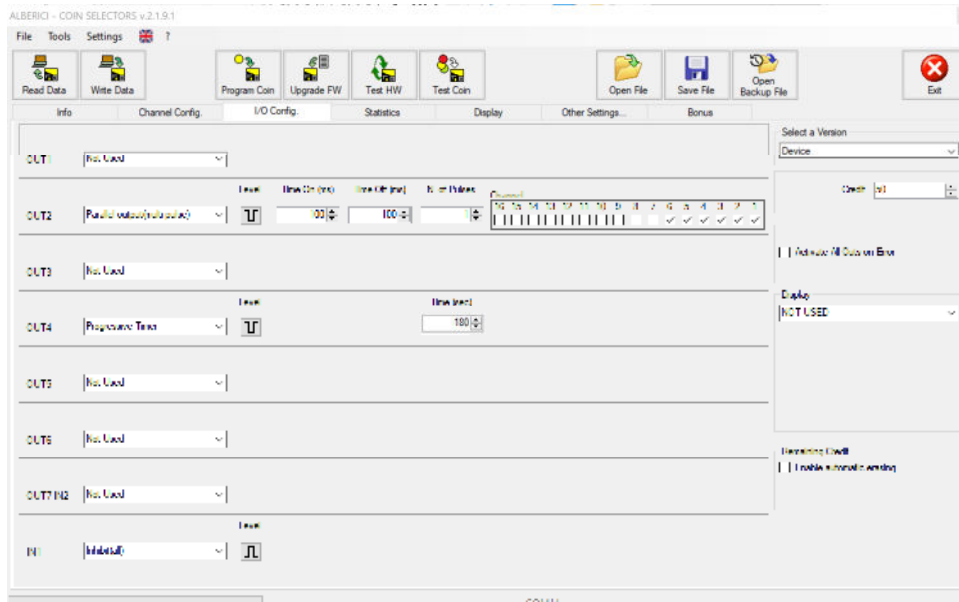


To meter through one single Output the validated coins according to the smaller accepted denomination, see page 10.

**Servo-relay pcb:** the coin acceptor, when set as Timer, can be used to activate a power line for a programmable time. To this purpose, the signal from the coin acceptor must drive an external relay through an interface that converts the TTL signal into the coil activation power voltage.

The Alberici Servo-relay pcb, apart from providing power to the Alberici coinmech, receives the signal from the coinmech and activates the on-board relay when the money introduced reaches the required price.

The Servo-relay pcb requires that the Timer output signal is received through OUT4 (corresponding to pin10 in the 10p sockets of the coin acceptor and of the pcb). Therefore the programmed configuration must be as follows:



The picture shows also that for this configuration as well it is possible to add a counter output (ex. OUT 2), to monitor the amount of cashed-in coins.

### 3.3E Timer on request

When the coin acceptor is programmed as Timer on request, it provides the activation pulse to the machine pcb only upon receiving a High Level signal (+5...+24Vdc) on IN1 (pin6). Such signal can be generated by pressing a "start" button. Please set output line to "Timer On Request", and input line to "Credit Request".

The duration of the pulse signal can be adjusted up to approx. 8 hours.

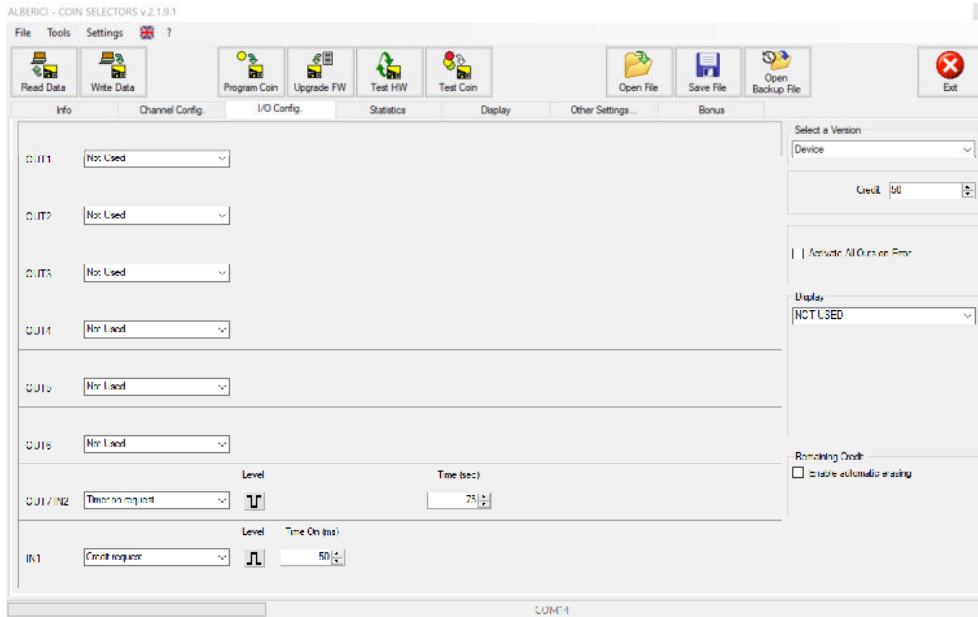
As usual, OUT7 (pin5) is the default Timer output. Any other OUT (OUT3, or OUT4) can be set as the signal output, according to the line on which the machine pcb detects the activation signal.

It is essential to set the amount (credit value) that the machine needs to start the service: such amount must be entered in the "Credit" box (top right corner), using the same Values set in the Channel Config. Tag:

Service price	Set credit value as
2 €	200
50 cents	50
1,70	170
13	1300

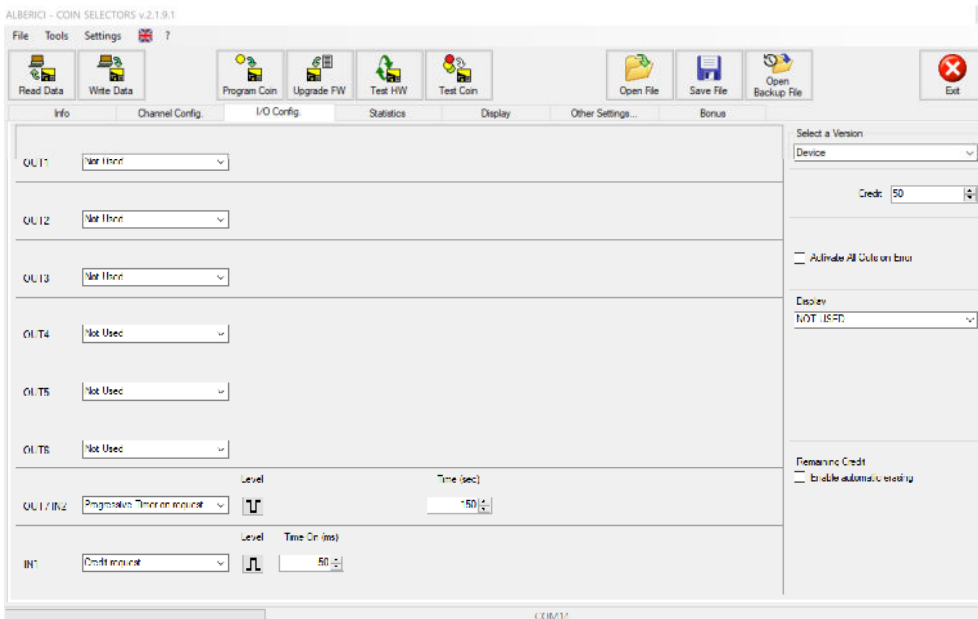
**- Timer on request (one credit):**

by this option, the coinmech rejects the money that has been eventually added during the signal activation time.



**- Progressive Timer on request (simple):**

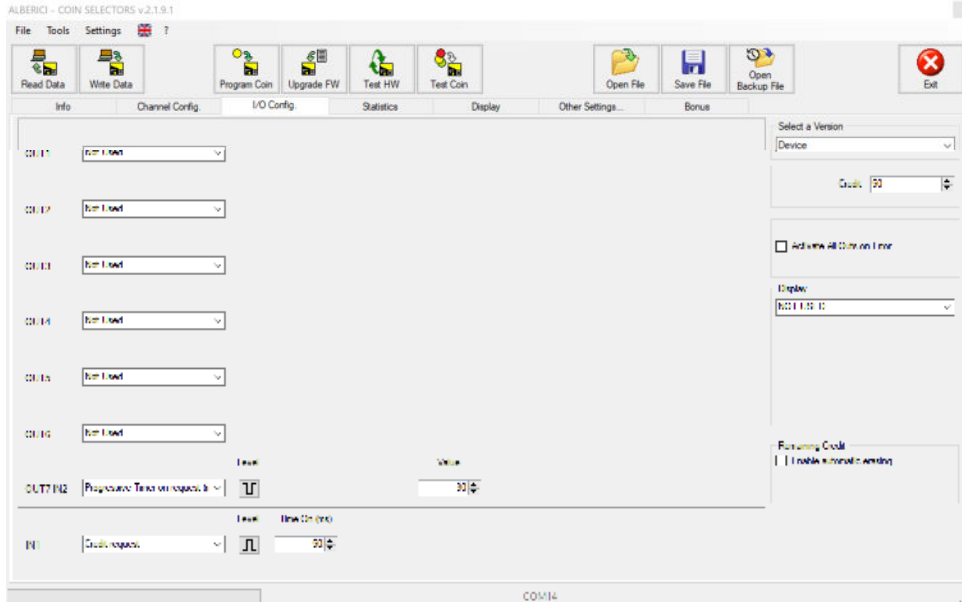
by this option, the coin acceptor processes any money amounts that are eventually added during activation time, and extends proportionally the length of the activation itself:



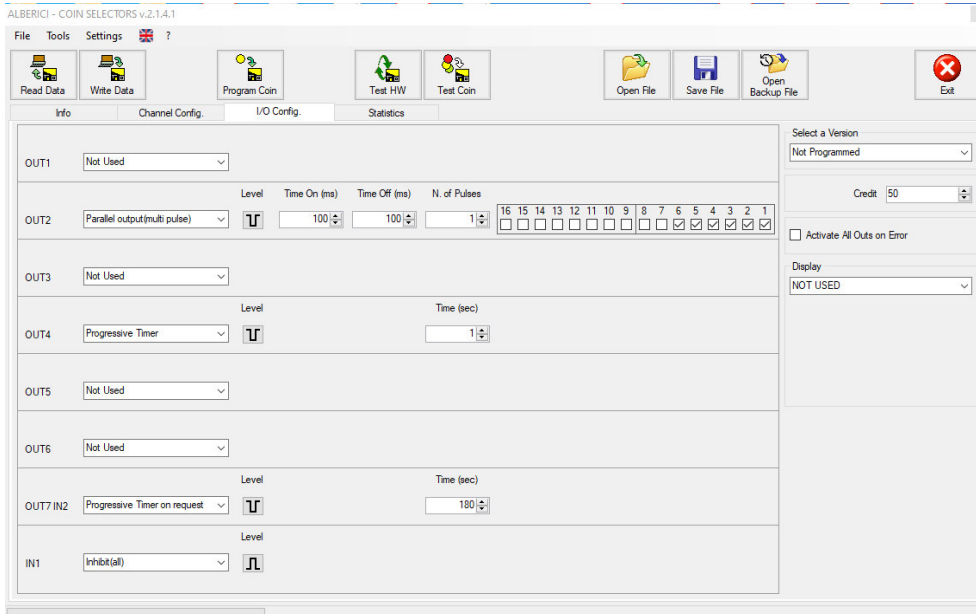
**- Progressive Timer on request (multi):**

by this option, the coin acceptor processes any money amounts that are eventually added during activation, and holds two/three/...N (2 / 3 / ...N) credit pulse(s) back, depending on the amount entered; it sends one (1) pulse to the machine pcb upon receiving on IN1 (pin6) a first high level signal. If a second high level signal is received into IN1 after the first activation has stopped, a second pulse is released; ...; if an N<sup>th</sup> high level signal is received into IN1, an N<sup>th</sup> pulse is released after the (x-1)<sup>th</sup> activation has stopped.

