Installation guide
Bewacard 93
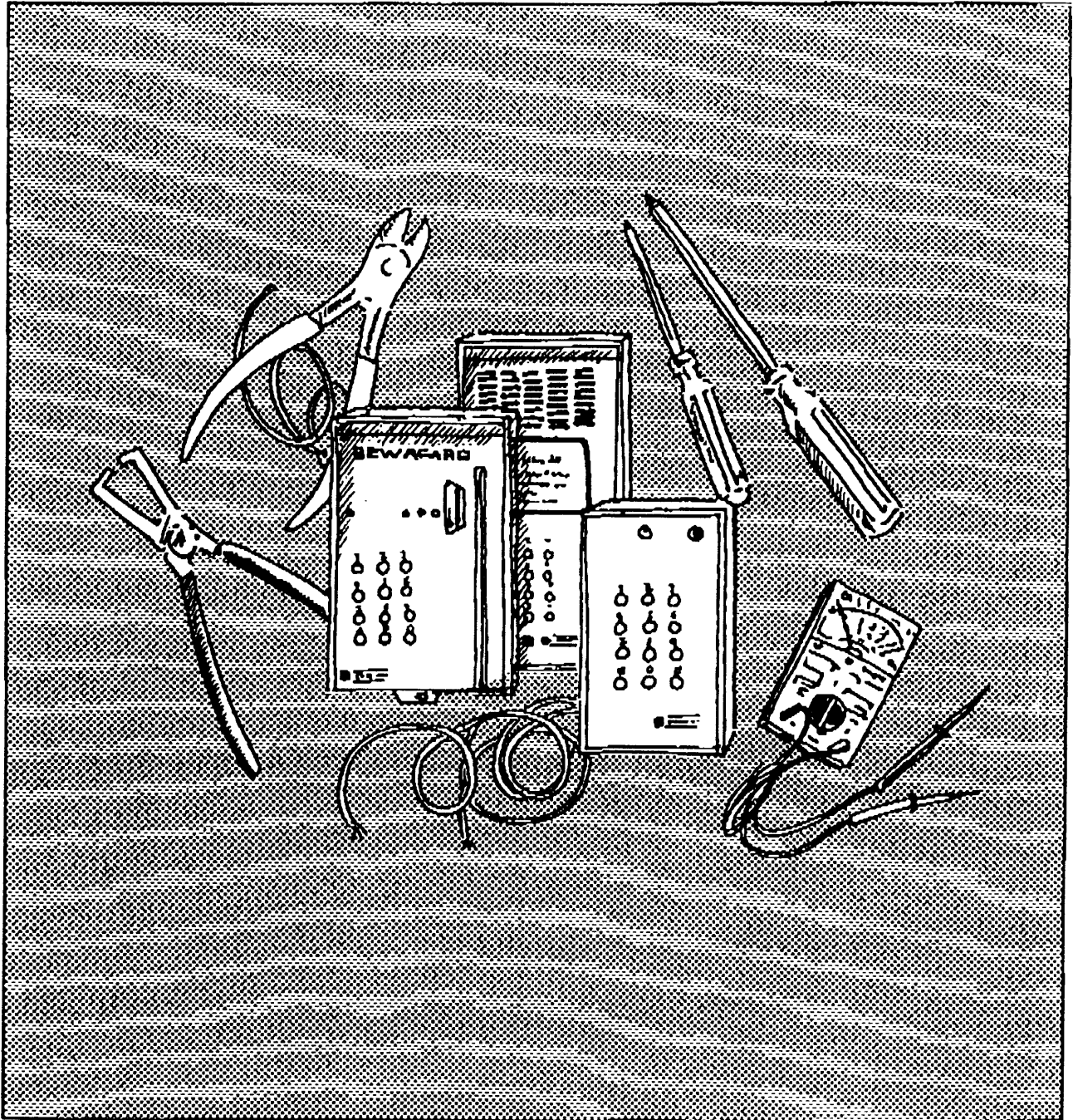
::: BEWATOR

For details of connection of DT 20 proximity reader, see separate connection instructions supplied with the DT 20 unit.

6 System start-up

During the start-up of a security system, it is important to acquaint those who actually will be using the system with its operations and facilities. It therefore follows that it is also important that you should, during preparation of any tender for access control systems, set aside time for start-up and training. Do not hesitate to contact Bewator for any help or advice you may need. Documentation for the system, together with details of its layout should be left with the customer.

