CYFRAL®

DOOR PHONE
with
DIGITAL PANEL

SYSTEM CC-1000 / CC-1500

INSTALLATION AND PROGRAMMING MANUAL

1. WIRING OF OUTDOOR PANEL (OP) AND DOOR ENTRY CONTROLLER (DEC).

We have to use 6 wires cable to connect OP with DEC. Outdoor panel terminals identically marked as DEC terminals are connected to each other, for example, GND with GND, MIK with MIK, etc.

Table below contains description of every terminal:

GND	ground
+ZAS	panel`s positive supply coming from electronic cassette device
SERB	serial data B
SERA	serial data A
GLO	speaker out. To this terminal a wire from the speaker should be connected
GLI	speaker in. To this terminal a wire from DEC marked as GL1 should be connected.
MIK	microphone. To this terminal a wire from DEC marked as MK1 should be connected.
DAL	Dallas button (iButton)

1.1 CONNECTING INTERPHONE TO DEC.

Depending on the type of **DEC** (CC-1000 or CC-1500) the connection of interphones should be done according to the method showed below.

1.1.1 Connecting interphones to the CC-1000 DEC.

The terminal blocks marked **R01÷R16** and **AGND1÷AGND8** are designed for interphones connection. Interphones are joined according to the manner showed in Table no.1. The available number of interphones is 128.

Interphones are connected according to the earlier assigned flats` numeration and paying attention to their polarity. Interphone terminal marked as „+" should be connected to the suitable row **Rxx** and marked **GND** – to the appropriate column marked **AGNDx**.

Examples.

The interphone of the flat number 15

According to the table no.1, an interphone terminal marked „**+**" is connected to the terminal block number **R15** and terminal **GND** – to the terminal block marked **AGND1**

The interphone of the flat number 44.

According to the table no.1, an interphone terminal marked „**+**" is connected to the terminal block marked **R12** and terminal **GND** („**-**") to the terminal block marked **AGND3**.

1.1.2 Connecting interphones to the CC-1500 DEC.

The terminal blocks marked **R01÷R**64 and **AGND** are designed for interphones connection. Terminals of interphones marked as "**+**" are connected to the suitable terminals blocks marked from R01 up to **R64**. Ground terminals marked "**-**" are connected to any of 8 available terminals block marked **AGND**. The available number of interphones is 64.

1.2 CONNECTING AN ELECTROMAGNETIC LOCK.

2 wires of electromagnetic lock are connected to the pair of terminals marked as **ZACZ1** regardless a type of **DEC**.

1.3 CONNECTING EXTENDED SWITCH TO RELEASE THE ELECTROMAGNETIC LOCK.

Both the **DEC** CC-1000 & CC-1500 enable to release the electromagnetic lock by using the extended switch. The switch should be connected to the terminals marked as **WZ1** and **GND**.

REMARK:
Terminal blocks marked as WZ2 and GND are designed for steering of another electromagnetic lock belonging to the master panel, when master-slave configuration is required. More info can be found in chapter dedicated multi-entry systems.

1.4 POWER SUPPLY FOR DEC AND OP.

Before connecting power to the system the correctness of wiring interphone system (outdoor panel and door entry controller) should be done !
As power supply can be used any transformer 230/12.5V AC, 15VA.
Two terminals of the secondary output voltage should be connected to the terminals marked as AC on the PCB DEC.
After switching the power a middle horizontal segment of LED display should be lit on.
If there is a first switching on of the Outdoor Panel and Electronic Cassette Device, they have to be programmed before their normal use.
The detailed listing of programming is described in chapter 2.

2. PROGRAMMING INTERPHONE INTO THE SYSTEM.

For quick and easy searching through programming menu the following assumptions are made:
Key function during programming:

*	confirms chosen option or program
#	moves back digits being entered before, exits from the program one level up, exits from the programming procedure
0..9	digits
1	scrolls program number upward
3	scrolls program number downward

To access programming procedure the following sequence of keys has to be entered:
'*', **'0'**, **'1'**, **'*'**
LED display confirms passing the system into programming procedure by blinking a horizontal segment.
Now it has to be entered the serial number of DEC (6 digits), which is going to be programmed and confirmed by pressing the key **'*'**.