If the amount accepted sums up to an amount in between two multiples, the excess amount shall be stored and summed up to the next amount received.



**Coin count:** some machines might need to monitor both the Timer Output, as well as the series of parallel OUTs; for instance, a way to count how many single coins are being cashed, irrespective of their relevant value, is to use one of the OUTs to transmit such information. Generally, OUT 2 is used to this purpose (credit signal on OUT 3 or on OUT 7 or on OUT 1). The Channel boxes corresponding to the denominations under monitoring must be ticked:

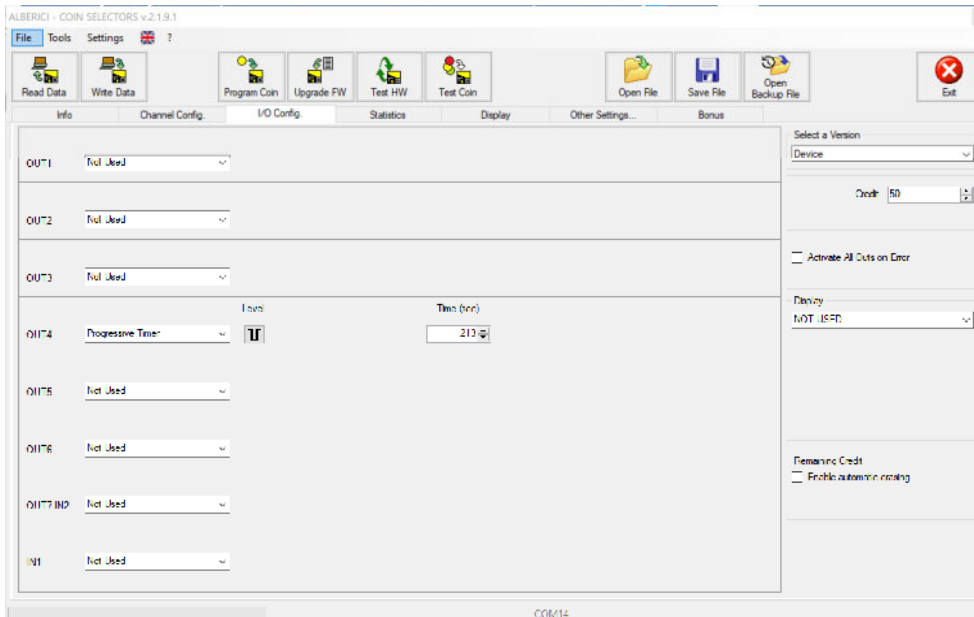


To meter through one single Output the validated coins according to the smaller accepted denomination, see page 10.

**Servo-relay pcb:** the coin acceptor, when set as Timer, can be used to activate a power line for a programmable time. To this purpose, the signal from the coin acceptor must drive an external relay through an interface that converts the TTL signal into the coil activation power voltage.

The Alberici Servo-relay pcb, apart from providing power to the Alberici coinmech, receives the signal from the coinmech and activates the on-board relay when the money introduced reaches the required price.

The Servo-relay pcb requires that the Timer output signal is received through OUT4 (corresponding to pin10 in the 10p sockets of the coin acceptor and of the pcb). Therefore the programmed configuration must be as follows:



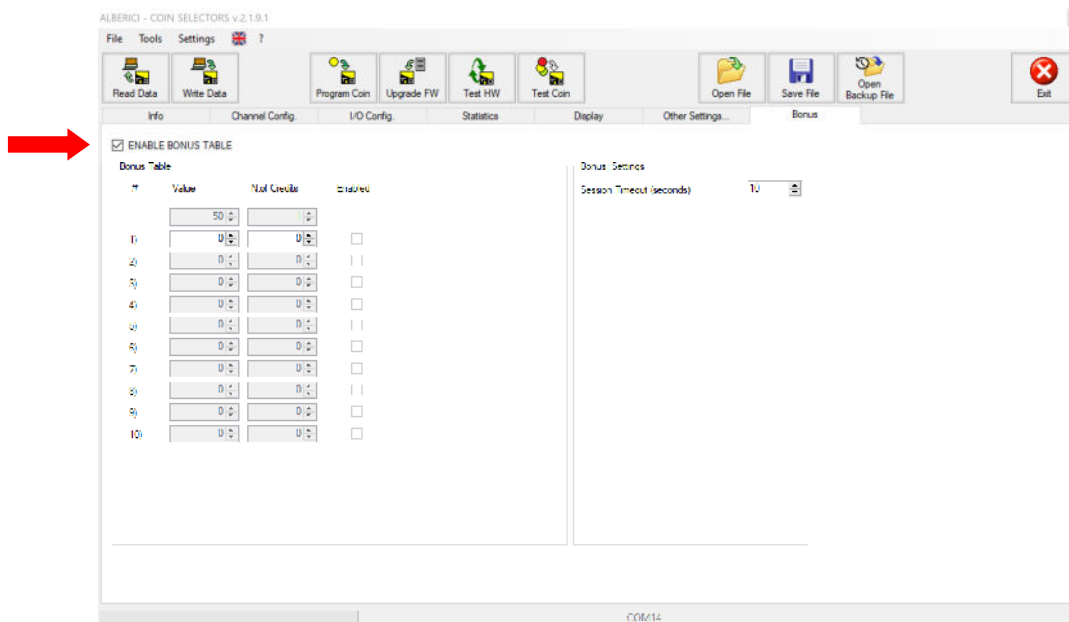
Also for this configuration it is possible to add the counter output (ex. OUT 2), to monitor the number of cashed-in coins.

### 3.4 PROGRAMMING THE BONUS (only available on ARM 4 Totalizer / Timer coin acceptors, starting from below listed versions, and only accessible by using the Alberici Coin Selector v. 2.1.9.1 up)

The software v. 2.1.9.1 and the following versions allow to set Bonus levels, provided the coin acceptor is equipped with ARM microprocessor; the label of such coin acceptors show "A4" in the fw version release:

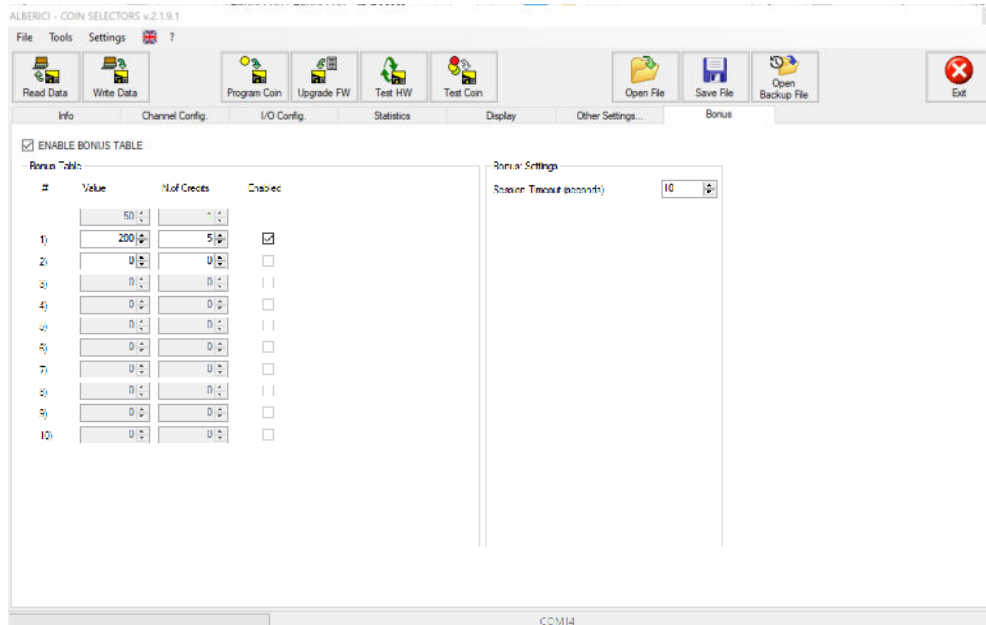
- AL55 K/I/S, fw version: u1.8 A4.0.9 up
- AL66 V, fw version: u1.8 A4.1.9 up
- AL66 K/I/S, fw version: u1.8 A4.1.9 up
- AL66 FG V, version fw: u1.8 A4.1.7 up
- AL66 FG K/I/S, fw version: u1.8 A4.1.7 up

The Bonus is available for any Totalizer (Credit Output) or Timer configuration. Pls. see section 3.4.1 for details. Open the 'Bonus' tag section, and enable the 10-Level Bonus Table by ticking the relevant box:

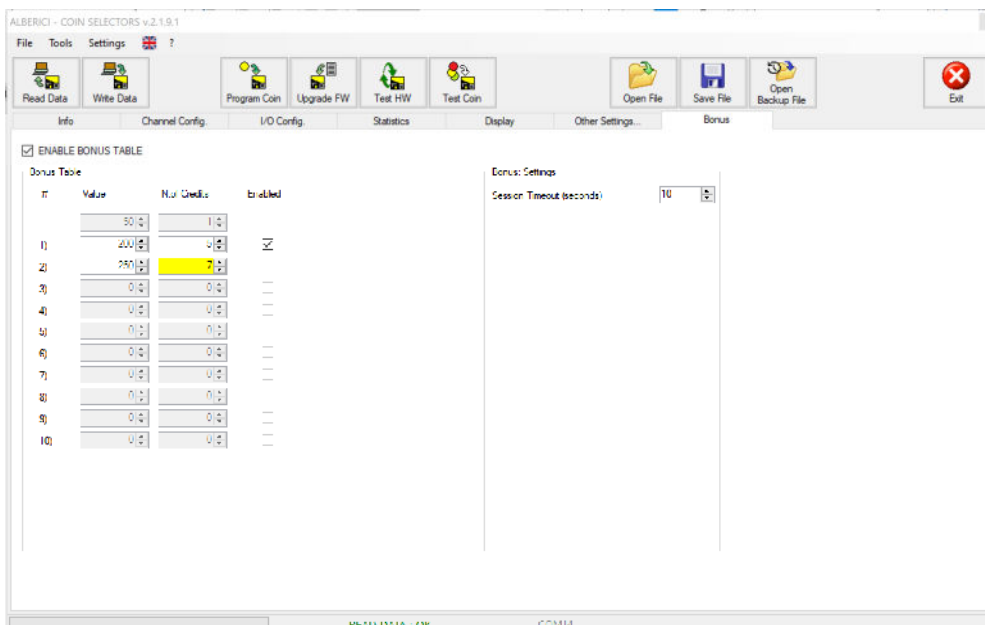


The "Value" box shows the credit amount set in the 'I/O Config' section: in the figure above it is 50, corresponding to 1 credit pulse.