7 Technical data

- Lock activating time: Individually adjustable for both locks, 1 – 45 seconds.
- Power supply: 12 V DC or 24 V DC.
- Power consumption: 100 mA standby, 200 mA with both relays activated.
- Maximum load via relay contacts: 1 A, 28 V DC.
- Ambient temperature range: 0°C–40°C.
- Dimensions: 140 x 200 x 60 mm (H x W x D)
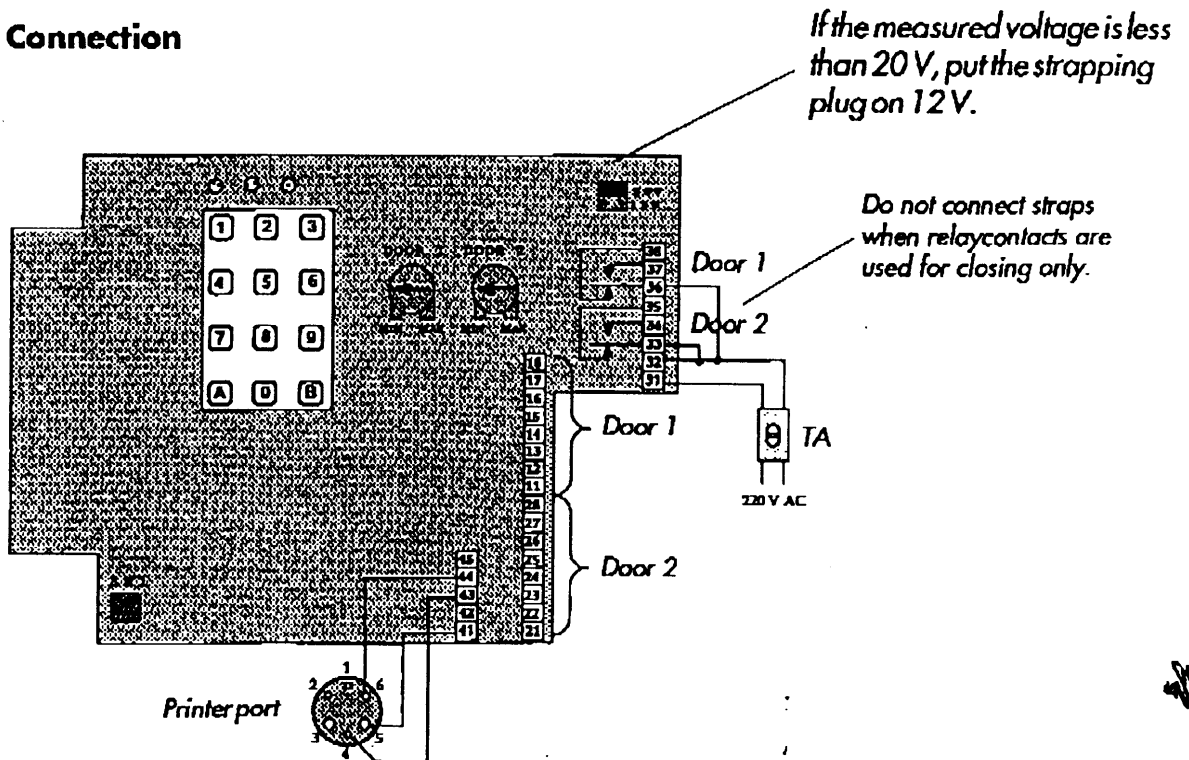
5 Installation

Location and installation

The Bewacard 93 control unit is designed for wall mounting in dry, heated indoor areas (ambient temperature range 0°C to +40°C). It should also be possible to lock the area, so that only the person responsible for the system has access. BC 12 or BC 15 magnetic card readers, or DT 20 proximity readers, are connected to the control unit for control of a maximum of 2 doors.

Data transfer between control unit and readers may be sensitive to interference, particularly over long distances. To evade the risk of interference problems, the following precautions should always be taken:
* Route the cable to avoid possible sources of interference as far as possible, i.e. at no less than 10-20 cm from cable serving power lines carrying 220 V and above. Maintain the same distance from cables to contactors, etc.
* Use screened cable (such as ELAKY 5 x 2 x 0.6), and restrict cable length to 100 metres.
* Earth the cable screen via the power supply to the control unit.
* Use six-conductor screened cable between the terminal box and the reader head. Join both screens wired into the terminal box using the supplied top joint, so that the screen between reader head and terminal box is also earthed (see Figure *Connection of reader head*, next page).

Install the supplied printer port on to the unit, as illustrated in the Figure below.

Connection

If the measured voltage is less than 20 V, put the strapping plug on 12 V.

Do not connect straps when relay contacts are used for closing only.

The card readers are connected to the relevant ports (doors 1 and 2), as shown in the Figure overleaf.

All pre-programmed days are cleared, all at once,
as follows:

1 Set control unit in programming mode (see page 7).

A52   2 Enter A52.

2186   3 Enter code 2186.

B   4 Press B.

4.9 Clear memory

This function is used to clear all information held in the card reader memory. The timer and programming code are not affected. Follow these steps:

1 Open the control unit using the key.

SW1   2 Press SW1 (see Figure, page 6).

112186   3 Enter code 112186. The LEDs will flash three times to confirm that memory has been cleared.

DECEMBER
24
SUNDAY

Pre-program single public holidays

You can pre-program for the whole year, but remember if you do not re-program at the end of the year, the same settings will apply to the following year. For example, don't forget that Easter and certain other public holidays changes from year to year!

