

COMER ID.
(Access Control Through GSM)

User's Guide



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Introduction:

Comer ID. Is a high security device to be used instead of traditional "Remote controllers" for access control purposes. It uses GSM for data transfer and Mobile phones as remote controller.

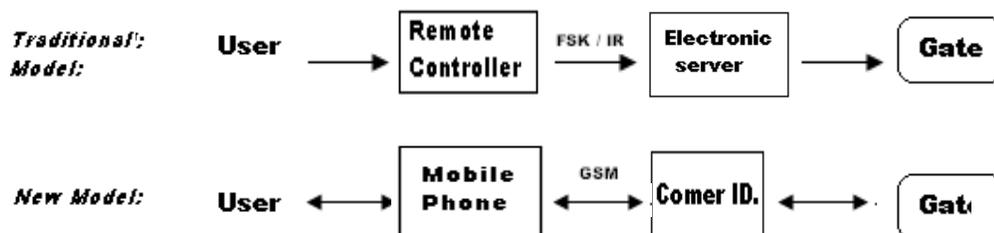
An example is "Automatic Gates" which usually use FSK or IR remote controller for gate open/close commands.

Our model DAH_10MB can easily be installed on all types of automatic gates and perform following operations:

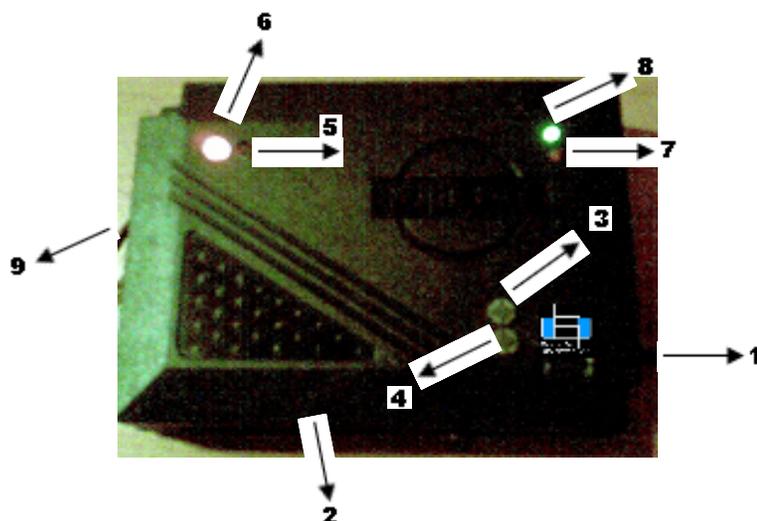
- _Process open/close commands issued from users mobile phones.
- _Perform Identification of users and control the gate subsequently.
- _Full programmable for Add/Drop new users (SMS & PC programmable).
- _Store transit information (ID , Date , Time up to 500 records).
- _Reporting transit info to system manager (Real time & offline).
- _Detect intruder activity and report.
- _Manual access operation with high security passwords.

Obviously, none of these features are supported by traditional remote controllers. Another disadvantage of existing remote controllers is that they can be copied easily nowadays(specially for non code-rolling or freq-hopping models).

High cost of large qty of remote controllers in big complex's is another motivation toward using a more reliable and low cost system which are all integrated into Comer-ID.



System Elements:



Power supply + 12VDC	.....	1..... جک تغذیه..
Antenna GSM Band I,II	.....	2.....
Programming push Button(C-Models)	.....	3. کلید برنامه ریزی..
Reset push Button	.....	4..... کلید ریست..
Programming indicator LED	.....	5. نمایشگر برنامه ریزی..
Transition LED	.....	6..... نمایشگر عبور..
RF Signal Indicator	.....	7..... نمایشگر سیگنال..
Operation LED	.....	8..... کرد عادی..
Command Line	.....	9..... کانکتور فرمان..

