MASTER USER'S GUIDE

LOC Technology

apricot

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Preface

This booklet describes the operation of the Apricot LOC Technology v2.1 security system as implemented by the Apricot LS Security Card.

It is intended to be read only by the persons responsible for configuring the security system – the so-called "Master" users. Instructions for "ordinary" users of the system are provided in an Appendix, which can be photocopied if necessary.

The reason for this is that most ordinary users will not need to know the details of the system in order to use it. The system is made more secure by providing information on a "need-to-know" basis.

CONTENTS

A Technical Information

B Quick Guide to Security

1 INTRODUCTION

This chapter introduces Apricot LOC Technology™ v2.1 by answering a number of commonly-asked questions.

Introducing Apricot LOC Technology

The Apricot LOC Technology security system offers the ability to control who is allowed to use the computer and when they are allowed to use it. Properly used, the system helps to prevent misuse and deter theft.

Apricot LOC Technology provides the complete solution to the problem of access control. However, you should not neglect other aspects of computer security such as virus protection or data encryption. Ask your supplier for advice.

The security system operates in addition to any power-on, system or boot password that may be defined using the computer's BIOS Setup utility. To avoid confusing the users of the system, it is advisable **not** to use such passwords with LOC Technology.

How is the system implemented?

The security system is implemented by an Apricot LS Security Card fitted in one of the computer's ISA or EISA slots.

The Apricot LS Security Card is designed to work best in an Apricot computer that has an infrared sensor and a BIOS with LOC Technology extensions. The security system will tell you if an existing Apricot BIOS must be upgraded to support LOC Technology.

Note
The Security Card should work in an Apricot computer that lacks LOC Technology support, but is slightly less secure in that the system can be by-passed by removing the card. In this manual, it is assumed that the host computer has LOC Technology support unless stated otherwise.

How is the system configured?

The security system is configured by using the LOC Technology Setup utility which is held in the Security Card's read-only memory.

LOC Technology Setup can be started whenever the computer is turned on or rebooted, by pressing ALT+S when prompted to do so.

The security system can prevent individual users accessing the utility.

How do users logon to the computer?

The security system obliges users to logon every time the computer is turned on or rebooted.

For a fully-authenticated logon the user must present three items:

- A hand-held infrared device called a KeyLOC card
- A user name
- A password

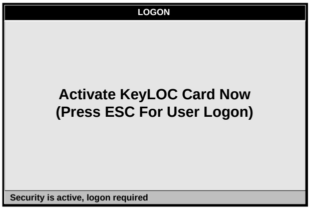
In situations where full authentication is deemed unnecessary, either the KeyLOC card or the user name and password may be omitted.

In addition, the user can be assigned logon periods that specify on what days of the week, and between what times, he is permitted to logon (for example, from 9:00 to 17:30, Monday to Friday).

A user is usually permitted to change his password when he logs on. He may also be forced to change his password every few days. Alternatively, a user may be barred from changing his password altogether.

The security system also supports a "Quick Logon" facility. This allows the creation of one user account which does not require any authentication at logon. This could be useful in situations where the computer has a majority of users with identical security requirements. These users would rely on the Quick Logon account, whereas fully- or partially-authenticated logons would be reserved for special users such as Master users (see below).

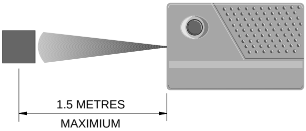
①



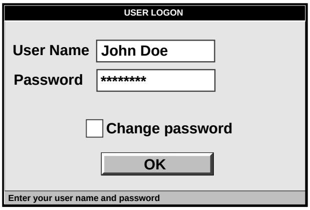
LOGON

Activate KeyLOC Card Now
(Press ESC For User Logon)

Security is active, logon required



②



USER LOGON

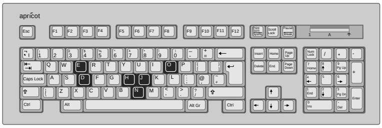
User Name: John Doe

Password: ********

□ Change password

OK

Enter your user name and password



As mentioned earlier, each individual user can be denied access to the LOC Technology Setup utility. In addition, each user account can be given an expiry date (with the exception of the Master user account).

What happens after several invalid logons?

An invalid logon is one which involves an unrecognised KeyLOC card, an incorrect user name or password, or which is attempted outside the user’s permitted logon periods.

A lockout period can be imposed after three consecutive invalid logons. This means that the computer is “locked” in the logon sequence and cannot boot. No further logons can be attempted until the lockout period expires. The user cannot circumvent the lockout period by turning off the computer; the security system keeps track of elapsed time even when the computer is turned off.

Optionally, an alarm can be set to sound after four invalid logons (that is, during the second and subsequent lockouts).

Who are the "Master" users?

At least one user account must be given "Master" status. A Master user can logon at any time and is always allowed to access the LOC Technology Setup utility. A Master user account can never expire, nor can it be given the Quick Logon facility (in other words, some authentication is always required).

What other features are there?

Ownership string

An ownership string identifies the owner of the computer, whether it is a person or an organization. The string is prominently displayed every time the computer is turned on or rebooted. The string cannot be altered or deleted except by those users who are permitted access to LOC Technology Setup.

The purpose of the ownership string is to deter theft by making the provenance of the computer clear.

Logon statistics

The total number and last recorded date of both valid logons and invalid logon attempts are displayed after each successful logon. These statistics can be reset from within LOC Technology Setup.

This information can aid the detection of attempts to breach security.

What happens if the Security Card is removed or substituted?

If the Apricot LS Security Card is removed from the computer, the computer will detect the absence of the card and refuse to boot.

Every Security Card has a unique **System Identification Number** or **SIN** programmed into it at the factory. If one Security Card is removed and replaced by another, the computer will detect the change and require the user to type in the SINs of both the old card and new card. (If the new card had already been programmed with a security configuration, that configuration is erased automatically.)