LED status:

Pre-program and change public holidays and half-days

1	Set control unit in programming mode (see page 7).	⊛⊛⊛
A **5** **1** 2	Enter A51.	○○⊛
●●●● 3	Enter date of public holiday or half-day, e.g. 24/12. Enter the digits in the order day, month, i.e. 2412.	○○⊛
● 4	Enter the type of day, e.g. 7 (8 denotes half-days).	○○⊛
5	Enter next date and repeat the same steps to program types of day for public holidays and half-days throughout the year. Finish by pressing B.	
		⊛⊛⊛

N.B.: When pre-programming half-days (type 8), don't forget that, at the time zone programming stage, you have to enter a period of time for this type of day.

Clear pre-programmed days

Single days are cleared, one at a time, as follows:

1	Set control unit in programming mode (see page 7).	⊛⊛⊛
A **5** **2** 2	Enter A52.	⊛○⊛
●●●● 3	Enter the date you want to clear, e.g. 2412 for 24 December.	
4	Enter any additional dates.	
B 5	Press B.	⊛⊛⊛

4.8 Other operations

Change programming code

LED status:

	1 Set control unit in programming mode (see page 7).	⊕ ⊕ ⊕
Ⓐ②⑦	2 Enter A27.	○ ○ ⊕
●●●●●●	3 Enter a new 6-digit programming code.	⊕ ⊕ ⊕

N.B.: Don't forget to make a note of the new programming code.

Change memory allocation

	1 Set control unit in programming mode (see page 7).	⊕ ⊕ ⊕
Ⓐ②⑥	2 Enter A26.	⊕ ⊕ ○
●	3 Enter the required memory allocation (see *Definition of terms*). Enter ❶ for 468-768, ❷ for 980-512, ❸ for 1492-256 and ❹ for 2004-0.	⊕ ⊕ ⊕

Set programming block

A one-digit security block that may be set in 2 positions:
❶ – SW1 is enabled, allowing a new programming code to be programmed in; this is the setting at delivery.
❷ – SW1 is disabled. A new programming code may only be set if you know the old one (see command A27).
N.B.: Make sure you write down the programming code.

	1 Set control unit in programming mode (see page 7).	⊕ ⊕ ⊕
Ⓐ②⑤	2 Enter A25.	⊕ ○ ⊕
●	3 Enter the required programming block.	⊕ ⊕ ⊕

4.7 Time zones

Before programming the time zones, you should print out a list of the time zones that are already being used (see Chapter 4.10, *Printout*).

At delivery, the first two time zones are pre-programmed as shown below:

A31 3 00.00–24.00   12345678   Time zone 1 — cards only, 24 hours a day, every day
A32 9 00.00–24.00   12345678   Time zone 2 — continuous printout 24 hours a day, every day

This is because it must be possible for the installer to easily check that the system is working, without first having to program time zones. The other time zones are unprogrammed. Time zones are programmed as follows:

LED status: (only for A31)

1 Set control unit in programming mode (see page 7). ⊗ ⊗ ⊗

2 Enter A31. (The '1' indicates the first time zone; the next time zone is code A32, etc., up to A38). ○ ○ ⊗

3 Enter required level of security, or ⦿ for continuous printout of all ingresses.
❶ = door unlocked, **❸** = card only. ○ ○ ⊗

4 Enter time at which security level is to begin, e.g. 08.00. ○ ○ ⊗

5 Enter time at which security level is to end, e.g. 17.00. ○ ○ ⊗

6 Enter the type or types of day to apply for the security level, as well as the times selected. ❶ = Monday, ❷ = Tuesday, ❸ = Wednesday, ❹ = Thursday, ❺ = Friday, ❻ = Saturday, ❼ = Sunday, ❼ = public holiday and ❾ = half-day (e.g. for Monday—Friday, enter 12345). ○ ○ ⊗

7 Press B. ⊗ ⊗ ⊗

Log in card/pass (whole series)

LED status:

1 Set control unit in programming mode (see page 7).

2 Enter A04.

3 Enter the eight-digit code for the first card/pass in the numerical series.

4 Enter the eight-digit code for the last card/pass in the numerical series.
The red LED will flash rapidly. (500 cards/passes take about 5 seconds to log in.)

If the red LED does not flash, the number of the first card/pass is higher than the number of the last card/pass. If all the LEDs flash, the number of cards/passes is too big for the control unit's memory.
Press B to cancel the error signal and then check the number of cards/passes.
Repeat the procedure from the beginning.

5 Log in any additional series of cards/passes.

6 Press B.

Block access for card/pass (without card)

1 Set control unit in programming mode (see page 7.)

2 Enter A16.

3 Enter the eight-digit code for the card/pass. When you finish, all the LEDs will flash to confirm that access for the card/pass has been blocked.