Technical spec

Power	350mA , 12VDC
RF Interface	3GPPTS100907
Commands	6 fail & safe
Learning	Full SMS & PC support
Storage	up to 500 Records
Retention	More than 100 years

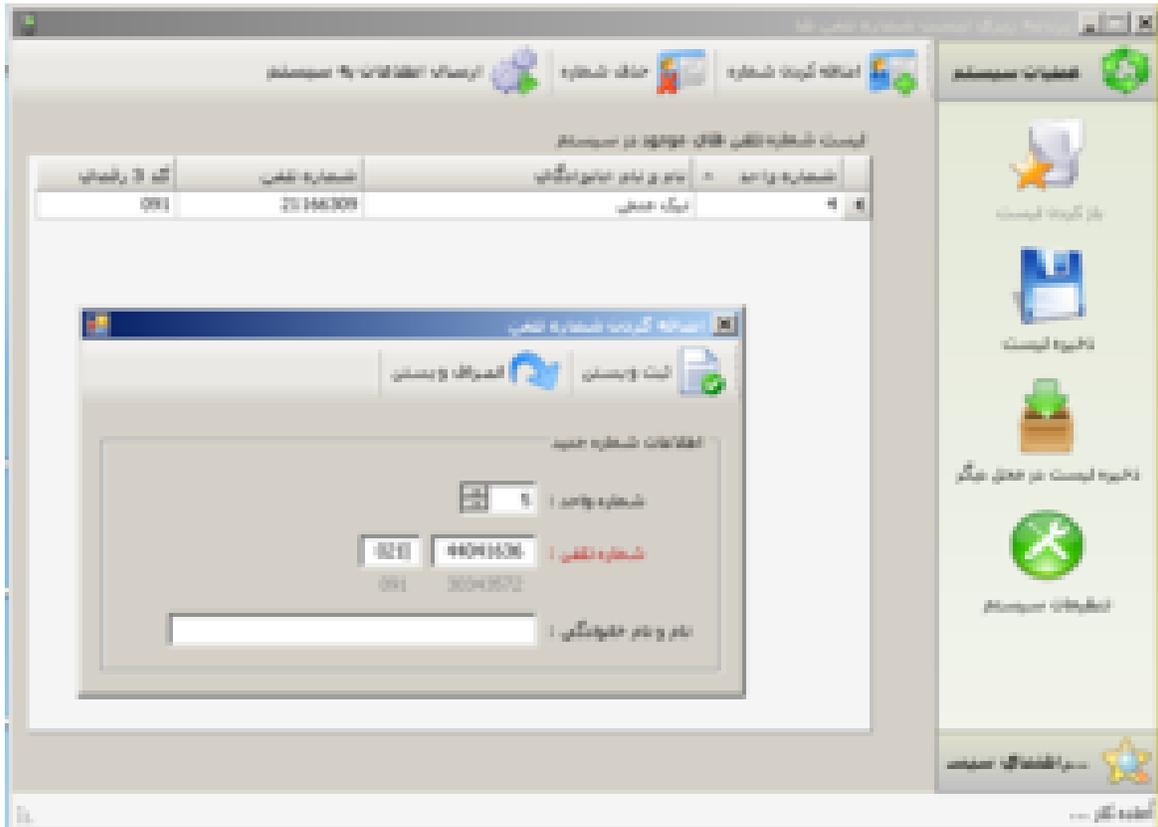
Programming Guide

After system installation(Refer to installation manual) ,it should be programmed for proper operation.This programming should be done by system manager and can be accomplished in two ways:

- _ In PC based models, the Programming is done by PC & G.Access S/W.
- _In SMS based models, the programming is done by SMS instructions.

Programming in C-Models (PC Based)

You should first install G.Access software on your PC (The CD is inside purchased package). Run the application and in the window shown below, add or delete phone numbers of as many users you wish. Save the final config and connect the Comer ID to serial port of PC using special cable provided in the package. Then click on "Data transfer " Menu. The transfer would start and if successful , you will see a report of transferred subscribers. Then you should detach the device and install it on the gate.



For detailed information about programming in C-Models, please refer to “HELP” Menu in the software.

Programming in S-Models (SMS Based)

In S-Models, Instructions with special format is sent via test message to the system. These instruction should be sent by system manager who knows the system password. A fresh device usually contains no data inside. This is the responsibility of system manager to : Add users phone list, adjust date & time, set reporting mode, assign a new password and so on.

The generic format of instructions is as below:

“z ,Instruction group, sys password, parameters, z”

If this format is followed, system will execute the instruction, and if it is violated and error indication would appear on “Prog LED”.

Also, following a correct instruction sent, a confirmation SMS would bounce from Comer ID to system manager including the parameters set after command execution. Please note that “ and , are symbolic in the above format and the not include any “ or , .

Changing system password:(t command)

A factory set password is "0000" with a new device. The first thing a system manager would proceed to do should be changing this PW.

For changing the password, send below SMS to Comer ID.