Set the value for the first level: the software will prompt for the double, and then it will prompt the next multiple values of the credit amount ("Value"); correspondingly, it will increase the relevant number of the credit pulses ('N. of Credits') routed: as an ex., if the amount = 100 calls for 3 credits (= 2 + 1 Bonus reward), 150 will call for 4 credits (= 3 + 1 Bonus reward), 200 will call for 5 credits (= 4 + 1 Bonus reward), and so on. Once the expected money amount and the number of credit pulses (purchased credits plus bonus given) to be routed have been set, tick the "Enabled" box), to confirm the first level:

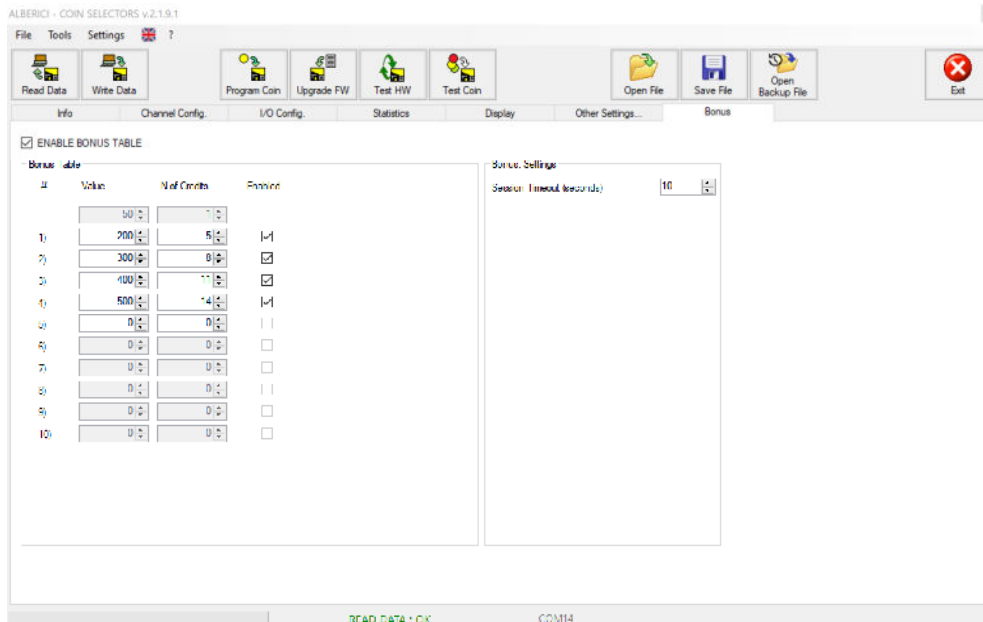


If higher rewarding levels must be set, repeat the same operation for the following (second) level. The software will prompt for the next multiple amount and for the corresponding number of pulses, including in the calculation the Bonus credit(s) already awarded in the previous level: in the above example, for the set value of 250, 7 credits will be routed (= 5 + 1 Bonus awarded from the first level + 1 Bonus for the present second level):



If a further prize level is set, the credit calculation continues with proportion: for instance, the amount of 300 will bestow 8 credits (6 + 1 Bonus reward for the first level value of 200 + 1 Bonus reward for the present level); the amount of 400 will bestow 11 credits (8 + 1 Bonus reward for the first level value of 200 + 1 Bonus reward for the 300 + 1 Bonus reward for the present level); the amount of 500 will bestow 13 credits (10 + 1 Bonus reward for the first level value of 200 + 1 Bonus reward for the 300 + 1 Bonus reward for the 400 + 1 Bonus reward for the present level), and so on:





It is possible to increase the credits in each level, as against the figure automatically proposed by the software.

If further prize levels must be set, repeat the described operation. When finished, download (“Write”) the settings to the coin acceptor, and save the file to program - if necessary - further acceptors of the same type.

NOTICE: to allow the User to reach the amount corresponding to the Bonus by introducing coins one after another (“accumulation of the credit”), it is possible to set how many seconds can elapse between one coin and the next one, before the pulse(s) corresponding to the paid amount get sent out. The default time (10 seconds) can be set to any value between 1 and 60 seconds.

This parameter is not pertinent when the set configuration is “on request” (see sections 3.3C and 3.3E).

### 3.4.1 Bonus-compatible configurations:

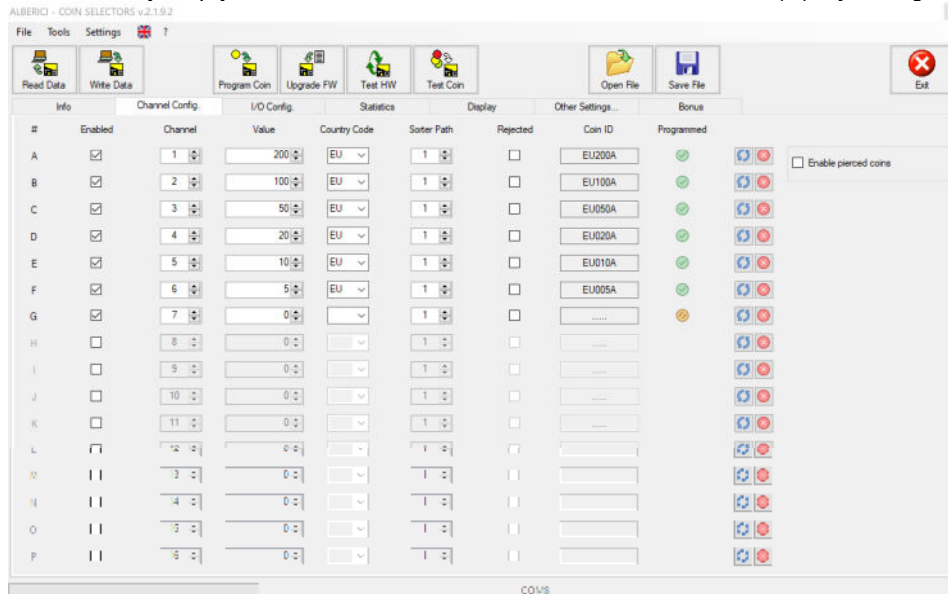
- CREDIT OUTPUT - see Section 3.3.B: *coins are always accepted* even if outputs are activated; the cumulative calculation of the introduced denominations takes place only *if coins are introduced at intervals of less than 10 SECONDS between each other* (such time intervals can be programmed from 1 to 60 seconds).
- CREDIT ON REQUEST - see Section 3.3.C: coins are only accepted *as long as the REQUEST input remains idle* (for example, until the "service start" button is pressed).
- CREDIT ON REQUEST (MULTI) - see Section 3.3.C: coins are only accepted *until the FIRST ACTIVATION of the REQUEST input*.
- TIMER - see Section 3.3.D: coins are *NOT accepted as long as the output is active*, i.e. during the provision of the service (therefore the bonus is available, but only if the required level is reached with a single coin!).
- TIMER ON REQUEST - see Section 3.3.E: coins are accepted only *as long as the REQUEST input is idle* (for example, until the service "start" button is pressed): they are *NOT accepted if the output is active*, i.e. during the service delivery.
- PROGRESSIVE TIMER - see Section 3.3.D: coins are *accepted ALSO while the output is activated*, i.e. during the provision of the service. The bonus session lasts for the entire duration of the service, and coins can be introduced until immediately before the service ends; there is no 10-second limit between one coin and the next.
- PROGRESSIVE TIMER ON REQUEST (SINGLE) - see Section 3.3.E: coins are *accepted ALSO while the output is activated*. The bonus session lasts for the entire duration of the service, and the coins can be introduced until immediately before the service ends; there is no 10-second limit between one coin and the next.
- PROGRESSIVE TIMER ON REQUEST (MULTI) - see Section 3.3.E: coins are accepted *ONLY WHEN OUTPUTS ARE IDLE*.

### 3.5 PROGRAMMING THE COINS

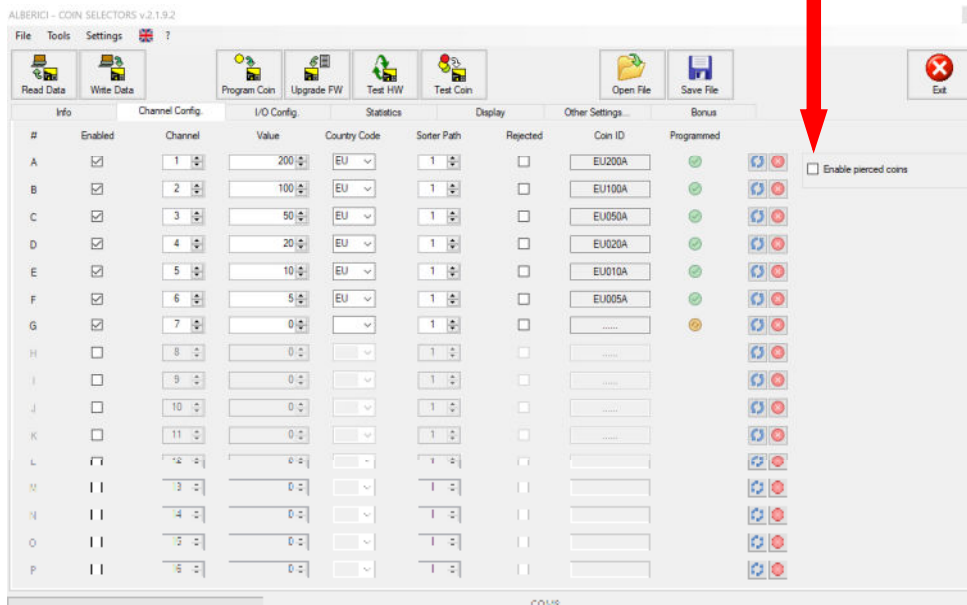
The coin changer always contains factory-programmed and tested configuration and currency. New coins and/or tokens can be programmed thereafter, to replace the factory ones, or in addition to them.

#### 3.5.1 Programming new coins/tokens in an empty channel or over an existing denomination

To program a new coin in any empty channel, activate such channel first, ex. channel 7 (G), by ticking the 'Enabled' box.



If the coin or the token that must be programmed has a hole in the middle, tick the "Enable pierced pieces" box:






If the channel must contain a piece (coin or token) sharing the same value as one of the already programmed ones, just copy the same data from the boxes of the corresponding channel. If the new channel is to contain a new coin or token, fill the boxes accordingly:


- Tick the 'Enabled' box
- Channel number;
- Value of the denomination in cents (range available from 1 to 50.000);
- Country Code (ex. EU, CH, GB,... for Tokens: TK);

➤ if token and coin with same value must be disabled separately, give the token the coin Country Code.

- Sorter Path (if any);
- If the coin must be rejected (ex. the coin is a fake), tick the 'Rejected' box;
- Coin ID (i.e. UE, CH, GB, ...; use TK for Tokens).

The “Programmed” yellow round symbol  will turn green  after the the channel has been completely programmed.

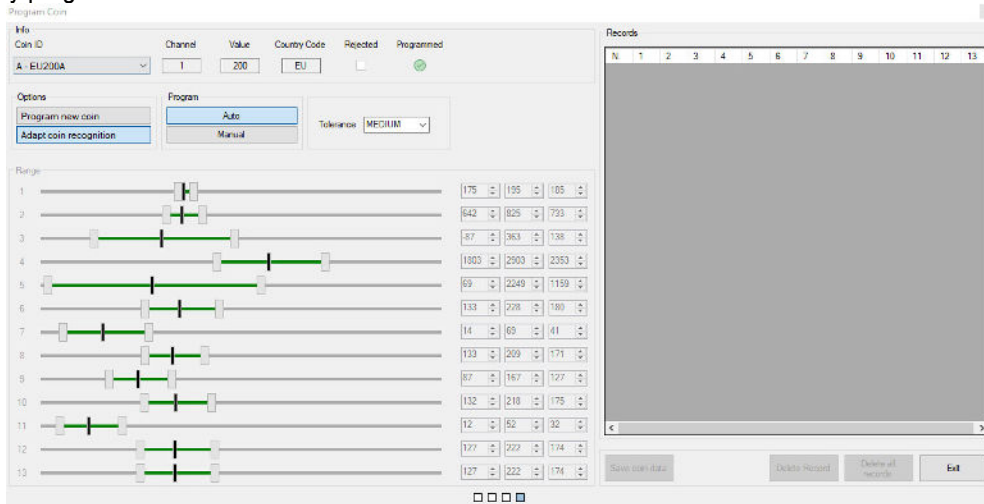
The  button allows to reset (erase) completely the channel parameters.

The data previously programmed in one channel can be restored after reset by clicking on the restore  button.

In case of any error made, the restore button always takes the configuration back to the data previously programmed.

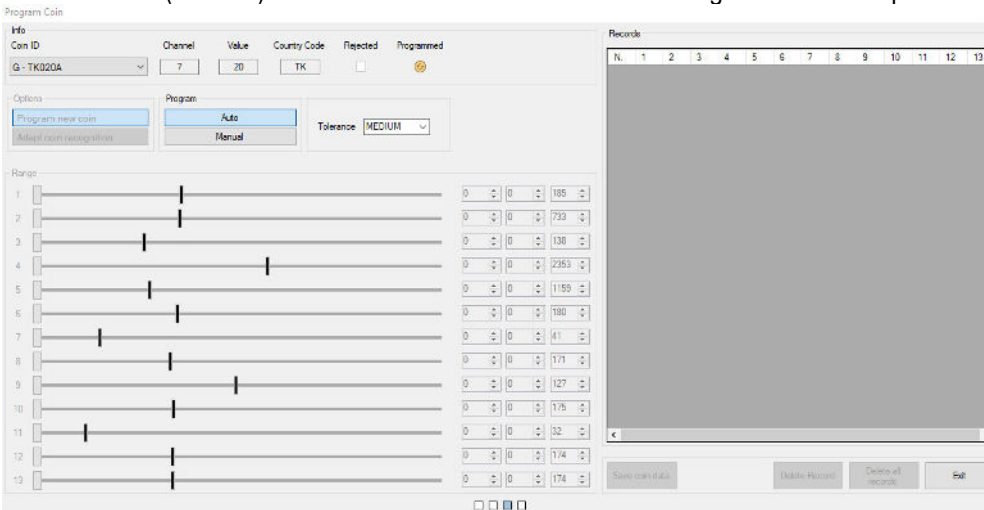
Confirm the new channel by the ‘Write Data’ button , and click the ‘Program Coin’  button.

