

OUTDOOR PANEL
METAKOM
MK10.2-TM



PASSPORT

User`s manual

Valid for filling

To be completed by the repair company

Contents of the repair. Name and number according to the scheme of the replaced part or unit. The place and nature of the defect:

Signature of the person who carried out repairs _____

Date of repair _____
(date, month, year)

Signature of the owner of the product, confirming the repair

Repair company stamp with the city:

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1. PURPOSE

The METAKOM outdoor panel MK10.2-TM4 (hereinafter doorphone) represents a specialized microprocessor system intended for installation in multi-apartment buildings, offices, as well as for organizing a selective communication system with up to 10 subscribers.

As user keys the electronic keys are used (hereinafter TM-Keys) METAKOM TM2002, METAKOM TM2003 (A, B) or Dallas iButtomtm - DS1990A.

As terminal devices installed for the subscribers, we recommend TKP-01, TKP-05M, TKP-05M, TKP-10M, TKP-10M, TKP-12M, TKP-14M or other interphone handset type TKP-01, designed for doorphones with coordinate addressing system for the production of METAKOM.

The doorphone provides a call signal to the user's TKP, a duplex connection of the visitor to the subscriber, remote opening of the lock upon a signal from the TKP.

The lock can also be opened with the TM-key, using the code dialed on the call unit, or by pressing the EXIT button installed at the entrance door inside the entrance.

To enable the use of different types of locks, the METAKOM MK10.2-TM4 outdoor panel is available in two versions:

Full name of the model	Lock type	Terminal marking of terminal blocks	Description of the output node
METAKOM MK10.2-TM4E	Electromagnetic lock without control board	LOCK - a line normally closed to the common lock wire GND.	Powerful key transistor. When you open the lock, it turns off.
METAKOM MK10.2-TM4M	Electromechanical lock without control board	LOCK – a line normally open to the common lock wire GND	Powerful key transistor. When you open the lock, it turns on.

Valid for filling

Tear-off coupon N1

For the warranty repair of the outdoor panel METAKOM MK10.2

To be completed by the manufacturer

Serial number of the product _____

Release date _____
(date, month, year)

Representative of the QC of the manufacturer _____

(QC stamp)

Address for return of the coupon to the manufacturer:
Russia, 241024, Bryansk
city, Delegate street, 68, LTD "Metakom"

To be completed by a trade or installation organization

Date of sale _____
(date, month, year)

Seller _____
(signature or stamp)

Stamp of the trade organization:

Date of commissioning _____
(date, month, year)

Installer _____
(signature or stamp)

The stamp of the organization that conducted the installation:

Cut-off line Counterfoil coupon N1 for warranty repair of the METAKOM outdoor panel MK10.2

Annex 1.

Code tables.

Table №1

№ sp	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Code	8529	7970	8740	2362	9813	4966	8801	8433	0899	2307	1628	1278	3352	961	9538	3923	356	9077	4727	039

Table №7

№ sp	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Code	2065	1627	1605	0053	9542	0102	5488	273	5266	8436	6149	1118	0039	3338	0819	2643	723	358	549	6135

The output stage with a transistor is designed for direct control of the lock winding without the use of any additional control board or demagnetization.

The power supply of the call and lock unit can be provided from the METAKOM BP-2U power supply.

The full name of the calling panel consists of the following elements:

MK10.2 – TM4 E V N

----- - - -
1 2 3 4 5

1. MK10.2 - Model number;
2. TM4 - Support for electronic keys METAKOM TM2002, METAKOM TM2003(A,B) and Dallas iButton^{im};
3. E - For an electromagnetic lock,
M - For electromechanical lock,
4. V - Built-in video camera and infrared illumination,
{пробел} - Without a video camera,
5. N - The doorphone supports networking.

2. Distinctive features

- Direct addressing of subscribers;
- Built-in switch for 10 subscribers;
- 2 ringer volume levels, 3 ringtones;
- Auto-collection of keys mode;
- Disable reading of some types of keys (prohibition of reading keys using Dallas or TM2002 protocol);
- Use of special keys with individual coding;
- Transfer of all the doorphone settings to a personal computer (or another doorphone) and back via the METAKOM adapter MKA-02U and the TM-key DS1996 (L). It is possible to configure all modes of operation of the doorphone and input subscriber TM-keys using a personal computer (PC) in a comfortable laboratory environment. The information thus prepared is transferred to the nonvolatile memory of the outdoor panel. A copy of this information is stored on the PC and used for subsequent servicing;
- Possibility of the organization of interphone network type 1 Master / 16 Slave (one main input, 16 additional);
- The possibility of diagnosing the system during commissioning (testing the hands-on subscriber with the output of the audio line parameters on the LED backlight);
- Correction of the parameters for determining the tube position for each subscriber separately (the adjustment can be carried out for each subscriber separately);
- Vandal-proof design - special keypad design, installation on site with a special key;
- Waterproof keyboard with illumination of each key, backlight of the electronic key contactor;
- Return to the outdoor panel factory settings, while storing recorded keys;
- Self-test on power up or on reset.