Important
The SIN is printed on a small label stuck onto the Security Card. To preserve security, this label ***must be removed*** *and the SIN recorded in a safe, secure place together with the serial number of the card and the serial number of the computer in which the card is installed.*

What else is the SIN used for?

In exceptional circumstances it may be necessary to erase the security configuration held in the Security Card's memory. This can be done by removing a jumper on the card (see Appendix A for details).

Until the jumper is replaced the security system insists that the SIN is entered whenever the computer is turned on or rebooted. The SIN therefore provides a "fail-safe" mechanism in case the jumper is removed maliciously in an attempt to by-pass security.

LOC Saver for Windows

LOC Saver for Windows is an optional software enhancement for the Microsoft Windows for Workgroups v3.11 operating system. When leaving the computer unattended for a time, a user can click the button on his KeyLOC card to obscure the screen and lock the keyboard and mouse; Windows continues working "behind the scenes". When the user returns, another click of the button cancels unattended mode. See Chapter 4 for more information.

Telling users about the security system

You can photocopy Appendix B of this booklet and give copies to each of the users of the computer as a Quick Guide To Security. You may want to back this up by explaining further the terms shown in bold (for example, **lockout period**). Note that users whose accounts do not include the right to use LOC Technology Setup need never know that such a utility even exists.

2 CONFIGURING THE SECURITY SYSTEM

The security system is enabled and configured by using the LOC Technology Setup utility. Once the security system is enabled, individual users may be barred from accessing this utility.

For an Apricot computer with LOC Technology BIOS support, BIOS reprogramming must be enabled in order to use the security system. This feature is usually controlled by a jumper on the motherboard (see the computer's *Owner's Handbook* for details). If the Security Card is pre-installed at the factory, BIOS reprogramming should be enabled by default. The security system itself will tell you if you need to enable BIOS reprogramming.

Don't forget to remove the SIN label from the Security Card and record the SIN in a safe, secure place together with the serial number of the card and the serial number of the computer in which the card is installed.

Note
The Apricot LS Security Card is normally pre-installed at the factory. Refer to Appendix A if you need to remove or re-install it.

Using the LOC Technology Setup utility

To configure the security system:

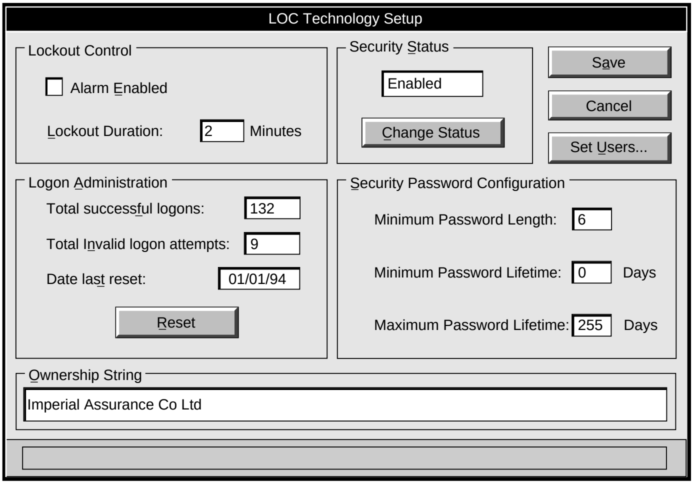
1. Turn on or reboot the computer.
2. If the security system is already enabled, logon to the computer using an account that includes the right to access LOC Technology Setup.
3. Press the ALT+S key combination when invited to do so.
4. In the LOC Technology Setup dialog, set up the global options you want. See the later section on “Setting up a security configuration” for details.
5. To define user accounts, choose the Set Users button.
6. In the User Setup dialog, choose the Next User button to cycle through the accounts to find a free account, or the account you want to edit. Free accounts are marked as FREE in the User Name text box.
7. Set up the account details you want. See the section on “Defining user accounts” for details. Choose the Next User button to find the next account you want to edit. When you have finished, choose the OK button.
8. In the LOC Technology Setup dialog, choose the Change Status button to set the Security Status to “Enabled” or “Disabled”, as required.

   The security system has no effect until it is enabled.
9. Choose the Save button to save the new security configuration in memory.

If you have saved changes in the utility, the computer reboots automatically.

Setting up a security configuration

In the LOC Technology Setup dialog box you can configure Lockout Control, Security Password Configuration, Logon Administration and the Ownership String.



LOC Technology Setup

Lockout Control

□ Alarm Enabled

Lockout Duration: 2 Minutes

Security Status

Enabled

Logon Administration

Total successful logons: 132

Total Invalid logon attempts: 9

Date last reset: 01/01/94

Security Password Configuration

Minimum Password Length: 6

Minimum Password Lifetime: 0 Days

Maximum Password Lifetime: 255 Days

Ownership String

Imperial Assurance Co Ltd

Lockout Control

A **lockout period** can be imposed after three invalid logon attempts, and an alarm can sound during the lockouts caused by the fourth and subsequent attempts.

When setting the lockout duration, bear in mind that most invalid logons will be caused by users forgetting or mistyping their user names or passwords. You will have to balance the frustration caused to legitimate (if forgetful) users against the need to deter repeated attempts to breach security. It is always advisable to have lockouts enabled.

To set a lockout period and alarm:

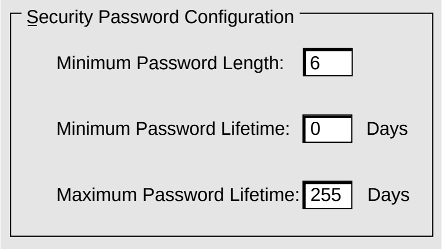
1. Ensure that the Security Status is “Enabled” (choose the Change Status button if it is not).