4 Repeat step 2 for any additional cards/passes for which you wish access to be blocked.

5 Press B.

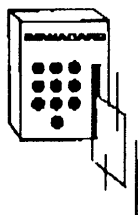If the LEDs do not flash, either the card/pass is not logged in or you entered the wrong code.

4.6 Cards/passes

LED status:

Log in card/pass (with card)

1 Set control unit in programming mode (see page 7).

    ◉ ◉ ◉

A 0 1   2 Enter A01.

    ○ ○ ◉

3 Insert card/pass in reader; if the card is accepted, the red
LED on the control unit will flash once.
After entering A01, you have about 2 minutes to insert
the first card before the unit automatically switches out of
programming mode. If the LED on the control unit does
not flash, either memory is full or the card/pass has not
been accepted.

4 Log in any additional cards following the same steps.
You have 40 seconds between each card logged in.

B   5 Press B.

    ◉ ◉ ◉

Log in card/pass (without card)

1 Set control unit in programming mode (see page 7).

    ◉ ◉ ◉

A 0 3   2 Enter A03.

    ○ ◉ ◉

●●●●●●●● 3 Enter eight-digit code for card/pass.
The yellow LED will go off each time you press a key.
When you finish logging in the card/pass, the red and
yellow LEDs will flash once to confirm the card/pass has
been logged in.
If the LED does not flash, memory is full.

4 Log in any additional cards/passes following the same
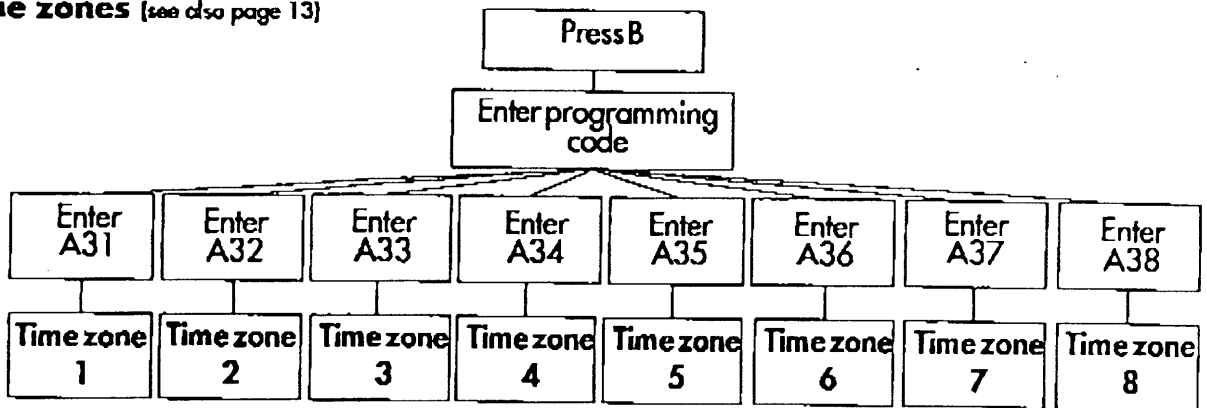steps.

B   5 Press B.

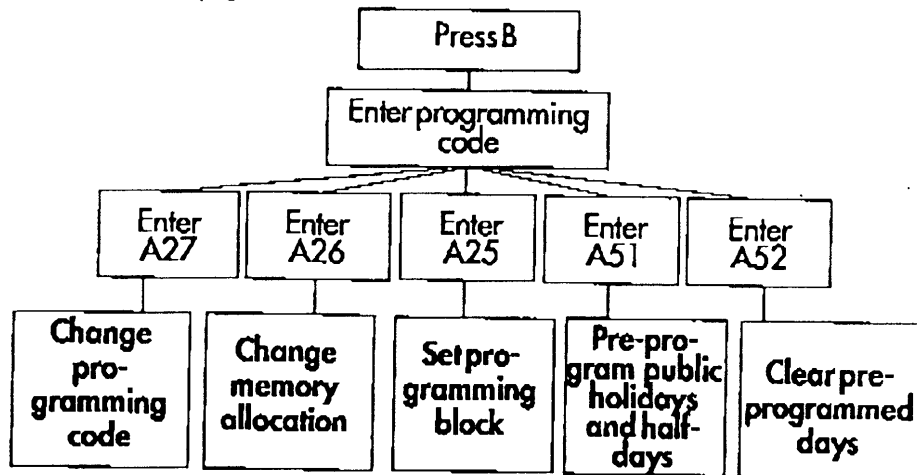   ◉ ◉ ◉

4.5 Basic operation

Enter time and date

LED status:

1 Set control unit in programming mode (see page 7). ⊛ ⊛ ⊛

Ⓐ❷❸ 2 Enter A23. ○ ⊛ ⊛

●●●●●● 3 Enter current date, in the sequence year, month, day, e.g. 901129 ○ ⊛ ⊛

●●●● 4 Enter current time, e.g. 1823 ○ ⊛ ⊛
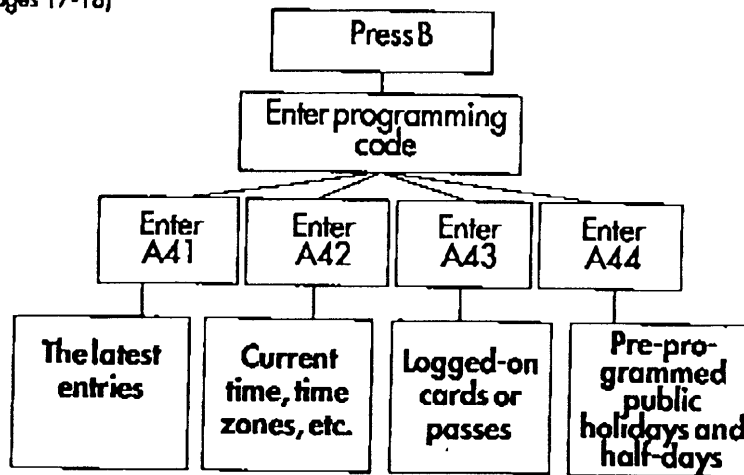
● 5 Enter current type of day, e.g. 4 (Thursday) ⊛ ⊛ ⊛
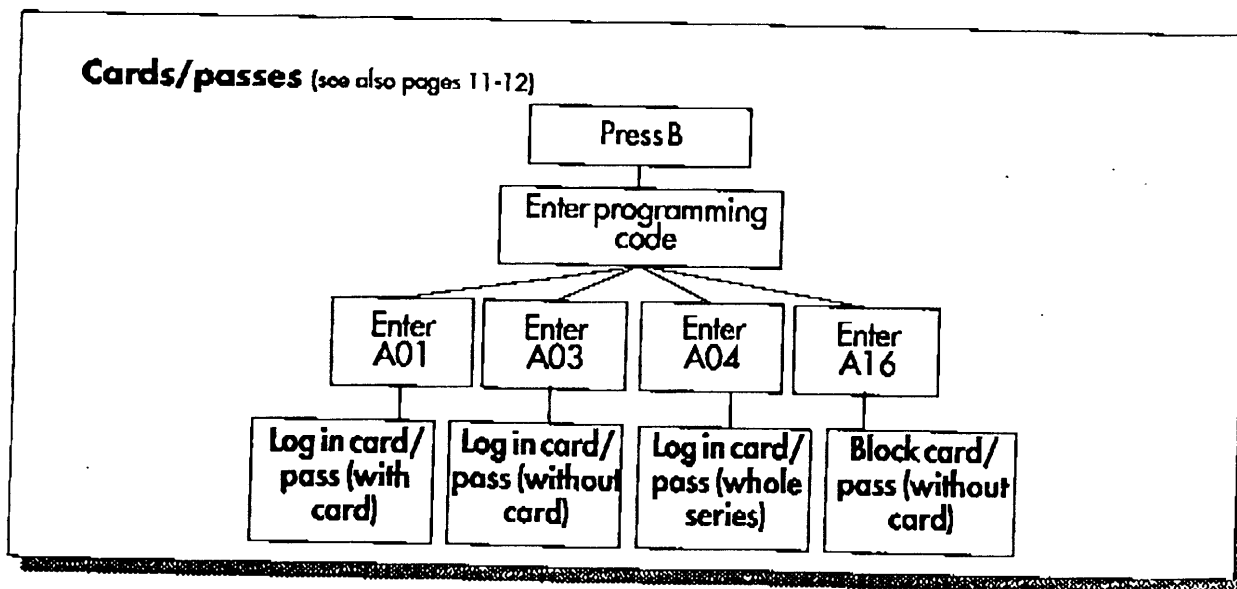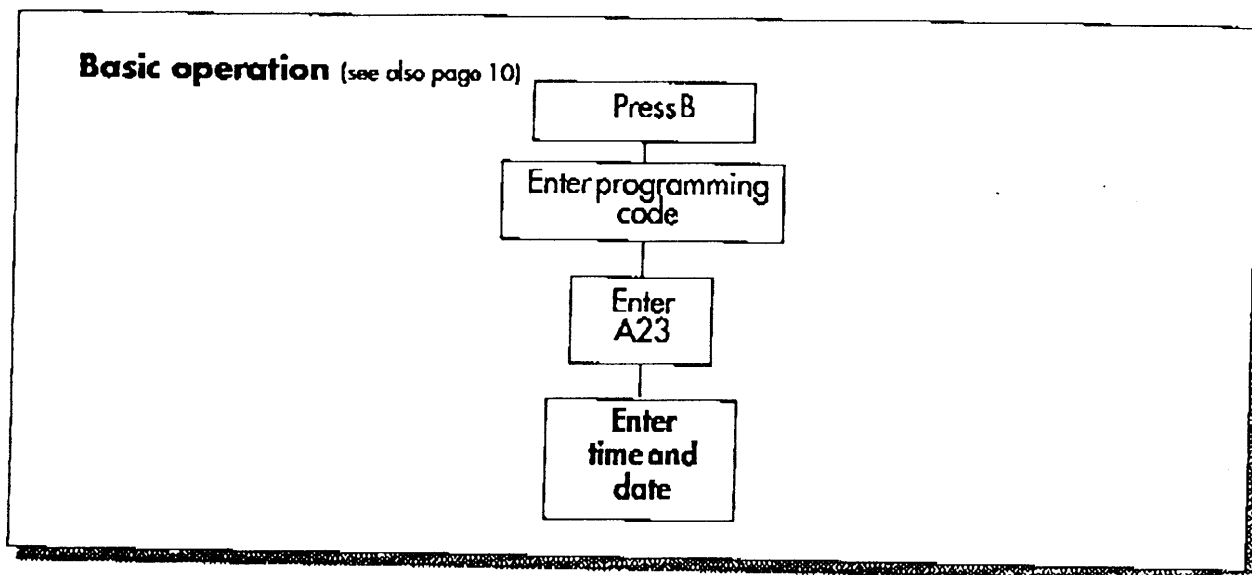
Time zones (see also page 13)

```
                              ┌──────────────┐
                              │   Press B    │
                              └──────┬───────┘
                              ┌──────┴───────┐
                              │Enter programming│
                              │     code     │
                              └──────┬───────┘
```