9. TRANSPORTATION AND STORAGE

Packaged products can be transported by all types of transport, except unpressurized aircraft compartments and open decks of ships and ships, in accordance with the rules for the carriage of goods operating on this type of transport.

As a transport container the wooden boxes are used, the group and other containers, ensuring the safety of the goods during transportation. Products should be stored only in a packaged form when there are no acidic, alkaline or other aggressive impurities in the surrounding air.

10. WARRANTY OF THE MANUFACTURER

The manufacturer guarantees the compliance of the METACOM MK10.2-RF outdoor panel (METAKOM MK10.2-MF) with the requirements of MTCM.420570.004 TU when the user applies the rules of use, storage and transportation.

Warranty period - 12 months from the date of sale, but not more than 18 months from the date of manufacture. Service life is 5 years from the date of manufacture.

Without presentation of a coupon for warranty repair and (or) violation of the integrity of seals, mechanical, electrical or other types of damage caused by improper transportation, storage, operations or actions of third parties, no claims for quality are accepted and no warranty repair is performed.

Manufacturer's address
Russia, 241024, Bryansk city, Delegate street, 68,
LTD "Metakom"
Tel / fax: (4832) 68-28-26
Tel. (4832) 68-37-95
<http://www.metakom.ru>
E-mail: os@metakom.ru

11. OUTDOOR PANEL COMPLETENESS

1. Outdoor panel 1 pcs.
2. Passport.....1pcs.
3. Fixing kit.....1 pcs.
4. Special key.....1 pcs.
5. Packing box.....1 pcs.

The product is certified

8. USER'S USE OF THE OUTDOOR PANEL

After power on, the doorphone is in standby mode. Subscriber numbers are highlighted in red.

After pressing the user number button, the visitor establishes a connection with the user's TKP and provides the set number of call signals. If the subscriber does not pick up the handset, after the set number of ring signals has been exhausted, the call unit returns to standby mode. When the receiver is off, the call signals are given in a different key. In this case, the subscriber needs to hang up, wait for the call signal of another tone and lift the handset.

When the subscriber picks up the handset, the highlight of the corresponding user's number changes to green, the connection with the subscriber is established and the visitor can talk.

The lock is opened by pressing the button on the TKP of the subscriber. This turns on the highlighting of all subscriber numbers in green.

If the subscriber has hung up, the conversation is interrupted and the call unit returns to standby. You can also interrupt the conversation by pressing any button on the outdoor panel.

After the set time limit has expired, the conversation will be interrupted automatically (see section 7.).

If the function of "general" or "individual" codes is activated, then to enter the code for door opening you must press and hold any button until two sound signals appear. After that, it is necessary to enter the code on the keyboard (factory general code is 1234, the individual code is taken from the table). If the code is entered correctly, the lock is opened.

If the network protocol is activated, then at the time of a network call, the number illumination goes out. When the connection with the subscriber is established, the numbering of the numbers in red will flash. In this case, dialing the number on the keyboard is blocked. The door is opened by the exit button or stored in the memory of the TM-key.

3. OPERATING FUNCTIONS

- Indication of modes of operation by backlighting the buttons of the keyboard;
- Sound control of button pressing;
- Call the subscriber by pressing a button on the call unit;
- Sound control of making a call to the subscriber (sending a ringing tone of another tonality, if the subscriber's handset is not packed);
- Duplex communication subscriber-visitor;
- Remote lock opening from the subscriber's TKP;
- Local lock opening by a set of a general or individual access code;
- Local lock opening by an individual TM-key;
- Local lock opening from the entrance by pressing the EXIT button;
- Sound signaling the use of an individual user code or TM-key on the TKP of the corresponding subscriber (function included on request);
- Ability to prohibit the maintenance of the user's TKP while maintaining access to the individual code;
- The possibility of prohibiting the maintenance of the subscriber's TKP while maintaining access by an individual code;
- Code lock operation in common code mode, in individual codes mode or jointly (programmable);
- Adjustment of all parameters of work for the complete conformity to the requirements shown on a place of installation;
- Use the master TM key to quickly enter the programming mode.

4. SELF-TEST

When the power supply of the call unit is turned on, a self-test procedure is performed. When an error is detected, an appropriate sound signal and a light indication are output.

If the EEPROM chip fails to initialize, the button illumination flashes 2 times. If the error is caused by the fact that a new (or previously used in the other device) EEPROM was installed, perform a full initialization of the EEPROM (see section 7.3). If the error message continues to appear - replace the EEPROM chip.