2. Type the lockout duration in the Lockout Duration box (between 1 and 255 minutes, or up to 4.25 hours).
3. If an alarm is required, select the Alarm Enabled check box.

To disable both the lockout and the alarm without disabling the security system, set a lockout duration of zero minutes.

Security Password Configuration

The Security Password Configuration settings apply restrictions on the use of passwords to increase the effectiveness of the security system.



Security Password Configuration

Minimum Password Length: 6

Minimum Password Lifetime: 0 Days

Maximum Password Lifetime: 255 Days

The **minimum password length** is the minimum number of characters allowed in any user's password.

The **minimum password lifetime** is the minimum number of days that must elapse before any user can change his password. Sometimes a user, annoyed at being forced to change his password (or worried about forgetting the new one) will be tempted to change back to the old one soon afterward. The minimum password lifetime feature will prevent this.

The **maximum password lifetime** is the number of days that a user's password will remain valid; after this, the user will be forced to change his password at the next logon attempt. The maximum password lifetime applies only to those users who have the Expiry (Password) attribute set in their user accounts.

To set the security password configuration:

1. Ensure that the Security Status is "Enabled" (choose the Change Status button if it is not).

2. Type the minimum password length in the Minimum Password Length box (between 1 and 8 characters).

   Set a minimum length of at least 6 characters; the more characters a password has, the more difficult it will be to guess.

3. Type the minimum password lifetime in the Minimum Password Lifetime box (between 0 and 255 days).

   A minimum lifetime of 0 days allows a user to change his password at any time, unless the Lock Password attribute is set in his user account.

4. Type the maximum password lifetime in the Maximum Password Lifetime box (between 1 and 255 days, or up to 9 months).

   Set a relatively short maximum; the longer a password remains current, the greater the chance of its being discovered.

Logon Administration

Logon Administration shows the history of logon attempts at the computer:

- The total number of successful logons since the logon statistics were last reset.
- The total number of invalid logons since the logon statistics were last reset.
- The date when the logon statistics were last reset.

To reset the logon statistics:

1. Ensure that the Security Status is “Enabled” (choose the Change Status button if it is not).
2. Choose the Reset button.

This not only resets the logon statistics shown in the LOC Technology Setup dialog, but also those displayed after each successful logon (see the chapter on “Understanding the Logon Sequence”, later in this booklet).

Ownership String

The ownership string is displayed every time the computer is turned on or rebooted.

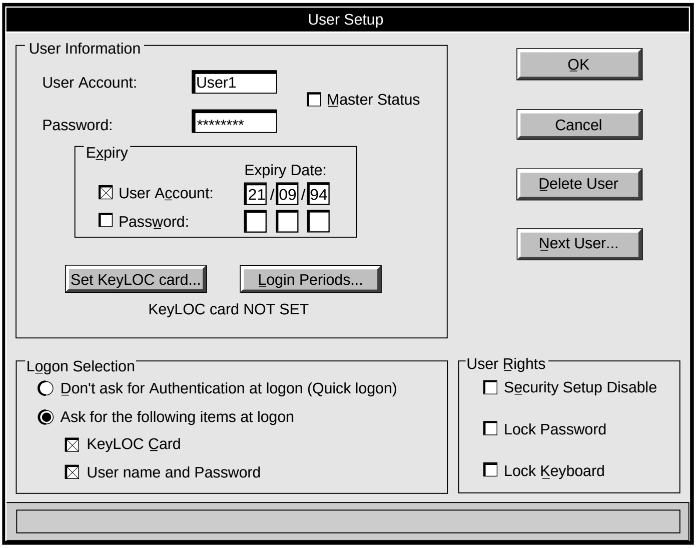
Don't set an ownership string without restricting access to the LOC Technology Setup utility. Otherwise, anyone using the computer will be able to change or delete the ownership string.

To set the ownership string:

1. Ensure that the Security Status is "Enabled" (choose the Change Status button if it is not).
2. Type the ownership string into the Ownership String box. You can use up to 40 characters.

Defining user accounts

You set up user accounts using the User Setup dialog box.



User Setup

User Information

User Account: User1

Password: ********

□ Master Status

Expiry

Expiry Date:

☒ User Account: 21 / 09 / 94

□ Password:

KeyLOC card NOT SET

Logon Selection

○ Don't ask for Authentication at logon (Quick logon)

● Ask for the following items at logon

☒ KeyLOC Card

☒ User name and Password

User Rights

□ Security Setup Disable

□ Lock Password

□ Lock Keyboard

If you define any user accounts, you must include at least one Master user account.

You do not have to enable the security system before defining user accounts. The number of user accounts is limited by the capacity of the memory on the Security Card. This may vary for different models.

User Information

Under User Information you provide details of the user name, password, KeyLOC card and logon periods.

An account does not need to have to have either a user name or a password if you don't plan to ask for them at logon (see "Logon Selection" below). However, it can be beneficial to define them anyway as this provides a way of identifying the account.

You will also need to define user names and passwords if users are to share KeyLOC cards (although it is best if users each have their own KeyLOC cards). A Master user's KeyLOC card cannot be shared.

For ordinary users, you can set a date when the user account will expire. After this date, the user will be unable to logon, and attempts to do so will be counted as invalid logons.

You can also set a date when the user's password will expire, by applying the maximum password lifetime. After this date the user is allowed to logon one more time with his old password, but is then forced to change it, at which point the next password expiry date is calculated automatically.

If you don't set a password expiry date, the password will never expire. However, the user can still change his password voluntarily, provided that the Lock Password attribute is not set (see "User Rights" below).

Again for ordinary users, you can set a permitted logon period for each day of the week.

To set the user information:

1. Type the user name in the User Name text box. You must use a different name for each user account.

   If you do not supply a user name, the security system puts USER (followed by a user number) in the User Name box. This shows that the account is in use, but it is **not** the account's user name.

