

User Programming

User Programming is the starting point for allowing a person to operate the system.

Three special Users are pre-defined within the system.

User 00001 is known as the “INSTALLER”. The PIN code for this User is defaulted to 01 in the factory and should be changed by the Installer as soon as possible.

User 00001 has special privileges including:

- Exclusive Access to the Installer Menu.
- Access to higher level options in the Access, Times and Service Menus.
- Special options is the Test Menu.
- Remote access enabled regardless of the setting of the “Remote Access” option in the Menu Group assigned to this User’s User Type. (Installer must not be locked out by “Master” User)

User 00002 is known as the “MASTER” and is usually assigned to the owner of the system or the person responsible for security. The PIN code for this User is defaulted to 02 in the factory and should be changed by the installer or system owner/administrator as soon as possible.

Special privileges for User 00002 include:

- The ability to program/edit all other Users (except User 00001)
- Remote access enabled regardless of the setting of the “Remote Access” option in the Menu Group assigned to this User’s User Type.
- The option to lockout / enable INSTALLER access (If feature is used)

User 00003 has no defaults pre-defined and is the same as a normal User except that Remote Access will always be enabled regardless of the setting of the “Remote Access” option in the Menu Group assigned to this User’s User Type.

The procedure to reset this User Code section to the factory default is explained in more detail at the end of this chapter.

User numbering and permission to edit.

When a User’s “User Type” allows permission to change User codes (specified in the User Type’s Menu Group), the User is only allowed to change User numbers equal to, or higher than their own. (Unless User Ranks are utilised within the system).

For this reason it is recommended to plan the user numbering before programming the Users, so that the numbering will reflect the authority required. For example, a system administrator who has permission to change all User codes should be issued a very low user number (eg. 3). A Supervisor who only has permission to change the Users in their own department, should have a user number lower than all the staff in that department, but higher than any User with more authority.

CARD ONLY USERS***ACCESS 4000 ONLY*****Introduction**

All Users in the Concept 3000/4000 have the following basic features:

- Card Details
- Pin Number
- User Type

Some or all users have the following features:

- User Name
- Expiry Date
- Additional Area
- User Rank
- Extra Yes/No Options

Concept Access 4000 introduces the “Card Only User”. A card only user is identical to a normal user except that only the features below are available:

- Card Details
- User Type

A card only user is a user who only uses that access control component of the system. No terminal operation is permitted. A card only user cannot be named and has no expiry date, additional area, user rank or extra Yes/No options.

All user numbers start at 00001. Normal users with pin numbers are numbered from 00001 to a maximum of 04096. Card only users are numbered from 04097 to a maximum of 53,249.

The number of normal users, names, expiry dates and card only users depends on the memory configuration. **Card Only Users are only available in Access 4000 512k Memory configurations.** Normal Users can be configured in one “bank” with up to 4096 users. Card only users can be configured in up to six “banks”, with each bank containing up to 8192 card only users. Each bank starts and ends at a particular card number:

User	Starting User	Ending User
Normal Users	1	4096
Card Only User, Bank 1	4097	12288
Card Only User, Bank 2	12289	20480
Card Only User, Bank 3	20481	28672
Card Only User, Bank 4	28673	36864
Card Only User, Bank 5	36865	45056
Card Only User, Bank 6	45057	53249

Practical considerations will in most cases limit the maximum number of users to 10,000 to 20,000. The average search time for a 20,000 user system is approximately 300ms, depending on other tasks at the time.

Programming

Programming of card only users is identical to normal users except that certain programming screens will be unavailable such as user name.

User to
alter: U00001

This screen allows the Installer or administrator to select a specific User to alter, chosen from a possible maximum of 4000 users or, thousands more if "Card Only" Users are available and memory size and configuration allow. (Note that Card only users start at U04097). On pressing the ON key the operator is allowed to search alphabetically for the name of an existing User using the digit keys and up and down arrows.