The pattern below will be displayed. If the channel 1 (line A = coin A) has already been programmed, the warning ‘Coin A already programmed!’ will be shown.

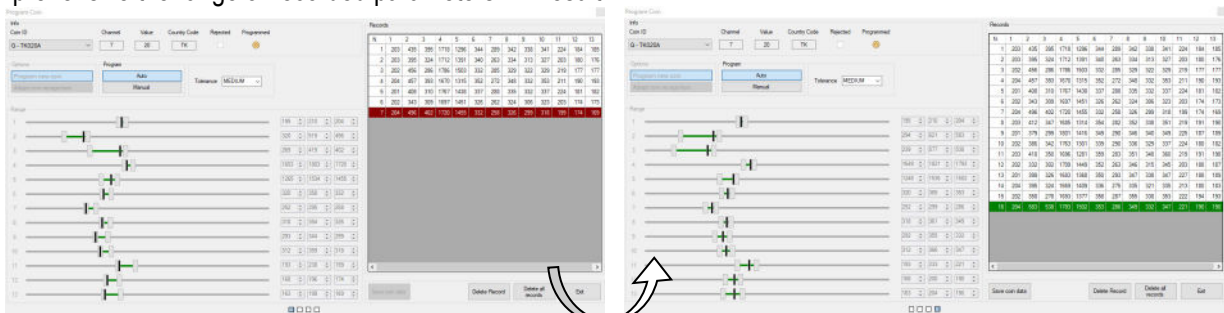


➤ *If the programmed parameters must be enlarged by adding other coins of the same denomination, in order to widen the acceptance range, see section 3.3.2 Adding same denomination coins in the preset coin channel.*

Choose the desired channel (ex. 7=G) from the ‘Coin ID’ box and select the ‘Program new coin’ option.



Drop into the acceptor at least 15 pieces. The red data appearing in the “Records” monitor screen are the last ones read by the sensors. They will be shown in green colour after the 15<sup>th</sup> processed coin. The more coins, the more comprehensive the range of recorded parameters will result.

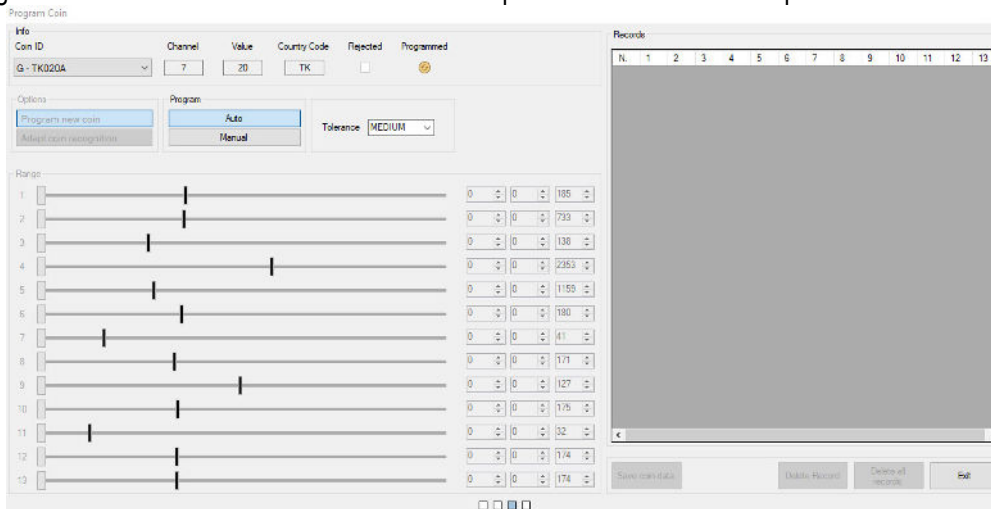


Set the tolerance level to High, Medium or Low, according to your needs, then click on the button 'Save Coin Data', confirm by OK, and click on 'Exit'. Repeat the same procedure for all the new coins to be programmed.

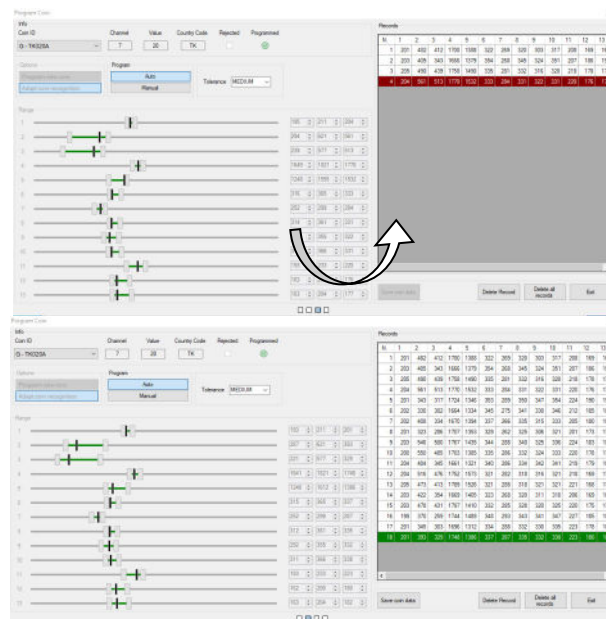
In case the acceptor is set (or must be set) to work as Pulse Parallel, do not forget to associate the channel to the output (section "I/O Config.") from where the acceptance of the coin must be signalled. If the programmed piece is a token, it is advised to associate its channel to the same output that signals the acceptance of the coin denomination having the same value assigned to the token. Ex. if the token programmed in channel 7 (G) is given value 100, and the 1 € coin (=value 100) channel is 2 (B) matched to OUT 2, match channel 7 (G) too to OUT 2.

### 3.5.2 Adding new coins from the same denomination in an existing coin denomination channel

It may occur that new or 'deviant' coins (ex. from a different mint, or worn out coins) get rejected, though they are the same denomination as the programmed coins that are accepted. In such a case, by selecting the 'Adapt coin recognition' option, such 'deviant' coins can be included in the same channel where the denomination has been programmed. This is recommended when the acceptor will be used in ccTalk protocol.



**How to:** drop into the acceptor at least 15 pieces. The red data appearing in the monitor window are the parameter values read by the sensors. They will be shown in green colour after the 15<sup>th</sup> coin measured. The more the processed coins, the more comprehensive the range of recorded parameters will result.



Set the tolerance level to High, Medium or Low, then press 'Save Coin Data', confirm by OK, and click on 'Exit'.

The application backs up automatically all the programmed configurations in the Backup Directory. The key is always available, by which the saved configuration can be promptly retrieved.





### 3.6 WORKING WITH THE COINSET FILES


If a firmware file in 'user' format is available, it can be downloaded directly to the coin acceptor. The existing file in the coin acceptor will be overwritten and cancelled, therefore it is good practice to first save it on your PC, to possibly use it later on other occasions or to restore it in the same acceptor.

#### NOTICE: FIRMWARE VERSIONS: v. 2 FREESCALE (fw u1.2 px.0.x) vs. v. 3 ARM (fw u1.5 Ax.0.x and up)

The files created for coin acceptors from generation v. 2 (FREESCALE processor) are not compatible with coin acceptors from generation v. 3 (ARM processor). Also be aware that files created for AL55 acceptors will not work in AL66 or FG; nor files for FG will work for AL55 or AL66; likewise, the files prepared for AL66 will not work in AL55 or FG.

#### 3.6.1 Save and retrieve a coinset file


Any file created  on the coinmech can be saved and named by the 'Save File'  button in your PC preferred folder.

It will then be possible to retrieve the necessary file(s) by the 'Open File'  button when necessary, and download it/them to other coin acceptors of the same type: files for AL66 v. 3 will work in other AL66 v. 3, but not in the AL55 or in the FG coin acceptor.


Files for AL66 (AL55, FG) v. 2 (Freescale processor) are not compatible with AL66 (AL55, FG) v. 3 (ARM processor).

#### 3.6.2 Download (paste) a coin-set file to the coin acceptor

Pay attention: the fw file existing in the coin acceptor will be overwritten and cancelled, so it is wise to save it first in your PC preferred folder for possible future recovery or restoration.

Click on the 'Open File'  button, and choose the fw file that you intend to load onto the acceptor.

The configuration will be shown in the "Channel Configuration" section.

Click on the 'Write Data'  button to download the fw file to the coin acceptor.


Click on the 'Test Coin'  button to test operation (see section 5.2 TEST COIN ACCEPTANCE).

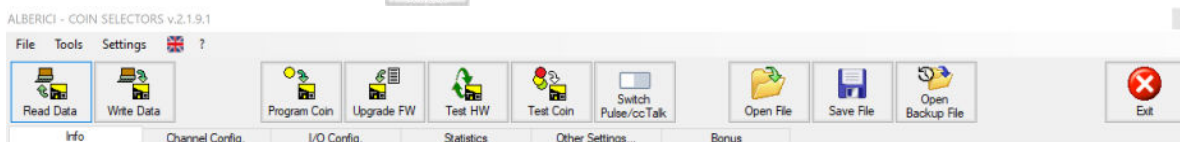
Should the coin acceptance not comply with expectations, adjust it using the "Program Coin" function: set the "Adapt Coin recognition" option and insert the rejected coins, as explained in section 3.3.2 Adding new coins...

#### 3.6.3 Restore the channels default configuration

The menu option: **Tools -> Restore to factory default channels** allows to restore the original factory configuration of the coin parameters and of the channels. The configuration of the outputs remains as the last one programmed.

### 3.7 AL55: SWITCHING FROM PULSE MODE TO CCTALK MODE

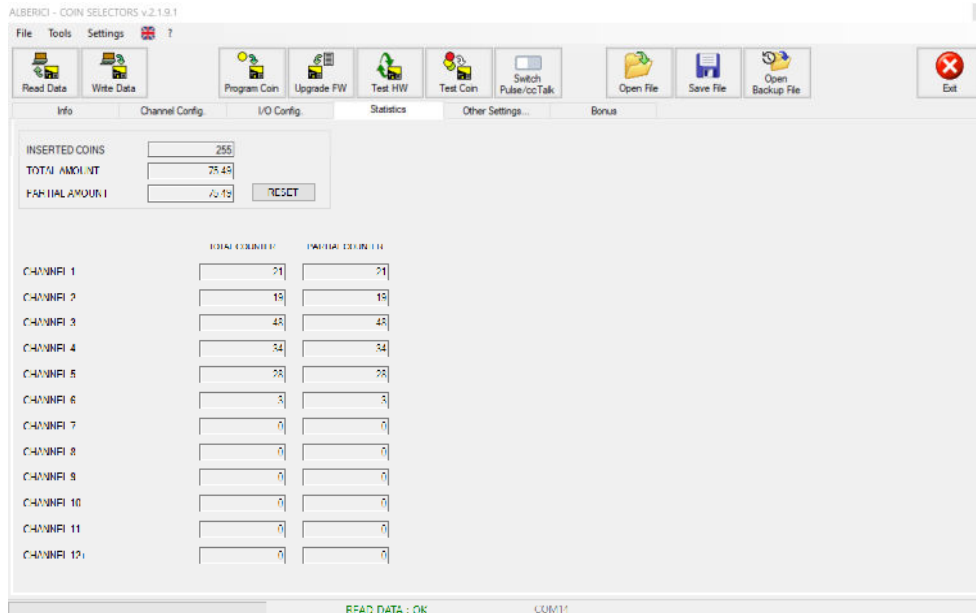
To switch the AL55 coin acceptor between Pulse and ccTalk mode, the upper bar in the interface window will make available the "Change Mode"  button (only when an AL55 acceptor is reckoned by the software).