If a key fault is detected, the button illumination flashes 3 times, its operation is blocked, and the function of opening the door lock from the exit button and TM -keys is operable.

When the audio line is shorted, an error signal sounds and a twofold flashing of the button illumination, an error signal sounds when the line is broken and the button illumination flashes once.

Chapter №28 Enabling the mode of reading copies of the TM2002 key.

Used to allow reading copies of the TM2002 key on the base Key-blank TM2004. After entering the section, press "1"
To allow reading copies of the key TM2002 or "2" for prohibition. The factory setting is that reading copies is prohibited. To exit the section without changes, press "0".

Chapter №29 Sound signal melody selection.

It is used to set one of 3 options for the sound signal of a call. After entering the section to select the first melody, you must type "1", the second - "2", the third - "3". To exit the section without changes, press "0".

New access code or "0" to exit unchanged. If the code entry is enabled, dial the new system code. After dialing the 6th digit, the new code will automatically be saved.

Chapter №24 Master key recording

Used to record a master key intended for a fast entry into the programming mode. Any key supporting the Dallas protocol (TM2003, DS1990, DS1996) can be used as the master key. After entering the section, you need to press: "1" - to record the master key, "5" - to remove the master key. After entering the recording mode, you must attach the key to the reader, if the key is read correctly, the master key will be recorded. To exit the section without changes, press "0".

Chapter №25 Return to factory settings.

Used to set the factory settings. After entering the section, you need to press "1" to confirm the installation, then the parameters will be changed automatically, and the key database will not change. To exit the section without changes, press "0".

Chapter №26 Enabling the Network Protocol

Used to disable the network protocol or set the network number of the doorphone working on the network. To disable the network protocol, press "0", "0". To enable the network protocol, you must set the network number of the intercom. It can be from 1 to 16. The network number is set according to the subscriber numbers being serviced, i.e. the intercom with the network number "1" will serve the initial numbers of the subscribers, and with the network number "16" - the last numbers of the subscribers.

If the network number is from 1 to 9, the first character is to enter "0" next number (for example: network number 5 - "0", "5", etc.).

Chapter №27 Number of user`s served.

Used to set the number of subscribers served. It is set if the number of subscribers serviced by the interphone is less than 10. To enter, the first digit must be entered with "0" followed by the number of subscribers (for example: the number of subscribers 6 - "0", "6", etc.). To exit without changes, press "0", "0".

5. TECHNICAL SPECIFICATIONS

Maximum resistance of the entrance access line	Max 30 Ohm
Maximum number of subscribers served	10
Maximum subscriber number (for network version)	999
Maximum number of TM keys	975
Number of TM keys per apartment	To 975
Offset of subscriber numbers (for network version)	1...999**
Number of ringing signals applied to the TKP	6...14**
Lock opening duration	3...11 sec.**
Restriction of the conversation duration	40...120 sec.**
Maximum number of individual codes	10
Maximum number of the code table	255
Number of subscriber code digits	4
Number of the total code digits	4
Number of the master code digits	6
Operating temperature range	-30...+40°C***
Relative humidity (at 35 ° C)	95%
Supply voltage (DC)	15...18V
Maximum current consumption in standby mode (without a video camera)	180 mA
Peak consumption current (when a call signal is applied to a subscriber's TKP)	210 mA
Overall dimensions of the block, max (height x width x thickness)	155x180x40 mm.
Block weight without package, max	0,8 kg.

* - when using multiple switches

** - programmable parameter.

*** - for modifications with index "V" operating temperature range -10 ... + 40 ° C.

6. INSTALLATION PROCEDURE

ATTENTION! There is a dangerous voltage in the power supply - 220V. Do not perform installation and maintenance work with the power turned on. In the outdoor panel and other doorphone devices, except for the power supply unit, there are no voltages exceeding 18V.

The following sequence of actions is recommended:

1. Carefully study this instruction manual and block diagram.
 2. Prepare a niche for installing the outdoor panel (see the markup in Figure 1).
 3. Install the power supply, the lock and the opening button from the room. Connect the outdoor panel housing to the protective ground wire.
 4. Set the interphone handsets in the apartments (TKP).
 5. Install the wiring. Make taps from the loops and connect the TKP of all the subscribers. (Figure 2)
 6. Check that the connections are correct.
 7. Turn on the power, the button illumination in red should turn on, enter the programming mode (see section 7.2) and perform the following actions:
 - A) Change the access code to the programming mode and, if necessary, program the master TM-key. Be careful when entering the code. **WRITE MASTER CODE!**
 - B) If necessary, set the shift of the subscriber numbers range (see section 7.3). This parameter should always be set first, since all further operations with subscriber numbers will depend on the set offset.
 - C) Program subscriber TM-keys.
 - D) If the doorphone will be used on the network, it is necessary to enter the number of the first subscriber, the network number (from 1 to 16), the number of subscribers served (see section 7.3). Attention! If the first subscriber number is entered different from "1", then the offset of the subscriber numbers must be taken into account when setting the next parameters. As the Master doorphone, the outdoor panel MK2003.2-TM4E(V)N can be used.
 - E) If a common code is used in the code lock mode, then change the common code and switch the outdoor panel to the common code mode. Write down the general code (see section 7.3).
 - F) If individual codes are used, create a code table. (See section 7.3). Record the code table number.
 - G) If necessary, change the duration of the ringing signal, the duration of the lock opening, the duration of the call restriction, and so on. Factory settings in most cases are optimal.
- NOTE: Items a ... g can be pre-made using a personal computer. In this case, the prepared information is transferred to the outdoor panel memory via the METAKOM MKA-02U adapter and the TM-key DS1996 (L).
8. Check the operation of the call unit in the intercom mode and in the code lock mode.
 9. Secure the outdoor panel to a previously prepared niche using the supplied hardware kit.