REMARK:
Unique serial number of DEC given by a producer is placed on board (PCB) of DEC.

Next and admin password has to be entered (6 digits) and confirmed by pressing the key '*'.

REMARK:
Predefined, default admin password is 123456.
Correctness of entered digits is confirmed by passing the system into programming procedure.

The sound and blinking caption **'P-01'** will appear, which is the first menu`s program.
If the entered serial number was wrong, after a fixed delay, the sentence '**Er01**' will appear on LED display and error sound will be heard.
If the admin password was wrong the sentence **'Er02'** will appear on LED display and error sound also will be heard. In both situations the programming procedure should be started again.
The summary errors table, which might appear during exploitation of interphone system is shown in Table no. 1.

2. 1. DESCRIPTION OF PROGRAMS.

REMARK:
Each time to enter programming procedure of any presented below programs it is necessary to login the system by making given steps, i.e.:

- enter a sequence of digits: '*', '0', '1', '*'
- enter a 6 digit of serial DEC`s number and confirm by pressing the key '*'
- enter a 6 digit admin password and confirm by pressing the key '*'
- chose a required program from the list below.

2.1.1. PROGRAM 01 (P-01). Type of Outdoor Panel.

There are three operation modes of Outdoor Panel: Master, Slave or Special.
To program OP as a Slave one, after making steps from the point 2.1, while on LED display the sentence **'P-01'** will blink:

- confirm the choice by pressing the key '*'. LCD display will project the digit 1, by default, which is corresponding with Slave panel`s option.
- confirm again the choice by pressing the key '*', next quit the program by pressing the key "#".

Outdoor panel confirms the correctness of programming by emitting a short sound.
Possible errors:
'**Er01**' - lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.2. PROGRAM 02 (P-02). **Adding new subscribers**.

- Enter a new number of a subscriber. The max. quantity of digits – 3.
- Confirm by pressing the key '*'.
- Enter a physical address of connected interphone unit. The number should be within the range from 1-128 for CC-1000 DEC and 1-64 for CC-1500 one.
- Confirm by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.

REMARKS:
The key '#' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er03' - entered numer of the subscriber was programmed already. Erase the number from device`s memory or use the other number of the subscriber. This error means also a choice of using the interphone unit just being in use.

2.1.3. PROGRAM 03 (P-03). Simple programming of subscribers.

- Enter the number of subscribers – max.128 for CC-1000, 64 for CC-1500.
- Confirm by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.

REMARKS:
Following subscribers` numbers will be put in order to the next interphones from 1 to entered number. The older numeration will be erased.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.4. PROGRAM 04 (P-04). Advanced programming of subscribes.

This program enables adjustment of numeration according to the individual requirements (untypical numeration, non continuous but regular numeration, et cetera). To do it:

- Enter the initial subscriber`s number, for example 100.
- Confirm the choice by pressing the key '*'.
- Enter step of increment, for example 10.
- Confirm the choice by pressing the key '*'.
- Enter the quantity of subscribes, for example 7.
- Confirm the choice by pressing the key '*'.
- Enter the first number of interphone unit, for example 15.
- Confirm the choice by pressing the key '*'.
- If want to erase the consist of entered previously numeration enter digit 1
- If want to keep the consist of entered previously numeration enter digit 0
- Confirm the choice by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound

REMARKS:
The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
Here is a result of the program`s operation

Interphone number:	subscriber`s number (after replacement):
15	100
16	110
17	120
18	130
19	140
20	150
21	160

2.1.5. PROGRAM 05 (P-05). Erasing of the subscriber.

- Enter subscriber`s numer to be erased.
- Confirm by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound

REMARK:
The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er04' - Wrong entered subscriber`s number

2.1.6. PROGRAM 06 (P-06). Adding entry codes.

- Enter subscriber`s number
- Confirm the choice by pressing the key '*'.
- Enter a new 4-digit entry code (numer)
- Confirm the choice by pressing the key '*'.