2. Type the password in the Password text box and press ENTER. Then re-type the password to confirm it.

   To preserve security, the password appears as a string of asterisks. Remember that there may be a minimum password length.

   User names and passwords can each have up to 8 characters, selected from A-Z, a-z, 0-9 and SPACE.

3. If this is a Master user account, select the Master Status check box.

   When you select Master Status, some of the other controls in the User Setup dialog are disabled (they become dimmed or "greyed-out"). These changes are made to ensure that a Master user will always be able to logon and access the LOC Technology Setup utility.

   The Master Status check box is greyed-out for accounts with shared KeyLOC cards.

4. To set a date when the user account will expire, select the User Account check box in the Expiry section and then type the date next to it.

   You cannot set an expiry date for a Master user account.

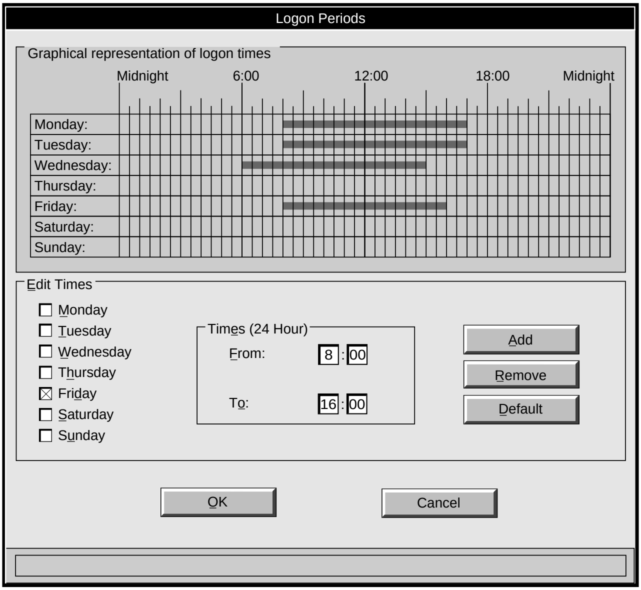
5. To set a date when the password will expire, select the Password check box in the Expiry section. You do not need to type the date itself as it is automatically set to today's date plus the maximum password lifetime.

The Password check box is greyed-out if the Lock Password attribute is set; if a user cannot change his password, it cannot be allowed to expire.

6. If the user account requires a KeyLOC card, click on the Set KeyLOC Card button. Aim the KeyLOC card at the computer's infrared sensor and press the button on the card. The card's unique electronic signature is added to the security configuration.

   The KeyLOC card will be rejected if it is already allocated to a Master user, or to another user who has a "KeyLOC card only" logon.

7. To set logon periods for a non-Master user, choose the Logon Periods button. The Logon Periods dialog appears.



Logon Periods

Graphical representation of logon times

Edit Times

□ Monday
□ Tuesday
□ Wednesday
□ Thursday
☒ Friday
□ Saturday
□ Sunday

Times (24 Hour)

From: 8 : 00

To: 16 : 00

Use the check boxes in the Edit Times section to select the days of the week you want to edit.

To set a specific logon period for the selected day or days, type the start time (to the nearest 30 minutes) in the From box and the end time in the To box, then choose the Add button.

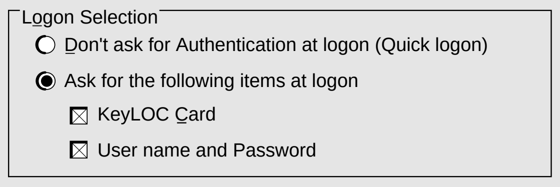
To remove the current logon period, choose the Remove button. This prevents the user logging-on at all on the selected day(s).

To apply the default logon period, choose the Default button. The default logon period is 24 hours, allowing unrestricted logons on the selected day(s).

8. When you are satisfied, choose the OK button.

Logon Selection

In Logon Selection you specify what items of authentication are required at logon.



Logon Selection

○ Don't ask for Authentication at logon (Quick logon)

● Ask for the following items at logon

☒ KeyLOC Card

☒ User name and Password

Most user accounts will use one of three authentication schemes:

- KeyLOC card, user name and password.
- KeyLOC card only.
- User name and password only.

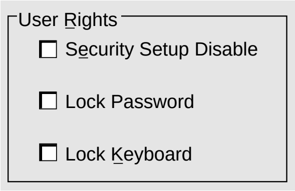
You cannot select a “KeyLOC card only” logon if the user is sharing his KeyLOC card with another user.

One user account (not a Master user account) can be given the Quick Logon facility, requiring no authentication. This account will then be used automatically by all users unless they specifically invoke the logon sequence and use a different account (see the chapter on “Understanding the Logon Sequence” for more information).

If Quick Logon is used it must be used carefully. In a multi-user configuration the Quick Logon account should never be allowed to access the LOC Technology Setup utility. See "User Rights" for more information.

User Rights

Listed under User Rights are several check boxes. Use these to select what aspects of the computer the user is **not** allowed to use.



User Rights

□ Security Setup Disable

□ Lock Password

□ Lock Keyboard

At first, no check box is selected and all rights are enabled.

User right	Meaning if selected
Security Setup Disable	The user cannot access the LOC Technology Setup utility.
Lock Password	The user cannot change his password at logon. The Change Password check box in the User Logon dialog box is ignored if selected.
Lock Keyboard	After the computer boots, the keyboard is locked until the user enters his password.

The Security Setup Disable and Lock Keyboard check boxes are greyed-out for a Master user account.

The Lock Password check box is greyed-out if the Expiry (Password) attribute is set, because a user must be permitted to change his password when it expires.