(long line, use of some video monitors with adapters, etc.), then you can adjust the threshold position of the tube in a certain range. The threshold shift is in the range 1 ... 9. Correctness of the adjustment can be verified using A.18.

After entering the section, you need to dial the number of the subscriber for which you want to change the threshold, then dial the threshold offset value (press button 1 ... 9). To exit the section without changes, press "0".

Chapter №20 Setting the threshold for the opening of the lock button on the subscriber's handset

It is used to adjust the threshold for the opening of the lock button on the subscriber tube. If there is an incorrect detection of the lock opening signal (long line, use of some video monitors with adapters, etc.), then it is possible in a certain range to adjust the threshold of operation of the lock opening button on the subscriber tube. The threshold shift is in the range 1 ... 9. Correctness of the adjustment can be verified using A.18.

After entering the section, it is necessary to dial the subscriber's number, for which it is necessary to change the threshold, then dial the threshold offset value (press button 1 ... 9). To exit the section without changes, press "0".

Chapter №21 Recording of electronic media DS1996 (L)

Used to transfer information from the memory of the outdoor panel to the TM-key DS1996 (L). After entering the section, attach the DS1996 (L) key to the reader, the data transfer will begin. If an error occurs, an error signal will sound. The end of the recording is a sign of the end of the information transfer.

Warning: be sure to wait for the correct end of the record, otherwise later when reading incorrect information in the work of the outdoor panel there may be failures.

Chapter №22 Reading the electronic media DS1996 (L)

Used to transfer information from the TM-key DS1996 (L) to the memory of the outdoor panel. After entering the section, attach the DS1996 (L) key to the reader, the data transfer will begin. If an error occurs, an error signal will sound. The end of the recording is a sign of the end of the information transfer.

Warning: be sure to wait until the reading is completed correctly, otherwise the outdoor panel may fail.

Chapter №23 Changing the system code

Used to change the access code in programming mode. After entering the section, you must type "1", to allow input

Chapter №15 Change of individual code

Used to enter the new individual code in the custom table of individual codes. After entering the section, you need to click the button number of the subscriber for whom you want to change the code. Yes, you need to dial a new individual code. After dialing the 4th digit, the new code will automatically be saved.

Chapter №16 Enable subscriber alert by code or key.

Used to enable subscriber alert mode when using an individual code or key. After entering the section, you need to press the button of the number of the disconnected subscriber, then press:

"1" - if necessary, include the service; "2" - if you want to disconnect the service; "0" - if necessary to exit without changing the parameter;

When the correct input is made, a beep will sound.

Chapter №17 Internal switch test

Used for installation or failure of the outdoor panel. After entering the section, press "1" to start the test. To exit the section, press "0". After the start, the subscriber handsets will be connected to each other and a short-term audio signal will be provided.

Chapter №18 Test subscribers' tubes

Used to determine the position of the handset at the subscriber during installation or failure of the outdoor panel.

After entering the section, you need to press the button number of the subscriber, for which it is necessary to check the handset, the connection will be established, and the keypad's position will be displayed on the keypad illumination: "1" - short circuit, "2" - the tube lies, "3" - the handset is removed, "4" - a line break.

If the thresholds are different, then you need to make a correction. To automatically correct the threshold for the opening of the lock on the subscriber tube, it is necessary to remove the tube from the stand, press the lock release button and hold it down, then press "8". Manual correction is described in P 19, 20.

Chapter №19 Setting the threshold for determining the position of the tube

Used to adjust the range for determining the position of the tube. If the tube position is incorrectly detected

10. In versions of the outdoor panel with index V, the built-in video camera can be powered from external or internal voltage of 12V. For power supply from the internal source, the terminals "+ UV" and "+ 12V" must be closed.

11. Make a note in the tear-off coupons about the date of commissioning the unit. If the volume of the call is insufficient, adjust the required parameters (microphone sensitivity and speaker volume) by trimmer resistors on the back of the call unit.

