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1.0 - Introduction

Lora was born on an unknown day in 1988, when the only local BBS entered FidoNet, using the best software of those days, which was Opus-CBCS.

The initial target of Lora was to imitate Opus, and in completing this project, increase my knowledge of personal computers (I had bought an 8 MHz XT clone) and of programming as well.

The result of this effort was Lora v1.00, a nearly perfect Opus clone. Lora had Opus-Like behavior until version 1.11, and that ended the first period of Lora's development.

Due to the many bugs which were caused by my lack of knowledge of the C language in which the program was written. I decided to change everything and to "build" Lora again.

The 2.00 version of Lora was published in the first days of 1992, after nearly a year of work. I rewrote the source code completely and changed 90% of Lora's behavior.

Now that one year and two upgrade releases later, Lora experiences a esthetic metamorphosis, and has become the program I planned on a school desk in the autumn of 1988.

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1.1 - Main features

LORA has the following features and specifications:

- Both a DOS and an OS/2 release are available.
- Support for up to four different message bases at the same time (with no difference seen by users).
Presently Lora supports:
 - the standard Fido-Base (*.MSG) message base,
 - the QuickBBS (also known as the Hudson message base),
 - the PIP-Base, a compressed message base,
 - and the new Squish-Mail<Tm> message base.
- Support for an infinite number of message/file areas, only limits are for the individual message base types.
- Hyper-Scan function for fast user and message/file areas search.
- Built-in front-end FidoNet Mailer, compatible with:
 - FTSC-0001 (compulsary with FidoNet),
 - WaZOO,
 - and has full EMSI capabilities.
- Support for point systems using Fakenet and four dimension points. This support can be implemented at the same time for different point systems.
- Support for AKA's and ZoneGates.
- Support for the Janus bi-directional protocol for mail transfer.
- Support for multitaskers, leaving unused time to other tasks.
- Support for more than one node with one directory and one configuration file.
- An integrated multiline chat.
- Support for up to twenty different languages.
- Memory swap in EMS, XMS or disk during the execution of external door (leaving in memory only 1.6K for the recovery code), DOS version only.
- Support for the AVATAR/0+ protocol as an alternate to ANSI-BBS.
- Userlist features 12 access levels and 32 configurable flags.
- Support for Remote Access 1.11, Maximus CBCS 2.00 and SuperBBS 1.16 compatible Embedded Commands.
- Built-in TimeBank, FileBank and BBS List doors.
- Support for off-line mail readers compatible with the QWK packet format, as well as a human readable ASCII format.
- Remote clock synchronization in WaZOO and EMSI sessions.

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- Automatic clock synchronization with an Atomic Clock, compatible with the Galileo Ferraris Institute of Torino, Italy.
- User limits (such as on-line time, download limits, etc.) overrides on a single call basis.
- Exclusive ZModem auto-upload feature, your users can upload files at any menu prompt.
- Support for new 16800 baud, 19200 baud, USRobotics V32terbo 21600 baud, V.FAST 28800 baud connection speed and FAX modems.
- Support for ISDN connection speeds, 38000, 56000 and 64000 baud.
- Integrated ANSI/VT100 and Avatar terminal emulation, awareness of downloading and uploading files using all the protocols, including external protocols.
- IEMSI (Interactive EMSI) for user's automatic log-in and parameter settings.
- Supports Internet mail (but not newsgroups) areas.
- Supports external file transfer protocols, such as Omen Technology's DSZ and GSZ.

1.2 - Multi-line systems

Lora is able to manage multi-line systems that use multi-taskers or LANs. Every temporary file created by Lora contains the task number with which it is associated with in its name, so to avoid cross-task accesses to the same files.

If the system uses a multi-taskers like DesqView, DoubleDOS or Multilink, Lora is able to recognize the environment by itself and to release the CPU time, if not used, to the other active tasks.

On the command line it's possible to set both the task number and the log file to be created. These two parameters replace the default parameters set in the configuration file. It's possible to omit these parameters in the configuration file and to set them on the command line only.

If you do not use external programs that do not support multitasker usage, it's not necessary to create a work directory for each line. If you want different directories for each task, it's possible to tell to Lora where to find its configuration file, using the LORA environment variable.

Lora looks for the configuration file in the current directory, then in the directory specified by the command line parameter -C, and then in the directory set by the LORA environment variable.

If you load SHARE.EXE before executing your multitasker or if the multitasker supports the file sharing mode by itself, you must set the READ ONLY attribute for LORA.EXE and LORA.OVL, otherwise you may experience sharing violation errors because the overlay manager keeps the executable files open.

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1.3 - The compressed message base

Lora introduces the concept of the compressed message bases in a Bulletin Board System. It's a new kind of message storing technique, aiming at optimizing the disk space needed to contain a large number of messages. The PIP Base, planned and created by Roberto Piola and supported by a BBS program since Lora 2.00, is the first effective program that uses this technique.

All the messages are stored in a unique file (with different files for each area) and the text is compressed using the letter frequency method. Actually, the most used letter is reduced to a single byte, and expanded again in the reading phase. This method allows an average 35% compression of normal text. That means, considering a typical message base of 10 MB, a savings of 3.5 MB would result.

To use the compressed message base with Lora all that is required is to change the 'Storage' parameter of the message areas setup menu, until 'Pip-base' is displayed. Make sure to configure the 'Pip-base path' (General / Paths menu) field to reflect an existing directory. You are limited to 199 message bases, and area 1 is generally used for local messages.

1.4 - Acknowledgments

I would like to thank all the Beta-testers, for the help given in developing Lora, particularly:

Marcello Ardini, for supporting me with his patience for the bugs of the software and the crashes of his system while Alpha testing. Also I would like to thank him for his programming hints.

Mario Battacchi, for the translation of this manual and for his unfailing support even in the worst moments. It's only Mario, until now, who supported the bugs of Version 1.11 of Lora.

Roberto Piola, for giving me the source code of his PIP-Base, the new compressed message base.

Alfonso Martone, for his hundreds of suggestions and hints in the development of LoraBBS. He also gave me part of the source code to help me in the implementation of new features.

Andrea Borgia, for beta-testing the Lora 4d point management feature.

Riccardo DeAgostini, for the development of the Reverse-Polish Notation (RPN) calculator source code.

Giovanni Fasano, for the source code related to the Squish version of the personal mail scanner.

Special thanks to all the people who registered and will soon register Lora. I'm sorry if I forgot somebody, but feel you free to inform me, so that I can insert you in the next manual release.

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1.4.1 - Translator Notes

This manual has been translated from Italian to English, and may contain errors. If you find some of them, feel free to send me a message, so that I can correct them in next version of the manual.

Mario Battacchi (2:332/403.1@Fidonet.org) (MCI-ID 5271667)

Additional translation support and conversion to Microsoft Word 6.0 and WordPerfect 5.1/6.0 was performed by James J. McKenzie.

I can be contacted at: Mckenzie@emh.osan.af.mil

1.5 - Credits

The following products and names are the copyrighted material and or trademarks. The names and trademark/copyright holders are listed below.

QuickBBS	The QuickBBS Group, Inc.
DesqView	Quarterdeck Office Systems
BinkleyTerm, Janus	Bit Bucket Software
FidoNet, Fido	Tom Jennings
MS-DOS	Microsoft Corporation
X00, VX00, SIO	Ray Gwinn
BNU	David Nugent
Dr.Comm	Rocco Rionero
IBM, OS/2, PC-DOS	International Business Machines
Opus, WaZOO	Wynn Wagner III
Remote Access	Andrew Milner
SuperBBS	Aki Antman and Risto Virkalla
Maximus-CBCS, Squish	Scott J. Dudley
EMSI	Johaquim Homrighausen
HS/Link	Samuel H. Smith
Puma/MPT	Matthew Thomas
GoldEd	Odinn Sorensen
Wedit	Franco Schinco
PIP-base	Roberto Piola
Mercurio	Giovanni Lopes Pegna
DSZ, GSZ	Omen Technology

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2.0 - User's License

LoraBBS E-mail System, known hereafter as Lora, is not a public domain program, but belongs to the category of programs called "shareware". The distribution and use of the programs contained within the program grouping are limited to this user license.

You are free to use Lora for a restricted period of time (up to 30 days) to evaluate it's features, and to decide if it fulfills your needs. When this period is expired, if you want to go on using Lora, you should register following the instructions provide in a later section.

Lora is not a life-limited program; it will work without registration, but some secondary features will remain disabled.

No guarantee of any kind is given for the functioning of Lora, any suitability of Lora to perform any task. If you wish to use Lora, you do it at your own risk. Due to the particular method of software distribution, the author is not obliged to refund any part or all of your any registration fee. All this program is guaranteed to do is take up space on your hard drive.

You are encouraged to distribute the original archive of Lora without any changes. The only exception is if the money you receive is what is necessary to cover postal and diskette copying costs. You are not to distribute your personal registration code to other persons. The source code of this and later versions of Lora will not be distributed to the public.

If you experience any problems, you can reach the author at FidoNet node 2:332/402.1 (Internet: macca@arci01.bo.cnr.it). Due to a lack of time (I am busy correcting the bugs and adding your suggestions to Lora) it may take a long time to reply, but sooner or later everybody will receive an answer. You are encouraged, however, to utilize the international FidoNet echo, LORA, the Lora support echo, to post your questions, suggestions and nicely worded complaints. There may be someone who has experienced the same troubles are you are and can reply much more quickly than I can to your problem.

2.1 - Registration

For registration, you must send an International postal order or bank check to the addresses shown later. The amount of the registration cost depends upon your particular configuration. The registration alpha-numeric code you receive will work on later releases. The author has the right to change the key coding scheme at any time, and (if necessary) of asking for new registration fees. Future releases may require a new key code.

There are several registration sites available. There is a listing below, but it is subject to change. Please inquire on the LORA echo to find who is the closest to you.

Site license and group discounts are available, write to Marco Maccaferri at the address below (via paper mail or electronic mail) for more information.

When you register Lora, the following additional features will be available:

- Keyboard lock with password. Local logon will still be possible, but all functions like Alt-X, DOS Shell, etc. will be disabled.
- Disabling the internal front-end mailer to use Lora with other programs (FrontDoor, D'Bridge, BinkleyTerm, etc.).
- More than 2 remote lines will be allowed. Unregistered versions only allow tasks 1 and 2 to be used for remote log-ins. All other task numbers will drop to a local logon.

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- Memory swap during external doors (DOS version only).
- Use of the internal Areafix and Raid (TIC manager) functions for the automatic management of echomail and file links.
- Inclusion of key sequences in the internal keyboard buffer during the execution of BBS commands.
- Use of file-semaphores for certain operations in multitasking environments.
- Access to beta releases.

2.2 - Registration fees

[1] Special FidoNet Sysop (DOS) Lit. 60.000 (\$46)
Special FidoNet Sysop (OS/2) Lit. 60.000 (\$46)
Special FidoNet Sysop (DOS + OS/2) Lit. 80.000 (\$60)
Special FidoNet Sysop (Crossgrade) Lit. 30.000 (\$23)
This version of the software will work up to 2 telephone lines.

[2] 5 Lines (DOS) Lit. 100.000 (\$76)
5 Lines (OS/2) Lit. 100.000 (\$76)
5 Lines (DOS + OS/2) Lit. 140.000 (\$106)
5 Lines (Crossgrade) Lit. 50.000 (\$38)

[3] 10 Lines (DOS) Lit. 150.000 (\$116)
10 Lines (OS/2) Lit. 150.000 (\$116)
10 Lines (DOS + OS/2) Lit. 210.000 (\$162)
10 Lines (Crossgrade) Lit. 75.000 (\$58)

[4] Unlimited Lines (DOS) Lit. 250.000 (\$190)
Unlimited Lines (OS/2) Lit. 250.000 (\$190)
Unlimited Lines (DOS + OS/2) Lit. 350.000 (\$260)
Unlimited Lines (Crossgrade) Lit. 125.000 (\$95)

[5] Point registration (DOS) Lit. 35.000 (\$30)
Point registration (OS/2) Lit. 35.000 (\$30)
Point registration (DOS + OS/2) Lit. 45.000 (\$40)
Point registration (Crossgrade) Lit. 17.500 (\$15)
The software works completely on a single telephone line, does not accept incoming calls, and the BBS section works only in local mode.

[6] Upgrades from a smaller number of lines to a larger number Price difference between the two.

Forwarding expenses (the cost of changing your money to Lira and additional bank fees):

Foreign check Lit. 13.000
Italian, Eurocheques or Money Orders Lit. 3.000

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2.3 - Registration form

Contributions support the ShareWare concept.

Qty. Description Thank you for supporting Lora and other fine shareware programs!Single Total

____ LoraBBS 2 Lines L. _____

____ LoraBBS 5 Lines L. _____

____ LoraBBS 10 Lines L. _____

____ LoraBBS Unlimited Lines L. _____

____ LoraBBS Point L. _____

Forwarding expenses L. _____

TOTAL L. _____

Name: _____

Address: _____

(please print)

Operating System to register: () DOS () OS/2 () Both
() Crossgrade

Where did you receive Lora? () Friends () Shareware collection
() BBS () User Group
() Other _____

Key forwarding method: () FAX _____
() Netmail to _____
() Paper mail

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See the next section for the closest registration site. If none is listed this form should be mailed to Marco with a Bank check or International Postal Money Order, in either Lire or your country's monetary unit to equal the Lire amounts posted above. The USD amounts are for US registrations only.

2.4 - Support and registration sites

Australia:

Lindsay Blume
O.I.S. Australia (Online Information System)
+61-9-250-3148
FidoNet : 3:690/634

Austria:

Christian Kvasny
The Fright Night BBS
+43-2243-80348 (00:00-24:00)
FidoNet : 2:313/16
AdultNet: 690:3956/1000

United Kingdom:

Barry Kingston-Wyatt
Spartacus BBS
+44-373-451737 (21:00-08:00 GMT)
FidoNet : 2:255/27
Note: Credit cards allowed

United States:

David Huges
PO Box 6592
Colorado Springs, CO 80934-6592
USA
Goldmill BBS
+1-719-632-2657
FidoNet : 1:128/67
Internet: david@oldcolo.com

Italy and other countries:

Marco Maccaferri
via Ferrara, 9
40139 Bologna - ITALY
Arci Computer Club
+39-51-6331730
FidoNet : 2:332/402
AmigaNet: 39:102/304
VirNET : 9:391/105
Internet: macca@arci01.bo.cnr.it

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2.4.1 - Support

You can get support and the latest releases from the above support and registration sites and from the support-only sites listed below. In addition, there is an echomail conference open to everyone interested in discussing Lora called LORA. It is available on the international echomail backbone. Ask your BossNode, Hub, Net Echo Coordinator to acquire the echo. If they cannot, contact the support sites and ask them to make it available to you.