Find User Name ^
J SMITH

User 00001 Name
J SMITH

This screen allows names to be defined for some or all Users, depending on memory configuration. Names may only be defined from User 00001 to a particular maximum. This question will not be asked if a name cannot be assigned to this User. Names are up to 16 characters long.

U00001 type ->
MANAGER

This screen allows a User Type to be selected for this User. The User Type specifies all the Security and Access attributes for this User. Pressing the right arrow key will cycle through all defined User Types. Pressing the OFF key will set the User Type for this User back to "None". Setting a User Type to None is the same as cancelling a User - all their security and access permissions will be cancelled but can be reinstated again by simply setting the User Type back to the desired type.

U00001
type: UT001

If the On key is pressed, the User Type can be selected by its number.

User 00001
PIN No. ####

This screen allows an optional PIN code to be defined for a User for use with LCD Terminals within the system. PIN codes can be between 1 and 8 digits. The User Type will determine how and when a PIN code is used and what it is allowed to do. Pressing the OFF key will clear the code. When entering a PIN number, the digits will be displayed as they are pressed but once the OK key is pressed a PIN number can only be viewed by the User who owns it.

If a duplicate PIN is entered, the PIN will not be allowed and the original owner of the PIN will be notified when they log in next that their "PIN Discovered".

CARD TYPE

U00001 Crd Typ->
Credit Card

This screen specifies the type of access Card that is going to be used by this User if an access Card is allocated. The OFF and right arrow keys are used to select the desired Card Type:

Credit Card

This Card Type is selected when Credit Cards are going to be used in swipe Readers. The Card can be entered by typing in the account number or by swiping the card.

Site Code

This Card Type selects the traditional access Card method where each Card is numbered according to the User. Cards may be swipe or Wiegand format Cards. A "Site Code" is often stored on the Card to determine if the Card will be accepted at this site.

Direct Entry

In Direct Entry mode the Card number is independent of the User and a Card offset does not need to be used. This Card Type selects a direct entry method where all Card information is saved for each User and can only be used for Wiegand and Swipe formats. The Card information can be entered at the keypad or a Card can be "scanned" at a Reader.

NOTES:

1. The format option must be correctly set in Reader Module Programming for any of the above options to work correctly.
2. "Test Cards" [MENU 4,5] may assist in determining an unknown Card Type.

The screens that follow depend on the Card type selected.

**U00001 Acct No.
(No Card)**
Credit Card Type Only

This screen allows the first 16 digits of the Credit Card account number to be directly typed in for this User. If the bottom line says "No Card" then no account number is stored for this User. If the bottom line says "***Card**" then an account number is already stored for this User. If an account number is already stored it cannot be viewed for security reasons. If a digit key or the OFF key is pushed, then any existing account number will be over-written. (Before entering your account number, press the OFF key to clear the screen).

**U00001 Waiting
for Card at R01**

If the ON key is pressed, then the credit Card can be entered by simply swiping the Card at any Reader connected to Reader Module #1 or another Reader Module, if specified in the General System options [MENU 7,5,1] "Reader for User Programming". The Card must be swiped within 10 seconds. The screen will then change to the next screen in the series.

**U00001 Acct No.
** Card ****

This screen allows Credit Card account numbers greater than 16 digits to be entered.

**U00001 Acct No.
(cont.) No Card**

The first 16 digits may be entered on the previous screen whilst this screen allows up to 8 additional digits to be entered. (Before entering the account number, press the OFF key to clear the screen. If the account number is less than 17 digits and this screen is not required, just press OK).

Site-Code Card Type Only

This screen allows any Card number to be assigned to any site-code User.

It is only necessary to alter the default Card Number displayed if the User's Card ID number is different from their User Number. It may be possible to use a Site Code Offset to align Card ID numbers with User Numbers.

It is recommended that Card ID and User Number be the same wherever possible. The default value is a Card number equal to the User Number. This number can be set to any value between 00001 and 65535. If the number is set to zero, then the default value of the User Number will be programmed. By allowing any Card number to be assigned to any User, Card numbers do not have to be in sequence. If a Card is lost, that User can be assigned another Card and still retain their User programming.