  Outdoor panel confirms the correctness of programming by emitting a short sound

> **REMARK:**
> The key '#' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er04' - Wrong entered subscriber`s number
'Er06' - there is no free room. Subscriber have already 4 codes.
'Er07' – entered entry code is already being in use.

2.1.7. PROGRAM 07 (P-07). Change of entry codes.

- Enter the previously entered code.
- Confirm the choice by pressing the key '*'.
- Enter a new subscriber`s number.
- Confirm the choice by pressing the key '*'.

  Outdoor panel confirms the correctness of programming by emitting a short sound

> **REMARK:**
> The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er04' - Wrong entered subscriber`s number
'Er05' - Wrong entered entry code.

2.1.8. PROGRAM – 08 (P-08). Erasing of all subscriber`s entry codes.

- Enter subscriber`s number.
- Confirm the choice by pressing the key '*'.

  Outdoor panel confirms the correctness of programming by emitting a short sound

> **REMARK:**
> The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er04' - Wrong entered subscriber`s number

2.1.9. PROGRAM 09 (P-09). Common entry code for all sibscribers.

- Enter common entry code.
- Confirm the choice by pressing the key '*'.
- Repeat common entry code.
- Again press the key '*' for confirmation.

Outdoor panel confirms the correctness of programming and erasing all previous entered codes by emitting a short sound.

REMARK:
Due to erasing all previous entry codes (individual entry codes included) it is not recommended to apply this program after introducing individual entry codes by subscribers.
The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.10. PROGRAM 10 (P-10). **Adding iButtons (Dallas button).**

- Enter subscriber`s number.
- Confirm the choice by pressing the key '*'.
- Touch each of the iButton to the reader and hold on until the outdoor panel confirms the correctness of programming by emitting a short sound

REMARKS:
Each of the subscribers 8 iButtons can be logged in.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er04' - Wrong entered subscriber`s number
'Er08' - Programmed iButton is already in memory (was previous being programmed)
'Er09' - There is no room for a new iButton designed for each subscriber.

2.1.11. PROGRAM 11 (P-11). Erasing iButtons from the memory.

Simply touch the iButton to the reader.
Every time the outdoor panel confirms the correctness of erasing by emitting a short sound.

REMARK:
The program erases subscriber`s iButtons and iButtons non specially assigned to the subscriber's number (not evidenced).
To quit the program it is necessary to press the key '#'

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er10' - iButton wasn`t logged in before.

2.1.12. PROGRAM 12 (P-12). Erasing of all subscriber's iButtons.

- Enter subscriber's number.
- Confirm the choice by pressing the key '*'.
  Outdoor panel confirms the correctness of erasing by emitting a short sound.

REMARK
The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er04' - Wrong entered subscriber`s number

2.1.13. PROGRAM 13 (P-13). Adding non evidenced iButtons.

Simply touch iButtons in turn to the reader.
Correctness of iButtons' programming is confirmed by short sound.

REMARK:
It is possible to add 768 max. non evidenced iButtons, which will be remembered apart from subscriber`s iButtons.
Erasing of single non evidenced iButton is possible by using the program P-11.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er08' - IButton is already in use
'Er09' - There is no room for a new iButton.

2.1.14. PROGRAM 14 (P-14). Erasing of all non evidenced ibuttons.

- After selection the program, the LED displays 4 horizontal, blinking dashes.
- Confirm erasing by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound
Possible errors:
'Er01' -lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.15. PROGRAM 15 (P-15). Erasing the whole Electronic Cassette Device`s memory.

- After selection the program, the LED displays 4 horizontal, blinking dashes.
- Confirm erasing by pressing the key '*'.

Outdoor panel confirms the correctness of erasing all subscribers` numbers, all entry codes and registered Ibuttons by emitting a short sound.
Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.16. PROGRAM 16 (P-16). Change of admin password.

