

ReCT-3A

For alarm systems

User's Manual

1. General description

ReCT-3A can function in different ways, depending on the application. It can be connected to a simple telephone set or the trunk port of a PBX in order to make and receive calls through a GSM network. If it is connected to a PTT line it can drive out through GSM only the calls to mobile phone, while all the other calls are driven out through the PTT line.

2. Installation

2.1 SIM card insertion

Using a normal mobile phone, we disable the PIN from the SIM card. At the bottom of the ReCT-3A, we slide the transparent lid, in order to reveal the socket of the SIM card. Then we slide the black cover of the socket a bit (arrow: OPEN), we open it, we put the SIM in its position, we close the black cover, we slide it a bit (arrow: LOCK), and finally we slide the lid at its original position.

2.2 Connections

You can see the way to connect the power supply in Figure 1. You connect PHONE to the telephone set, the trunk port of a PBX or the alarm dialer. You optionally connect LINE to the PTT line.

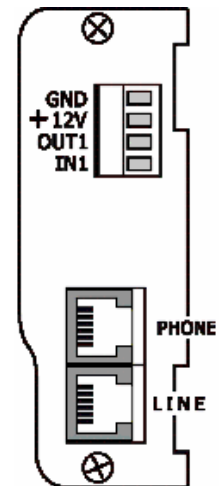


Figure 1: ReCT-3A connections

3. Programming

Depending on the use, ReCT-3A might need the appropriate programming. This is done with a telephone set connected to 'PHONE' input, by giving the command:

#XX*YYYYYY#, where XX is the command code and YYYYYYYY the data.

First we will describe the programming commands, grouped according to function, and then we will show how the programming is done by using the above methods.

3.1 Locking / unlocking of the programming

The programming by telephone or SMS is password protected and the relative commands are:

#10*1111# To unlock the programming. 1111 is the default password, which we can change with the next command.

#09*3456# To define a new password. The new password in the example is 3456.

#08*# To lock the programming.

3.2 Call operation settings

The following 4 operation modes define how the ReCT-3A sends the phone calls to the telephone networks.

1. When connected to a telephone set or an analog trunk slot of a PBX all the outgoing and incoming calls are driven through GSM network.
2. If a PTT line is connected (to line connector), calls to numbers starting by 6 (default) are driven out through the GSM network. All calls to other numbers are driven out by PTT network. If the PTT line is disconnected all calls are driven out through GSM network.
3. If the PTT line is connected all the calls are driven out through PTT line. If there is no PTT line connected or the line is disconnected (voltage less than 5 V) all the calls are driven out through the GSM networks. This mode is the one that is used in the majority of the alarm industry applications.
4. As mode "3", with the addition that if the IN1 input is grounded (0V), then the LINE connection is ignored and all the calls are driven out through the GSM network. In addition, the OUT1 output is going to 0V when the PTT line is disconnected (voltage on AB less than 5V). In this case, if we don't want an SMS sending with the grounding of input 3, we have to define it, by putting "0" at the "A" position of the commands 11 to 14. (see par 2.3.1)

Important Note : When the connected phone is OFF HOOK (doing either a GSM or PTT line call) any incoming call from the other network will be not signaled to the phone user and the call will be lost.

3.2.1 Operation mode setting

For the setting of the 4 above modes, the command is:

#01*X# where X is 1 to 4, depending on the mode we choose

3.2.2 Defining first digits for mobile phones (mode-2)

In mode 2, the calls to GSM numbers (mobile phones) go out through GSM network while the rest of the calls are driven through the PTT line. Numbers starting by 6 are by default mobile phones. In detail, we can define up to 4 "first digits", so that the call numbers starting with any of these 4 digits are driven out directly from the GSM network. The relative command is:

#02*XXXX# where X,X,X,X are the "first digits"

For example, with the command: **#02*64*6#** all the numbers starting from 6, 4 or * will be called through the GSM network

3.2.3 Changing the dial tone

With the following command we can change the dial tone we hear when we pick up the receiver and the connection is to GSM network.

#07*X# X=1 for normal dial tone.
 X=2 for continuous dial tone.
 X=3 for fast dial tone.

3.3 Programming by tone telephone set connected to the 'phone' jack

- We go OFF HOOK, wait for dial tone.
- We unlock programming by dialing **# 10* 4-digit password #**. The default password is 1111.
- We hear a continuous tone (confirmation that the command has been accepted). If we hear a fast cutting tone (beep-beep-beep...), it means that there is a mistake in the programming and the command is not accepted (maybe the password is not the right one). We have to repeat the procedure.
- We go ON HOOK and we are ready to start the programming, following the relative instructions (par. 2).
- We go OFF HOOK. We don't dial the password again, but we program directly the command we want (par 2). We hear the continuous confirmation tone, we go ON HOOK, we go OFF HOOK for the next command etc.
- In the end we dial: **#08*#** in order to lock the programming procedure.

In case of power failure during the programming, the programming locking is activated automatically. So, in order to continue, we have to dial the password command again.

By telephone, we cannot program commands which have letters in their data, like commands 25 to 36.

4. Operation

4.1 Operation test

With the SIM in its position (disabled PIN), the antenna connected, and a tone telephone set connected on the PHONE connector, we do not connect PTT line. We connect the power to the unit.

After about 30 sec, the green LED "CONNECT" must flash shortly every 2 secs (it means that the module is in standby mode) and the red LED shows the strength of the GSM signal (max 6 flashings in a row and again and again).

We go OFF HOOK on the telephone. We hear the dial tone and make a trial call.

4.2 LED indications

The 3 existing LED on ReCT-3 indicate the following :

The GREEN LED (CONNECT)

- It is flashing shortly every 2 secs. It shows that the GSM module is connected with the GSM network.

The YELLOW LED (ACTIVITY)

- It is ON if the unit is at standby and PTT line is connected.
- It is OFF if the unit is stand by and PTT line is not connected.
- It is flashing slowly when an outgoing GSM dialling is in progress.
- It is flashing fast, when an SMS sending is in progress.
- It is flashing "beep – beep" when a SMS is receiving.
- It is flashing "beeeeeep – beep" when an autotest call is in progress.

The RED LED (STATUS)

- It is flashing slowly when the operation begins (after power ON).
- It is flashing "Beeeeeeep – beep" when a problem in SIM card is found.
- It shows the GSM signal strength, flashing from 1 to up 6 times every 4 secs. (6 flashings = strongest signal).

The flashings are:

Slow 1 pulse every 4 secs.

Fast 1 pulse every 1 sec.

Beep - beep 2 short close pulses every 4 secs.

Beeeeep - beep 1 long and 1 short pulse every 4 secs.