The actual Card number searched is altered if a Site-Code Offset is programmed. The Site-Code is subtracted from the Card number before the search of the Users commences.

Operation:

The sequence below shows the logic that Concept applies in determining which User to assign which Card.

- Check Card Site Code for a matching value in the Site Code table. Only search for Site Codes that are enabled.
- Check if the Site Code has an offset programmed. If so, subtract the offset value from the Card number. If the offset value is equal to the Card number, no search will take place. If the offset is greater than the Card number, the resulting Card number is equal to $- \text{offset} + 65535$.
- Search all User codes starting at U00001 for a match between the User Card number and the Card number derived above. Only search Site Code Users.
- If a match is found, check that the issue number also matches. If it does, a User has been found.

Examples

Scenario	Card IDs	User IDs	Offset	Solution
Cards are in sequence	00001 to 00100	U00001 to U00100	Not Required	No problem as User ID = Card ID
Cards are mixed	28401, 15745, 164	U00010 to U00012	Not Required	Manually enter each Card ID for each User (U00010 = Card 28401, etc)
Cards are in sequence & Card ID must be stepped down to align with User ID	28411 to 28510	U00010 to U00110	If Card ID > User ID, Offset = Card ID - Desired Card number	Programme an Offset of 28401 U00010=Card00010 (28411-28401)
Cards are in sequence & Card ID must be stepped up to align with User ID	00001 to 00100	U04097 to U04197	If Card ID < User ID, Offset = 65535 - Desired Card number *** 65535 is the max. allowable Card number ***	Programme an Offset of 61438 U04097=Card04097 (65535 -61438) *** 65535 is the max. allowable Card number ***

User 00001
Issue No: 000

This screen allows an optional Issue number to be assigned for this User if the Cards used support Issue numbers. Setting the Issue number to 000 will allow any Issue number to be accepted. (If the Card used does not support Issue numbers then set the Issue number to 000). Only the manufacturer's Magnetic Swipe Cards currently support issue numbers.

**U00001 Raw Card
Data: 0000000000**

Direct Entry Card Type only

This screen allows Raw Card data to be entered for Wiegand format Cards that are going to be read directly with no site-codes. The data must be entered in the Hex format.

**U00001 Waiting
for Card**

ALTERNATIVELY: If the ON key is pressed, the Card can be entered by simply presenting the Card at any Reader connected to Reader Module #1 or another Reader Module, if specified in the General System options [MENU 7,5,1] "Reader for User Programming". The Card must be swiped within 10 seconds. The screen will then change to the next screen in the series.

**U00001 Raw Card
Data: dddddddddd**

where dddddddddd is the Card data as read.

Expiry Dates and User Ranks

User Expiry Dates allow an optional date and time to be chosen for each User after which Card or PIN access will be denied. User Ranks allow a method to control who can change which User codes.

Memory Configurations allow for Users with Names only, or a combination of Users with Names and Card Only Users. Only Users with Names can have expiry dates.

NOTE: Do not set an expiry date for User01 or User02 unless it is specifically required.

Users with Names

Users with Names utilise more of the system's Memory and so allow for the inclusion of a smaller number of Users (Up to 4,000). A larger amount of detailed information may be recorded against each User and a greater degree of control is possible for Users with Names. This includes options to set Expiry Dates and User Ranks.

Card Only Users

Only a relatively small amount of information is recorded against Card Only Users. In addition, only limited programming options are available for these Users. The advantage of including such users is that the system can accommodate a large numbers of Card Only Users (Up to 65,000). Card Only Users will be discussed in more detail towards the end of this chapter but the point to note at this stage is that Expiry Dates and User Ranks are not available for these users.

Combination of Users with Names and Card Only Users

Configuration Options allow for the combination of Users with Names and Card Only Users. One such combination would be 500 Users with Names and up to 24,576 Card Only Users. In this case, only the Users with Names would be able to utilise Expiry Date and User Rank programming options.

Expiry Dates

User Expiry Dates are programmed in User Codes (MENU 2,1).