- Enter new 6 digit password.
- Confirm by pressing the key '*'.
- Enter new 6 digit password once more.
- Again confirm it by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.

REMARK:
The key '**#**' erases step by step wrong entered digits.

Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.
'Er13' - Wrong entered admin`s password. Repeat the procedure again

2.1.17. PROGRAM 17 (P-17). Change ring`s duration time.

- Choice the program 17.
- LED display shows the actual ringing`s duration time.
  - pressing the key '1' duration time will be decreased by 5 second`s step.
  - pressing the key '3' duration time will be increased by 5 second`s step
  - Ring`s duration time min = 5 second.
  - Ring`s duration time max = 30 second
- Confirm the choice by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.
Possible errors:
'Er01' - lack of EDC`s reply. Check wires, repeat the programming procedure.

2.1.18. PROGRAM 18 (P-18). Change talk`s duration time.

- Choice the program P-18.
  - LED display shows the actual talk`s duration time in format m:ss, where 'm' - means minutes, 'ss' – means seconds.
  - pressing the key '1' duration time will be decreased by 30 second`s step.
  - pressing the key '3' duration time will be increased by 30 second`s step
  - Talk`s duration time min = 2,5 minutes.
  - Talk`s duration time max = 5,0 minutes
- Confirm the choice by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.
Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.19. PROGRAM 19 (P-19). Changing of the opening lock time duration.

- Choose the program.
- LED display shows actual duration time of opening electromagnetic lock.
  - pressing the key '1' duration time will be decreased by 1 second`s step.
  - pressing the key '3' duration time will be increased by 1 second`s step
  - Talking`s duration time min = 3s.
  - Talking`s duration time max = 7s
- 2.1.19.3 Confirm the choice by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.
Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.

2.1.20. PROGRAM 20 (P-20). Ringing Level adjustment.

- Choose the program
  - pressing the key '1' ringing level will be decreased.
  - pressing the key '3' ringing level will be increased.
  - available range of ringing level 1 - 5
- Confirm the choice by pressing the key '*'.

Outdoor panel confirms the correctness of programming by emitting a short sound.
Possible errors:
'Er01' - lack of DEC`s reply. Check wires, repeat the programming procedure.

3. ADJUSTMENT OF SPEECH CIRCUIT.

After start-up of the system the correction of speaker & microphone volume`s level should be required, although tuned in the factory, new adjustment should be done in real configuration.
On the PCB DEC there are 3 regulation points available:

a) volume level of microphone`s OP (trimpot P2),
b) volume level of speaker`s OP (trimpot P3) and
c) adjustment of side tone level (trimpot P1).

In order to properly set all levels the connection with the middle placed interphone should be established. Next, by adjusting the side tone trimpot (P1) the position corresponding to the minimum side tone effect should be found.
Here is a proposal of the sequence steps to tune all acoustic circuits:

a) set trimpots P2 and P3 in position preventing enough audibility,

b) adjusting level of side tone`s trimpot to find a point, where acoustic feedback occurs, than rotating the slider of trimpot in opposite side find the second such a point

c). set the slider in the middle between these two points,

d) increase the volume levels by the trimpots P2 and P3,

e) repeat the adjustment steps from points b), c) and d) to find the optimal positions of trimpots.

Remember not to set too high levels due to the spread of microphones in interphones, it may causes the acoustic feedback for some of them.

In this case it may be useful to take an advantage of the side tone regulation in interphone unit by adjusting the trimpot in the interphone.

Here are recommended, practical level`s adjustment:

- amplification of outdoor panel`s microphone should be set to the minimum but ensuring enough audibility in interphone`s receiver,
- amplification of outdoor panel`s speaker should be set to the maximum but with enough margin preventing against the acoustic feedback.

4. USAGE OF THE CC-1000/CC-1500 SYSTEM.

4. 1. Making connection with the subscriber.