"z,t,0000, New four digit PW, Repeat New PW,#, #, z"

Example1:

To set a new PW like 2012 , send below SMS:

zt000020122012##z

consider that letters are "Lower case".

After successful execution of command , below confirmation SMS would reach to system manager:

Confirmation: "New password is set"

Note: System manager should keep the new Password in a safe and reachable place. There is no way to retrieve a forgotten password but to send the device for factory to flash it.

Adding new users: (+ command)

In order to give people, permission for passing through the gate , you should add their phone number into "allowed list" of device. Below SMS will perform such task for you:

"z,+,Four digit pw,Phone numbers in 10 digits,z"

Note1: within each SMS , you can add up to 10 numbers.If more than 10 numbers must be added in a time , please send separate messages.

Note2: Adding large qty of phone numbers, happens only in the first usage .It is reasonable to save this SMS in a safe place in your mobile phone so that you may use it in future without Re-typing all numbers.

Note3 : Only last 10 digits of phone numbers must be entered. For countries with less than 10 digits in numbers, you may add enough digits from (area code) and (country code) until the total qty of digits become 10.

Example2:

If we want to add four subscribers with phone numbers as below , we compose as SMS as shown later:

User1: 09121166309

User2:44041636

User3:6447644

User4:8336309

Compose: z+20129121166309214404163697264476445148336309z

You may consider that user 1 , has extra digit , so we drop it's first zero, and users 2&3&4 all have less than 10 digits, so we have added their area codes at the beginning(Tehran 21 , Texas 972 and Montreal 514).

After successful transmission of phone number , a confirmation message would come back from device to system manager: " New user(s) added successfully"

Important Note***: Comer ID. Recognizes system manager as the first phone number in the user's list. Therefore always put the Manager's phone in the heading of list. In the example above, User1 becomes the system manager.

Deleting a user from access list: (- Command)

In some circumstances, the System manager may decide to restrict access of some users. This might be due to : a user is moved, access period is expired, not paid bills, sanctions! , or any other reason.

Below SMS , deletes only one user at a time:

"z, - , Four digit PW , 10 digit number to be deleted , z "

Note1: Only one user can be deleted in each SMS.

Note2: Be careful not to delete the system manager.

Note3: If you want to delete all users, you should compose below :^ ^

z-201277777777z

Example3: To delete user 2 from the list of previous example, we send:

z-20122144041636z

Important Note**: If you want to change system manager, the only way is to first delete all users and then add new list of users with first number as for manager. Also consider that system password should be told to new manager by the former one.

After successful deletion of users , a confirmation will appear on manager phone:

“User(s) deleted successfully”.

Requesting User’s list: (r command)

Only system manager can ask the system to send him a list of allowed users.He should compose an SMS as below:

“z,r,four digit PW , rrrrrrrrr,z

Note: The report would come in list of 10 users in each SMS separately.

Example4: If we need the list of users in example2 , we compose below sms:

zr2012rrrrrrrrrrz and the response of system will be like below sms:

List of Users:

9121166309-

2144041636-

9726447644-

5148336309-

Requesting transit records (k Command)

Records are stored in non-volatile memory of Comer ID for up to 500 transits(Depending on system model this number is changed). These records can be retrieved at any time upon request of manager. Generally there are two ways for observing the information of transits.One is “Real_Time reporting” and the other one is “Window reporting”

Real Time reporting (L Command)

Manager can invoke instant reporting by sending below SMS to Comer ID

“z,l,four digit pw,lllllllllz”

Upon receiving this command, Comer ID starts to report each transit instantly just after the user proceeds to transit. The information comes in an sms containing the phone number, time and date. The format of received SMS is like:

"This user is in transit (9121166309 ,08/19, 21:35)

Note1: Only use this mode, when you are expecting a particular user to pass the gate.

Note2: This mode is not the default one, so you should activate it any time you need and don't forget to deactivate then after .

Deactivating Real_Time Reporting(h command)

For de_activating Real_Time reporting , manager should send below SMS to device:

"z,h,four digit pw,hhhhhhhhhh,z"

Following the commands of activation and de_activation of Real_Time reporting , a confirmation bounces back from device as below:

"Real_Time reporting activated" & "Real_Time reporting de_activated"

Window Reporting (K Command)

Manager can always request the device to send him an specified number of the past transit reports. To do this , he should send an sms containing the number of needed transits:

"z,k,four digit pw,nnnnnnnnnn,z"

In which n stands for one fifth of required number of transits(i.e. n=1 for 5 transits and n=3 for 15 transits)

Important Note: When you ask for certain number of transit records, the device should retrieve information from memory, thus it takes few seconds to respond,during this period, LED#6 is blinking red & blue and you should avoid issuing new commands during this period.