**U00005 Expires:
00/00/88 - :**

This screen shows the expiry date in the format "day/month/year-hour:minute". If the year is set to 88 (1988), which is the default setting when the memory is cleared, the Expiry Date will be ignored for this user. Pressing the OFF key will clear all fields.

U00005 Expires:
/ / - :

When all fields are cleared, the Expiry Date will also be ignored.

To set up an Expiry Date, begin by pressing the OFF button to clear all the fields. Then only fill in those sections of the date and time fields which you wish to use to validate the User's Card or PIN when it is presented.

If any field is left blank, that field will be ignored.

Example

00/00/88-00:00	Ignore expiry date
/ / - :	Ignore expiry date
/ /99 :	User Card or PIN will not work if the year is 1999 or higher.
12/ / - :	User Card or PIN will not work in any month where the date is the 12th or higher
/ / -12:	User Card or PIN will not work past 12:00PM on any day.
03/09/99-12:00	User Card or PIN will not work past 12:00PM on 3rd September, 1999.

User Ranks

When Users are given permission to change User Codes via either their User Type or Menu Group, they are only allowed to change User number equal to, or higher than, their own. For example, if User 567 has permission to change codes he/she can change code 567, 568, 569 and so on. Furthermore, when a User has permission to change User codes he can select any User Type for that code, even one that gives that code more authority than their own User Type. For these reasons the number of people who are given authority to change codes is normally restricted.

The User Rank system is designed to provide better security when it is desirable to give groups of people the authority to change codes. Each User in the system can be assigned a rank. The rank is a list of 8 yes/no flags which determine the "rank" of the User.

U00005 12345678
Rank: nnnnnnnn

This User has no ranks enabled.

U00005 12345678
Rank: Ynnnnnnn

This User has rank 1 enabled.

U00005 12345678
Rank: nnnnnnYn

This User has rank 7 enabled.

U00005 12345678
Rank: YnYnnnnn

This User has rank 1 and rank 3 enabled.

U00005 12345678
Rank: YYYYYYYY

This User has all 8 ranks enabled.

NOTE:

It is very important that you understand how user ranks are programmed and how they operate before attempting to incorporate the facility into your system. It is advised to plan your user rank programming carefully before entering the data. Read the following information for more details of user rank operation.

User Rank Permissions

The 3000 system applies the following rules to validate the extent to which a User, who has general permission to alter Users, can actually make changes or additions to Users.

A Normal User is any User above User 00002. User 00001 (Installer) and User 00002 (Master) are special Users with special privileges.

User logged on with User alter permission.	Users allowed to alter.
User 00001 with "O" security option set to "n"	-All Users
User 00001 with "O" security option set to "Y"	-Only User 00001
User 00002	-All Users except User 00001
Normal User with no rank screen	-Any User above and including their own
Normal User with no ranks enabled	-Any User with no rank screen -Any User with no ranks enabled and above and including their own
Normal User with some ranks enabled	-Any User with no rank screen -Any user that has any matching rank set to yes except User 00001 or user 00002

When a normal User is altering a User Rank screen for another user, they cannot set any ranks to "Yes" unless the corresponding rank for themselves is also set to "Yes". A normal User can always set a User Rank to "no". User 00001 and User 00002 can set or clear ranks for any User.

Example using ranks

Starting with a defaulted system with no ranks enabled, only the master or installer can set any ranks to yes. The master code sets up the following Users to alter other Users as follows:

User	User Rank
U00069	Ynnnnnnn
U00516	nYnnnnnn
U01345	YYnnnnnn

The master code also sets up the following User Types:

User Type	User Type Rank
User Type only to be used by U00069	Ynnnnnnn
User Type only to be used by U00516	nYnnnnnn
User Type to be used by any User	YYnnnnnn

In the above example U00069 or U00516 can define a code from a “pool” of available Users who have no ranks enabled. When they define a User code they set the rank to the same as their own rank so that User becomes “Their User”. They can release a User back to the “pool” by disabling all ranks for that User. U00069 can only modify Users with rank 1 set. U00516 can only modify Users with rank 2 set. U01345 can define or modify Users of either rank.