If possible, install the power supply in the boxes, niches, at the ceiling. The power supply must be installed within 15 meters of the outdoor panel. The "EXIT" button provides opening of the lock when leaving the entrance and is installed near the entrance door inside the entrance.

To reduce the influence of climatic factors (low temperature, high humidity, frost, dew), the outdoor panel and the lock should be installed on the second door of the entrance located in the vestibule.

The cross-sections of the wires connecting the power supply unit to the outdoor panel and the lock must be at least 0.35 mm² (KSPV 2x0.64 or CVVC 2x0.5), the rest - not less than 0.12 mm². As a connecting wire, it is recommended to use a wire with colored insulation of cores. To reduce the influence of external influences, the connection is recommended to be carried out with a shielded cable. For installation of video equipment use a coaxial cable of the type RK-75.

For doorphones MK10.2 with a network function when installing a digital line (AV), use a twisted pair. On long communication lines on the "Master" and the last "Slave" intercom, install 120 Ohm resistors between the terminals AB.

The "+" terminal of the TKP is connected to the bus of tens, and the "-" TKP is connected to the bus of units. Before connecting the TKP, the line must be checked for a short circuit. Line resistance should not exceed 30 ohms.

There is protection against short circuit of the line in the doorphone. At this time, communication with the TKP will be impossible. All other functions are available. Installation of other doorphone units is carried out in accordance with the passports for these units.

Front panel contour
Outline of cutout

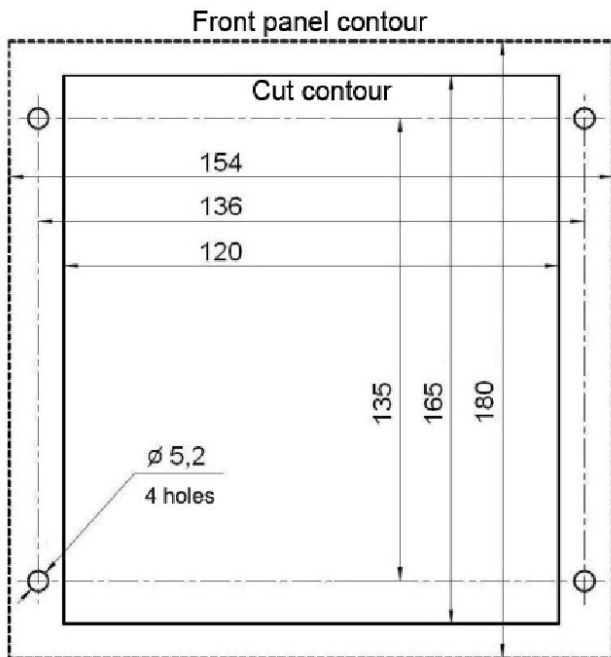


Figure 1. Markup for installation of the outdoor panel

Chapter №11 Ringing volume

Used to set the desired sound level of the ring signal in the handset. After entering the section, you need to press the subscriber number button, for which you need to change the volume of the call, then press: "1" - to set the minimum volume level, "2" - to set the maximum volume level. To exit the section without changes, press "0". If the input is correct, a beep will sound.

Chapter №12 Inclusion of the general or individual code

Used to permit the work of a general or individual code. After entering the section, you need to press: "1" - to allow the work of the general code, "2" - to prohibit the work of the common code, "3" - to permit the work of the individual code, "4" - to prohibit the work of the individual code.

For simultaneous work of the general and individual code it is necessary to allow the work of the general, then individual code. To exit the section without changes, press "0".

Chapter №13 Changing the General Code

Used to enter a new common code. After entering the section, you must type "1" to enter a new common code or "0" to exit without changes, then type a new common code. If the code consists of 3 digits, the first value is "0". After dialing the 4th digit, the new code will be automatically saved.

Chapter №14 Changing the Code Table Number

Used to generate a new table of individual codes. After entering the section, you need to dial a three-digit codebook number.

If the table number is from 1 to 9, the first character is to enter "00" next the table number (for example: table number 5 - "0", "0", "5", etc.).

If the table number from 10 to 99 is required by the first character, enter "0" next the table number (for example: table number 12 - "0", "1", "2", etc.).

A sign of saving the parameter is the sound signal and the appearance of a "running line" of button illumination.

To exit the section without changes, press "0", "0", "0". Some code tables are in Appendix 1.

To exit the section without changes, press "0".

Chapter №7 Activation of electronic key collection mod

Used to automatically record subscriber keys when the key is applied to the reader. This opens the door.

After entering the section, you need to press "1" to allow autoscore or "2" to disable autoscore. To exit the section without changes, press "0".