3 UNDERSTANDING THE LOGON SEQUENCE

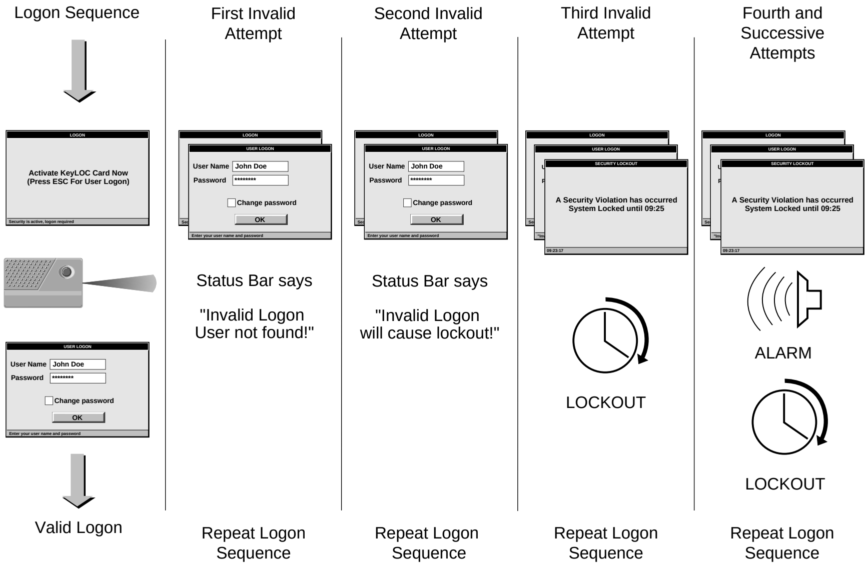
While the security system is disabled, the computer boots as described in the *Owner's Handbook.*

Once the security system is enabled, the logon sequence starts automatically every time the computer is turned on or re-booted (unless the security configuration includes a Quick Logon account – see the section below on "Variations caused by Quick Logon").

Depending on the particular model of computer, the logon sequence may occur before, during or after the power-on self-test (POST). In any case, the logon sequence occurs before the computer starts looking for an operating system.

The security system operates in addition to any password that may be defined using the computer's BIOS Setup utility. The type of password provided in BIOS Setup varies with the model of computer, but if enabled it will typically be required after the logon sequence (see the *Owner's Handbook* for more information).

How do users logon?



LOGON

Activate KeyLOC Card Now
(Press ESC For User Logon)

Security is active, logon required

USER LOGON

User Name John Doe
Password ********
□ Change password
OK

Enter your user name and password

SECURITY LOCKOUT

A Security Violation has occurred
System Locked until 09:25

09:23:17

The Logon dialog box, requesting a KeyLOC card, will appear if the security configuration includes at least one account requiring KeyLOC card authentication.

The User Logon dialog appears if the user presses ESC at the Logon dialog or if his account requires full authentication. The User Logon dialog also appears if the KeyLOC card is not recognised; this masks the fact that the logon has already failed.

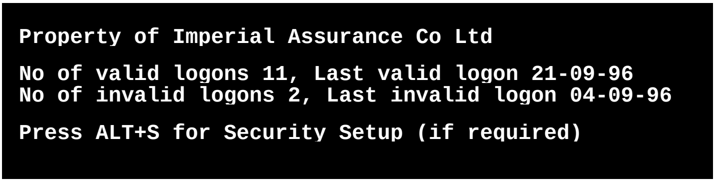
If the proffered authentication is not recognised, or if the user is outside his logon period for today, the logon attempt fails and the Logon or User Logon dialog re-appears. Repeated invalid logon attempts may cause lockouts and sound the lockout alarm, if these features are enabled (see diagram).

If the computer is turned off after one or more invalid logons, the security system remembers how many invalid logons there have been and will re-commence from the appropriate point in the logon sequence when the computer is next turned on.

What happens after logging-on?

After a successful logon, the security system displays the following security-related information: the ownership string (if defined), some logon statistics and, if the account includes the appropriate user right, an invitation to “Press ALT+S for Security Setup”.

For example:



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Property of Imperial Assurance Co Ltd

No of valid logons 11, Last valid logon 21-09-96
No of invalid logons 2, Last invalid logon 04-09-96

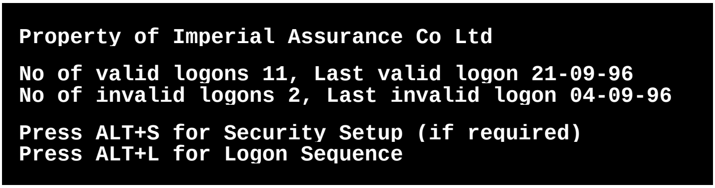
Press ALT+S for Security Setup (if required)
```

The **no. of valid logons**, **no. of invalid logons**, and the **last invalid logon**, are statistics that are the same for all users. The **last valid logon** relates only to the currently logged-on user; it records the last date on which he (or someone using his user account) logged on. These statistics can be reset from within LOC Technology Setup.

Variations caused by Quick Logon

If the security configuration includes a user account with the Quick Logon facility, the logon sequence is not started automatically each time the computer is turned on or rebooted.

Instead, the security information appears straight away.



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Property of Imperial Assurance Co Ltd

No of valid logons 11, Last valid logon 21-09-96
No of invalid logons 2, Last invalid logon 04-09-96

Press ALT+S for Security Setup (if required)
Press ALT+L for Logon Sequence
```
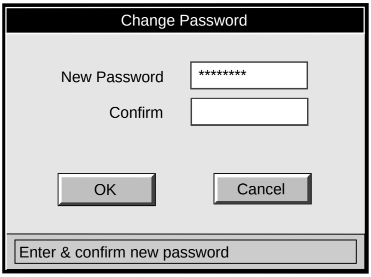

In this case the **last valid logon** date relates to the Quick Logon account, and “Press ALT+S for Security Setup” only appears if the Quick Logon account has the appropriate user right. In addition, however, there is an invitation to “Press ALT+L for Logon Sequence”.