The author's voice number is not listed. Marco does not want to make available a voice support line. This is because of the large number of systems that use Lora around the world and does not want a call to him at 3 a.m. Please use the electronic support system, and if this fails, send the support sites listed a letter with all of the details outlining the problems you are experiencing. As the postal system can be and is the slower of the two, please use the support echo first. Also, there are many of us out there willing to help you through your problem.

2.4.2 - Support-only sites

The following people are acting as support sites-only and not as registration sites.

Belgium:

Maurice Derden
OS/2 Inter-Soft BBS
+32-16-640395
FidoNet : 2:292/606

United Kingdom:

Mike Corby
The Cats Board
+44-628-824852
FidoNet : 2:252/27

USA:

Vanyel Ashkevron
The Herald's Haven OS/2
FidoNet : 1:163/534

KOREA:

James Mckenzie
OS/2 Support, Seoul
FidoNet: 6:760/13

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3.0 - Installation

To install Lora for DOS, you will need a PC/XT/AT computer with at least 512K of free RAM, DOS 3.30 or later version, at least one free serial port and 3 MB of Hard disk space.

The OS/2 release needs OS/2 2.x or later installed, one free serial port and at least 3 Mbytes of Hard disk space.

Here is the procedures to install Lora in your system:

1. Create a directory on the drive you want to install Lora on, LORA is recommended name for this directory, and decompress the original archive, LORA234D.xxx (LORA234S.xxx for OS/2) within the directory. The DOS version will work with OS/2, but requires a FOSSIL driver such as VX00.
2. Run LORA234D.EXE (LORA234S.EXE for OS/2). The program will create all the necessary additional directories and will copy the appropriate files inside them.
3. If you have installed Lora in C:\LORA, you can begin using it with the sample message and file areas configuration; if not, you have to change all the references to C:\LORA using the configuration program LSETUP to reflect the correct drive and directory you installed LORA into.
4. The DOS version of Lora requires a FOSSIL driver for serial communications in order to work properly. If you have not yet have one, you can find a FOSSIL driver at the nearest BBS (on node 2:332/402 you can find the newest versions of all of the available FOSSIL drivers). BNU and X00 are the most popular and come with documentation on how to install and use them. Rebooting of your DOS system is necessary before LORA will operate properly. Lora has been successfully tested with the BNU 1.70 FOSSIL driver, Dr.Comm 0.4 and X00, but it can work also with different kind of FOSSIL drivers. With OS/2, Lora for DOS was tested with Ray Gwinn's SIO drivers (version 1.26) using the VX00.SYS driver in the DOS window. The OS/2 release doesn't need a FOSSIL driver. It has been tested with the standard serial port drivers and with Ray Gwinn's SIO drivers (version 1.26).

3.1 - Upgrading from a previous version

Here are the procedures to upgrade Lora to this version:

1. Decompress LORA234D.xxx (LORA234S.xxx if you are running OS/2) into the directory you originally installed Lora to.
2. Run LORA234D.EXE (LORA234S.EXE for OS/2).
3. Run UPDATE.EXE.

The program will upgrade the files that are changed with this release. If you are using two or more configuration files (for two or more lines), you can specify the name of those configuration files on the command line. For example: UPDATE config1.dat config2.dat

The upgrade can be made from a DOS version to change to the OS/2 version and vice versa. If you have already installed the DOS version, you can upgrade to the OS/2 version by simply get the OS/2 package and follow the upgrade procedures.

If you are upgrading a Lora version older than 2.30, part of the configuration must be completed again. Use LSETUP to insert the configuration(s) you desire from the LORA.CFG file.

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From Version 2.30 or earlier, you don't need to keep the LORA.CFG, SYSTEM.CFG, SCHED.CFG and NODES.CFG files, as well as LORACOMP.EXE. You can save space on your hard drive by deleting these files, unless you plan on returning to the earlier version.

3.2 - Package contents

The compressed file contains the following files:

README - Main features and the installation chapter and any changes not contained in the LORA.DOC file.

LORA234D.EXE - Installation program (self extracting).*

WHATSNEW.TXT - News about the current release.

FILE_ID.DIZ - Archive comment, for BBSes that supports it.

* With the OS/2 release the installation program is named LORA234S.EXE and it is an OS/2 text mode application.

After executing the installation program, you should find the following files and sub-directories:

Sub-directories:

INBOUND - Network's inbound files directory.

OUTBOUND - Network's outbound files directory.

MSG - Message base directory.

OLR - Offline reader temporary directory.

FILE - Storage of the example's file areas.

TMP - Temporary path.

IPC - InterProcess Communications directory.

MISC - Miscellaneous text files directory.

NODES - Nodelist directory.

LANG - Menu and language files directory.

Files in the directory you installed Lora to:

AXEL_F.DAT - Chat music file.

BRASIL.DAT - Chat music file.

CHANGE.DAT - Chat music file.

COUNTRY.DAT - Chat music file.

CUCARACH.DAT - Chat music file.

ENTRTAIN.DAT - Chat music file.

GHOSTB.DAT - Chat music file.

GIOCHIPR.DAT - Chat music file.

LARRY.DAT - Chat music file.

MARYP.DAT - Chat music file.

OSOLEMIO.DAT - Chat music file.

PHONE.DAT - Chat music file.

THEWIND.DAT - Chat music file.

CONFIG.DAT - Configuration file.

SYSFILE.DAT - File areas configuration file.

SYSMSG.DAT - Message areas configuration file.

PAGE.DAT - Chat music file (used by Lora).

LORA.DOC - Documentation (this file)

LORA.EXE - Program's loader.

LORA.OVL - Main executable file.

LSETUP.EXE - Lora's configuration program.

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LMSG.EXE - Message areas maintenance program.
LUSER.EXE - Users maintenance program.
USERED.EXE - Users editor.
LNETMGR.EXE - Network manager.
LTOP.EXE - TOP 10 users generator.
FILEIDX.EXE - File request index generator.
LANGCOMP.EXE - Language files compiler.
L2WORLD.EXE - External doors interface (DOS application, even in the OS/2 version.)

LORA.ICO - OS/2 icon file for Lora.(OS/2 version only.)
LSETUP.ICO - OS/2 icon file for LSETUP.(OS/2 version only.)

LORA_API.ZIP -Structures of Lora's data files and examples on how to use it for developers.

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4.0 - Configuration

LSETUP is the program used for Lora's configuration. The pull-down menus allow you to set all the options available, including BBS menus, mail-session nodes, and so on.

LSETUP accepts only one optional parameter in the command line, i.e. the filename of the configuration file to be used. If you omit it, the file named CONFIG.DAT will be used. If the configuration file does not exist, it will be created using standard parameters. Upon exiting from LSETUP the actual file write will occur. If you run LSETUP from within Lora, the configuration filename will be automatically passed to LSETUP.

Let's now review menus and the options available within each one:

4.1 - File

This is the first menu and covers everything concerning the interaction between LSETUP and the external world. The options available are:

Registration

Shows a window in which it is possible to insert your registration code (if registered). Do not enter anything in this block other than a registration code which you obtained when you registered Lora.

Write AREAS.BBS

Allows you to export to a text file the configuration of the echomail message areas (those areas marked with the echomail flag and for which an echotag has been defined). By default, LSETUP uses the AREAS.BBS file defined in the Mailer/Areafix menu (see later) or in the current directory, if not defined, but it can be changed at any time.

The file uses a standard AREAS.BBS format, so that it can be used by any external program that supports this standard. An example of the AREAS.BBS generated by Lora follows:

```
Man at Work - Lora Developer's site ! Marco Maccaferri
;Site name and Sysop, separated by an exclamation mark
$C:\Lora\Msg\Cartoni  CARTONI.332      2:332/402
$C:\Lora\Msg\Chat400  CHATTER.400     2:332/402
$C:\Lora\Msg\Cine400  CINEMA.400      2:332/402
;These are squish type areas
124      BBS_SOFT.ITA      2:332/402
71       CINEMA.ITA       2:332/402
41       ECHOSER.033      2:332/402
42       ECHOSER.332      2:332/402
;These are QuickBBS (Hudson) type areas
!50      FIDO_STYLE.ITA   2:332/402
;This is a Pip-base type area
C:\MSG\PRIVAT  PRIVAT.400    2:332/402
;This is a Fido (*.MSG) type area
;
; Created by LSETUP v.2.33
;This will be inserted by LSETUP and will reflect the version number
;that created the file
```

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;Lines that start with a semi-colon are comments and can be added after the file is created.

Write ROUTE.CFG

Creates a routing file based on the present configuration. Please note: This option works only if 4d point addresses are inserted using the Global / Address menu. The routing file will be created for 4d point addresses only.

WARNING: YOU WILL NEED A ROUTE.CFG FILE IN ORDER FOR LORA TO WORK PROPERLY. SEE SECTION 11.6 FOR INFORMATION ON WHAT MUST BE INCLUDED IN THIS FILE.

Import AREAS.BBS

This option imports a standard AREAS.BBS file in the Lora echomail areas configuration. Existing areas will be updated using data contained in the imported file. Non-existing areas will be created with the data contained in the imported file.

Import TIC.CFG

This option allows you to import your existing TIC (file echo) configuration file into Lora's configuration files. The following is an example of valid TIC.CFG file:

```
;
;
AREA C:\LORA\TMP\ LORA
      2:332/402 MARVEL *D
;
;
AREA C:\LORA\TMP\ LORA_OS2
      2:332/402 MARVEL *D
;
;
```

Please refer to the Tick program documentation for more information about the meaning of these lines.

Lora imports the only the file area definitions and the forward information. No other information is imported from the configuration file, even passwords are not imported and must be configured manually inside the Manager/Nodes settings, described later.

DOS Shell

Makes an operating system shell from which you can return to back to LSETUP. It works under OS/2, but keep in mind that OS/2 is a multitasking operating system, so it's best to open another OS/2 Window instead of shelling out of this program.

Quit

Exits from LSETUP. If the configuration has been changed, LSETUP will ask if you want to save the changed configuration.

4.2 - Global

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This menu allows you to change global options for Lora. The options available are the following:

Site Info

Allows you to insert the data related to the system and its operator. In this window you can insert the system name, the Sysop name (must be the same as the one that you registered Lora with), the town where the system resides, the telephone number and flags (used for mail sessions with other similar systems, such as MO for mail only).

Directory/Paths

These settings allow you to declare the directories used for the files Lora works with.

Main Directory - Directory in which Lora will search for every common file, in a multi-line system, such as message and files area configurations.

Normal inbound

Known inbound

Prot inbound - These are three directories used in the mail sessions with other BBSs for file reception. The Prot inbound area is used with password-protected nodes. The known inbound is used with nodes that are not password-protected but are known (namely present in a Nodelist that Lora uses). The normal inbound area is used for all other systems.

Outbound - It is a directory used in mail sessions in which the files to be sent are stored. Important! This area must have no extension! Lora automatically adds a numeric extension for the files directed to a BBS whose zone number is different from the one that you used in your main address.

Netmail messages - Here the Netmail (mail directed to specific nodes) messages are stored. This should point only to this message area, and not be used for any other message area.

Bad Messages - Here the messages that can not be imported into echomail/Netmail areas for safety reasons are stored. These reasons are that the messages came from unauthorized nodes or destined to areas that do not exist.

Duplicate messages - Here the messages recognized as duplicates (those messages already imported by Lora) are stored. Lora memorizes the dupes for the last 1000 messages in each area.

Quick Directory - Here all the files of the Hudson message base (MSG*.BBS) are stored. If the files do not exist, Lora will create them when needed.

Pip-Base path - Here all the files of the Pip message base are stored. If the files do not exist, Lora will create them when needed.

IPC Path - Here the files for the information interchange between the system tasks are stored. To improve performance, it is better to create this directory on a RAM disk.

Nodelist - Here the files related to other BBSs connections are stored.

Temporary path - Here all temporary files are stored. To improve the BBS's performance, it is

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better to create this directory on a RAM disk.

Filebox path - This directory is used as the main directory for the users filebox's creation. Fileboxes, which will be explained later, are like mailboxes, but are related to file exchange between users.

Addresses

Allows you to define the addresses by which your system is identified in your network. If you belong (or want to) to networks like FidoNet, AmigaNet, or similar, the node number must be assigned by the local coordinator of the network.

You can define up to 20 addresses. The first address (marked 'Main') is your default address and is used whenever requested (Netmail and echomail forwarding, TIC processing, and so on) if no other address is specified for that task.

General

General options for the system operation::

CGA "snow" checking - By setting this flag on, you will eliminate flickering, which can be annoying, which is made by some CGA cards when programs write directly to video memory.

Monochrome - Allows you to see the differences between colors, even with monochromatic cards, like the Hercules cards.

Direct screen writes - By setting this flag on, you will improve program performance, since it will write directly to video memory, without using video BIOS functions. This option may cause some problems in multi-tasking systems that shadow video memory. Lora's internal routines also allow direct video memory writes in systems using DesqView with 286 processors.

Blankout timer - Defines after how many minutes of inactivity the screen blanker (also known as screen saver) will become active. A 0 input will deactivate the screen blanker completely.

Line number - Defines the task number in multiline systems. In single line systems this must be set to 1.

Multiline system - By setting this flag on, Lora is allowed to create on disk all of the semaphore files necessary for a system that is running in the multi-line mode. If you are using a single system with a slow disk drive, it's better to keep this flag off, to improve system performance.

Time Adjustment

Allows you to define the parameters for the automatic synchronization of the system clock with other nodes and with the Turin-based Galileo Ferraris Institute, or other atomic clock systems based upon its standard.

Init - Defines the modem initialization command.

Dial prefix - Defines the call command. It will be sent to the modem before the phone number.

Dial suffix - This command will be added after the phone number. Usually it is a | (pipe), that is

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the same as a carriage return (CR) character.

Number - Defines the number to be called. The Galileo Ferraris phone number is +39-11-63487892. Please note that you need to add the code for international calls from your country.

Use DST - Allow the synchronization of the PC clock always using the solar time. If it is set to Yes, the clock will be synchronized to daylight savings time or the solar time based on the time of the year. If set to No time will always be synchronized with solar time, even if daylight savings time is in effect.

Nodes - Defines the BBS node numbers with which the system clock can be synchronized to.