Chapter №8 Time of opening the lock

Used to set the required duration of the lock opening. The minimum unchanged opening time is 3 seconds. The input value can be from 1 to 9. In this case, the opening time varies from 3 to 11 seconds, i.e., the pressed button 1 corresponds to a time of 3 seconds, and the button 9 to 11 seconds.

After entering the section, you must click the button corresponding to the required opening time in seconds. To exit the section without changes, press "0".

Chapter №9 Talk duration

Used to set the required duration of the call of the visitor to the subscriber. Minimum non-modifiable talk time 40 seconds. The input value can be from 1 to 9. In this case, the opening time changes from 40 to 120 seconds, i.e., the pressed button 1 corresponds to a time of 40 seconds, and the button 9 to 120 seconds.

After entering the section, press the button corresponding to the required time. To exit the section without changes, press "0".

Chapter №10 Number of ringtones

Used to set the number of ringing tones applied to the TKP. The call signal to the subscriber's TKP consists of an alternation of a musical fragment and a pause. This function determines the number of music fragments to be sent to the TKP.

The minimum unalterable number of signals is 6. The input value can be from 1 to 9. In this case, the number of signals varies from 6 to 14, i.e., 6 signals correspond to the pressed button 1, and 14 to the button 9.

After entering the section, you must press the button corresponding to the required number of signals. To exit the section without changes, press "0".

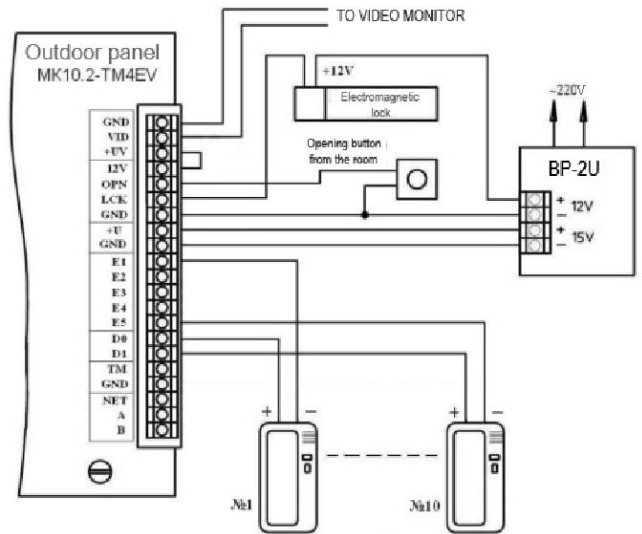


Fig. 2 Example of installation of the outdoor panel MK10.2-TMV

If the key is correctly written, an audible signal will sound and a "running line" will appear on the indicator. To exit the recording mode, press "0"».

After entering the record mode of individual keys, the button illumination will flash in green. It is necessary to dial the number of the subscriber to which the keys will be recorded, then the backlight of button 2 will flash red. Attach a key to the reader, the key will be recorded, if the key is already written, then an error signal will sound. If the key is written correctly.

Chapter №4 Deleting electronic keys

Used to remove TM-keys from the memory of the outdoor panel. Removal is carried out in 3 modes: deleting "shared" keys, deleting "individual" keys and deleting all keys. After entering the section, you need to press: "1" - to delete "common" keys, "2" - delete "individual" keys, "3" - delete all keys. To exit the section without removing the keys, press "0".

After logging into the "individual" key deletion subsection, you must enter the subscriber number whose keys will be deleted. When deleting the keys, an audible signal will sound and a "running line" will appear on the indicator.

Chapter №5 Enabling key coding

Used to specify an individual key number. Using the adapter MKA-02U, you can write the individual code into the TM-key MK2004. If the same code is recorded in the intercom, the intercom will react only to keys with such a code, so it becomes possible to exclude the use of non-original TM keys.

After entering the section, you must enter the code (number from 1 to 255).

If the code value is in the range from 1 to 9, enter the value of the code (for example: code value 8 - "0", "0", "8", etc.) by the first character.

If the code value is in the range from 10 to 99, the first character is to enter "0" next code value (for example: code value 15 is "0", "1", "5", etc.).

If the input is correct, an audible signal will sound and a "running line" will appear on the indicator. To disable this function, after entering the section, you need to enter "0", "0", "0".

Chapter №6 Disabling the reading of certain types of electronic keys

Used to block the operation of the electronic keys reading protocols. After entering the section, you need to press: "1" - to enable reading TM2002 keys, "2" - to disable reading TM2002 keys, "3" read permission for TM2003 and Dallas, "4" for reading TM2003 and Dallas.