If the user presses ALT+L when this final message appears, the logon sequence is started as described earlier. Otherwise, he is automatically logged-on using the Quick Logon account.

Changing a password at logon

A user is usually permitted to change his password when he logs on, by selecting the Change Password check box in the User Logon dialog before choosing OK. The Change Password dialog appears.



Change Password

New Password: ********

Confirm:

Enter & confirm new password

If the security configuration includes a minimum password lifetime, the user will not be allowed to change his password until this period has expired. A user is also not permitted to change his password voluntarily if his user account includes the Lock Password attribute. In these cases, the Change Password check box in the User Logon dialog is inactive.

On the other hand, a user can be forced to change his password if the security configuration specifies a maximum password lifetime. In this case, the Change Password dialog – retitled as the Password Expired dialog – appears once the user's password has expired, whether or not the user requests it.

4 LOC SAVER FOR WINDOWS

Temporarily unattended computers can pose a serious security problem; a secure logon procedure is worthless if a ten-minute coffee break can leave the whole system exposed. On the other hand, it is inconvenient to have to turn off the computer for only a short absence.

LOC Saver for Windows is an optional software enhancement for the Microsoft Windows for Workgroups v3.11 operating system. When leaving the computer unattended for a time, a user can click the button on his KeyLOC card to obscure the screen and lock the keyboard and mouse. When the user returns, another click of the button cancels unattended mode.

LOC Saver can be invoked and cancelled only by the currently-logged-on user or by any Master user (provided that they have KeyLOC cards).

The user can select a .BMP file with which to obscure the screen, and specify an inactivity timeout so that LOC Saver can act like a secure screen saver.

Ask your Apricot supplier about how to get a copy of LOC Saver. Use the information in this chapter to install and configure LOC Saver, and to help users with their problems.

Installing the software

To install LOC Saver for Windows:

1. Insert the LOC Saver diskette in drive A.
2. Choose the Run command from the File menu in Program Manager. The Run dialog appears.
3. In the Run dialog, type **a:\setup** and choose OK. The LOC Saver Setup program starts.
4. Follow the on-screen instructions to install LOC Saver.
5. In the Destination Path dialog, specify a drive and directory for LOC Saver and its associated files (the default directory is C:\LOCTECH2). Then choose the Continue button.

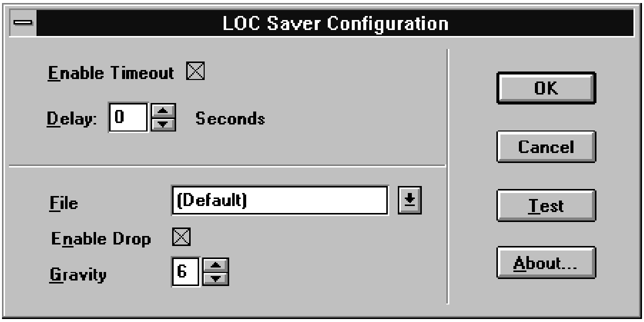
   Setup copies the files APRLOC2.386, LOC.DLL, and LOCSAVER.EXE to the specified directory. A LOC Saver program icon is added to a new LOC Saver group and also to the pre-defined StartUp group. For effective security, LOC Saver should remain in the StartUp group, where it will be loaded automatically each time you start Windows.
6. When the Setup program has finished, a dialog appears which says that the installation is complete.

Configuring LOC Saver

To change LOC Saver's configuration settings:

1. Double-click on the LOC Saver program icon.

   The LOC Saver Configuration dialog appears.



LOC Saver Configuration

Enable Timeout ☒

Delay: 0 Seconds

File (Default)

Enable Drop ☒

Gravity 6

Option	Function
Enable Timeout & Delay	Select this option if you want the computer to lock automatically after a specified period of mouse and keyboard inactivity. When this option is selected, you must specify a Delay timeout value in seconds.
File	Enter the name of the bitmap file you want to use for screen blanking. You may select any .BMP file in the Windows directory. If you select **(Default)**, LOC Saver uses the LOC Technology logo by default.
Enable Drop & Gravity	When this option is selected, the chosen bitmap image will descend from the top of the screen (otherwise, the bitmap simply appears all at once). You may enter a Gravity value from 1 (slowest) to 30 (fastest) to control the drop speed.
Test	Choose this button to display the current bitmap, then press any key to return to the LOC Saver Configuration dialog.

2. Set the configuration options as required then choose OK.

Troubleshooting

LOC Saver and MS-DOS

If a full-screen MS-DOS window is open when LOC Saver locks the computer, the MS-DOS window will be minimized when the user fires his KeyLOC card and returns to his Windows session. This is a feature of Windows.

LOC Saver's timeout feature cannot operate when an MS-DOS session is the active Window.

Windows' Exit dialog box

LOC Saver's screen-blanking feature will not work while the Windows' Exit dialog is open, although the keyboard and mouse will lock as usual. The user can unlock the computer by using his KeyLOC card.

Disabling LOC Technology

LOC Saver must be removed from the StartUp group **before** disabling the security system. If this is not done, LOC Saver's timeout feature may lock the computer and then be unable to recognise any KeyLOC cards.