Example5: For users in example2 , we need the latest five transits information. We should compose: zk2012111111111z and send it to Comer ID. The response will be:

(5148336309, 11/28,10:43)

(9121166309,11/28,11:15)

(5148336309,11/28,16:40)

(9726447644,11/28,23:51)

(2144041636,11/29,02:08)

Adjusting Date and Time(C Command)

In order to read reports with exact time and date , manager should adjust the systems date & time for the first time of usage:

The sms for date & time adjusting would read like:

"z,c,four digit pw,mm/dd,hh:mm,z"

*mm : Month in two digit format (03 for march ,...)

*dd: Day

*hh:Hour (in 24 hours format)

*mm: Minute

Example6: It is fourth of july , at 12:47 that manager decides to adjust system's date & time, he should compose : zc201207/0412:47z and send it for device. The confirmation message comes from device as :

"_Date and Time adjusted , Date:07/04 , Time:12:47"

Note: There is no provision of back up battery for RTC in this device, so after the power is disconnected , you should always re_adjust time & date after power resumes.

Checking the Credit available on SIM card(S Command)

The credit on SIM card is never reduced during normal operation of device(Normal open/close sequences). But when system manager decides to change a setting on device (i.e Time adjust, Reporting,...) , that incurs some sms charges. As a rough approximation the initial charge on device is sufficient for 5 years of operation based on one setting or reporting done per week.Anyhow , if manager wants to know the current charging on device , he should compose:

"z,s,four digit pw,sssssssss,z"

The response would be : "Available charge is : ..."

Increase the charge on SIM Card (a Command)

To recharge the sim card , manager should obtain a valid pay as you go charge card and compose following :

"z,a,four digit pw,16digit charge card number,##,##,##,z"

The new charge on device will be reported to manager upon successful re-charging.

Introducing manual access password (d Command)

If due to any reason , a user can not access through the gate using his/her mobile phone, then there is a provision of "Manual access key's" on top side of Comer ID, by pressing on which , users can easily pass through the gate.The user should only enter the special password.

This password is a sequential color-count coding, and it means pressing the key's should be implemented in color sequence and counted as predefined values for each key.

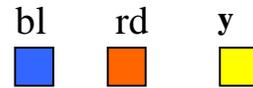
To set these predefined values, manager should compose:

"z,d,four digit pw,bl=n1,rd=n2,y=n3,z"

Bl=n1 , means n1 times pressing blue key.

Rd=n2, means n2 time pressing red key.

Y=n3,means n3 time pressing yellow key.



Note : n1, n2 , n3 are integers less than 10.

Example 7: the manual access password is : by pressing 3 times blue, 2 times red and one time yellow , what is the sms that should be sent to Comer ID.?

Answer:

Zd2012bl=3 rd=2y=1z

A confirmation comes from device upon successful setting of password :

"Manual access code is set as : bl=n1,rd=n2,y=n3"

Operation guide:

After all settings are programmed into the device , for open/close commands , users should just make a call to the device. Upon the first ring , the gate will be opened and by disconnecting the call , the gate will be closed.This is the round trip command.

For single trip command (Only open and stay opened) , user should hang up just before second ring is heard. In this way the gate doest not close upon disconnection and stays opened. Now for closing the gate (Single trip) , user should again establish a single ring call.