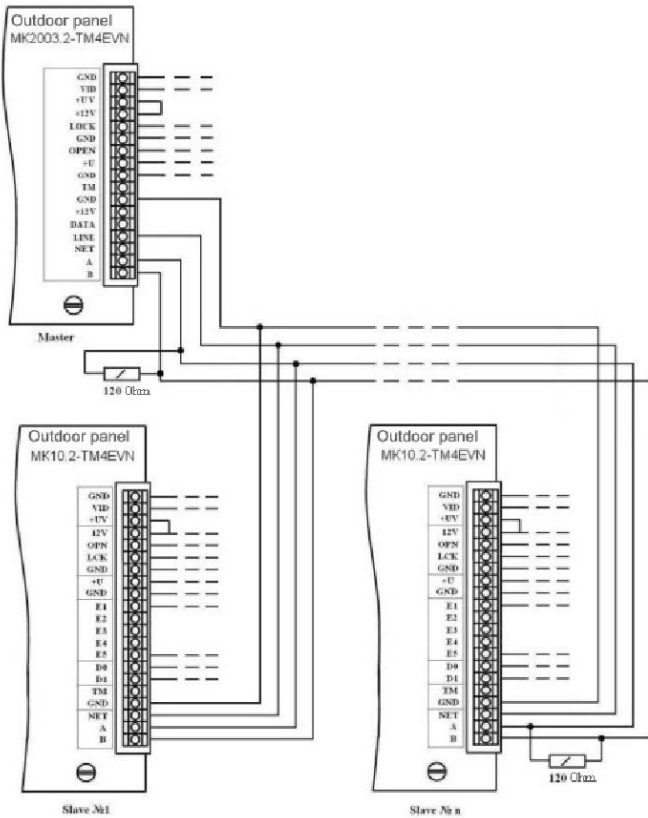


Fig. 3 Example of installation for interconnection of doorphones in a network.

7. PREPARATION FOR WORK

If the number of the first subscriber from 1 to 9 is necessary, enter the "00" next number of the subscriber (for example: first subscriber number 1 - "0", "0", "1", first subscriber number 5 - "0", "0", "5", etc.).

If the number of the first subscriber from 10 to 99 is necessary, enter the "0" next number of the subscriber (for example: first subscriber number 10 - "0", "1", "0", first subscriber number 55 - "0", "5" "5", etc.).

A sign of saving the parameter is the sound signal and the appearance of a "running line" of button illumination.

To exit the section without changes, press "0", "0", "0".

This setting affects all subsequent changes in the parameters of the outdoor panel, so it must be performed at the beginning of the change of the subordinate parameters of the outdoor panel.

Chapter №2 Disconnecting subscribers

Used to disconnect the subscriber's service. When you call a disconnected subscriber, an erroneous beep will sound. After entering the section, it is necessary to press the button of the number of the subscriber being switched off, then press:

"1" - if service is to be turned on; "2" - if it is necessary to disconnect the service; "0" - if necessary, exit without changing the parameter.

If the input is correct, a beep will sound.

This setting affects all subsequent changes in the parameters of the outdoor panel, so it must be performed at the beginning of the change of the subordinate parameters of the outdoor panel.

Chapter №3 Recording of electronic keys

Used to enter TM-keys in the memory of the outdoor panel.

Recording TM-keys is carried out in 2 modes

- the mode of "common" keys,
- the mode of "individual" keys.

In the mode of "common" TM-keys, the keys are written to the common database without pointing to a particular subscriber, and the function of notifying the subscriber is unavailable. In the mode of "individual" TM-keys, the key is written to the number of the particular subscriber.

If an error occurs during the recording of TM-keys, the number of keys will overflow, then an error signal will be issued and further key recording will be impossible.

After entering the section, you need to press: "1" - to write the public keys, "2" - to record individual keys.

After entering the public key recording mode, the backlight of button 1 will flash red. Attach a key to the reader, the key will be recorded, if the key is already written, then an error signal will sound. If the key is correctly written, an audible signal will sound and a "running line" will appear on the indicator. To exit the recording mode, press "0"».

After entering the record mode of individual keys, the button illumination will flash in green. It is necessary to dial the number of the subscriber to which the keys will be recorded, then the backlight of button 2 will flash red. Attach a key to the reader, the key will be recorded, if the key is already written, then an error signal will sound. If the key is written correctly.

Preparing the doorphone for work consists in programming parameters to meet the requirements of the system at the installation site, and input subscriber TM-keys.

Programming is carried out directly from the outdoor panel keypad or on a personal computer using a special program, the METAKOM MKA-02U adapter and the Dallas TM key and the DS1996 (L) Buttontm. All parameters are stored in the non-volatile memory of the device (hereinafter EEPROM), which ensures the safety of data in the absence of power supply voltage.

When the call unit is delivered, the EEPROM contains the initial settings shown in the table.