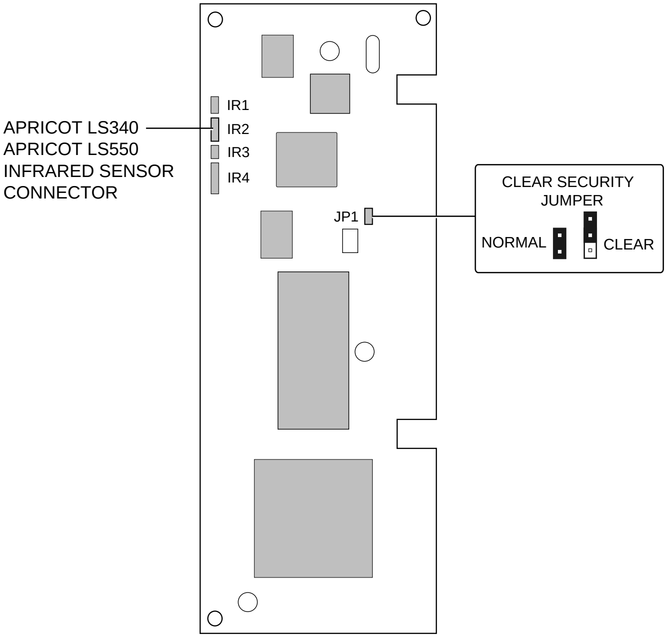
Display Power Manager

The Display Power Manager is an energy-saving screen saver which is supplied with Apricot computers that have on-board Cirrus Logic CL-GD543x video controllers. The Display Power Manager will override LOC Saver's bitmap screen display if both programs are running at the same time.

A TECHNICAL INFORMATION

This Appendix provides some information about installing the Apricot LS Security Card and erasing the security configuration from the card's memory. You should rarely, if ever, need to do either.

The following illustration shows the main features of the card.



Installing the Apricot LS Security Card

The Security Card is normally pre-installed at the factory. You should not need to install the card except in very unusual circumstances.

The card is intended to be fitted in an Apricot computer that has an infrared sensor and an Apricot BIOS with LOC Technology v2.1 extensions.

The card should work in a non-Apricot computer, but this **cannot** be guaranteed. In a non-Apricot computer the system is less secure. Without an infrared sensor, KeyLOC cards cannot be used, and without BIOS support the security system can be by-passed by removing the Security Card. In these situations, you should enforce physical security by locking the computer's system unit and keeping the keys in a safe, secure place.

The card is installed in the same way as any other ISA expansion card (see the computer's *Owner's Handbook* for instructions). The card may have up to four alternative connectors for an internal infrared sensor cable. In an Apricot LS340 or LS550 computer, use the 3-pin **IR2** connector.

Remove the SIN label from the card and record the SIN in a safe, secure place together with the serial number of the card and the serial number of the computer in which the card is installed.

The card does not require any manual configuration, although if the computer supports PCI cards you may have to declare ISA Legacy Resource usage in the computer's BIOS Setup utility. The Security Card's base memory address is **D000h** (although only the area between D8000h-E0000h is actually used) and its only I/O port address below 3FFh is **259h**. It uses no interrupts or DMA channels.

Enabling BIOS reprogramming

If the Security Card is fitted in an Apricot computer with LOC Technology BIOS support, BIOS reprogramming **must** be enabled in order to use the security system. The security system will display a warning dialog if BIOS reprogramming is disabled.

BIOS reprogramming is usually controlled by a jumper on the motherboard. See the computer's *Owner's Handbook* for details.

Upgrading the BIOS

When the computer is turned on, the Security Card checks the motherboard BIOS. If it is an Apricot BIOS that currently lacks LOC Technology support, but which can be upgraded, a dialog advising an upgrade appears. In this situation the Security Card **cannot** be used without upgrading the BIOS – the security system will not allow the computer to boot until the BIOS is upgraded.

BIOS upgrades are normally performed by a service engineer. Ask your supplier or authorized maintainer for assistance. If you need to use the computer in the meantime, simply remove the Security Card.

Entering the System Identification Number (SIN)

Every Apricot LS Security Card has a unique **System Identification Number** or **SIN** programmed into it at the factory.

When installing a Security Card

After installing the Security Card in an Apricot computer with LOC Technology BIOS support, you are prompted to type in the Security Card's SIN when turning on the computer for the first time.

When replacing a Security Card

If you replace one Security Card with another you are required to supply the SINs of both old and new cards. If the new card had already been programmed with a security configuration, that configuration is erased automatically when you enter its SIN.

Erasing the security configuration

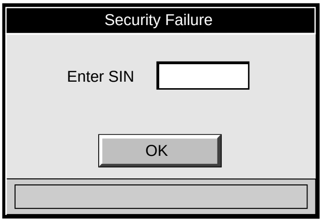
In exceptional circumstances it may be necessary to erase the Security Card's security configuration and start again.

To erase the security configuration:

1. Turn off the computer and unplug all power cords.
2. Take suitable anti-static precautions and remove the system unit cover.

   If you are unfamiliar with the recommended anti-static precautions or the process of removing the system unit cover, refer to the computer's *Owner's Handbook*.

3. If necessary, remove any expansion cards that obscure the Security Card.
4. Move the Clear Security (CLR SEC) jumper on the Security Card to the “Clear” position (see diagram).
5. Replace the system unit cover and reconnect all power cords.
6. Insert a system diskette in Drive A and turn on the computer.
7. Type the Security Card’s SIN in the Security Failure dialog box and choose OK.



Security Failure

Enter SIN

The LOC Technology Setup utility starts automatically.

8. Define at least one Master user account, then exit from LOC Technology Setup (see Chapter 2, “Configuring the Security System”, for detailed instructions).
9. Turn off the computer, unplug all power cords and remove the system unit cover.
10. Return the Clear Security jumper on the Security Card to the “Normal” position.
11. Replace any expansion cards you removed earlier.
12. Replace the system unit cover and reconnect all power cords.

B QUICK GUIDE TO SECURITY

This computer is protected by an internal security system. A **user account** has been set up so that you can use the computer, but you may be restricted to using it only at certain times or on certain days of the week – these are your **logon periods**.

The person responsible for the security system is called the **Master** user. This may be the owner of the computer, or someone else who has been given the job of safeguarding its security. If you have any problems with the security system, ask the Master user for help.