To achieve the connection with required subscriber it is necessary to enter his number by pressing digits included in this number. Each properly entered digit is signaled by displaying it on the LED display and sound signal emitting from the outdoor panel`s speaker.

After each key`s pressing, system clock counts 3s period time. If within this time the next digit will be entered the program will add it to the sequence of digits assuming it as an entered subscriber`s number.
Attempt of entering the number consists of longer than 3 digits won`t change the status of the LED display and previously entered number will be treated as a proper one until system clock will have counted 3 s.
If the mistake be made while entering digits, it is possible to erase the wrong entered digit by pressing the key '#'

After pressing the confirmation key system will establish the connection with chosen subscriber. System generates acoustic sound of ringing, which lasts previously programmed time (default 15 s). This sound consists of two frequency modulated tones last 1,5 s with 2,4 s pause, while system checks the status of the interphone`s handset. Picking up the handset causes establishing acoustic connection between OE and interphone unit, which is limited up to 2,5 min (default).

Ringing time and waiting time for connection maybe cancel in every moment (but before the hook off of the handset) by pressing the key '#'. In this case the entered previously number will be erased and system is set to ready in-use state.
During conversation electromagnetic lock can be switched on by pressing the key located on interphone unit. Time for releasing the lock is defined by programming (default 4 s).
All predefined times can be changed by using the appropriate programming procedures described in this manual.
Disconnection may occur as a result of putting the handset on the base or exceeding the fixed, conversation period time.

4. 2. Using an entry code.

Taking advantage of built-in entry code option a subscriber may open a door without keys or disturbing tenants. Entry codes may be programmed by the admin or subscriber at any time.
To make use of entry code it is necessary to follow the steps:

- confirm the choice by pressing the key '*' twice (double confirmation is necessary to distinguish it from ringing).
- After double confirmation 4 horizontal dashes will appear on LED display.
- enter programmed earlier 4 digit entry code. Each of entered digit, due to the entry code confidence, is masked by sign 'c'.

REMARK:
Digit '0' in entry code is no meaningful one and maybe avoid.
If the entry code was entered properly the electromagnetic lock would be released on during the previously determined time.

TABLE No 1 - ERRORS CODES` TABLE WITH THEIR INTERPRETATIONS.

O. n.	Error code	Description	Remarks:
1	Er01	lack of electronic device`s reply	see remark no 1
2	Er02	Wrong admin`s password	
3	Er03	number of the subscriber is just being in use	In programming mode
4	Er04	Wrong entered subscriber`s number	In programming mode
5	Er05	Wrong entered entry code	In programming mode
6	Er06	there is no free room for a new entry code	In programming mode
7	Er07	entered entry code is already being in use	In programming mode
8	Er08	Programmed iButton is already in memory	In programming mode
9	Er09	There is no room for a new iButton	In programming mode
10	Er10	IButton wasn`t logged in before	In programming mode
11	Er11	Busy line	
12	Er12	Wrong entry code	
13	Er13	Wrong entered new admin`s password	
14	Er14	Short circuit of an interphone unit (line)	
15	Er15	Wrong entered common entry code	

TABLE No 2 - CONVERSION`S TABLE FROM MATRIX NUMERATION ONTO NUMERICAL ONE.

AGND R-XX	1	2	3	4	5	6	7	8
01	1	17	33	49	65	81	97	113
02	2	18	34	50	66	82	98	114
03	3	19	35	51	67	83	99	115
04	4	20	36	52	68	84	100	116
05	5	21	37	53	69	85	101	117
06	6	22	38	54	70	86	102	118
07	7	23	39	55	71	87	103	119
08	8	24	40	56	72	88	104	120
09	9	25	41	57	73	89	105	121
10	10	26	42	58	74	90	106	122
11	11	27	43	59	75	91	107	123
12	12	28	44	60	76	92	108	124
13	13	29	45	61	77	93	109	125
14	14	30	46	62	78	94	110	126
15	15	31	47	63	79	95	111	127
16	16	32	48	64	80	96	112	128