Enter A31	Enter A32	Enter A33	Enter A34	Enter A35	Enter A36	Enter A37	Enter A38
Time zone 1	Time zone 2	Time zone 3	Time zone 4	Time zone 5	Time zone 6	Time zone 7	Time zone 8

Other operations (see also pages 14-16)

```
                              ┌──────────────┐
                              │   Press B    │
                              └──────┬───────┘
                              ┌──────┴───────┐
                              │Enter programming│
                              │     code     │
                              └──────┬───────┘
```

Enter A27	Enter A26	Enter A25	Enter A51	Enter A52
Change programming code	Change memory allocation	Set programming block	Pre-program public holidays and half-days	Clear pre-programmed days

Printouts (see also pages 17-18)

```
                              ┌──────────────┐
                              │   Press B    │
                              └──────┬───────┘
                              ┌──────┴───────┐
                              │Enter programming│
                              │     code     │
                              └──────┬───────┘
```

Enter A41	Enter A42	Enter A43	Enter A44
The latest entries	Current time, time zones, etc.	Logged-on cards or passes	Pre-programmed public holidays and half-days

4.4 Programming overwiew

Basic operation (see also page 10)

```
Press B
   |
Enter programming
     code
   |
Enter
 A23
   |
Enter
time and
 date
```

Cards/passes (see also pages 11-12)

```
Press B
   |
Enter programming
     code
  /   |   |   \
Enter Enter Enter Enter
A01   A03   A04   A16
 |     |     |     |
Log in card/  Log in card/  Log in card/  Block card/
pass (with    pass (without pass (whole   pass (without
card)         card)         series)       card)
```

4.2 Programming mode

Every time you want to perform an operation – e.g. program a function or request a printout – you must first set the control unit in programming mode. Follow these steps:

LED status:

B   1. Press B; the green LED will be lit.   ⊕○○

2. Enter the 6-digit programming code. As   ⊕⊕⊕
you enter the last digit, all the LEDs will
come on. The unit is in programming
mode.

3. Follows the instructions for the desired
operation (see section below).

If you enter the wrong programming code, the green LED will go out. Start again, from step 1. If you wait too long (more than 60 seconds) before pressing a key, all the LEDs will go off. In this case, too, start again from step 1.

4.3 Opening time

You yourself can alter the lock activating time for the door, i.e. the time you have to open the door from when the yellow LED comes on. The normal lock activating time is 6 – 7 seconds. Follow these steps:
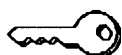
1. Open the control unit with the key.

2. Turn the red knobs clockwise (see Figure, page 6), the lefthand one for door 1 and the righthand one for door 2. If the time set is too long or too short, adjust the settings and try again.
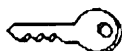
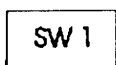# 4 Programming

4.1 Setting the programming code

Before you can begin programming the system, you must first set a programming code. Every time you program the system, or request a printout, you must enter this code.

LED status:

How to set the programming code:

1. Open the control unit with the key supplied.   ⊛ ○ ⊛

2. Press the key marked SW1 at the bottom left of the panel (see diagram below). The green and red LEDs will come on.

   SW 1

3. Enter the desired 6-digit programming code via the control unit's keypad. The LEDs will go off when you enter the last digit.

N.B.: It is important to write down the programming code, in case you forget it. Also make sure that the key to the Bewacard 93 control unit is kept in a safe place.