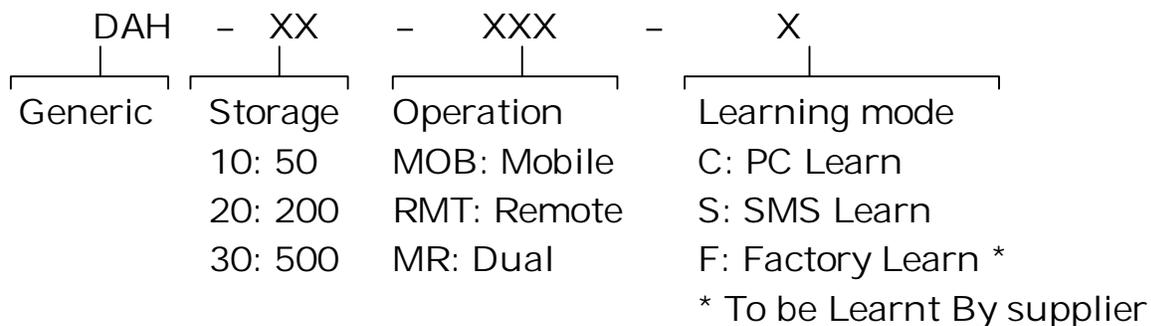
LED's Interpretation

Power on	8 Contant ON
Warm up	7 rapid Blinking (Integrity check)
Self memory check	5 flashes five times
System ready to use	8 constant on, 7 flashes every three seconds, 5 & 6 off.
Gate is in transit	6 , blinks red & blue
Storing transit info	6 & 5 pulse once
Message received correctly	5 , pulses once for 2 seconds
Message received but format is wrong	5 , blinks 4 times
Confirmation is sent to manager	5, pulses once for 1 second.
Collecting transit records from memory to report	6 flashes red & blue for some times until info is ready

General Notes:

1. In this system , identification is done based on user's phone number which is a unique and singular tag. Therefore , the security level is amongst highest available in arena.
2. If a user passes through multiple gates in a day (Office, home , ...) , he can use the same ID for all of them , thus reducing couple of traditional remote controllers.
- 3.Distance between user and gate is not important in this system, thus in emergencies , users can operate the gate from any location.
- 4.In "MR" models , the operation is based on both traditional remotes and mobile phone.
- 5.Since the transit records are stored on this system, all users should be notified by system manager before deployment. (To comply with privacy rights) .

ORDERING INFORMATION



Package Contents

- Controller unit (1)
- Adaptor (1)
- Helical Antenna(1)
- Op & Maint Booklet (1)
- G.ACCESS CD (1)*
- Transfer Cable (1) *
- Remote Controller(per case) **

Only C-Models *

MR and RMT Models**

Instructions Summary

Assume that system pw is :1234

Operation	SMS to be composed by manager	Example	Confirmation from device	Remarks
Adjust Date and Time	z,c,four digit pw,mm/dd,hh:mm,z	zc1234 09/14 18:05 z	Date: 9/14 Time:18:05 Date&Time is set	*The “,” are symbolic. *Skip the year in adjustment.
Add new User(s)	z,+ ,Four digit pw,Phone numbers in 10 digits,z	z+123491211663092144041636z	User(s) added successfully	*You can add up to 10 users per sms *Numbers should be in 10 digit format *Manager’s number should rank first .
Delete a user	z,- ,Four digit PW, 10 digit number to be deleted,z	z-12342144041636z	User(s) deleted successfully	Only one user can be deleted at a time.
Delete all users	Z,-,four digit pw,777777777z	z-1234 7777777z	All users are deleted.	*At least one user should be added (Manager)
Change system password	Z,t,four digit pw,new pw,new pw,##,z	zt123420122012##z	New password is set.	*Pw is changed from 1234 to 2012
Request Users list	Z,r,four digit pw,rrrrrrrrrr ,z	zr1234rrrrrrrrrrz	9121166309- 2144041636- :	*If more than 10 users are existing, separate sms will arrive for each 10 users.
Activating Real_Time reporting	Z,L,four digit pw,LLLLLLLLLL,z	zL1234LLLLLLLLLLz	Real_Time reporting activated.	*This mode is only for emergency cases *Turn it off to save credit on sim.
De_activating Real time Reporting	Z,h,four digit pw,hhhhhhhhhh,z	zh1234hhhhhhhhhzhz	Real_time reporting de_activated.	*This mode is by default
Window Reporting	Z,k,four digit pw,number of transit records,z	zk123422222222z	(9121166309,5/18 ,9:27) (9194877110,5/19 ,22:05) :	*Number is 1/5 of records needed(2 for 10 records) *Reports come in sms of 5 records each *Report comes with few seconds delay(Until info is collected from memory)
Check credit on device	Z,s,four digit pw,ssssssss,z		Remaining charge is Rls	
Re-charge the sim card	Z,a,four digit pw, 16 digit card number,####,z	Za12343456846677245026####z	New charge is: OR Card number is not correct OR You have already used this card number	
Set new manual access code	Z,d,four digit pw,count on each color key,z	Zd1234bl=2rd=3y=2	New manual access code set : blue=2, Red=3, Yellow=2	