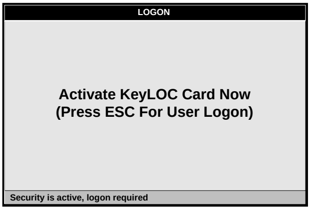
Logging-on to the computer

Every time you turn on or restart the computer (for example, by pressing CTRL+ALT+DEL in MS-DOS) you can expect to go through a **logon sequence**. This typically involves an infrared device called a KeyLOC card, a user name and a password.

1. If the Logon dialog box appears, aim your KeyLOC card at the infrared sensor on the front of the computer and press the button on the card. If you don't have a KeyLOC card, press the ESC key instead.
2. If the User Logon dialog box appears, type your user name in the User Name box, press TAB, then type your password in the Password box. The password is not displayed as you type (each character is shown as an asterisk). Choose the OK button (if you press ENTER after typing your password, the OK button is chosen automatically).

You may get both dialog boxes, or only one. It depends on how the Master user has set up the security system.

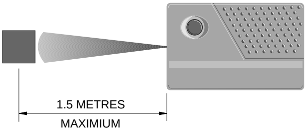
①



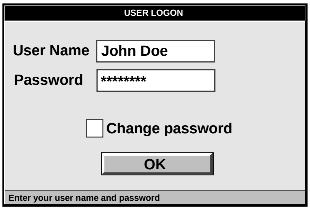
LOGON

Activate KeyLOC Card Now
(Press ESC For User Logon)

Security is active, logon required



②



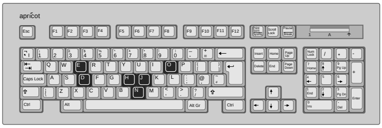
USER LOGON

User Name John Doe

Password ********

□ Change password

Enter your user name and password



If the authentication you offer is correct, and provided that one of your logon periods is current, the computer boots normally and you are free to use the computer. Otherwise, the logon is invalid and the computer will not boot.

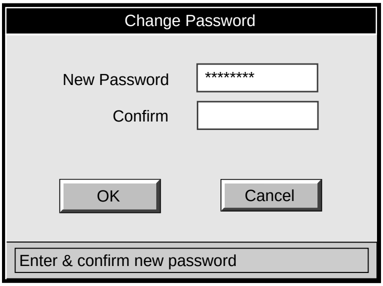
A **lockout period** may be imposed after three invalid logon attempts, and an alarm may sound after four invalid attempts. If a lockout is imposed, you will have to wait for it to end before you can try to logon again. Turning the computer off then on again will not cancel the lockout or the alarm.

Changing your password

Depending on how security is configured, you may be able to change your password voluntarily when you logon. If you can change your password, you should do so regularly.

To change your password:

1. After typing your user name and password in the User Logon dialog box, select the Change Password check box before choosing OK. The Change Password dialog box appears. (If it doesn't, you are not allowed to change your password.)



Change Password

New Password ********

Confirm

Enter & confirm new password

2. Type a new password in the New Password text box, and repeat it in the Confirm text box. A password can have up to eight characters, selected from A-Z, a-z, 0-9 and space. The security system may enforce a **minimum password length**.

3. Choose the OK button to make the change, or Cancel to keep your existing password. Any change you make will come into effect when you next logon.

If the security configuration includes a **minimum password lifetime**, you will not be allowed to change your password again until this lifetime has expired.

If the Password Expired dialog ever appears, the security system is forcing you to change your password because the **maximum password lifetime** has expired. This is necessary because the longer a password is in use, the greater the chance of it being discovered.

Don’t choose a password that someone who knows you could guess. For example, avoid obvious choices such as your partner’s name or your car registration number. Use a mix of uppercase and lowercase letters, and numbers. Use made-up words that aren’t in the dictionary. Never write your password down or tell anyone (including the Master user) what it is.

Logon statistics

When you logon, some **logon statistics** are displayed, for example:

```
No of valid logons 11, Last valid logon 21-09-94
No of invalid logons 2, Last invalid logon 04-09-94
```

The **no. of valid logons**, **no. of invalid logons**, and the **last invalid logon** date, are statistics that are the same for all users. The **last valid logon** relates only to you; it records the last date on which you (or someone using your user account) logged on. These statistics can be reset from time to time by the Master user.

Variations in the logon sequence

There are some possible variations in the logon sequence, depending on the details of the security configuration:

♦ There is an optional feature known as **Quick Logon**. If this feature is enabled, you will not have to go through the logon sequence every time you want to use the computer. Instead, the following message is displayed:

```
Press ALT+L for Logon Sequence
```

If you press ALT-L within 2 seconds of this message appearing, the logon sequence is started as described earlier. If you do nothing, you will be automatically logged-on using a “standard” or “default” user account.

♦ The Master user may have decided to disable the alarm and/or set a null lockout period. If no lockout period is specified, the system allows unlimited logon attempts.

LOC Saver for Windows

LOC Saver is an optional enhancement to the security system for use with the Windows for Workgroups operating system. When leaving the computer unattended for a time, you can click the button on your KeyLOC card to obscure the screen and lock the keyboard and mouse; Windows continues working “behind the scenes”. When you return, another click of the KeyLOC card’s button unlocks the computer. Ask the Master user if your computer has this feature.

Remember, if there’s anything about the security system you don’t understand, ask the Master user.

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MITSUBISHI ELECTRIC

APRICOT COMPUTERS LIMITED
3500 PARKSIDE
BIRMINGHAM BUSINESS PARK
BIRMINGHAM B37 7YS
UNITED KINGDOM

APRICOT COMPUTERS LIMITED
TRAVELLERS LANE
HATFIELD
HERTFORDSHIRE AL10 8XB
UNITED KINGDOM

MITSUBISHI ELECTRIC EUROPE GmbH
GOTHAER STRASSE 8
POSTFACH 1548
40835 RATINGEN
DEUTSCHLAND