Switches to set lock activating

SW1

Bewacard 93
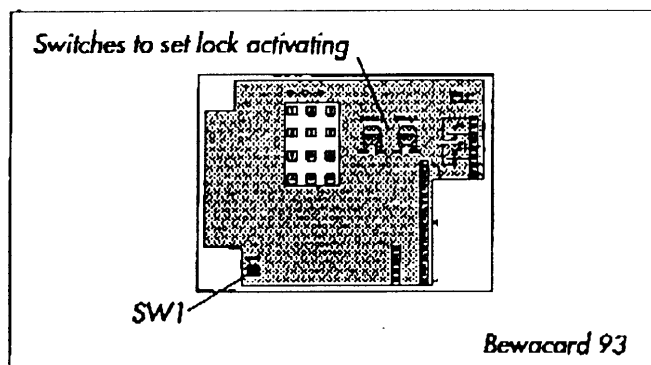
Security levels

Depending on specific security requirements, the following security
levels may be programmed:

- unlocked door: the card reader does not have to be used
- card only: the lock opens when you put your card through (or into) the
reader.
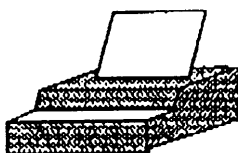
Continuous printout

A time zone may also be programmed for continuous printout of all
accesses. This is done during programming of the time zones.

Types of day

NOVEMBER

6

MONDAY

When programming the time zones, you also have to specify the days on
which they are to apply. For this reason, the days of the week are divided
into types. Type 1 is Monday, 2 is Tuesday, etc. Individual public
holidays — such as Christmas Eve, New Year's Day, Easter, etc. — are
assigned the same security level as Sundays (7), since it is assumed that
you will require the same level of security for public holidays as for
Sundays. Time zones may also be programmed for half-days (on the days
before public holidays).

Memory allocation

You yourself can decide how the memory in the control unit should be
allocated between the number of cards/passes that may be logged in, and
the number of stored access-records that may be printed out. A pre-
programmed public holiday takes up as much memory as a logged-in
card/pass. The Table below shows possible arrangements for memory
allocation. At delivery, the ratio is set at 980-512. If you should need more memory
to log in extra cards/passes, and memory is already full, you can still alter the memory
setting from ❷ to ❸. All that will happen is that some access-records will disappear.
On the other hand, you cannot increase the number of stored access-records once the
area of memory requested is being used by logged-in cards/passes. (See also page 14).

	Number of logged-in cards	Number of accesses recorded
❶	468	768
❷	980	512
❸	1492	256
❹	2004	0

3 Definition of terms

This chapter explains some of the terms used for programming. Before starting to program your Bewacard 93, you must first:

* set a programming code
* complete the time, name and calendar lists (these are to be found at the rear of the User's Handbook)
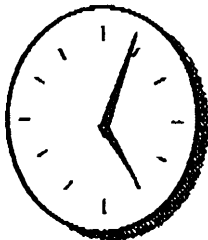
Time zones

Using the eight time zones, you can fine-tune levels of security (see below) for the exact requirements of your building. The example below has six time zones:

Possible time zones for a main entrance:

Monday – Friday   08.00 – 12.00:   door open
Monday – Friday   12.00 – 13.00:   card/pass only
Monday – Friday   13.00 – 18.00:   door open
Monday – Friday   18.00 – 08.00:   card/pass only
Saturday – Sunday 00.00 – 24.00:   card/pass only

You should ensure that a security level is specified for every period of every day. You can also pre-program public holidays and half-days so that, for example, Christmas Eve — which may fall on a Thursday in a particular year — is programmed at the same security level as a Sunday. See also Chapter 4.9, *Other operations*.
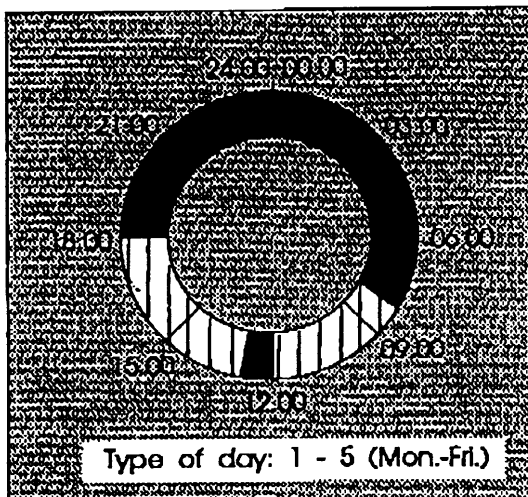
Card only

Door open

Type of day: 1 - 5 (Mon.-Fri.)

A diagram at the rear of the User's Manual provides a visual means of checking to ensure that you have a security level programmed for every period of the day. The diagram (left) illustrates the security levels programmed in the example above (Mon.-Fri.).

In the first alternative, each access immediately generates a printed record containing an indication of the door used. The integral timer may be used to set the periods when activity is to be logged, for example after working hours only.