Internet gateway

Allows you to specify an Internet mail gateway to automatically address mail destined to the Internet. You can define a message area as 'Internet mail' (see the message definition section). All mail entered into this area will be sent to the node set below.

Gateway Name - Defines the gateway user name.

Address - Node address of the gateway.

4.3 - Mailer

With this menu you can set all options related to mailer portion of Lora. This is the interface between your BBS and a Fido Technology Network.

Miscellaneous

Several options for the internal mailer and mail processor management are available:

Banner - The sentence filling in this field will be shown at the beginning of the connection, before entering the real BBS. The banner will be shown after the mailer identification string and before the "Press <ESC> twice to enter the BBS" sentence (See the Enter-BBS option).

Mail-Only - The sentence that fills this field will be shown in the place of the one defined in the Enter-BBS option, when the mailer cannot accept human calls. This might be due to a system or network event, such as the scheduled Zone Mail Hour (ZMH).

Enter-BBS - The sentence that fills this field will be shown to inform the user that the system is ready, and asks him to press <ESC> twice or wait 30 seconds to enter the BBS.

For these three options it's possible to specify a text file to be shown, putting in the filename preceded by an AT (@) in the field. For example: @BANNER.TXT would show the file BANNER.TXT.

Events file - Specifies the event filename to be used. There is an example events file included with Lora. This should be modified to match the options your BBS needs. There is an explanation of the events file settings in the Manager/Events menu definition.

WaZOO - Allows the mailer to make/receive calls using the WaZOO handshaking method. This method is a little obsolete, since it allows the systems to pass only one address per call.

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EMSI - Allows the mailer to make/receive calls using EMSI handshaking. This method is the latest product of FidoNet technology development. It allows the systems to pass many addresses with the same call, and additional information about the system. Also, the method of file transfer is negotiable.

If both the methods are flagged No, the most obsolete (but still compulsory) FidoNet method, FSC-001, will be used. The information passed to the remote system is minimal, and the file transfer is made using the SEALink protocol, an X-Modem variant.

Janus - Allows the mailer to use the bi-directional Janus protocol for file transfers between systems. Lora automatically disables the Janus protocol for HST connections, since the HST modem protocol does not allow bi-directional transmission at the fastest connection speeds.

Random redial time - With this option set on, the redial time will be calculated randomly, keeping the redial time set for the current event as the average time between each call. For example, if you set a redial time of 20 seconds, each call will be placed with 10 to 30 seconds of pause time between calls.

Secure - Each time the mail processor imports a message from a mail packet, it checks the sender's address, to see if it is allowed to write in that particular message area. If this condition is not satisfied, the message will be stored in the directory set as the Bad-Messages directory.

Keep Netmail - With this option set on, the mail processor will delete no messages from the Netmail area, even if they are marked Kill/Sent.

Flashing mail - Enable or disable the flashing "MAIL" word in the lower right screen corner area when unread Netmail messages are present.

Track Netmail - This flag activates, if set to Yes, the built-in message track utility will become active. The message tracker is used whenever a new Netmail message is tossed from a mail packet or packed from the Netmail directory, checking to see if the originating or destination nodes exist in the nodelists that Lora can access. If the destination node does not exist in your nodelists, then the Netmail will be bounced back to the originating address with a little explanation of what happened.

If the originating node doesn't exist in your nodelist, then a little header explaining that the recipients should not answer to that message through your system, or it will be bounced as undeliverable, will be added.

Log

These options are related to the log generation, namely the file in which system activity is reported.

Name - The filename to be used for system logging.

Style - Specifies the log format to be used. The Terse format appears as follows:

```
----- Mon 23 Nov 92, LoraBBS v2.21.3b
: 08:26:54 STATS: 290K used, 295K available
: 08:26:56      C: 4.2 of 61.8 Mb free, 6%
: 08:26:57 Starting Event 2
* 08:27:08 Processing 2:332/402 -- ARCI Computer Club/Lora BBS Suppo
: 08:27:08 Dialing 6331730
```

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```
+ 08:27:36 Connect 14400/Arq
* 08:27:44 Arci BBS - Oltre l'immaginazione... (2:332/402.0)
: 08:27:44 AKA: 39:102/304.0
* 08:27:44 Remote Uses LoraBBS Version 2.21.3a/14380
```

Here is an example of the Verbose format:

```
+ 22 Nov 22:48:08 LORA Begin, 2.21.3b, (task 1)
: 22 Nov 22:48:09 LORA STATS: 290K used, 130K available
: 22 Nov 22:48:09 LORA      C: 4.3 of 61.8 Mb free, 6%
+ 22 Nov 22:48:19 LORA Connect 2400
* 22 Nov 22:48:26 LORA LoraBBS Developer's Site (2:332/402.1)
: 22 Nov 22:48:26 LORA AKA: 39:102/304.2 2:332/403.13
* 22 Nov 22:48:26 LORA Remote Uses LoraBBS Version 2.21.3b/49459
```

As you can see, the information is the same, but in the Verbose format month and day are repeated on each line. Choose the format you prefer, but you should consider compatibility problems with log scanning programs.

The Verbose format is Maximus, Opus and BinkleyTerm compatible, the Terse one is FrontDoor compatible.

Log flags - With this option set to yes, the creation/deletion of the mailer flags (*.BSY) will be logged in the system logfile. Set this option to no if your system uses a slow hard disk.

File Requests

Allows you to define the file request privileges for other BBSs calling your system.

Request list

Request list (Secure)

Request list (Known) - Allows you to define a file and/or directory list from where files can be requested. A typical format of one of these lists is as follows:

```
C:\File\BBS\PROVA.ZIP !TEST
C:\File\LORA\*.*
@BETALORA C:\File\LORA23B5.ZIP
$C:\Lora\FILES.IDX
```

The first line indicates a password-protected file, the second one indicates that every file in the C:\File\Lora directory can be requested, the third one indicates a 'magic name'. A magic name is an arbitrary name to be used for requesting the last version of a given program. In the example shown, if a BBS requests BETALORA, the file LORA23B5.ZIP will be sent. The last line (the one beginning with the dollar symbol) allows you to specify one or more file indexes to considerably speed up the file request search, especially on CD-ROMs or other slow devices. The file indexes can be created with the FILEIDX utility, and can be password protected like any other file.

The three entries specify the file lists available for unknown nodes, for password-protected nodes and for nodes present in a nodelist that can be used by Lora.

About - Filename to be sent if the ABOUT file is requested. Usually this file contains information about your system, like opening hours, characteristics, magic names available, and whatever else you want known about your system.

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File List - Filename to be sent if the FILES file is requested. Usually this file contains the complete list of available files for the system.

Max size

Max size (Secure)

Max Size (Known) - These define the maximum number of Kilobytes to download to, unknown nodes, password-protected nodes, and nodes present in a nodelist that Lora can use.

Max match

Max match (Secure)

Max match (Known) - These define the maximum number of files to be downloaded to, unknown nodes, password-protected nodes, and nodes present in a nodelist that Lora can use.

Areafix

This menu allows you to configure the Areafix function, which is described in chapter 8.0 in this manual.

Areafix active - Turns the internal Areafix function on and off.

Help file name - Filename to be sent with the %HELP command. Since this file is sent in message form, it's best to keep it as short as possible.

Creating nodes - List of nodes that can create message areas on your system. When the mail processor imports a message into an unknown area, it checks to see if the sending node can create areas on your system. If the node can create new areas, Lora will create a Fido style (*.MSG) area in the base Lora directory called NEWAREA.xxx (where xxx is a progressive number) and will add that area to the AREAS.BBS file, if the Update AREAS.BBS flag is set to Yes. If the node cannot create a new area, the message will be stored in the bad message directory.

Autolink nodes - List of nodes that will be automatically linked to the new areas created by Areafix.

Alert nodes - List of nodes that will receive a copy of the answer messages generated by the Areafix function. Information request messages (%LIST, %QUERY, %UNLINKED and %HELP commands) will not be forwarded.

Use AREAS.BBS - If this parameter is set to Yes, allows Lora to consider the information found in the AREAS.BBS file when importing or exporting echomail messages.

Update AREAS.BBS - If set to Yes, allows to updates to the AREAS.BBS file whenever an Areafix message changes the echomail forward structure.

Allow rescan - If set to Yes, allows the rescan procedure on one or more echomail areas to be performed through an Areafix message. Note that some areas can generate extremely large packets, so it may be safer to keep this parameter set to No and perform the rescan manually.

Change TAG level - Defines the privilege level that a node must have to change the tag identification of an echomail area through an Areafix message. It is suggested that the level be set to allow only the Sysop or his/her co-workers to use this command.

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Remote maint. - Defines the privilege level that a node must have to send commands as another node through an Areafix message. It is suggested that the level should allow only the Sysop or his/her co-workers to use this command.

Check zones - If set to Yes enables the zone check on every Areafix operation, to allow the link of echomail areas with the same zone number.

TIC Processor

This menu allows you to configure the Lora/Raid (automatic echo file area manager) function, which is described later in this manual.

TIC active - Turns the internal Raid function on and off.

Help file name - Filename to be sent with the %HELP command. Since this file is sent in message form, it's better to keep it as short as possible.

Creating nodes - List of nodes that can create file areas on your system. When the TIC processor imports a file in an unknown area, it checks to see if the sending node can create areas. If the node can create a new file area, Lora will create a directory called FNEWAREA in the Lora base directory, and will then create a sub-directory which is named after the tag name of the file area and add it to the file area configuration file. If the node cannot create a new file area, the TIC file will be renamed as *.BAD.

Autolink nodes - List of nodes that will be automatically linked to the new areas created by the TIC processor.

Alert nodes - List of nodes that will receive a copy of the answer messages generated by Lora/Raid. The information request messages (%LIST, %QUERY, %UNLINKED and %HELP commands) will not be forwarded.

Change TAG level - Defines the privilege level that a node must have to change the tag of an filemail area through a Raid message. It is suggested that the level should allow only the Sysop or his/her co-workers to use this command.

Remote maint. - Defines the privilege level that a node must have to send commands as another node through a Raid message. It is suggested that the level be set to allow only the Sysop or his/her co-workers to use this command.

Check zones - If set to Yes enables the zone check on every Lora/Raid operation, to allow the link of file areas with the same zone number.

External Processing

In this menu it's possible to specify the filenames of the programs to be called during external maintenance routines.

Before import - The command in this field is executed after arcmail unpacking, and before message importing.

After import - The command in this field is executed after message importing intoecho areas, and before message area scanning.

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Before export - The command in this field is executed before message areas are scanned. After import and before export are executed together automatically if mail processing is not interrupted.

After export - The command in this field is executed after message area scanning for outbound messages and before Netmail scanning for outbound messages and outbound arcmail packing.

Before pack - This command is executed after Netmail message area scanning for outbound messages and before outbound message packing.

After pack - This command is executed after the Netmail message area scan and outbound mail packing.

Automaint - The command in this field is executed every day after internal maintenance routines. In a system that is up 24 hours a day, this command will be executed soon after midnight, and after a system restart.

BBS Batch - The command in this field is used to call an external BBS program. You can specify the following parameters on the command line:

- *B - Connection speed reported by modem. In local connections this will be forced to 0.
- *C - Full COMMAND.COM path.
- *H - Deactivates the FOSSIL driver (DOS version only). The OS/2 version translates this parameter to the com port file handle.
- *M - This parameter allows registered users to freeup almost all of the conventional memory, leaving only 1.6k in memory, for the recovery code (DOS version only).
- *N - Active task number.
- *P - Active serial port (1=COM1, 2=COM2, etc.)
- *T - Time, in minutes, before the next system event execution.
- *W - Activates the FOSSIL watchdog function. When the carrier drops, the FOSSIL driver resets the computer. This option is rarely used, and is present to show that it is available (DOS version only).

Message Editor

Defines the DOS command which will call the local message editor when logged onto Lora. Lora can work well with a wide variety of message readers/editors. Suggestions are GoldEd, Mercurio and WMail.

Mail Processing

In this menu are the mail processing options.

Method - Defines the method of mail exporting. You can choose between 'Separate Netmail', for which Netmail will be exported in different packets (*.PKT) than echomail (but always within the same compressed outbound mail bundle) and 'Netmail and Echomail together' (default) for which the Netmail will be appended to existing echomail packets.

Save Sysop Mail - If enabled (Yes) allows Lora to save in a separate directory the messages addressed to the Sysop, by name only, coming in through every echomail and the Netmail area. The messages will be saved in the Fido (*.MSG) format with all information untouched (even the AREA:<tag> line).

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Sysop Mail Path - Defines the directory to save the messages which are addressed to the Sysop.

Flashing flag - Allows to enable or disable the flashing "PERSONAL" word in the lower right screen corner of the screen when new unread messages that are addressed to the Sysop are present in the Sysop Mail Path.

Replace Tear Line - Defines if and how replace the tear line (the line immediately above the origin line in an echomail message) within a message processed locally with the Lora's tear line. You can choose:

'Always' to always replace the tear line (default for the unregistered versions), 'Never' to not replace the tear line, 'Link (limit to 35 char.)' to add to the existing tear line if the resulting line is not above the 35 character limit, 'Link (unlimited)' to add to the tear line without verifying the resulting line length.

The tear line for Lora is shown as follows:

--- Lora v.2.34

If added to the tear line of a message written with GoldEd (for example), it would look as follows:

--- GoldEd v.2.41+ / Lora v.2.34

Tear line - Allows you to define a custom tear line for your own system. The sequence %1 will be replaced by the version number, so that a tear line that looks like this:

Lora-OS/2 v%1

will be sent as:

Lora-OS/2 v2.34

Please note that the leading dashes (---) aren't required to be put in the above examples. They will be added at the time the message is formatted by Lora. This option is will work only on registered systems.

Import empty msgs. - Allows you to prevent the mail processor from importing messages without text lines inside them. Some systems send announcement messages and these messages can be retained or discarded as the Sysop wishes.

Force INTL line - This option allows you to force the mail processor to put an INTL line inside every Netmail message exported, even if such a line is not necessary. This option should be set to No, unless your Netmail uplink is having problems handling intra-zone netmail messages.

Mail-only password

Allows the Sysop to specify a password that allows the Sysop and his/her co-workers to log into the BBS even during a mail event that doesn't allow human callers.

The password must be written when Lora shows the 'Mail only' banner. The password is not echoed, so no indication is given from the system that a password is being entered. If the password is correct access is allowed to the BBS. This password is case sensitive.

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4.4 - BBS

Within this menu all of the options for the BBS settings, from area definitions to the user level definitions are collected.

Messages

Message area definitions. The options available are explained in chapter 5 of this manual.

Files

File area definitions. The options available are explained in chapter 6 of this manual.

QWK setup

The internal QWK door definitions.

Work dir - Directory in which all temporary files necessary for QWK packet creation will be stored.

Packet name - Filename of the packet (without the .QWK extension) that will be created. Lora will send to the user a packet called <packet name>.QWK, and will look for a packet called <packet name>.REP. All other .rep files will be ignored.

Max messages - Maximum number of messages that can be packed in a QWK outbound packet file. If the user exceeds this limit, message scanning will stop, and the packet will be sent to the user. The limit is checked after each area is scanned. This means, for example, that if the limit is set to 500 messages and a given area contains 1000 messages, all those 1000 messages will be packed, and then the scan will stop.

New users

Options that the Sysop can set for New Users.

New user sec. level - The access level assigned to new users. We suggest you to assign the LIMITED level to new users. If you don't want new users to join your system, assign them the HIDDEN level. This way the system cannot see them, and the PREREG file will be sent.

New user A flags

New user B flags

New user C flags

New user D flags - Flags assigned to new users.

Ask birthdate - Turn this flag on if you want the system to ask new users their birthdate.

Ask voice phone number - Turn this flag on if you want the system to ask new users their voice/home phone number.

Ask data phone number - Turn this flag on if you want the system to ask the users their data (or office) phone number.

Ask IBM character set - The system will ask new users if they want to see the IBM extended

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ASCII character set if this flag is turned on. Lora is able to remap these characters if the user is not able to receive them.

Ask alias name - Turn this flag on if you want the system to ask new users a nickname. This alias can be used in message areas as decided by the Sysop.

Ask default protocol - Turn this flag on if you want the system to ask new users for their preferred file transfer protocol.

Ask default packer - Turn this flag on if you want the system to ask new users for their default packer to be used with the QWK internal door.

Filebox default - If set to Yes, every new user will have their file-box flag set, so that they will have a file-box created upon first log-on so they can receive private files from other users, through the file-box commands. Every user can send files to a file-box, but only users with this flag set can own a file-box.

It is recommended that this feature not be used unless you are willing to track all files placed on your system.

More prompts - If you this flag to "yes", the system will ask the user to press Enter to see next page at the end of each page. If you set the flag to "no", the system will not stop scrolling until the end of the text to be shown. If you set the flag to "ask", the system will ask new users their choice.

Mail check - If you set this flag to "yes", the system will scan for user's personal mail at each log-on. If you set the flag to "no" the scan will never be performed. If you set the flag to "ask", the system will ask users if they want to scan mail areas during the log-on procedure.

New files check - The same options of as the mail check, but with respect to new files since the user's last log-on.

Screen clears - If you set this flag to "yes", the system will send clear screen codes. If you set the flag to "no", the screen clearing codes will never be sent. If you set the flag to "ask" the system will ask new users if they want to have the clear screen codes sent to them.

Hotkeys - As above, the flag "yes" means that hotkey commands (commands which do not need a CR to be executed) are always active. The flag "no" means that they will never be active (this means that users can put more than one command on the same line). The "ask" flag means that the system will ask to new users if they want to use hotkeys.

ANSI Graphics - As above, the flag "yes" means that ANSI graphics will always be active. The "no" flag means that they will never be active. The "ask" flag means that the system will ask new users if they want to use ANSI graphics.

Avatar Graphics - As above, but related to AVATAR graphics, more efficient and faster than ANSI.

Full screen editor - As above, the flag "yes" means that the full screen editor will be used to write messages. The flag "no" that the line editor will always be used. The "ask" flag means that the system will ask new users if they want to use the full screen editor or not.

Rookie calls - Defines the number of calls after which a user is no longer considered as a rookie user and should know how to use the system. For these users a message is displayed with special notes, instructions and useful hints on how to use the system.

Random birthdate check - If you turn this flag on, the system will randomly ask the user's

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birthdate during the log-on procedure.

General options

These are options that are used by the BBS part of Lora.

Users file - Defines the filename and path of the user database. You do not need to specify an extension, Lora will automatically add the .BBS or .IDX extension when needed.

Menu dir - Defines the directory to be searched for the menu files that will be shown to users.

General text dir - Defines the default directory to be searched for the text files to be shown to users at various times during the BBSs usage. It is possible to define a different directory for each language, so that it's possible to translate the files into each language that is supported by your system. The general text directory will be used to find the files that could not found in a different language directory.

Full screen editor - It defines the path and filename of an external full screen editor that can be used by users (please note that this editor is not the Sysop's editor defined in the Mail/message editor menu). It's possible to specify other special commands that can be used to pass useful information to the editor. The commands are as follows:

- *0 - Current file area path.
- *1 - Current message area path.
- *B - Baud rate (0 in local mode).
- *F - User's first name.
- *G - 0=No graphics, 1=Ansi, 2=Avatar.
- *H - Disables the FOSSIL driver before calling the editor (DOS version only). With the OS/2 version, it will be translated to the COM port handle.
- *L - User's last name.
- *M - This parameter allows registered users to free conventional memory, leaving only 1.5k in memory, for the recovery code.
- *N - Task number.
- *P - Serial port (1=COM1, 2=COM2, etc.).
- *R - User's position inside the users database (the record number).
- *S - Lora will not read LORAINFO at the end of the editor call.
- *T - Time left for the current call.
- *W - Activates the FOSSIL watchdog. If the carrier drops, the FOSSIL will reboot the computer.
- *X - The LORAINFO.T?? file will not be created, before calling the editor.
- *! - Stops time during the editor call. At the end of the call, the user will have the same amount of time he had before calling the editor.
- *# - Disables the 'Wants chat' flag. Useful to correctly manage external chat programs.

To be compatible with Scott Dudley's Maximus-CBCS 2.00, the following commands have been added:

- %A - User's first name, in capital letters.
- %b - Baud rate (0 in local mode).
- %B - User's last name, in capital letters.
- %c - Calling site.
- %C - Last answer to the questionnaire's ^OR command (see the EMBEDDED COMMANDS sections, for more details).
- %d - Current message area number
- %D - Current file area number

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%E - Length, in lines, of the user's screen.
%f - User's first name.
%F - Current file area path.
%g - 0=No graphics, 1=Ansi, 2=Avatar.
%G - User's daily download limit.
%h - User's voice phone number
%H - User's Kbytes downloaded in the present day.
%i - Total download.
%I - Total upload.
%j - Length (in minutes) of the present call.
%k - Task number.
%l - User's last name.
&L - In remote mode, this command is substituted with the '-pX -bY' string, where X is the serial port (1=COM1, 2=COM2, etc.) and Y is the speed (in baud). In local mode, this command is substituted with the '-k' string.
%M - Current message area path.
%n - User's first name.
%N - System name, as defined in the configuration file.
%p - Serial port (0=COM1, 1=COM2, etc.).
%P - Serial port (1=COM1, 2=COM2, etc.).
%q - Current message area path, without the final backslash.
%Q - Current file area path, without the final backslash.
%s - Sysop's last name.
%S - Sysop's first name.
%t - Time left for the present call, in minutes.
%T - Time left for the present call, in seconds.
%u - User's number.
%U - Substituted by underscore '_'.
%v - Upload directory path.
%V - Upload directory path, without the final backslash.
%Z - User's full name, in capital letters.

Quote header - With this field you can define the sentence that will be used as the first line when a user replies to a message when using the built-in full screen editor.

You can specify the following special characters:

@ - Expands into the person's name to which the original message was addressed.
- Expands into the person's name who posted the original message (the one being replied to).
' - Expands into the date that the original message (the one being replied to) was posted.
~ - Expands to the time that the original message (the one being replied to) was posted.

For example, if the following reply header was specified:

In a message originally to @, # said:

Would expand to:

If the reply was to a message posted by Joe User to All as,

In a message originally to All, Joe User said:

ANSI at logon - Definition of the ANSI display method at logon. "Auto" allows Lora to automatically recognize whether or not the user's terminal is able to display ANSI graphics with a special

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request code. The "Yes" flag forces Lora to send ANSI graphics codes. The "No" flag forces Lora to send ASCII codes; "Ask" means that the system will ask the user whether he wants to see ANSI graphics or ASCII codes.

Puma/MPT protocol - Activates/deactivates the internal Puma/MPT protocol management. The executable file must be in a directory defined by the PATH environment variable.

HS/Link protocol - Activates/deactivates the internal bi-directional HS/Link protocol management. The executable file must be in a directory defined by the PATH environment variable.

Snoop on-line user - Activates/deactivates displaying of everything that the user is doing on the system.

Aftercaller exit - Errorlevel with which Lora will exit after an user call. 0 means that Lora will not exit to the operating system after an user call, and will restart itself automatically, thus a batch file is not needed to manage the reset loop after a user hangs up.

Areachange keys - Definition of the letters for the change area commands:
They are for the go to previous area, go to next area, and list areas commands. They default to '[', ']', '?'. '?

Date format - Definition of the date format in the messages, the available parameters are the following:

- %D - Displays day number.
- %B - Displays month number.
- %C - Displays month abbreviation (Jan, Feb, Mar, etc.).
- %Y - Displays the year's last two digits (92, 93, etc.).

The international format uses %C-%D-%Y.

Time format - Definition of the time format in the messages. The available parameters are the following:

- %A - Displays "am" or "p.m." in 12 hours format.
- %E - Displays time in 12 hours format.
- %H - Displays time in 24 hours format.
- %M - Displays the minutes number.
- %S - Displays the seconds number.

The international format uses the %H:%M:%S parameters.