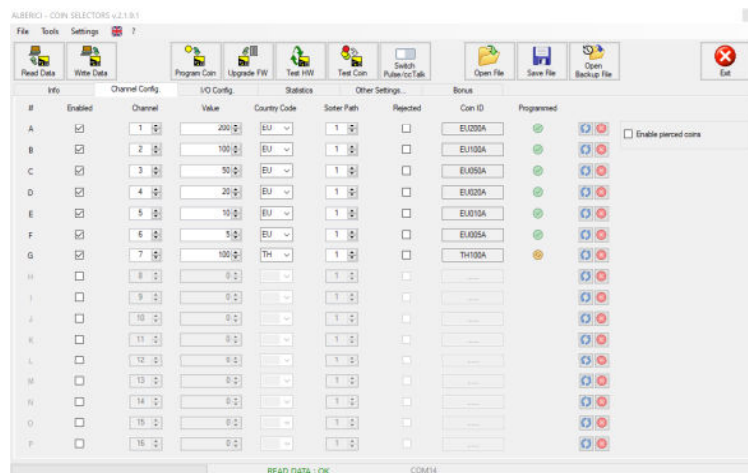
To change communication mode in the AL66 and AL66 FG coin validators, just move the Dip-switch 1 in the SW2 Row from position OFF (Pulse) to position ON (ccTalk) or back.

## 4. ACCOUNT RECORDS (STATISTICS)

In the first three lines of this section it is possible to check how many coins (pieces) have been processed by the coin acceptor, their total amount in Euro (or currency accepted), and the partial amount since the latest reset made. The lines named after the Channels show how many pieces of each denomination have been accepted in total (COUNTER) and how many pieces since the latest reset made (PARTIAL COUNTER).



Assuming that, as shown beside:  
 Channel 1 = 2€ denomination,  
 Channel 2 = 1€ denomination,  
 Channel 3 = 0,50€ denomination,  
 Channel 4 = 0,20€ denomination,  
 Channel 5 = 0,10€ denomination,  
 Channel 6 = 0,05€ denomination,  
 and that channel 7 corresponds to a token with value set to 1€



the Statistics records show that:

24 x 2€ coins have been accepted since last reset of partial counter; 85 x 2 € coins have been accepted ever.

21 x 1€ coins have been accepted since last reset of partial counter; 31 x 1 € coins have been accepted ever.

44 x 0,50€ coins have been accepted since last reset of partial counter; 44 x 0,50€ coins have been accepted ever.

12 x 0,20€ coins have been accepted since last reset of partial counter; 12 x 0,20€ coins have been accepted ever.

15 x 0,10€ coins have been accepted since last reset of partial counter; 15 x 0,10€ coins have been accepted ever.

11 x 0,05€ coins have been accepted since last reset of partial counter; 11 x 0,05€ coins have been accepted ever.

It is evident that the coin acceptor has been reprogrammed to accept the 3 latter denominations (0,20 - 0,10 - 0,05 €) at the time of the reset, since the amount of the total accepted pieces is equal to the amount shown by the partial records.

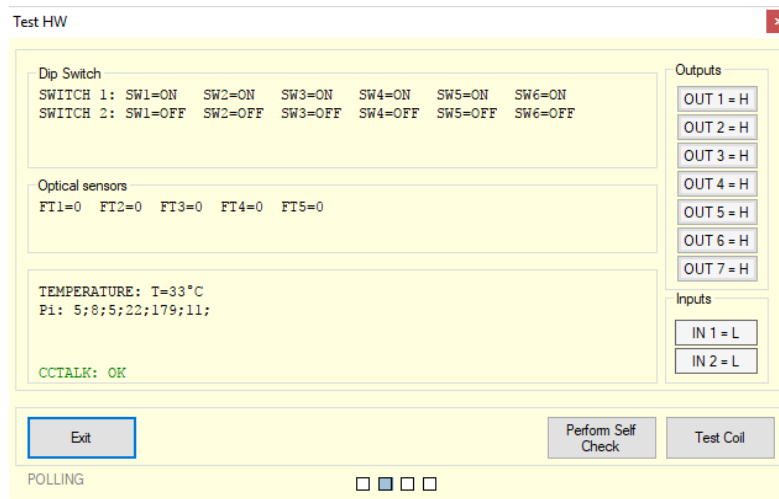
2 x tokens have been accepted since last reset of partial counter; 44 x tokens have been accepted ever.

14 x coins or tokens have been accepted (CH 9) before last reset of partial counter, meaning that CH 9 has been cancelled or set to "Rejected" before such reset. If it has been cancelled, it is recommended that memory of the previous content of CH 9 should be retained elsewhere.

## 5. TESTING ACCEPTANCE AND OPERATION

### 5.1 TEST COIN ACCEPTOR OPERATION

Click on the  button.



*Dip Switch:* this section shows if the mechanical positionings of the dip-switches corresponds to their electrical status.

*Optical sensors:* this section shows the operation of the optics when objects pass through. “0” = free, “1” = busy.


*Outputs:* shows “H” when no pulse is transmitted; shows “L” when pulse goes through (Active = Low). OUTs 1-6 are defaults for parallel outputs; OUT 7 is default for Totalizer output. Of course they will respond accordingly to the configuration, possibly different from the default one, that has been set.

*Inputs:* shows “L” when no pulse is transmitted; shows “H” when pulse go through (Active = High). Of course they will respond opposite if inputs levels have been set as Active = Low.

*Perform Self Check:* click on this button to start an automatic check of the system.

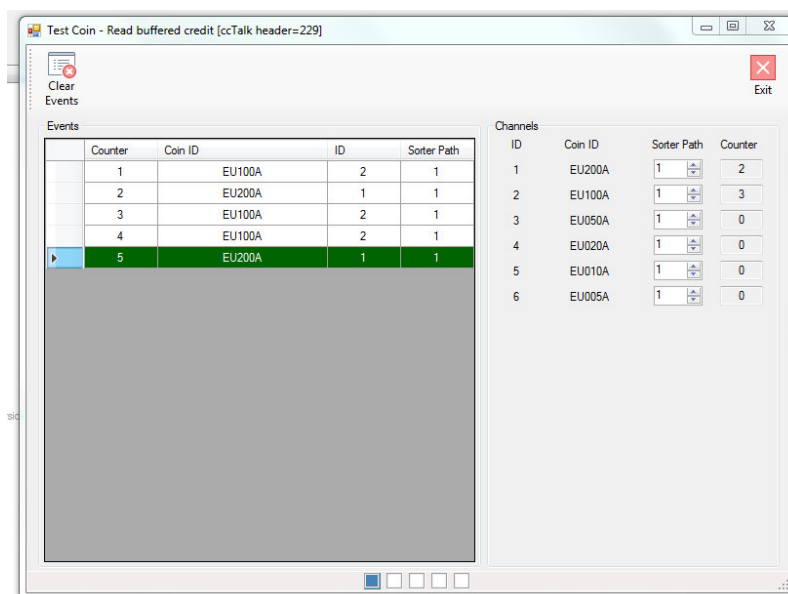
*Test Coin:* click on this button to activate the coil.

### 5.2 TEST COIN ACCEPTANCE

Click on the ‘Channel Configuration’ tag. then click on the  button.

**PAY ATTENTION!** *If this button has not been activated, no coin will be accepted.*

Drop coins into the acceptor: the monitor interface will show the denomination (Coin ID) that has been accepted.



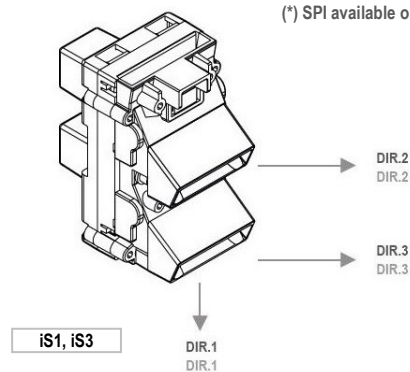
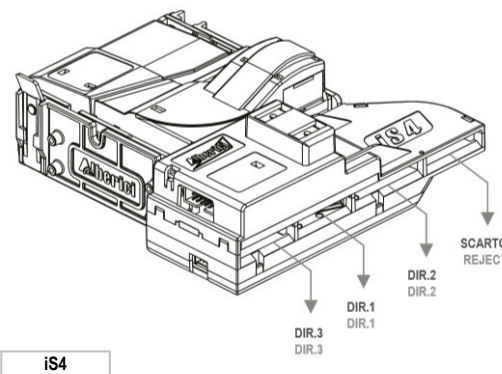
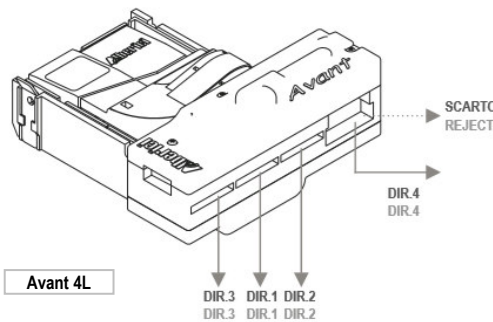
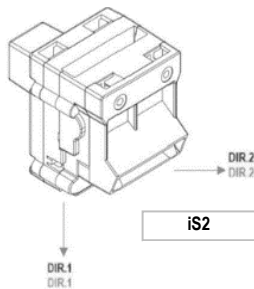
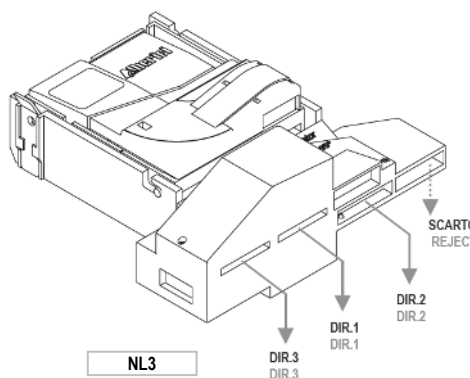
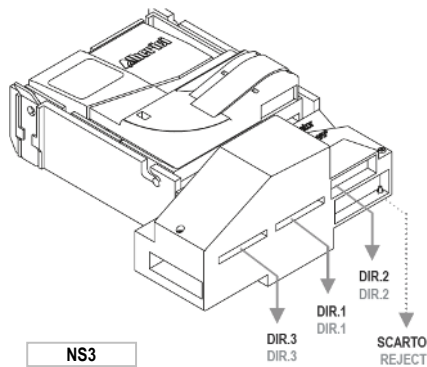
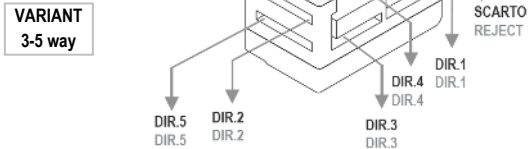
The ‘Counter’ column shows how many coins have been accepted for each denomination.