In the second alternative, you can request a printout when something out of the ordinary has happened, for example during a public holiday, etc. The integral memory in the control unit enables a printout of the most recent access-records (a maximum of 750) to be generated as required. The number of accesses stored depends on the way in which the memory allocation (see Chapter 3, *Definition of terms*) for the control unit is set up.

2.2 Cards or passes

The choice of card or pass to open the door depends on the type of reader connected to the Bewacard 93 system. Up to 2,000 cards or passes can be logged in. As a means of opening the door, any of the following may be used:

Magnetic card
If a BC 12 (swipe reader) or BC 15 (insert reader) is connected to the Bewacard 93 system, a magnetic card may be used to gain access. The card should be of the CR80 standard-format type. In addition to Bewator's own Bewacard magnetic card (see Figure), a large number of other magnetic cards may be used, including banker's cards and credit cards. If in doubt, contact Bewator. However, the Bewacard magnetic card is highly recommended — with its higher quality and extra robustness — if the card is likely to be used several times a day. The Bewacard magnetic card is printed with the code for the card. This is the code that shows up on the printed record of accesses. To identify the owner of the card, the code should be checked against a list of card-holders.
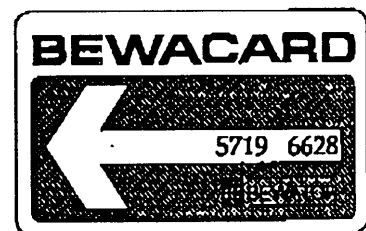

A Bewator access card

Bank cards are printed with a code, as illustrated in the Figure (right). The card reader registers the eight ringed digits as the card's code. If you are doubtful about which digits represent the code, log the card in the reader and request a printout (the relevant instructions are to be found in Chapter 4, section 11, *Printout*). The code is shown on the printout.
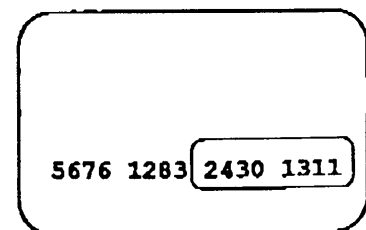
Bank card.

The Bewakey pass
If a DT 20 proximity reader is connected to the system, access may be gained using a Bewakey pass. There are two variants, a card-type and a keytag-type (see Figure), on each of which the code for the pass is printed. This is the code that appears on the printout of the record of accesses. To identify the owner of the pass, you should check the code against a list of pass-holders.
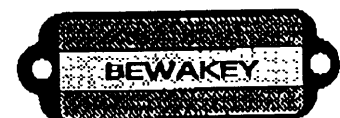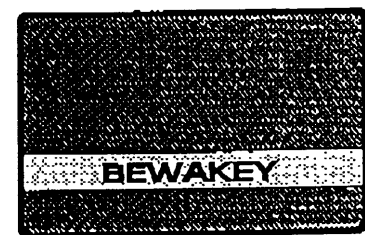

Bewakey passes

1 Introduction

This manual is intended as a guide for anyone who will be responsible for supervision of Bewacard 93 access control systems. It begins with a brief summary of the system, then continues with a detailed description of how to program it.

2 How the system works

Bewacard 93 is a control unit that operates a maximum of two locks. The locks are opened either with a card or a pass, depending on the type of reader used. If a printer is connected to the system, a check can be kept on all ingresses (entries through the doors concerned), via printouts stating time and date, as well as code numbers of cards and passes used. You enter (log in) the cards and passes, and program the Bewacard 93 system. Because security requirements vary according to time of day, day of the week, etc., Bewacard 93 is equipped with an integral timer. Using the timer, you can set the times at which a card/pass is necessary for access, even setting different times for different days if required. You can also decide whether locks should be left completely open or completely closed at specific times. You can choose from eight different "time zones", i.e. you can set the various functions for eight different periods of time. All programming automatically controls both locks. Separate programming is not possible. Using the timer's calendar function, you can program suitable levels of security for each of the year's public holidays, as well as for any half-days.
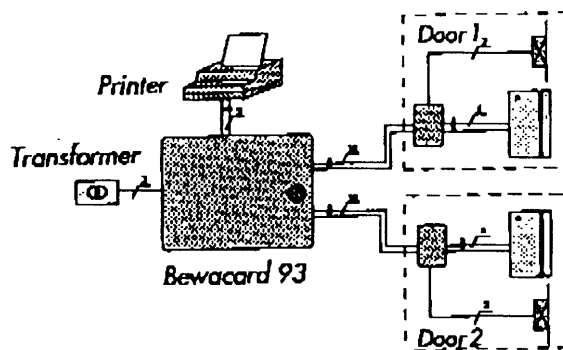
Bewacard 93, with 2 card readers and printer connected.

2.1 Access logging by printer

Connecting a printer provides two alternatives for obtaining printouts about entries:

• a continuous printout showing all entries
• a printout on request of data stored in memory.

Printer port

Door 2

Door 1

Door 2

Door 1

220 V AC

TA

Do not connect straps
when relaycontacts
are used for closing
only.