Download counter - Enables the files download counter to be shown. The counter will be put at the beginning of the description within two selectable delimiters.

Example:
TEST.ZIP (3) Counter Example

Counter limits - Defines the delimiters to be used for the download counter. The default is the square bracket characters.

Uploader name - Adds the uploader's name to the file description. If anyone uploads files containing viruses or is a Trojan file, you will be able to identify the uploader much more easily.

Login check city - If set to Yes Lora asks the user to verify the city they are calling from before

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entering the password at log-in time. This is useful to prevent a user with the same name as another user from calling two times to complete the log-in process to your system.

Inactivity time-out - Defines the number of minutes that a user can spend on-line without doing anything before the system hangs up the phone. About 20 seconds before the Lora forces a logout Lora will display a warning message to the user.

IEMSI logins - Setting this option to yes to allow your users to log in your board using the Interactive Electronic Mail Standard Interface (IEMSI) handshaking procedure. Terminal programs capable of such handshake procedures are: Lora's built-in terminal program, Terminate and FrontDoor's built-in terminal program.

Interactive EMSI (IEMSI) is a protocol which can be used by communications software programs to establish certain parameters for an interactive session, for example, a user logging on to a bulletin board. From within the IEMSI terminal's setup program, the user can define a number of user profiles, each of which includes the user's name, handle, password, telephone number, location, etc. When IEMSI is enabled from within the terminal and the user calls a BBS running Lora, the user's information is sent to the BBS automatically, enabling the user (the client) to log-on to a BBS (the server) without touching the keyboard. The IEMSI terminal and Lora will automatically exchange information such as software name and version number, screen parameters and local time. One particularly useful feature of IEMSI is the ability of the server to temporarily modify the user's display parameters for the current session only. Typically, when a user calls a BBS, the user's screen length setting is used to determine when page pausing is to occur. However, on one occasion the user may activate the IEMSI terminal in 50 line mode. Lora will recognize this and set the screen length to 50 lines for the current session only, restoring it to the original setting when the user disconnects. In addition, Lora will automatically activate whatever terminal emulation that it, as well as the client, supports.

Show missing files - If this option is set to yes, the missing files (files that are described in the FILES.BBS file but are not present in the file area's directory) will be displayed to the user with the 'MISSING' word instead of the file size and date.

ZModem protocol

XModem protocol

1K-XModem protocol

SEAlink protocol - This options allows you to enable (yes) or disable (no) the internal protocols. You can replace one or more of these protocols with an external one, using the external protocol setup menu.

Min. upload space - This option allows you to stop any upload made by any user when the free space on the upload drive is less than the amount specified (in Kbytes) in this field. Valid ranges are 1 to 32000 Kbytes, 0 means no checks for free space and the upload will take place even if there is not enough free space left on the drive.

Input date format - This option allows you to choose the date format for every date input field. Available formats are: DD-MM-YY (most European countries), MM-DD-YY (USA) and YY-MM-DD (Scientific format).

Limits

This menu allows you to define the BBS accesses for each user level. There are eleven levels available are eleven: Twit, Disgrace, Limited, Normal, Worthy, Privel, Favored, Extra, Clerk, Asst. Sysop and Sysop. There is one additional level: Hidden, but this "hides" the user from access to the system.

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You can define, for each level, the following parameters:

Time Limit per Call - Minutes available for each call.

Time Limit per Day - Minutes available in 24 hours. If this limit is higher than the Call Limit, the user will have the time defined here to him/her available per day, but he will not be able to spend more than the time defined in Call limit for each call.

Example: Call limit -> 30
Day limit -> 45

This means that the user will have 30 minutes available for the first call. If he spends 20 minutes on the BBS, he will have 25 minutes available for the remainder of the day.

Minimum Logon Baud - Minimum speed with which users of this level can logon. If the Sysop has a 14400 baud modem, it's better, for security reasons, to limit the Sysop level at 14400. A 0 here means no limit has been set.

Minimum Download Baud - Minimum speed necessary to download files. A 0 here means there is no baud limit set.

Download Limit (KB) - Maximum number of Kbytes that can be downloaded in a one day period. This period begins and ends at Midnight.

Limit at X baud - Maximum number of Kbytes that can be downloaded in a day, by connection speed. A 0 here means that Lora will use the value defined in the Download Limit entry.

Download/Upload Ratio - It defines the maximum download/upload ratio necessary to download files. A here 10 means, for example, that users must upload 1 Kbyte for each 10 Kbytes downloaded.

Ratio Start - It defines the number of downloads available before the Download/Upload ratio begins its check.

Login Limits

Minimum sec. level - It defines the minimum level needed to access the system. Useful for multi-line BBSs in which some tasks are reserved for particular users.

Minimum A flags

Minimum B flags

Minimum C flags

Minimum D flags - They define the flags that must be active to access the system. Useful for multi-line BBSs in which some tasks are reserved for particular users.

Minimum age - It defines the minimum age a user must have to access the system.

Time to login - Defines the time (in minutes) given to the user to complete the log-in procedure. Included within this time is the new users questionnaire if it is placed in a file that will be shown only to new users. By default this time is set to 10 minutes.

Paging hours

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Within this menu you can define when you, the Sysop, is available for chat. For each day of the week you can specify the starting and the ending time of your availability. Usually this option can be used to prevent users trying to page you for a chat in the middle of the night.

When a user tries to page you outside the available paging hours, the file NOTAVAIL will be displayed. You can place inside this file the hours you are available to be paged.

Language

Allows you to define up to 20 languages that are available for users to use. For each language you must define the following parameters:

Filename - The filename, without extension, for menus and sentences related to each language. Lora will add the extension .MNU for the menus, and .LNG for the reply sentences.

Description - Language description. The first character will be used as the hotkey for the language selection.

Textfiles path - Directory in which Lora will search for the text files to be displayed. If the file is not found in the directory defined here, Lora will look for it in the directory defined in the BBS/General Options/General text directory menu selection.

External protocols

This menu handles the configuration of the external protocols. Lora can handle a large number of external protocols. However the Protocol must use the DSZ standard for a log file. The other required options can be configured using this menu.

The keys available are the following:

PgUp/PgDn - Move through the protocols database one item at a time, up and down.

E - Edits the item displayed on the screen.

A - Adds a new item to the database.

D - Deletes the item displayed on the screen from the database.

Following are the parameters that can be configured for each external protocol:

Active - Allows you to temporarily disable one or more protocols. This must be set to Yes to allow users to be able to use the protocol. Protocols that are causing troubles can be temporarily disabled.

Name - Name with which the protocol is displayed to the users.

Hotkey - Command key that the user must type to select that protocol (must not be the same as any other internal or external protocol).

Download command - OS command to call the external protocol to initiate a download request. The following parameters can be specified:

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%1 - Name of the file to download. Only one file at a time can be downloaded).
%A - User's first name, all capital letters.
%b - Baud rate (0 if in local mode).
%B - User's last name, all capital letters.
%c - The place of the call.
%d - The number of the current message area.
%D - The number of the current file area.
%E - Length, in lines, of the user's screen.
%f - User's first name.
%F - Path of the current message area.
%g - 0=No graphics, 1=Ansi, 2=Avatar.
%G - User's daily download limit.
%h - Voice phone number of the user.
%H - number of Kilobytes downloaded today by the user.
%i - Total download.
%l - Total upload.
%j - Connection time for the current call.
%k - Task Number.
%l - User's last name.
%L - In remote calls the flag is replaced with the '-pX -bY' tring, where X is the serial port (1=COM1, 2=COM2, etc.) and Y is the baud rate. In local calls the flag is replaced with the '-k' string.
%M - Path of the current message area.
%n - User's first name.
%N - BBS name, as defined in the configuration file.
%p - Serial port (0=COM1, 1=COM2, etc.).
%P - Serial port (1=COM1, 2=COM2, etc.).
%q - Path of the current message area.
%Q - Path of the current file areas, without the final backslash.
%s - Sysop's last name.
%S - Sysop's first name.
%t - Time left for the call, in minutes.
%T - Time left for the call, in seconds.
%u - User's number.
%U - Substituted with the underscore '_'.
%v - Path of the upload directory.
%V - Path of the upload directory, without the final backslash
%Z - User's full name in capital letters.

Upload command - Same as the above, but the command must call the external protocol for an upload request. The same parameters available for the 'Download command' are available here too.

Log file name - Name of the log file created by the external protocol. This file must be compatible with the DSZ log format. The same parameters available for the 'Download command' are available here too.

Control file - This file will be created by Lora before calling the external protocol, and contains the download/upload requests made by the user. Each line contains the requests in the format specified by the 'Download string' or 'Upload string' parameters. The same parameters available for the 'Download command' are available here too.

Download string - Specifies the download command string that must be put in the 'Control file' above. The parameter %1 will be replaced by the file path and file name of the file to download.

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Upload string - Same as the above, except that this is for the upload command string.

Download keyword - Specifies the keyword needed to identify a successful download from the log file. This keyword must be located as the first word on each log file row.

Upload keyword - Same as the above, but identifies a successful upload.

Filename word

Size word

CPS word - These parameters allows you to specify at which word position Lora can find the filename, file size in bytes and CPS efficiency for each successful upload or download from the log file. Each row of the log file will be split in words separated by spaces (ASCII 32). The first word (the upload/download keyword) is normally the number 1.

Batch protocol - If set to Yes, the protocol can do batch downloads and can forward the file names on upload, so that Lora will not ask the user for the name of the file(s) when uploading.

Disable FOSSIL - If set to Yes, Lora disables the FOSSIL driver before calling the external protocol. This is useful to avoid possible conflicts between the FOSSIL and the protocol's serial port handler.

Change to UL dir - Since some external protocols can receive files only in the current directory, if this parameter is set to Yes, Lora will change to the upload directory before calling the external protocol.

4.5 - Terminal

This menu allows you to define the options related to the built-in terminal emulator.

Miscellaneous

Here you can set various options for the terminal emulator.

Init - The modem initialization string.

Download - The directory in which downloaded files will be stored.

Upload - The directory from which the emulator will look for the files to be uploaded.

Avatar - Activates / deactivates the Avatar/0+ emulation.

Auto ZModem - Activates / deactivates the ZModem download auto-recognition feature.

IEMSI Profile

Within this menu you can defines the parameters related to the IEMSI handshaking for the terminal emulator.

With IEMSI you can log in a BBS that supports IEMSI without any user intervention. The IEMSI detect is completely transparent to the user.

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IEWSI On - Allows you to enable or disable theIEWSI autologin.

Info time - Defines the amount of time (in seconds) for which theIEWSI server information must be shown on the screen.

Password - Defines the default password to use with BBSs.

Handle - Defines an optional handle to be used with certain BBSs.

Hot keys - Enables the hot keyed menus. You are not requested to confirm every command by pressing the ENTER key to execute them.

Quiet - Enable the "do not disturb" flag. If you are running a multi-line BBS, this prevents other users from sending you messages during the call.

Pausing - Enable the pause at the end of each screen page. By default the terminal screen will be set to 80x24 characters.

Editor - Selects the full-screen message editor.

News - Allows you to view, if the option is set to Yes, the bulletins of the called BBS.

New mail - If set to yes, it enables the personal mail check at login time.

New files - If set to yed, it enables the new files scan at login time.

Screen clear - Allows the BBS to send the screen clearing codes.

4.6 - Modem

This menu allows you to define options related to the operation of your modem.

Modem port - Serial port on which the modem is installed. 1 means COM1, 2 means COM2, etc.

Maximum baud rate - Defines the speed with which Lora talks with the modem. Usually it's the maximum speed supported by the modem, but this must be set to 19200, 38400 or 57600 with hi-speed modems (V32/V32bis) featuring error correction and data compression (V.42/V.42bis).

Lock port - Activates/deactivates the serial port speed lock at the speed defined in Maximum baud rate. To be used only if the modem is configured so that it will not change the serial speed to the computer during connections.

Terminal - When this flag is set to on, Lora assumes that a terminal instead of a modem is connected to the serial port. In this case you need to press Enter twice to begin connection. The terminal must be configured at the same speed defined in the Maximum baud rate setting.

FAX message - Defines the string returned by your FAXModem when another FAX machine is connected to it. By default Lora recognizes the "CONNECT FAX" string.

FAX Errorlevel - Defines the Errorlevel with which Lora exits to your OS after a FAX connection has been established. Note: The Modem/FAX support is limited to incoming fax connections. Presently there is no built-in support for fax transmission.

Strip dashes - If set to Yes Lora can strip every dash (-) from commands sent to the modem

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(particularly from phone numbers).

Dialing time-out - Defines the number of seconds to wait for a connection with another modem during a call. By default, the time is set to 60 seconds.

Carrier mask - Defines the carrier detect bit mask. Usually this is set to 128 but you can change the value to the signals you desire to monitor.

Refer to your FOSSIL documentation (Interrupt 14H, service 03H) to find out what serial signal lines that can be monitored with this setting.

Usually you can monitor the following signals:

- 16 - Clear To Send (CTS)
- 32 - Data Set Ready (DSR)
- 64 - Ring Indicator (RI)
- 128 - Data Carrier Detect (DCD)

You can combine the values above to monitor multiple signals (for example the value 160 = 128 + 32 monitors both the DCD and DSR lines). The default value is 128 (DCD).

DCD drop time-out - Defines the time to wait before hanging-up the connection when carrier is lost. This option is useful when line noise causes the loss of carrier for short periods, not more than a second or so.

Command strings

Allows you to define all of the commands related to modem management.

Init - Modem initialization command. There are some special characters that can be used to perform various tasks. (These are valid for all modem commands described in this section):

- | (pipe) - Translates to a CR (0x0D, 13) character.
- ~ (tilde) - 1 second pause.
- ^ (caret) - Sets the DTR line to ON.
- v (lowercase V) - Sets the DTR line to OFF.
- ` - 1/2 second pause.

Dial prefix - Command to be sent to the modem before the phone number is dialed.

Dial suffix - Command to be sent to the modem after the phone number. (Usually the pipe '|' character, which is the default if this space is left blank.)

Offhook - Command to be sent to the modem to keep the line busy. Lora sends this command whenever it is unable to answer calls.

Dial X - This table allows you to define 10 alternative call commands to be used instead of the main one. Useful if you need to setup a particular initialization for a given modem type.

Answer control

Allows you to define how and when Lora can answer incoming calls.

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Manual answer - If you set this flag to NO, Lora answers an incoming call with the command defined in Answer command. Be sure that your modem sends a RING<CR> string on incoming calls, if you want to use this option. If you set this flag to YES, then your modem must automatically answer the phone line.

Answer command - Command to be sent to the modem to make it answer incoming calls. The default for this command is "ATA|".

Limited hours - If you set this flag to Yes, Lora will answer calls in the time period between "Starting time" and "Ending time" only.

Starting time - Defines the hour after which Lora is able to answer calls. This time is based upon the 24 hour clock. 10:00 a.m. is 10:00 and 10:00 p.m. is 22:00.

Ending time - Defines the hour after which Lora will stop answering calls.

Nodelist flags

With this menu you can define the dialing command to send to the modem with calls to other certain nodes, based on the FidoNet nodelist flags.

In the first column, under the 'Flag' sentence specifies the flag to be checked (HST, H14 or ZYX, for example), in the second column, under the 'Prefix' sentence the dialing command must be specified (ATB1DT, for example).

The flags check is done starting from the first flag in this command. If, for example, a node has both the V32B and HST flags and in the list the commands for HST and V32B appear in that order, the HST command will be sent.

4.7 - Manager

This menu allows you to set the system management options.

Events

Allows you to define the system events. These options available for this sub-menu are explained in chapter 11, section 5.

Nodelist

Allows you to define the filenames containing nodelists in the St. Louis nodelist format. In the "Nodediff" field you can specify the filename containing differences between the current nodelist and the next one.

If you don't put in an extension, Lora will look for the file with the highest numbered extension.

Note: To apply differences to the nodelist correctly, the nodediff file must be already unpacked in the full nodelist directory, and the number of its extension must be the full nodelist extension plus 7.

Example: a nodediff file called NODEDIFF.135 can be applied only to a nodelist called

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NODELIST.128

Translations

Allows you to define the international and national prefix codes, as well as phone costs. The phone cost values can be for different times of the day and different days of the week.

The following commands are available in the translation table:

PgUp/PgDn - Allow you to move along the translation file.

E - Allows you to edit the translation table for the country currently displayed. This option will be explained later.

A - Allows you to add a new country or area of a country. The system will automatically put the new country in the right alphabetical place, regardless where you are when you add the country.

L - Allows you to list the defined countries, and to select one of them with the cursor keys.

D - Allows you to delete the currently displayed country. The system will ask for confirmation before deleting.

C - Allows you to copy the current costs table. The system will ask you the country name, the prefix contained in the nodelist, and the prefix Lora must dial.

Location - Defines the country name related to the current prefix. Presently it is used in this menu for reference only.

Prefix - Defines the international prefix. It must be the same as the one contained in the nodelist.

Translate to - Defines the national prefix. Lora will change the code defined in "Prefix" with this one when dialing a node.

The following table allows you to insert the phone costs relative to days of the week and time of day intervals. Note: a COST.DAT file relative to Italian call prices is contained in the Lora package. You will need to build the file for your country using information that is correct for your country and location with your country. A list for New York City in the United States would not be valid for Seoul, Korea.

S M T W T F S - Define the weekdays on which the inserted prices will be valid.

These stand for Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday. Press the space bar on the corresponding letter to deactivate a given day, and press any other key to activate it.

Start - Defines the beginning time of the current price interval. This is in the 24 hour clock format.

End - Defines the ending time of the current price interval.

Cost / Seconds - Defines the cost per seconds relative to the current time interval. The first pair of values represent the answer price, that is the price computed at the beginning of the connection. For most countries this is different from the second value. The second pair of values represent the price for any continuation of connection price.

Note: Lora will always add 20 seconds to each call to approximate the time before the remote

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modem answers and the CONNECT string is shown.

Packers (Archivers)

Allows you to define the packers to be used to pack and unpack mail. Do not change the packer order, since it's internally coded.

You must specify the %1 and %2 parameters for the packing command. They will be substituted by the archive name and by the file(s) to be archived (wildcards are allowed in the second parameter).

If you experience problems, like insufficient memory to run the packer/unpacker, you can tell Lora to swap itself out of memory by adding the + (plus) character before the packer/unpacker command.

For example:

```
ZIP  +PKZIP -ma %1 %2  PKUNZIP -o %1
```

would force Lora to swap out to disk before running both PKZip and PKUNZip. The unpacker command only requires the %1 parameter.

Presently Lora supports the ZIP, ARJ, LZH (LH1), LHA (LH5), ZOO, ARC packers. Archives to be unpacked are automatically recognized by signature bits that exist within the archive itself.

Nodes

Allows you to create a personal list of the nodes with which you conduct mail or file transfers on a regular basis. There is no need to build an external nodelist for these nodes, since Lora will consider these nodes as known nodes, even if they are not present in a nodelist as defined in the Nodelist sub menu.

The following commands are available in the nodes table:

PgUp/PgDn - Allows you to move through the node file.

E - Allows you to edit the current node settings. This option will be explained in detail later.

A - Allows you to add a new node. The system will automatically place the new node in the right numerical place, regardless where you were when you added the node.

L - Allows you to list the defined nodes, and to select one of them with the cursor keys.

D - Allows you to delete the currently displayed node. The system will ask for confirmation before deletion.

You can use the following parameters when editing a node (i.e. adding a new one or modifying an existing one):

Address - Full node address. Note for point nodes: you must insert the address in the format used for echomail forwards. If the point uses a fakenet address, you need to insert the fakenet address, otherwise you must insert the full 4d address. Lora will automatically sort the database in node

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number order.

Sysop

AKA - They represent two names of the same person. The internal remapper tests both names to send Netmail messages to points.

Level - Areafix uses this value to decide whether the node is allowed to link given areas (see the corresponding value in the message area definitions).

Packer - Packer to be used for mail directed to this node. When unpacking mail, Lora will automatically recognize the archive format, thus ignoring this value.

Session Pw - Password to be used in mail sessions.

Packet Pw - Password to be used in mail packets to validate origin. If the password is wrong or missing, the packets will not be imported. They will be stored as BAD_PKT.???, where ??? is a ascending number.

Areafix Pw - Password the node uses to send messages to Areafix.

Phone - Node phone number. Fill in this field if you want to dial a number different from the one present in nodelist, or if the current node is not present in nodelist.

Dial prefix - Command to be sent to the modem to call the current node. Usually Lora uses the ATD command, but you may need to use other commands to improve performance (for example, to deactivate the MNP5 compression for transmitting a file that is already compressed).

Echomail AKA - This option allows you to set with which AKA send outgoing mail to this node with. The 'Default' statement chooses the AKA defined for each echomail area.

Capabilities - Allows you to activate/deactivate some functions for the current node.

"Remap to point" allows Lora to send messages addressed to "Sysop" or "AKA" to the address specified in the "Address" field. The other flags (WAZOO, EMSI and Janus) are used to activate/deactivate these protocols for the current node.

Menu

Allows you to define the menus for the BBS part of the program. The options will be explained in Chapter 7, The Menuing System.

Users

This option allows you to change the user's parameters and add or delete users from the user database. The options that can be changed are self-explanatory. The following keys can be used from within the user editor:

PgUp/PgDn - Allow you to move among the user records.

E - Allows you to edit the current user.

A - Allows you to add a new user. The system will place the new user as the last record in the user database file.

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- L - Allows you to list the users in alphabetical order, and to select any one of them with the cursor keys.
- D - Allows you to delete the currently displayed user. The user is not physically deleted from the database unless you issue a LUSER -P command to explicitly delete any marked record.
- O - Allows you to switch between the first and the second option pages.

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5.0 - Message area configuration

The message area configuration is made using the BBS/Message menu inside LSETUP.

The window displayed shows the first defined area. If no area has been yet defined, all fields are empty.

You have the following commands available while in this sub-menu:

PgUp/PgDn - Allow you to move through the message area file.

E - Allows you to edit the current area. The options available will be explained in section one of this chapter.

A - Allows you to add a new area. The system will automatically place the new area in the right numerical place, regardless where you were when you added the area.

Lora adds new areas at TWIT access, read and write levels, and the maintenance value at 200 messages (Max messages), 5 days (Message age), 0 days (Age received).

L - Allows you to list the defined areas, and to select any one of them with the cursor keys.

D - Allows you to delete the currently displayed area. The system will ask for confirmation before deleting the area.

Message area parameters

This section lists every command that can be used to edit a message area. After one area has been fully edited, you must press ESC to continue to display the all the other areas. If you modified any of the settings, LSETUP will ask if you want to save those settings before exiting.

Number - The area number. It will be used in the area selection menu and to sort areas as a reference.

QWK Name - If present, it is short name to be used instead of the title for QWK packet creation and as an alternate in the area selection menu.

Name - Name of the area to be shown to users.

Type - Area type. It can be: Netmail, Echomail, Internet (mail placed here will be addressed to an Internet mail gateway), Passthrough (messages will be deleted after export) and Local (no echomail information will be added and exporting area to other systems is not allowed).

Echo-Tag - Area tag to be used when forwarding messages to other nodes.

Flags - Flags related to message management: Public only (messages must always be public), Private only (messages must always be private). If neither of the two above flags are active, Lora will ask the user if he wants the message to be public or private. If either of the two flags above are set, then all messages imported to that area will have the appropriate flag set if necessary.
Additional flags are: Allow alias (the user's nickname is allowed to be used in this area) and Group restricted (access is allowed only to members of a given group).

Afx level - Areafix level needed to access the current area. A node can be linked to this area with the Areafix function only if its access level is equal or higher than the one defined in

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this field.

Storage - Message storage method. The following message bases are supported: Fido (*.MSG), QuickBBS (also known as the Hudson base), Pip-Base (the compressed message base created and developed by Roberto Piola) and Squish (message base created by Scott J. Dudley). Please note that 'Netmail' and 'Internet' area will support the Fido *.MSG message storage format only.

Group - Group of the area. It can be a number from 0 (no group) to 255.

Path/Board - It contains either the directory used to store messages (Fido), or the board number (QuickBBS and Pip-Base) or the basic name of the file to be used (Squish).

Example, for an echo area named ROK_ECHO3:

Fido, RokEcho3 could be entered into this field, Quick or Pip-base, the number 2 and for Squish, drive letter:\lora base directory\msg directory\rokecho3. Note: You cannot use any special characters in the name of the area path and the path directory and file lengths cannot exceed 8 characters. A file name of LONG_LIVE could not be used as it is over 8 characters, and BUILD@IT could not be used as the '@' is considered a special character by both DOS and OS/2.

AKA - Node number to be used when exporting messages. The selection menu will show you the node numbers you defined in the General/Address area. Selection is made by pressing the up or down arrows until you get to the address you want to use in this area and then you can press ENTER to select or ESC to abort this process.

Origin - Sentence to be added at the end of echomail messages. By requirement the node number (AKA above) will be used, and is required in FidoNet echo areas. You can specify any sentence you wish, but remember the shorter the better. FidoNet limits the Origin line to 69 characters and this includes the node number.

Max messages - Maximum number of messages to be contained in the current area at one time (used by LMSG for maintenance). If set to 0, no messages will be deleted, unless you set one of the following two parameters.

Message age - Maximum age, expressed in days, of the messages contained in the current area (used by LMSG for maintenance). Messages will be checked to see how old they are by checking the origin's from line. If this is set to 0, messages will not be checked for their "age".

Age received - Maximum age, expressed in days, of messages received by the system. This is different than message age as a time stamp will be added to messages received by your system. (Used by LMSG for maintenance.) A 0 here will mean that the message will not have the additional line added to it and that no checks will be made.

Read level - Minimum user's level needed to access the current area and to be able to read messages.

A Flag

B Flag

C Flag

D Flag - If set, the user's flags must match for access the current area and to be able to read messages.

Write level - Minimum level necessary to be able to write messages in the current area. Lora will

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not display the "Edit new message" and "Reply to message" commands to users who's security level is lower than this one.

A Flag

B Flag

C Flag

D Flag - If set, the user's flags must match or they will not be able to write in this area. Lora will not display the "Edit new message" and "Reply to message" commands to users without the proper flags.

Forward 1

Forward 2

Forward 3 - These fields allows you to define the node numbers to send echomail messages to. You can write the node numbers with the verbose format (2:332/402 2:332/403 2:332/404) or with the short format (2:332/402 403 404).

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6.0 - File area configuration

The file area configuration is made with the BBS/Files menu inside LSETUP.

The displayed window shows the first area. If no area has been yet defined, all fields are empty.

The following commands are available while in this menu:

PgUp/PgDn - Allow you to move along the area file.

E - Allows you to edit the current area. This option will be explained later.

A - Allows you to add a new area. The system will automatically put the new area in the right numerical place, regardless of where you are when you add the area.

Lora adds new areas at TWIT user access level.

L - Allows you to list the defined areas, and to select any one of them with the cursor keys.

D - Allows you to delete the currently displayed area. The system will ask confirmation before deleting.

File area parameters

This section lists all commands that can be used to edit a file area. After one area's definitions have been fully edited, you must press <ESC> to display all the other areas. If you modified one or more of the settings, LSETUP will ask if you want to save before exiting.

Number - Area number. It will be used in selecting area from the menu and in sorting areas as a reference. Each area must have a unique area number.

Short Name - A short name to be used instead of the area number, for area selection.

Name - Name of the area to be shown to users.

Download - Name of the directory containing downloadable files. Lora needs a file called FILES.BBS in the area's download directory. This file contains filenames and descriptions. The format of a line in this file must be as follows:

```
<filename>    <description>
LORA233D.ZIP  LoraBBS-DOS v2.33 (Official release)
               >Lora is a complete mailer front-end,
               >mail processor and BBS system,
               >compatible with any Fido Technology
               >Network.
```

Lines beginning with a space (ASCII 32) are treated like comments, and are displayed as is. If the character following the space is the > character, then the line is treated as a multiline description. The rest of the line will be wrapped at the description position in the user's display. The example above will be displayed as follows:

```
LORA233D.ZIP  743600 08-12-93  LoraBBS-DOS v2.33 (Official release)
               Lora is a complete mailer front-end,
               mail processor and BBS system,
               compatible with any Fido Technology
               Network.
```

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Upload - Name of the directory in which the files uploaded by users to the current area will be stored.

File list - Filename to be read as a file and description list instead of the FILES.BBS file. Used for areas that reside on CD-ROMs or other read-only devices. This allows you to edit the description file to eliminate those files that you do not want your users to download and to allow you to place on your hard drive, the latest releases of programs.

Access priv - Minimum user level to access area and to read the file list.

A Flag

B Flag

C Flag

D Flag - The user flags needed to access the current area and to read the file list.

Download - Minimum level necessary to be able to download files from the current area. Lora will not display the "Download" command to users without the proper access level.

A Flag

B Flag

C Flag

D Flag - The flags necessary to download files from the current area. Lora will not display the "Download" command to users without the proper flags.

Upload - Minimum level necessary to be able to upload files to the current area. Lora will not display the "Upload" command to users without the proper level.

A Flag

B Flag

C Flag

D Flag - The flags necessary to upload files to the current area. Lora will not display the "Upload" command to users without the proper flags.

TIC Level - Minimum level necessary to be able to link this area as a TIC file area.

A Flag

B Flag

C Flag

D Flag - The flags necessary to be able to link this area as a TIC file area.

Group - Group of the area. It can be a number from 0 (no group) to 255.

Flags - Generic flags for area management:

F (No download limits) the download limits will not be considered for the current area.

G (Group restricted) members of the current area's group setting can only access this area.

S (No global search) the current area will be excluded from any global search (new files, locate files by keyword).

D (No file date) the file date will not be displayed in file lists.

N (Unknown can request) Every node can request files from this area, even if they are not listed in the current nodelist.

K (Known can request) Only the nodes listed in the current nodelist can request files from this area.

P (Prot can request) Only nodes that are listed in the current nodelist and have a session

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password can request files from this area.

C (CD-ROM) This area physically resides on a CD-ROM drive or on a read-only device. This prevents Lora from searching new files from this area.

TIC Tag - Name of the TIC area that is associated with this area. Lora can use tag names up to 20 characters wide, but for compatibility with other TIC processors they should be kept at less than or equal to 8 characters wide.

Forward 1

Forward 2

Forward 3 - These fields allow you to define the node numbers to send TIC files to. You can write the node numbers with the verbose format (2:332/402 2:332/403 2:332/404) or in the short format (2:332/402 403 404).

There are flags that can be used to specify if a certain node can act as a receive only or transmit only node:

2:332/402 - The node can transmit and receive files in this area.

>2:332/402 - The node is a receive only node. Files sent from this node will not be processed.

<2:332/402 - The node is a transmit-only node. Files sent from this node are to be processed, but files sent from other nodes will not be sent to this node.

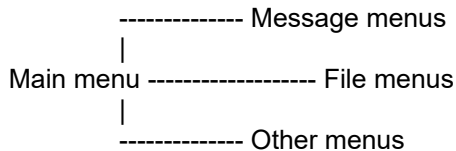
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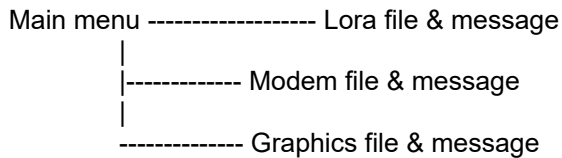
7.0 - Menu configuration

Lora is using a menu system that requires to be build up from scratch. (Although an easy installation program with some simple menus is included). You will have to setup all menus and external screens. Lora does include it's own menu program, which has all options available.

There are several ways to setup a menu system for your BBS. The most popular one looks like this:



Another method is to set up your menus by item:



Either way, plan your menu structure carefully. Users like a menu structure which is easy to follow.

Building a menu can be done in two ways. You can either build the whole menu with the menu editor, so text is displayed if needed, or you can start your menu with an ANSI/ASCII/AVATAR display option (with Hot-key) which will display the menu and have all the commands in the menu file. Both have advantages and disadvantages. Using an ANSI/ASCII/AVATAR file as menu gives you the advantages that you can use more colors on one line, use graphics and even animation. The disadvantage is that all menu options will be visible to all callers, whatever security level they have. You need to setup a display file option with the automatic flag set, which means the command will be executed automatically.

Using the normal menu has the advantages that you can hide several options from other security levels. Disadvantage is the limited use of color per line. It will be up to you which way you choose.

Be sure to check your menu files at every security level you have set up. Strange things can happen if you make mistakes. Building a menu is simple, building a complex menu with many different options for different security levels is more difficult. Taking your time is a good advice.

You can create or modify your BBS menus by using the LSETUP "Manager/ Menu" sub-menu.

First of all you need to select one of the 20 available menus to be modified. Note: You can not add menu files at this point. Each menu file is associated with one of the languages, so you need to use the "BBS /Language" menu to add or delete on of the languages before modifying its associated menus.

After selection of the file, LSETUP will list the already defined menus for the menu system you want to modify. The last one, called "< New menu >" allows you to add another menu Choose the proper menu to modify it. In order to delete a menu you need to delete every command inside the menu. The file update routine will delete every menu with no commands inside it.

If you wish to add a new menu, such as game doors, you must press <ENTER> when the New Menu field is highlighted.

After a selection is made, LSETUP will display a window with all the menu editing options. You have the following commands available:

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PgUp/PgDn - Allow you to move along the menu items.

E - Edit a menu item. After this command, an inverted-color bar shows the option to be modified.

The options available are as follows:

Display - Text to be shown to the user. The '^' (shifted 6) character marks the beginning and the end of highlighted text, the '~' character is replaced by the minutes left for the call. The underscore character can be used only if preceded by a backslash character (_). A semicolon character (;) will be substituted by a CR/LF sequence.

Some embedded commands (listed below) can be inserted in the text to be shown to the user. The embedded commands in some cases cannot be inserted into a menu selection, since some of them are useful only in questionnaires and/or are useless when contained inside menus.

The following embedded commands are available inside menus:

- ^FC - Displays the CPS of the last file transmitted.
- ^FD - Displays the phone number of office/data.
- ^FE - Displays the phone number of home/voice.
- ^FF - Displays the date, without time, of the last login.
- ^FG - Displays the time of the last login.
- ^FH - Displays the percentage efficiency of the last file transmitted.
- ^FI - YES/NO IBM character set.
- ^FL - Displays the netmail credit.
- ^FM - Displays the number of the last personal message read.
- ^FN - Displays the number of the last message read in the current area.
- ^FO - Displays the user's privilege level in verbal form.
- ^FQ - Displays the number of files sent.
- ^FR - Displays the number of Kbytes sent.
- ^FS - Displays the number of files received.
- ^FT - Displays the number of Kbytes received.
- ^FV - Displays the number of screen lines set by the user.
- ^FX - YES/NO ANSI toggle.
- ^FY - YES/NO end of page toggle.
- ^FZ - YES/NO formfeed code (ASCII 12) toggle.
- ^F0 - YES/NO full screen editor toggle.
- ^F2 - YES/NO hot keyed menu.
- ^F3 - Displays the user's handle.
- ^F4 - Displays the first login date.
- ^F5 - Displays the user's birthday.
- ^F6 - YES/NO mail check at login.
- ^F7 - Displays the user's registration.
- ^F8 - YES/NO AVATAR/0+ toggle.
- ^F9 - Number of upload/download ratio in the format 1:x.
- ^F! - YES/NO colors toggle.
- ^F^A - Displays the next quote reading it from the file defined in the configuration file (^FA will also display this information).
- ^F^B - Displays the user's full name.
- ^F^C - Displays the user's city (^FB will also display this information).
- ^F^D - Displays the current date.
- ^F^E - Displays the number of calls made by the user (^FP will also display this information).
- ^F^F - Displays the user's first name (^FW also).
- ^F^G - One second pause.

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^F^K - Displays the total on-line time of the day (counting all of the calls made during the day).
^F^L - Displays the on-line time of the present call (^FU will also display this information).
^F^O - Displays the time left for the current call.
^F^P - Displays date and onset time of the connection. A CR/LF character is added.
^F^Q - Displays the number of different users who have called on that day.
^F^R - Displays the net downloads in Kbytes that the user has made so far (download - upload).
^F^T - Displays current time.
^F^W - Displays the number of Kbytes sent.
^F^X - Displays the number of Kbytes received.
^F^Y - Displays the received/sent Kbytes ratio in x:1 format (^F: will also display this information).
^F[- Downloads, in Kbytes, that remain for today.
^F\ - The user's selected language.
^F] - Displays the comment field of the user's record (currently not implemented but available).
^F; - YES/NO full screen message reader.
^F% - Shows the default file transfer protocol.
^F" - Shows the default archiver.

^KA - Total number of calls to the system (all the of the lines).
^KB - Name of the last user who called on the current line.
^KC - Displays the number of the current message's answer.
^KD - Number of the first message (this command has been introduced for compatibility only, and is always set to 1).
^KE - Number of the last message in the current area.
^KG - Displays the day of the week.
^KI - Displays the current time in the form hh:mm:ss.
^KJ - Displays the current date in the form dd mmm aa.
^KK - Minutes on-line so far for the current call.
^KM - Number of personal messages found in the message base.
^KO - Time left for the current call.
^KP - Displays the number original message that this message is a reply to.
^KQ - Time limit for each call.
^KR - Baud rate of the connection.
^KT - Daily download limit.
^KU - Number of minutes still available before the next forced or non-BBS event.
^KW - Number of the line.
^KY - Title of the current message area.
^KZ - Title of the current file area.
^K0 - Number of messages in the current area.
^K1 - Number of the current active message area.
^K2 - Number of the current active file area.
^K5 - Name of the currently active message area.
^K7 - Displays the user's time bank account.
^K8 - Displays the user's file bank account.
^K9 - Number of messages contained in the current message area.
^K[- Download remaining for today.
^K\ - Delete the line from cursor to the end.

Type - Allows you to select, through a pop-up menu listing, the action type of the current command. The available actions that Lora recognizes are listed in the following section.

Data - Optional parameters needed by some kind of actions (see later).

Hot-key - Key to be pressed to activate the current command. You can use every ASCII character between 32(space) and 127 (delete).

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Automatic - When this option is active, the command will be immediately executed during the menu display, with no need to press the key defined in "Hot-key". Useful to display any file before the menu, or to execute a given action, depending on the user's level and flags.

First time - When this option is active, this item will be visible and usable, the only during the first time the menu is shown.

Hide display - When this option is active, the "Display" field will not be shown to users.

Color - Normal color of the text to be displayed. The color can be changed in the "Display" field also by the internal color change codes.

Hilight - Highlighted color of the text to be displayed. The text to be highlighted must be included between two ^ (shifted 6) symbols (i.e.: The word ^text^ is highlighted here.).

Security - Minimum user's level needed to see and to execute the current command.

Flags-A

Flags-B

Flags-C

Flags-D - Minimum user's flags needed to see and to execute the current command.

A - Adds a new command. LSETUP adds the new command after the current menu item. Normal color, hilight color and command level will be the same as the current menu item.

L - Lists commands. You can choose the one you would like to edit with the cursor and Enter keys.

D - Deletes current command. LSETUP will ask for confirmation before deleting.

S - Shows menu. The menu will be displayed as it appears to users. The access levels and flags will not be considered. The control codes like CTRL-C will be shown as printable characters (i.e.:^C).

You can fill in the "Data" field with additional parameters related to specific commands. The available parameters are as follows:

/K=<keys> - Puts the characters defined in <keys> into the internal keyboard buffer. Useful for "short keys" to use with certain operations. This option is available in registered versions only.

/AGE=<n> - Defines the minimum age that a user must have to view and issue certain commands. <n> must be in years.

It's possible to display every option of the menu by operating with the /C<count><op><value> switch (see also the menu type 104), where:

<count> - Number of the counter, from 0 to 3.

<op> - Command to be executed. Presently are available are:
= (equal), < (less than), > (Greater than), ! (different).

<value> - Value from 0 to 255.

I. E., /C1=10 displays that particular option only if counter number one is equal to 10.

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7.1 - Menu types

In this chapter all the menu types (executable actions) allowed by Lora will be described.

For sake of clarity, menu types are described in an order based on their function.

Missing menu type numbers are internal functions only, and cannot be accessed outside of the main Lora program.

7.1.1 - Moving between menus

Here all of the menu types are described that allow the user to move between menus.

14 - Clear Goto menu

Has the same function as the "Goto menu" command, but the menu stack is erased before executing the command. There is a clear screen code before entering the menu. If you don't want to use it, you have to insert the /NS parameter in the "Data" field.

15 - Clear gosub menu

Has the same function as the "Gosub menu" command, but the menu stack is erased before executing the command. There is a clear screen code before entering the menu. If you don't want to use it, you have to insert the /NS parameter in the "Data" field.

16 - Return to MAIN menu

Erases the menu stack and goes back immediately to MAIN, the first menu of the tree.

21 - Goto menu

Creates a GOTO function (the name of the current menu is not placed on the stack) to a general menu. It's possible to give a password protection to this menu, with the /P=xxxx option, where xxxx is the case-insensitive password, which is asked for when the user who attempts to enter this menu.

It's possible to specify the default file and message area using the /M[=n] and /F[=n] switches. If the area numbers are not specified, the last area visited by the user will be used.

There is a clear screen code before entering the menu. If you don't want to use it, you have to insert the /NS parameter in the "Data" field.

61 - Gosub menu

Creates a GOSUB function (the name of the menu is placed on the stack) to a menu. It is possible to give a password protection to this menu, with the /P=xxxx option, where xxxx is the case-insensitive password, which will be asked for when a user tries to enter this menu.

Optionally it's possible to specify the default file and message area using the /M[=n] and /F[=n] switches. If the area numbers are not specified, the last area visited by the user will be used.

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There is a clear screen code that is sent before entering the menu. If you do not want to use it, you have to insert the /NS parameter in the "Data" field.

66 - Return to previous menu

Goes back to the previous menu, taking it from the internal stack. If there is no menu pointer on the stack, it has no effect.

67 - Clear menu stack

Erases the internal menu stack, without going back to any menus that might have pointers in the stack.

7.1.2 - Message Areas

19 - Kill message

Allows users to kill their messages (written by or sent to him/her). The Sysop can kill any message in any message base.

40 - Edit new message

Allows the user to write a new message. The menu name for the line editor, usually EDITOR, must be placed in the "Data" field. Calls to this menu are made by a "Gosub menu" command. It's possible to set the following switches, to let the user write essential data, in particular circumstances:

/T="<to>" - Message receiver. In the write message to Sysop selection, you have to put your name in here. By default, it is set to "Marco Macaferri", Lora's designer and builder..

/S="<subj>" - Message subject.

/A="<n>" - Number of the area in which the message will be saved.

/L - After saving the message, the user will be logged off the BBS immediately.

41 - Reply to message

Like the previous command, but it replies to the last message read, automatically switching receiver and subject. The menu name for the line editor must be set in the "Data" field. Calls to this menu are made by a "Gosub menu" command.

If the user is using an external full screen editor, Lora will create a file, containing the original message text that the user is replying to.

53 - Short message list

Lists the messages in the selected area only on one line (short mode). The information displayed is: message number, sender, receiver and subject.

54 - Read next message

Reads the next message in the area. Messages that are missing or unavailable to the user (i.e.: private messages to someone else) will be automatically skipped.

55 - Read previous message

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Reads the previous message. Messages that are missing or unavailable to the user (i.e.: private messages to someone else) will be automatically skipped.

56 - Read messages non-stop

Reads all the following messages, after the last read, without stopping at the end of any message or page. The full screen reader is temporarily ignored under this option.

57 - Read previous message in thread. (Read parent message is how this is displayed). Reads the previous message in the thread that this message belongs to (the message that this message is an answer to). This item will only be displayed if the current message is part of a thread of continuous messages.

A message thread is a series of messages on the same topic. If you want to reply to a message that is part of a thread, and is about the same subject, then do not change the subject. If you wish to reply to a message that is part of a thread, but does not have anything to do with the thread, then change the subject to reflect the new topic.

58 - Read next message in thread. (Displayed as Read child message.)

Reads the reply to the current message. This menu type is displayed only if the current message has a valid reply message number.

59 - Check mailbox

Checks the user's personal mail (mail that has the user's name in the to block, and is not necessarily destined to that user.) If the user has personal mail that he has not yet read, Lora will create a "Gosub menu" command to the menu name set in the "Data" field. This is how Lora runs the log-on process "Read New Mail" item.

64 - Read individual message

Reads a message specified by number. Please note that the hot key used to activate this menu type is the first digit of the message number; other digits, if there are any, will be taken from the input buffer. Thus this menu item is activated by the first digit, and any other digits needed are taken from the keyboard buffer up to the <ENTER> key. It's suggested to add the digits from 0 to 9 to this menu type, to allow the user to read any message simply by entering the corresponding number.

89 - Verbose message list

Displays a list of the messages in the area, showing sender, receiver, subject, flags, date and time at which the message was written in detail.

118 - List areas w/new messages

Executes a "Change area" command (see later), and lists only the areas with new messages since user's last read messages in those areas.

119 - Write message to disk

Exports the last message read to a disk file or print device (i.e.: PRN: or LPT1:). Lora will ask the filename to be created.

7.1.3 - File areas

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22 - File list

Displays the list of files in the current area, which are contained in the FILES.BBS file. This file is normally contained in the current directory, but can be located elsewhere on this system and can be designated in the BBS/Files settings under Files list, and contains the file names and descriptions. All other files in the directory will be ignored, even if they are supposed to be displayed.