# 6. SETTING SORTER PATHS

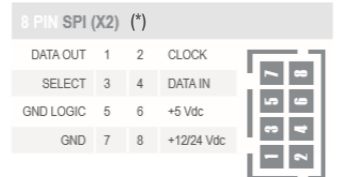
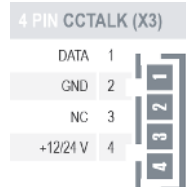
## Driving the NL3, NS3 and VARIANT sorters

To attribute the sorting commands, please refer to the output paths shown below for our sorters:

PATH	CCTALK (HEADER 210)	PULSE
01	Path / Dir. 1	NO OUT
02	Path / Dir. 2	OUT 5
03	Path / Dir. 3	OUT 6
04	Path / Dir. 4	OUT 4 + OUT 5
05	Path / Dir. 5	OUT 4 + OUT 6



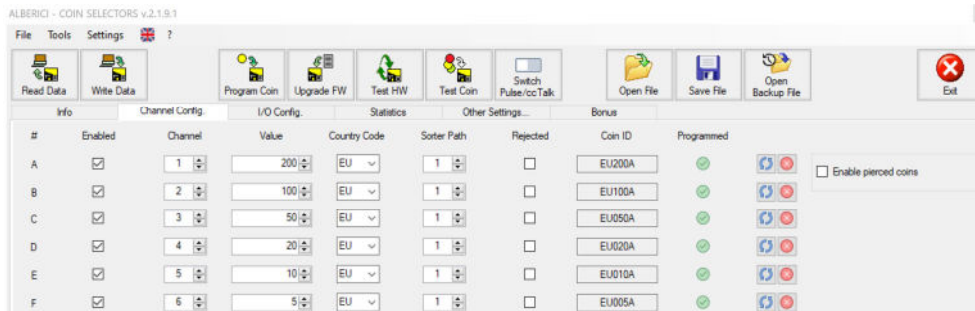
### SOCKETS AVAILABLE ON SORTER:



(\*) SPI available on iS1 and iS4 only



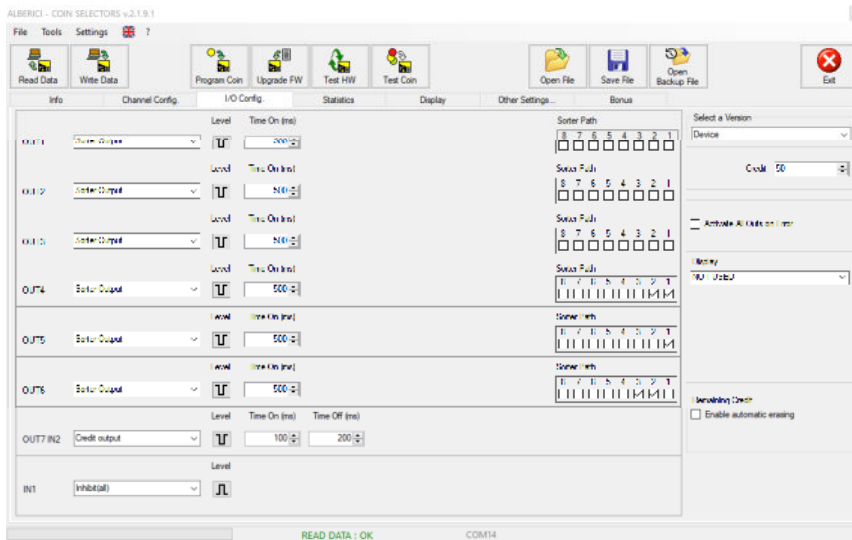
Assuming that the denominations have been programmed in the Channels as shown below (either Pulse or cctalk),



the sorter configurations may be set as in the following examples.

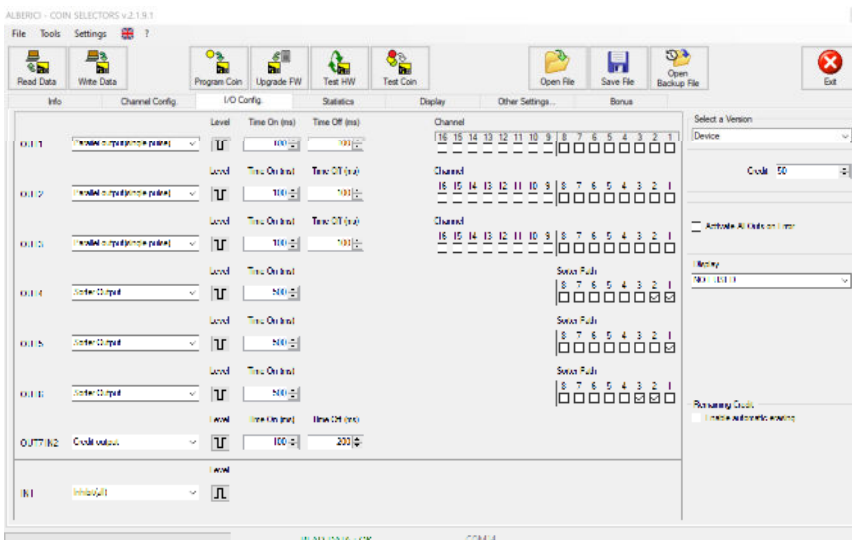
**Pulse coin acceptor with 5-way Variant Pulse sorter:**

- coin acceptor set to operate as Pulse Totalizer (Credit Output) on OUT7: the accepted coin denominations can be sorted the way shown as an example below: 2 € (sorter outputs OUT4+OUT5) through path (Dir.) 4; 1 € (sorter outputs OUT4+OUT6) through path (Dir.) 5; 50c (sorter output OUT6) through path (Dir.) 3; 20c, 10c, and 5c (no sorter outputs) go through path (Dir.) 1, usually meaning the coinbox.



	PULSE
Path / Dir. 1	NO OUT
Path / Dir. 2	OUT 5
Path / Dir. 3	OUT 6
Path / Dir. 4	OUT 4 + OUT 5
Path / Dir. 5	OUT 4 + OUT 6

- coin acceptor set to operate as Parallel: if up to 3 outputs (accepted denominations) are used, all the three of them can still be sorted. However, if more than 3 denominations are accepted, less will be able to be separated. If 6 denominations will be accepted, none of them can be separated, because all of the 6 outputs will be occupied.



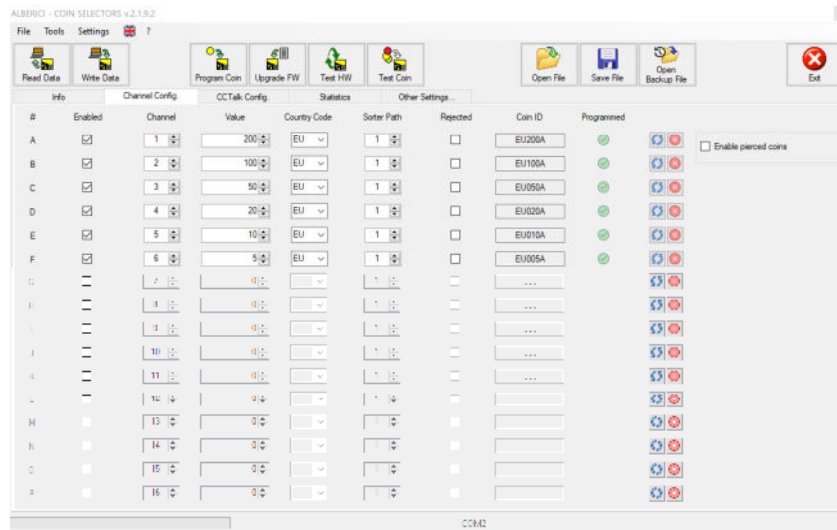
	PULSE
Path / Dir. 1	NO OUT
Path / Dir. 2	OUT 5
Path / Dir. 3	OUT 6
Path / Dir. 4	OUT 4 + OUT 5
Path / Dir. 5	OUT 4 + OUT 6

**ccTalk coin acceptor with 5-way Variant cctalk sorter:**

If the coin acceptor is set to ccTalk, and the sorter works as ccTalk as well, the table pattern of cctalk commands will be used:

CCTALK PATH COMMANDS (HEADER 210)	
01	Path / Dir. 1
02	Path / Dir. 2
03	Path / Dir. 3
04	Path / Dir. 4
05	Path / Dir. 5

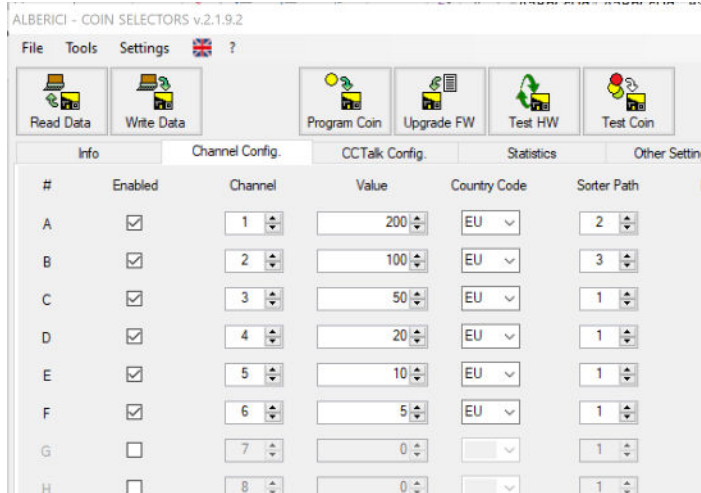
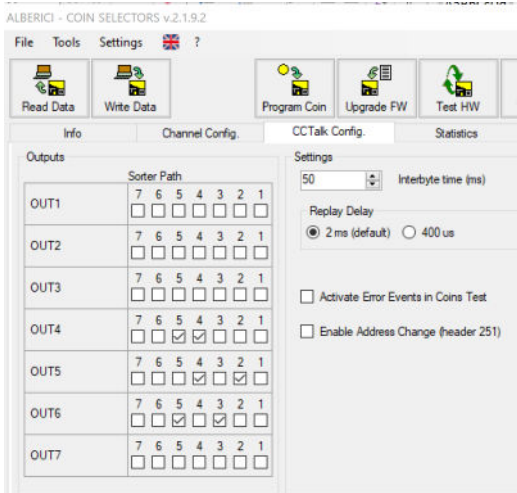
The settings in the Sorter Path column should be left as per their default setting 1. The master will then dictate the wanted settings, changing the paths by using the header 210 (“MODIFY SORTER PATH”).



**ccTalk coin acceptor with 5-way Variant Pulse sorter:**

The sorting directions are commanded by the unit main CPU via the ccTalk coin acceptor. The preset CCTalk Config. settings allow smooth transmission of the CPU commands; if changed, the sorting would be driven accordingly, with no influence by the main CPU. It is therefore recommended not to modify these settings, or it will not be possible to redirect the coin sorting paths depending on the operating conditions.

To test proper application of the cctalk commands by the coin acceptor, attribute different Sorter Paths to the various denominations in the Channel Config. section. Then check proper directions either by the Test Coin function or by the Led(s) lighting up in the Led box of the programming interface tool.



## 7. MENU UPPER BAR

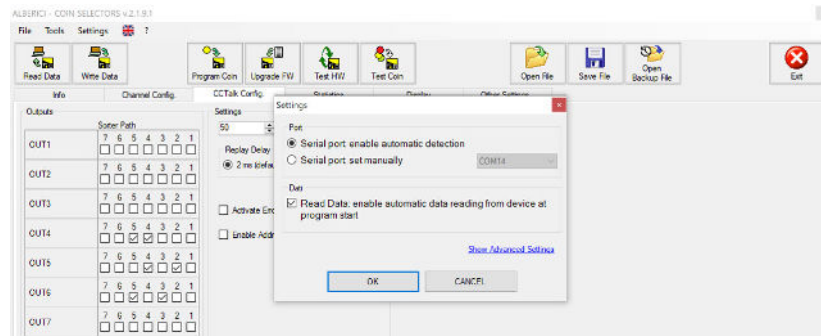
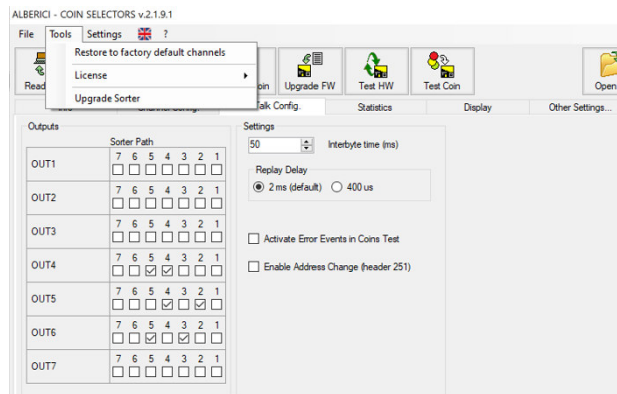
The upper bar offers two options: “Tools” and “Settings”.