When choosing User Types for a User, U00069 can choose User Types with rank 1 set, whilst U00516 can only choose User Types with rank 2 set. This way, Users cannot choose User Types that give them more options than their own.

U00001 NDLEG...
Options nnnnnnnn

This screen specifies various options for the User.

N	No Message Ack.	When set to Yes, if an alarm message is being displayed at a Terminal that the User is logging into, they will not be allowed to acknowledge the alarm message with the “OK” key, even if they have OFF control of the Area in which the alarm occurred. This option can be used to keep the User interface simple for specified Users.
D	Duress Code	When set to Yes, this PIN code will trigger a “Keypad Duress” System Input (Txx:S05) any time it is entered at a keypad. This allows the programmer total flexibility on how duress codes will work in the system. NOTES: If set to Yes, It is recommended to set the “No Greeting” option below to Yes also. This prevents the User name from being displayed when logging on. Alternatively program a generic name such as “Staff” that will <u>not</u> identify the PIN code as a Duress Code.
L	Area List Default	When set to Yes, this option will cause the Area List selection to automatically appear on the LCD Terminal on PIN code entry. This option would be provided for Users who were more likely to operate Area ON/OFF functions using Area Lists, rather than individual Area selection. Note: When a User is selecting an Area List to Control, any Area List can be selected, however, only Areas that are common to the Area List selected <u>and</u> the User Type’s On List (If turning the Area List On) or Off List (If turning the Area List Off) will be controlled.
E	Extra Area Off	When set to Yes, this option will cause the Area specified as the User’s “Extra Area” to automatically turn off when the User accesses a Door via a Reader that has been programmed to “Turn Off Extra Area”. Alternatively, if a Reader Arming mode is set to “Extra Area if Zone 8”, the User’s “Extra Area” will turn On if Zone 8 on the Reader Module is unsealed when the User accesses the Door. (See “Extra Areas” below)
G	No Greeting	When set to “Y”, this option disables the Greeting screen for this User. When the User logs on at the Terminal, the display will go straight to the Area status screen.

U00001 Ex.Area->
FOYER

This screen allows an optional “Extra Area” to be allocated to a User. (Only available on Users with names or expiry dates). When an Extra Area is allocated to the User, it appears as though the Area is in the Area ON and Area OFF Lists allocated to their User Type.

Extra Areas

This option is very useful in systems with large numbers of Area, where the majority of Users are only allowed to control a single Area. Instead of programming many Area Lists, each with only one Area assigned, it is easier to simply allocate an Area directly to the User, using the Extra Area option.

eg. In a shopping centre that contains 100 different shops, the shop owners and staff are only allowed control of Area protecting their own shop. Using the Extra Area option, simply assign the relevant shop Area to each User. If a common Mall Area and secured car-park was to be controlled by all shop owners, then these Areas could be placed in an Area List, and this List assigned to the “Shop Owners” User Type. In this example, only one Area List need be programmed (for the common Areas).

Two options are available by which to default User Code Programming to factory settings. These are explained below:

User to
alter: U00001

At the first User Code Programming screen press HELP, “9”.

User Defaults ->
Don't Default

This screen is then displayed. Available defaulting options are viewed by pressing the right Arrow Key. To make a selection, press the OK Key.

Selecting this option will abort the procedure.

Selecting this option will reset the first two users as follows:

Don't Default	U00001	INSTALLER	PIN = 01	Type = UT001
Clear All	U00002	MASTER	PIN = 02	Type = UT001

In addition, this option will delete all other User Codes, if present.

Selecting this option will reset the first two users as follows:

Standard	U00001	INSTALLER	PIN = 01	Type = UT001
	U00002	MASTER	PIN = 02	Type = UT001

This option will make no alterations to any other User Codes, if present.

Push '9' key to
Confirm Default

The confirmation screen is displayed. Press the “9” Key to confirm your selection.

Default
Done

The default procedure is confirmed.