N	Parameter	Value
1	Offset of subscribers	No
4	Ban of subscribers	All are allowed
5	Types of keys	All are allowed
6	Auto set mode	Disabled
7	Opening time of the lock	4 sec
8	Talk duration	90 sec
9	Number of ringtones	10
10	Using generic or individual code	Codes disabled
11	Code table number	1
12	Enable subscriber notification by key or code	Disabled
13	Tube position detection threshold level	5
14	The threshold level of the opening button lock on the subscriber tube	5
15	System code	123456
16	Master key	Not programmed
17	Network protocol	Disabled
18	Reading copies of TM2002	Forbidden

In programming mode, it is possible to repeatedly change any of these parameters, as well as return all settings to their original state.

You can view the serial number in the outdoor panel. The serial number is set at the factory and is not subject to change in the future. For viewing, it is necessary to press and hold any button, turn on the power supply, hold the button until an audible signal appears, then the serial number numbers are displayed, the first number is the highest digit of the serial number number, then seven remaining values are extracted in order eight-digit serial number.

7.1 OUTDOOR PANEL PROGRAMMING MODE

In the programming mode, access to the sections is made by typing the corresponding two-digit section number in the keyboard row, if there is a subsection, access to it is done by pressing the corresponding buttons. The numbering of the keyboard buttons starts with the upper button - the value is "1", the lower button - the value "0".

To enter sections from 1 to 9, you must enter the first character "0" next the partition number ("0" "1", "0" "2", etc.). Exit the programming mode by pressing the "0" "0" buttons. The exit from the sections is indicated in the corresponding descriptions. If no changes have been made or the buttons are pressed, the partition or programming mode will automatically exit after a while. The table shows the names of the sections and the combination of buttons for accessing them.

N menu	Menu name	Enter the menu	Submenu	Enter the submenu
1	First subscriber number	«0» «1»	--	---
2	Disconnecting subscribers	«0» «2»	--	---
3	Recording keys	«0» «3»	Shared keys Individual keys	«1» «2»
4	Deleting keys	«0» «4»	Shared keys Individual keys All keys	«1» «2» «3»
5	Enabling Key Encoding	«0» «5»	--	---
6	Disable key types	«0» «6»	Permission to read TM2002 No permission to read TM2002 Permission to read TM2002 No permission to read TM2002	«1» «2» «3» «4»
7	On auto set key mode	«0» «7»	---	---
8	Opening time of the lock	«0» «8»	---	---
9	Talk duration	«0» «9»	---	---
10	Ring duration	«1» «0»	---	---
11	Ring volume	«1» «1»	---	---
12	Include a single or shared code	«1» «2»	Enable shared code Disable shared code Enabling the in-line code Disable the in-line code	«1» «2» «3» «4»
13	Changing the general code	«1» «3»	---	---
14	Changing the code table	«1» «4»	---	---
15	Changing the code	«1» «5»	---	---
16	Notification by code or key	«1» «6»	---	---
17	Embedded Switch Test	«1» «7»	---	---
18	Subscriber Tube Test	«1» «8»	---	---
19	Setting the threshold for determining the position of the tube	«1» «9»	---	---
20	Setting the threshold for the opening of the lock button on the subscriber tube	«2» «0»	---	---

21	Recording to DS1996	«2» «1»	---	---
22	Reading from DS1996	«2» «2»	---	---
23	Changing the system key	«2» «3»	---	---
24	Master-key recording	«2» «4»	Deleting master key Recording master key	«5» «1»
25	Factory setting	«2» «5»	---	---
26	Enable network protocol	«2» «6»	---	---
27	Number of subscribers served	«2» «7»	---	---
28	Enabling the mode of reading copies of the TM2002 key	«2» «8»	---	---
29	Select the melody of the sound signal	«2» «9»	---	---

7.2 ENTER THE PROGRAMMING MODE

To enter the programming mode, you need to know a special master-code or a programmed master key.

a) Enter the programming mode using the master code.

When the call unit is in standby mode, you must press and hold any button, wait for 2 beeps, continue to hold the button until 3 beeps sound, the green keypad will flash, then dial the master code on the keypad ("123456" - factory master code), with each press accompanied by an audible signal and turning on the backlight of the keyboard. After that, if the code is entered correctly, the outdoor panel goes into the programming mode, the sign of finding in the programming mode is the green light of the keyboard.

b) Enter the programming mode using the master key.

When the call unit is in standby mode, you must press and hold any button, wait for 2 beeps, continue to hold the button until 3 beeps sound, the green keypad will flash, then type "0" 0, 0, 0, 0. Then attach the master key to the reader. After the identification of the master key, the programming mode is entered.

7.3 DESCRIPTION OF THE SECTIONS OF THE PROGRAMMING MODE

(On the right side, in the description of the sections of the programming mode, there is an image of the keyboard backlight when entering this section.)

Chapter №1 Set the offset of subscribers.

Used to set the offset of subscriber numbers if the number range exceeds the maximum value of the subscribers served. This parameter must be set if the doorphone will be used in the network. After entering the section, you need to dial the three-digit number of the first subscriber.