By the “Tool” menu it is possible to:

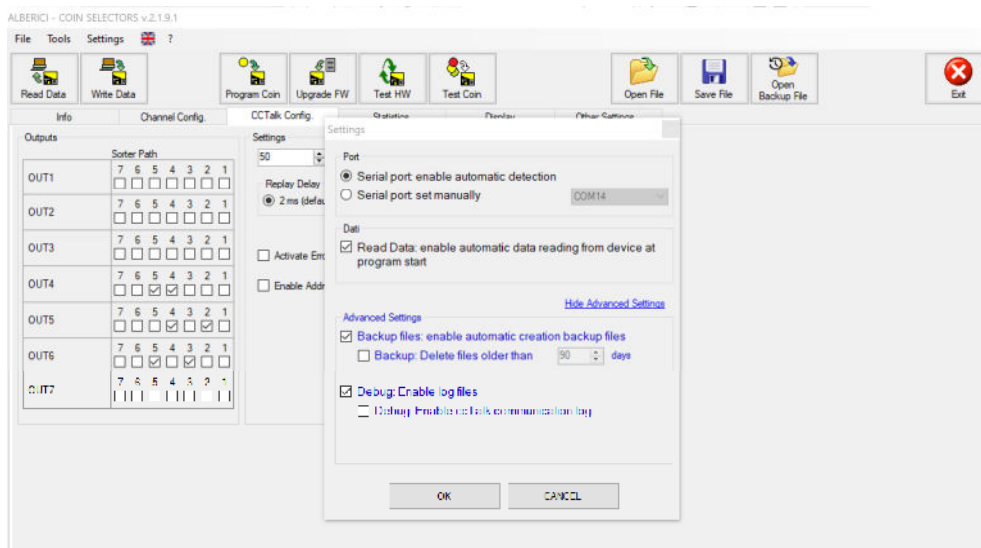
1. Restore the channel configuration to the default settings made at the factory.
2. Obtain, for very special needs and a limited period of time, a licensed file allowing to add special upgrading features to the programming software (must be used under factory directions).
3. Update the separator.

By the “Settings” menu it is possible to:

1. Make the software automatically detect which serial port the programming interface is connected to, or let the Operator set it every time.
2. Enable automatic reading of the coin acceptor data, or let the Operator trigger it intentionally (“Read” button).



By default, the software is set to create backup files of the configuration saved by and by, and to create log files of the communication between the coin acceptor and the PC programming software (see ‘Show advanced settings’). The latter can be useful to investigate possible communication or setting problems of the coin acceptor under test.



## 8. DISPLAY SETTING (only for FG coin acceptors)

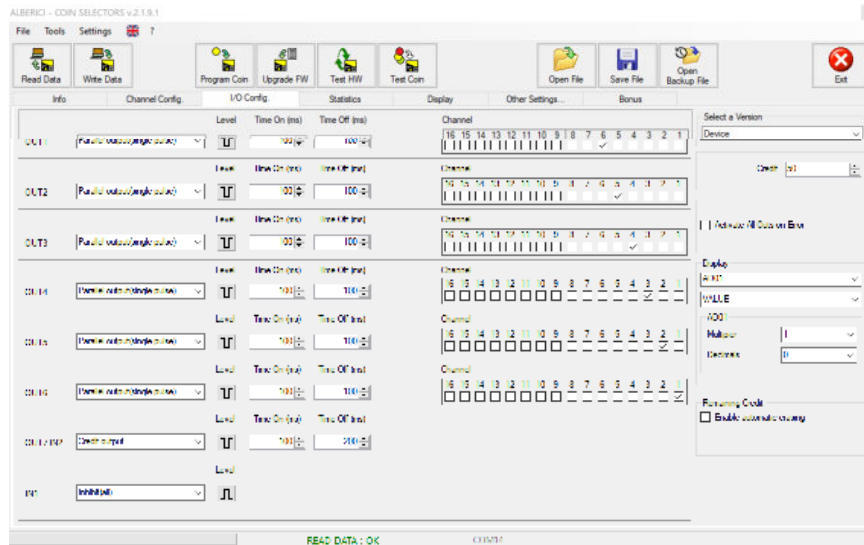
The display function is only compatible with FG coin acceptors. The FG coin acceptor must be previously set at the factory to be able to host and control the display.

The display is retro-compatible with the AL66 coin acceptors of the older series having fw 1.2.xxxx, by using the dedicated 8p / 6p adapter cable (code n°. S-030515-000).

The display must be connected to the 8-pole X2 connector located on the back of the acceptor.



To choose the data that must be displayed, make use of the boxes in the "Display" option (see right hand side in the Output Configuration section):



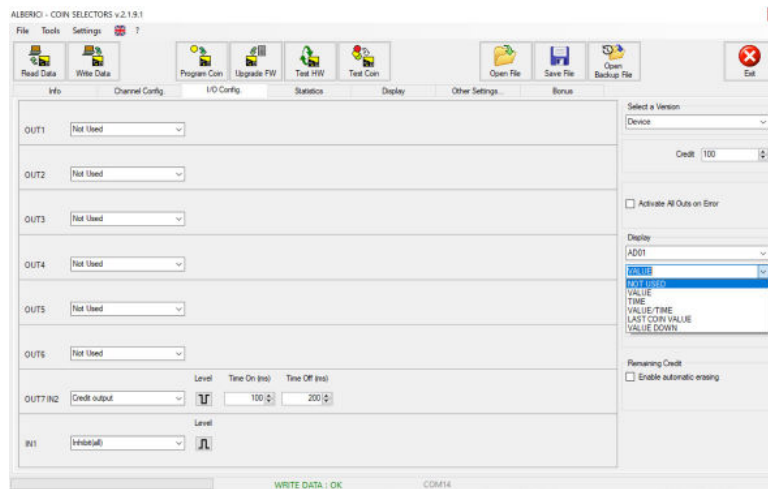
Set the Display model to 'AD01'. When in stand-by, if the activation amount is 1 Euro (100), the display shows:



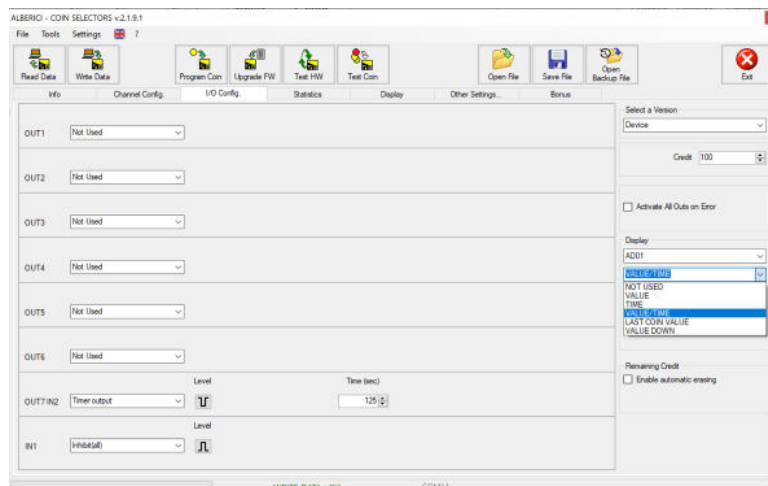
In the Credit ('Credit Output') and Timer set-ups, any of the following data can be chosen to appear on the display:

VALUE (UP) - TIME - VALUE / TIME - LAST COIN VALUE - VALUE DOWN

CREDIT OUTPUT



TIMER



If VALUE (UP) has been set, the display shows the increase in credit as coins are inserted. For example, in the case of a coin mechanism programmed as an Accumulator at 1.00 Euro):



If VALUE DOWN has been set, during insertion of the coins the display shows the amount missing to reach the credit value necessary to obtain the service (countdown-like). For example:



If TIME has been set (the coin acceptor output must be programmed as Timer) and activation has been started, the display will show the time countdown:



If VALUE / TIME has been set (the coin acceptor output must be programmed as Timer) and activation has been started, the display will show the inserted amount and the time countdown as well:



The option LAST COIN VALUE simply displays the latest accepted denomination, for example:



For all the options that include the VALUE to be displayed (i.e. VALUE, VALUE/TIME, LAST COIN VALUE, and VALUE DOWN), the software provides two mathematical functions to enable the Operator to modify the format of the displayed data, according his needs:

- **Multiplier:** this function allows to show the values of the denominations to be represented on the display under more familiar figures. For example, if (due to the Operator's needs) the €1 coin is attributed the value 4, and the price of the service is €1.00, the multiplier can be set to 25, so as to make the figure 100 appear on the display, much more similar to the € 1.00 denomination than 25 is.
- **Decimals** (decimal digits): this function allows to show the displayed values by reducing the unit of measure. For example, if the case value is set to 2, the price set in the "Credit" box as 100 (€1.00) will appear as:



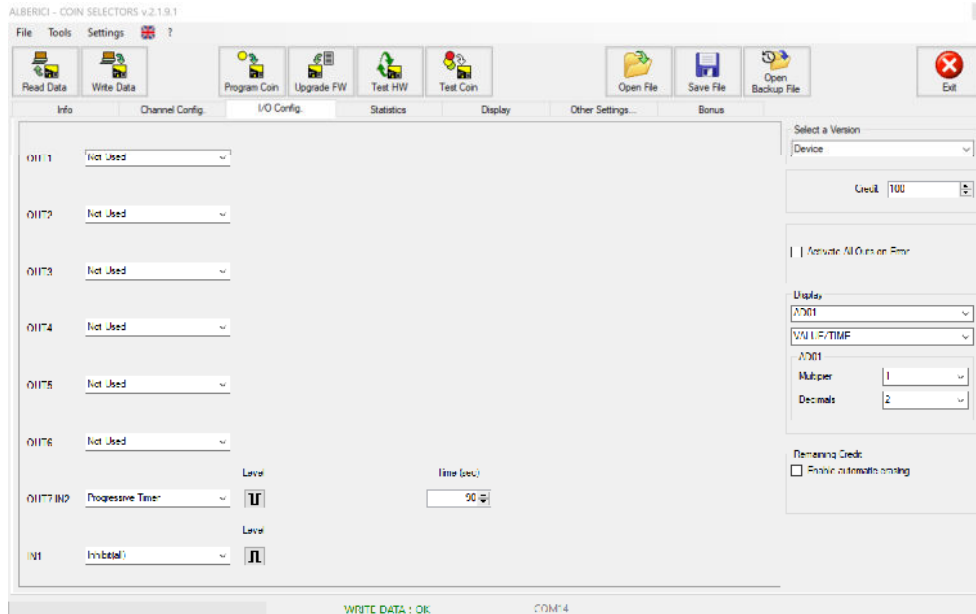
instead of:



The combination of the Multiplier / Decimals settings makes it possible to show the values set for the different denominations - and consequently the value of the credit or price of the service ("Credit") - under the familiar format of the coin values, e.g.:

Values set for the denominations	Credit value = 1 € ("Credit")	Multiplier/Decimals	(Price) shown on display
2€=200, 1€=100, 50c=50, 20c=20, 10c=10, 5c=5	100	1 / 2	1.00
2€=100, 1€=50, 50c=25	50	2 / 0	100
2€=100, 1€=50, 50c=25	50	2 / 2	1.00
2€=4, 1€=2, 50c=1	2	50 / 2	1.00
... and so on ...	...	...	...

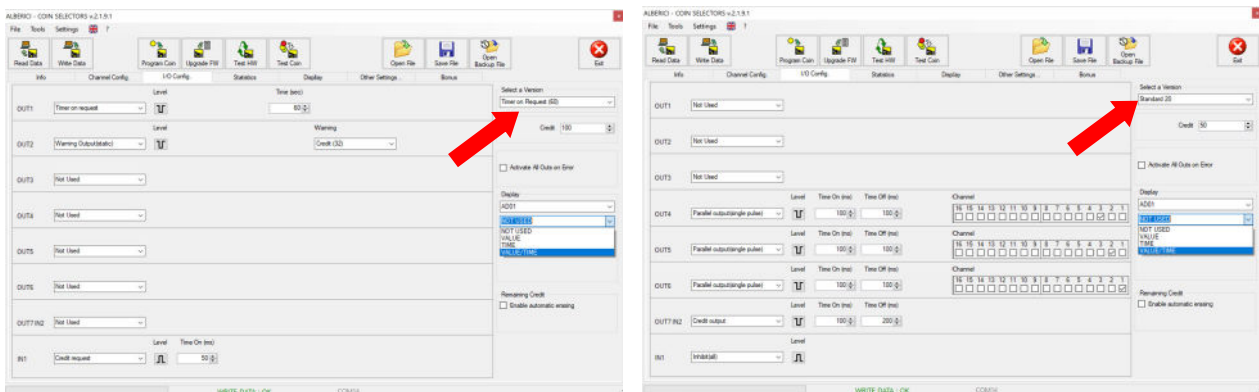
When using the TIME and VALUE / TIME options it is not possible to change the format of the time duration, since this is always expressed in minutes and seconds. For example, the below configuration:



will produce this display information:



PLEASE NOTICE! The ready-made configurations available in the "Select a Version" box allow only for the following three display options:  
VALUE - TIME - VALUE/TIME



- FURTHER MODIFIABLE FUNCTIONS AVAILABLE in the PULSE MODE

**Activate all Outputs in case of error:** by ticking this option, all OUTs from 1 to 7, which in stand-by condition are at pull-up high potential, will fall to low potential when a fault or an operation error occurs. This signal can be useful if the machine pcb operating in Pulse mode is programmed to monitor accordingly any "out of service" status or malfunctioning event of the coin acceptor.

**Remaining Credit:** by default, if the User inserts more than the exact amount (or a multiple) of the credit value, the display will maintain the remaining unused credit suspended and available after the (last) credit impulse has been dispensed. However, the coin validator can be programmed so that:

- if the remaining credit is to be cancelled automatically, tick the "Enable automatic erasing" box;
- if the remaining credit must remain available, leave the box empty.

## 9. MANUAL PROGRAMMING BY THE ON-BOARD DIP SWITCHES

The AL55 can be re-programmed only by PC and programming tool (interface) and software, except for disabling the individual denominations which can be done by the Dip-switches of the SW1 row.

AL66 and FG allow to reprogram coins into channels by combining the use of the dip-switches of rows SW1 and SW2, and also to set several pre-defined options via the SW2 row (see section 2. SETTING THE DIP-SWITCH ROWS).

### 9.1 'MANUAL' AUTO-PROGRAMMING INSTRUCTIONS (rows SW1 and SW2)

#### 9.1.1 How to programme (new) coins

- 1) Take note of the positions of the dip-switches.
- 2) Power off the coin acceptor.
- 3) Set all the dip-switches in SW1 row to OFF.
- 4) Move the dip-switch 2 of the SW2 row to ON.
- 5) Power up the coin acceptor: start of the auto-programming mode is confirmed by single coil activation.
- 6) In SW1 row, move to ON the dip-switch corresponding to the channel in which the coins will be teached.
- 7) Drop 10 such coins into the acceptor: double coil activation will confirm that the coins have been programmed.
- 8) Power off the coin acceptor and set the dip-switches according to the desired operation.

#### 9.1.2 How to reset the previous configuration

- 1) Take note of the positions of the dip-switches.
- 2) Power off the coin acceptor.
- 3) Set all the dip-switches in SW1 row to OFF.
- 4) Move the dip-switch 2 of the SW2 row to ON.
- 5) Set to ON both dip-switches 1 and 6 of the SW1 row.
- 6) Power up the coin acceptor: after few seconds, triple coil activation will confirm that the coins/channels that have been manually programmed have been cancelled, and that the previous configuration as been restored.
- 7) Power off the coin acceptor and set the dip-switches according to the desired operation.
- 6) Power off the coin acceptor and set the dip-switches according to the desired operation (see Chapter 2).

### 9.2 MODIFYING THE CREDIT VALUE

**9.2.1 AL66 and FG:** when the acceptor is programmed as Totalizer or Timer, a corresponding credit value (threshold at which the confirmation pulse signal is produced on the credit Output) is set. In lack of the PC programming tool, such credit value can be changed by setting the combination of the **Dip-Switches 4 and 5 in the SW2 Row:**

DS4 = OFF, DS5 = OFF	>	multiplies by 1
DS4 = OFF, DS5 = ON	>	multiplies by 2
DS4 = ON, DS5 = OFF	>	multiplies by 4
DS4 = ON, DS5 = ON	>	divides by 10

It is also possible to move the credit signal from the preset Output (standard being generally OUT 7) to the OUT 3, by setting the Dip-Switch 3 of SW2 Row.

DS3 = OFF	>	Multi-pulse totalizer, OUTPUT as per programmed setting (ex. OUT 7)
DS3 = ON	>	Multi-pulse totalizer on OUTPUT 3

**9.2.2 AL55 with sw release v.1.8 A4.1.0:** when the acceptor is programmed as Totalizer or Timer, a corresponding credit value (threshold at which the confirmation pulse signal is produced on the credit Output) is set. Such credit value can be changed by setting the combination of the **Dip-Switches in the SW1 Row**, provided that prior the coin acceptor "Other Settings" have been set for that as follows, using the programming software:

ALBERICI - COIN SELECTORS v.2.1.9.2

File Tools Settings ?

Read Data Write Data Program Coin Upgrade FW Test HW Test Coin Switch Pulse/ccTalk Open File Save File Open Backup File Exit

Info Channel Config I/O Config Statistics Other Settings... Bonus

Dip Switch Settings

- SW1/2 default mode
- 'Double Currency' mode: DIP Switch 6 in row SW1 = 'coins bank' selector (Off = rows A-H; On = rows I-P)
- SW2 alternative mode: DIP Switches 1-2-3-4 in row SW2 = Credit Value [PULSE ONLY]
- SW2 alternative mode: DIP Switches 1-6 in row SW2 = On/Off channels 7-12 [PULSE ONLY]
- SW1 alternative mode: DIP Switches 1-2-3-4-5-6 in row SW1 = Credit Value [PULSE ONLY]

**PLEASE DO NOTICE: when so preset, SW1 is fully dedicated to credit value change; coin acceptance can then be disabled/enabled only by using the programming software.**

### 9.3 MODIFYING THE SECURITY PROTECTION IN ACCEPTANCE (SW2 row)

Move the Dip-Switch 6 in the SW2 Row from its default OFF position to ON, if in need of stricter discrimination of the inserted coins, i.e. when very well-made fakes or false coins are in circulation.

- 4 DS6 = ON HIGH Discrimination
- 5 DS6 = OFF STANDARD Discrimination

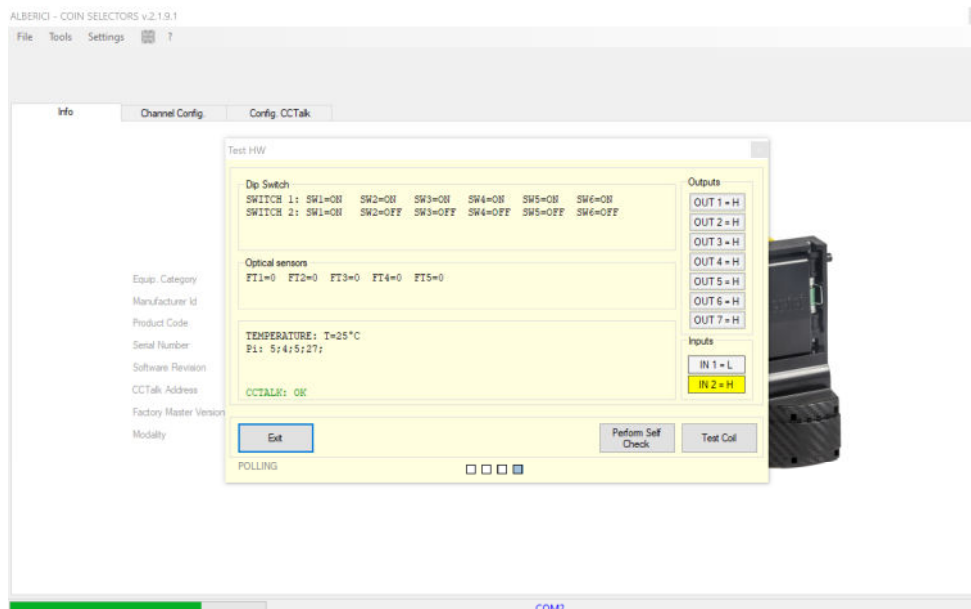
### 9.4 DISABLING ACCEPTANCE OF COINS (SW1 row)

To inhibit acceptance of any coin programmed in the channels, move the corresponding Dip-Switch in SW1 Row to OFF, according to the scheme below:

SW1 Dip-Switch Row	DS1	DS2	DS3	DS4	DS5	DS6
ON	Enable CH1	Enable CH2	Enable CH3	Enable CH4	Enable CH5	Enable CH6
OFF	Disable CH1	Disable CH2	Disable CH3	Disable CH4	Disable CH5	Disable CH6

## 10. TEST THE HARDWARE

The operating status of the coin acceptor can be queried by the functional button “Test HW”. Activate it to obtain the one-shot picture of the device conditions:



The above screenshot means the following:

**Dip-Switches** - as per Tables in Section 2:

DIP-SWITCHES 1 ROW: all switches are in ON position, that is: acceptance of each denomination is enabled.

DIP-SWITCHES 2 ROW: all switches are in OFF position (that is, Pulse mode, Totalizer on OUT 7, no multiplying / dividing factor applied, standard selectivity).

**Optical sensors** - shows the status of the sensors located along the coin path(s).

In idle / stand-by condition, all these sensors should not be activated: “0” means “not active”

When a coin passes in front of each sensor, the latter’s status changes to “1”.

If any sensor shows “1” and no coin is there, check for dirt or foreign bodies between the prisms of the emitter phototransistor and of the detector.

S, I, K Models	V Model
FT1 = first optic sensor in the inductive reading path FT2 = second optic sensor in the inductive reading path FT3 = optic sensor just before the electric coil FT4 = anti-fraud optic sensor (along the reject path) FT5 = crediting optic sensor (just passed the coil)	FT1 = first optic sensor in the inductive reading path FT2 = second optic sensor in the inductive reading path FT3 = optic sensor just before the electric coil FT4 = anti-fraud optic sensor (bottom acceptance path) FT5 = crediting optic sensor (and anti-fraud as well, by monitoring of the FT4 > FT5 sequence path)



## **Temperature**

When showing values above 60°C, the coin acceptor protection system may be in operation, preventing acceptance.

## **Outputs**

Unless differently set by the operator (see Section 3.3, paragraph "*Active level (Low / High) and duration of the pulse signal*", page 10), Outputs are always at high potential level when in idle / stand-by condition. When a signal is transmitted through one Output, its potential drops to Low level as long as the signal is there.

If any Output is permanently Low (unless so set by the Operator), it means that the corresponding transistor needs replacement.

## **Inputs**

Unless differently set by the operator (see Section 3.3, paragraph "*Inhibit coin acceptance*", page 10), Input 1 is always at high potential level when in idle / stand-by condition.

When a signal (ex.: credit request, or acceptance inhibit, and the like) is received through it, its potential drops to Low level as long as the signal is there.

Input 2 corresponds to Output 7, that is the usual output for the Totalizer signal. When not in use for the Totalizer pulse transmission, it can be used as second Input.

## **CCTALK**

When showing "OK", the communication is running properly.

The four boxes blinking one after another in the bottom line shows that the polling activity is in progress.

## **Perform Self-check**

Activate this button to start a fully automatic test of the above components' status, coil not included.

## **Test Coil**

Activate this button to check the proper operation of the coil.



***NOTICE***

Alberici S.p.A. reserves the right to make changes to the equipment described and to its technical specifications at any time and without notice, in pursuit of continual improvement of this product.



Via Ca' Bianca 421  
40024 Castel San Pietro Terme  
(BO) - ITALY

Progettazione e produzione di sistemi di pagamento, accessori per videogames e macchine vending  
Design and manufacture of payment systems, accessories for videogames and vending machines

Tel. + 39 051 944 300

Fax. + 39 051 944 594

<http://www.alberici.net>

[info@alberici.net](mailto:info@alberici.net)