Normally, Lora will not display any file which, even though present in FILES.BBS, that is not physically present in the current directory. Another setting available within LSETUP will allow display of files that are in the FILES.BBS, but that are not present. The file description will be replaced with the word <MISSING> in the highlight color of the area.

23 - Download file

Enables the user to choose a transfer protocol and download one or more files. If the user has a valid default download protocol, Lora will not ask for one.

It's possible to specify the following parameters the "Data" field:

/NOREM - Ignores the files tagged for later download (by default Lora asks the user if he/she wants to download the selected files).

/F=<filename> - File name (wildcards allowed) to send to the user. With this parameter only the transfer protocol will be requested. This parameter is useful for BBSs that make the latest releases of certain programs downloadable with a single command. If you specify a filename in the "Data" field, the limitations like maximum Kbyte limit, Upload/download ratio, etc. will be ruled out. Only the maximum connection time limit will be considered before the download commences.

24 - File display

Displays an ASCII file contained in the current area. Files displayed with this command should not contain control codes or embedded commands. These should be ASCII text files only.

25 - Raw directory

Displays the DOS Directory of the current area. This command lists all the files in the current directory, including files present in the directory, but not listed in FILES.BBS.

65 - Tag files

Allows the user to select one or more files for a later download. This command is useful to select multiple files from multiple areas and download them all in one time (if a batch protocol, such as Zmodem, is used).

68 - Locate files

Allows the user to find one or more files in any area, specifying a sequence of keywords.

Setting the /F parameter in the "Data" field, will allow the search to be done on the current area only.

69 - Upload file

Allows the user to send a file using one of the available transfer protocols. If the user has set a valid

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default protocol, Lora will not ask for one. If the user chooses a protocol that does not transmit the filename (i.e.: XModem and 1k-XModem), Lora will ask for the filename to be uploaded.

When the upload is completed, Lora will search every area to see if the uploaded file is already present. If Lora finds it somewhere, Lora will delete the uploaded file. If the file is not found, Lora will not deduct the time spent for file transmission.

72 - Override path

Allows the user to set a different path to the current area. It's useful if you want to send or to receive files in any directory of the hard disk.

CAUTION! It's suggested to give access to this command to SYSOP or other trustworthy people only.

73 - New files list

Displays the list of files arrived after the last user's login, or after a date specified by the user.

Setting the /F parameter in the "Data" field, the search will be done in the current area only.

102 - Archive contents

Displays the content of compressed files. Lora is able to display the content of the files archived by means of ARJ, ZIP, ARC, LZH and LHA(Amiga files also).

122 - Upload to filebox

Permette ad un utente di mandare un file ad un altro utente con la filebox attivata. Viene chiesto il nome dell'utente.

123 - Download from filebox

Il contenuto della filebox viene visualizzato all'utente e se sono presenti dei files, viene chiesto se li si vuole prelevare. E' possibile dire a Lora che si intende cancellare il file una volta prelevato con successo.

127 - Kill from filebox

Allows a user with an active filebox to delete their files without downloading them.

128 - List filebox

Allow a user with an active filebox to list their contents without asking for download.

129 - List/Remove tagged files

Allows a user to list or remove, as specified on the "Data" field, the files selected for later download.

If the "Data" field is empty, the command lists the selected files, if the /R parameter is present, after the file list the system asks if the user wants to remove one file.

7.1.4 - User configuration

This group has been divided into two selection menus: "User configuration 1" contains all the commands up to "77 - Set full screen reader", and "User configuration 2" contains all the remaining commands.

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27 - Set password

Allows the user to change his password. The user will not be prompted for his old password and will have to verify the new one.

29 - Set nulls

Allows the user to set a number of null characters (ASCII 0) to be sent after each CR/LF sequence. Useful for very slow computers.

30 - Set screen length

Allows the user to set the number of lines to be displayed before a "more?" request. The default setting is 24, but it should be set to one less than the maximum number of lines that can be displayed on the screen.

32 - Set 'more?' question

Allows the user to enable or disable the end-of-page pause.

33 - Set screen clear

Allows the user to enable or disable the clear screen code (ASCII 12). In ANSI emulation, the code is automatically expanded to the correct ANSI sequence.

34 - Set editor

Allows the user to enable the full screen editor (only if ANSI or AVATAR graphics are active) or to use the line editor.

35 - Set location

Allows the user to set or change the city from which he calls.

36 - Set mail check at logon

Allows the user to enable or disable the personal mail check at logon.

37 - Set Avatar/0+

Allows the user to enable or disable the Avatar/0+ emulation for graphics and colors.

38 - Set ANSI

Allows the user to enable or disable the ANSI/VT100 emulation for graphics and colors. If the user deactivates both Avatar and ANSI graphics, the full screen editor (if active) will be deactivated also. When ANSI is active, Avatar will be deactivated. Lora uses Avatar as an alternative to ANSI, not as a complement to it.

39 - Set color

Allows the user to enable or disable the color sequences. Useful if the user has an ANSI terminal with a

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B/W monitor.

70 - Set signature

Allows the user to set his personal signature. This sentence will be inserted automatically at the bottom of each message, just before the tearline for echomail messages, and as the last row of NetMail and local messages.

77 - Set full screen reader

Allows the user to enable or disable the full screen reader for messages. To enable the full screen reader, ANSI or AVATAR/0+ emulation must be turned on.

99 - Set alias

Allows the user to set his nickname. By default, the alias is the same as the user's real name.

100 - Set voice phone

Allows the user to change the voice phone number.

101 - Set data phone

Allows the user to change or set his/her office or data phone number.

106 - Set hot-keyed menu

Allows the user to set the menu hot keys. With hot-keyed menus it is no longer necessary to press the ENTER key to confirm a command, when the hot-key letter is pressed.

117 - Set IBM characters

Allows the user to enable or disable the display of ASCII characters higher than 127. When disabled, Lora will remap the upper 128 characters of the ASCII code (from code 128 to 255), to a standard character set that is readable by any personal computer using the standard ASCII set. It's possible to define a translation table for each language that was setup using LSETUP.

121 - Set user group

Allows the user to select which group he wants to belong to. You can specify in the "Data" field the /M switch to select the message area group, or the /F switch to select the file area group. Lora displays to the user the file MGROUP.* for the message areas, or the file FGROUP.* for the file areas, then waits for a number. The user now can select the group number. This number will be recorded in the user file, so that it doesn't need to be set at every call.

124 - Set birthdate

Allows the user to insert his own birthdate. Lora will use this information to display the text file containing the happy birthday wishes and, if set, will be used random user birthdate check to verify the information entered by the user.

125 - Set default protocol

Allows the user to choose a default transfer protocol or none, if the user so desires. If the default protocol

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is set to none, the user will be prompted for file transfer protocol where one is needed.

126 - Set default archiver

Allows the user to choose the default packing program to be used with the off-line reader. If the user chooses none, then one will be asked for when the user downloads mail using the .QWK packet type.

7.1.5 - Line editor

42 - Save message

Saves the message text. If the /RET parameter is set in the "Data" field, a "Return to previous menu" function will be executed. If you omit the /RET parameter, your users can post carbon copies of the same message to more than one receiver. They have just to change the receiver's name, then save the message again.

43 - Abort editing

Aborts the message creation. A "Return to previous menu" function is executed.

44 - List message text

Displays the text of the message just written, one screen at a time.

45 - Edit line

Allows the user to edit one line of the message. The original line will be displayed before the prompt for the new text.

46 - Insert line

Allows the user to insert a line inside the text. The user must specify the line which will come before the new line.

47 - Delete line

Allows the user to delete one or more lines from the text.

48 - Continue editing

Allows the user to go on writing the message, starting from the line after the last written.

49 - Change 'To' field

Allows the user to change the message receiver. If the /RET parameter is not specified in the "Save message" command, it can be used to send the same message to more than one receiver (carbon copies).

50 - Change subject

Allows the user to change the message subject.

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7.1.6 - Personal mail

The commands for personal mail allow the Sysop to create a personalized menu for this option also. By default, Lora looks for a menu called "READMAIL", which must be always present.

74 - Read next

Reads the next message addressed to the user, or the first message addressed to the user, if the user has read no messages.

75 - Read previous

Reads the message prior to the one displayed that is addressed to the user.

76 - Read mail non-stop

Reads all the messages without stopping at the end of any message or page. The full screen reader is temporarily ignored only for this operation.

82 - List mail

Displays the list of personal messages not yet read by the user, showing the message area, sender, receiver, subject, flags, date and time at which the message was written.

85 - Read individual mail

Reads a message specifying the number. Please note that the hot key used to activate this menu type is the first digit of the message number. Other digits, if there are any, are taken from the input buffer. It's suggested to add the numbers from 0 to 9 to this menu type, to allow the user to read any message simply by entering the attached first number of the message he/she wants to read.

7.1.7 - Multiline chat

Lora provides a built-in multi-line chat system. The following menu items allow your users to utilize this feature.

78 - Send on-line message

Allows the user to send a one-line message to another user connected on a different line of the system. It's the only way to send a message to users not connected with the CB CHAT SYSTEM.

81 - Users on-line

Displays the list of users currently connected to the system. When one line is busy in mail transfers with other nodes, Lora will show "Mail with <node>" to users. Also, any messages sent to this user will be held until he/she is finished with the mail sub-system.

95 - Who is where

Displays the list of CB Chat System channels that are currently active, and the users connected to each channel. This command is the same as the /a command in Chat System.

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96 - CB-chat system

Sets the multiline chat with a 40 channel transceiving simulation. The user is automatically 'tuned' on channel 1. In the "Data" field it's possible to set the channel number to which the user will be tuned when entering the chat.

The following commands are available inside the CB chat:

/a - Displays who is connected on each channel, from 1 to 40.
/c<num> - Allows the user to change channel. <num.> ranges from 1 to 40.
/q - Exits the CB chat.
/w - Displays who's connected on the current channel.

7.1.8 - Offline reader

Lora supports a built-in QWK and ASCII off-line mail packer. This feature allows callers to log on, pack up messages from one or more message areas, and download a compressed mail bundle for off-line reading and reply.

This packer is fully integrated with the main BBS, so the off-line mail reader will automatically adjust itself as areas are added to or deleted from your system.

Following are the menu types that allows you to set up a menu that allows you users to pack and download new messages, as well as upload their replies.

86 - Tag areas

Allows the user to define the message areas where Lora must keep a pointer to the last message read. During the export of messages in QWK and ASCII format only these areas will be considered. When asking the list of areas (by entering a question mark) those with the "@" character will be scanned and any new mail will be packed and made available for download.

A maximum of 50 areas can be marked.

87 - ASCII download

Allows the user to download the new messages present in the marked areas in ASCII format. This method is offered as an alternative to QWK for those users who don't have (or don't want to install) a QWK reader. There is an option inside the "BBS / QWK setup" menu that allows you to limit the number of messages per packet. If the scan of an area places the number of messages in the packet higher than this setting, the mail scan will stop and Lora will proceed to either the protocol/packer selection menu or to the download ready screen.

If the user has not pre-selected a packer then Lora will ask which packer (Zip, ARJ or LHArc) and which transfer protocol must be used. If the user has not pre-selected a download file transfer protocol, then Lora will ask which file transfer protocol the user would like to use. If the user has already selected these two settings, they will not be asked for and the system will go automatically to the download ready screen. No checks will be made of the dimension of the file to be downloaded, except for the one regarding the transfer time, and that must not be longer than the time left for the current call.

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88 - Resume download

Allows the user to resume the download of the message packet, if the download has not been completed.

112 - QWK download

Allows the user to download the new messages present in the marked areas, in the QWK format. Lora will ask which packer (Zip, ARJ or LHArc) and which transfer protocol must be used. If both options have been set, the next screen that the user will see is the download start screen.

To use this option the user needs to have a QWK reader installed. Presently many readers, more or less powerful, exist for many systems. No controls are kept of the dimension of the file to be downloaded, except for the one regarding the transfer time. This must not take longer than the time left for the current call.

There is an option inside the "BBS / QWK setup" menu that allows you to limit the number of messages per packet.

7.1.9 - Built-in doors

Lora includes a few common doors internally built, so that it's necessary to use external doors for for games and other reasons only. Presently Lora includes a QWK compatible mail processor, a time and file bank, and a BBS database. The menu types related to these doors will now be shown, as well as a brief description of the doors.

91 - Show account

Allows the user to see the amount of time and Kbytes in his account at the BBS time/file bank.

92 - Deposit time

Allows the user to deposit a certain amount of time left for the current call in the BBS time bank. The deposited time will be automatically subtracted from the time left for the current call and from the daily total time.

93 - Withdraw time

Allows the user to withdraw time from the BBS time bank. The minutes added are usable only for the current call. If for any reason the current call ends, all the time withdrawn will be lost and at the next call only the time left before the withdrawal will be available.

114 - Deposit Kbytes

Allows the user to deposit a certain amount of Kbytes left for today in the BBS file bank. The deposited Kbytes will be automatically subtracted from the Kbytes left for today.

115 - Withdraw Kbytes

Allows the user to withdraw Kbytes from the BBS file bank. The Kbytes added are usable only the current

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day.

107 - Add to BBS list

Allows the user to add a record in the BBS database included in the program. Lora will ask for the data that are needed to identify the BBS to be added.

You can specify up to 10 BBS lists using the /L=<number> switch. Each BBS list will have a separate file database named BBSLIST<number>.BBS. If you don't specify the /L= switch, the default file database named BBSLIST.BBS is used.

108 - Short BBS list

Displays the BBS database contents in short format (one BBS per line). Unlike the "Long BBS list", the user cannot enter a string to search for.

You can specify up to 10 BBS lists using the /L=<number> switch. Each BBS list will have a separate file database named BBSLIST<number>.BBS. If you don't specify the /L= switch, the default file database named BBSLIST.BBS is used.

109 - Long BBS list

Displays the BBS database contents in detailed format, showing all information gathered by the "Add to BBS-list" command on more than one line. The user can also enter a search string to limit the listing only to a desired group of BBSes.

You can specify up to 10 BBS lists using the /L=<number> switch. Each BBS list will have a separate file database named BBSLIST<number>.BBS. If you don't specify the /L= switch, the default file database named BBSLIST.BBS is used.

110 - Change BBS in list

Allow users to modify the data of one or more BBS present in the database. Lora will ask the name (even partial) of the BBS to be changed. The new information gathered will replace the information present for the BBS for which the entry is being changed. If the item to be changed is not present in the current BBS list file, then the information will be added to the information present.

You can specify up to 10 BBS lists using the /L=<number> switch. Each BBS list will have a separate file database named BBSLIST<number>.BBS. If you don't specify the /L= switch, the default file database named BBSLIST.BBS is used.

Caution: Anybody can change any record in the BBS database. There are no controls over the user who selects this command, unless you use the /R switch that allows only the users at SYSOP level and the user named as the BBS's Sysop to change the data of that BBS.

This is suggested if you are having problems with your users.

111 - Remove BBS list

Allows the user to delete one or more BBS present in the database. Lora will ask the name (even partial) of the BBS to be deleted.

You can specify up to 10 BBS lists using the /L=<number> switch. Each BBS list will have a separate file

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database named BBSLIST<number>.BBS. If you don't specify the /L= switch, the default file database named BBSLIST.BBS is used.

Caution: Anybody can delete any record of the BBS database. There is no blocking of the users whom select this command, unless you use the /R switch that allows only the users at SYSOP level and the user named as the BBS's Sysop to delete the data of any BBS in the file. This is suggested if you are having problems with users deleting BBSs from the files without a good reason to do so.

120 - Download BBS-list

Allows the user to download the BBS list database in readable ASCII format. Lora asks for the default file transfer protocol only (if the user has not made any choice). If the user has selected a file transfer protocol, the file will start downloading without prompting for a file transfer protocol.

You can specify up to 10 BBS lists using the /L=<number> switch. Each BBS list will have a separate file database named BBSLIST<number>.BBS. If you don't specify the /L= switch, the default file database named BBSLIST.BBS is used.

7.1.10 - Other commands

This group has been divided into two selection menus: "Miscellaneous 1" contains all the commands up to "51 - Press enter to continue", and "Miscellaneous 2" contains the remainder.

0 - Display only

This command does absolutely nothing but display the 'Display' field to the user. This is useful to display the top lines of the menu to the user and possibly a "selection question".

3 - Logoff

Stops the connection displaying the LOGOFF.* file to the user. No confirmation of logoff is asked. If you want to request confirmation from the user before logging him out, you have to create a sub-menu.

5 - Display text files

Displays any text file. You must specify the name of the file, path included, to be displayed in the "Data" field. If no extension is specified, Lora looks for the following: .AVT, .BBS, .ANS (if ANSI is active) and .ASC.

The files may contain the internal special commands.

By default a clear screen code is sent before displaying the file. If you don't want it, you have to specify the /NS command in the "Data" field.

If you specify the /R flag in the "Data" field, Lora issues a 'Press [Enter] to continue' message after the file is displayed to the user.

If you specify the /P flag in the "Data" field, the file will be sent to the user 'as is' without interpreting the embedded commands inside it.

6 - Yell at Sysop (Page the Sysop)

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Allows the user to call the Sysop for a chat. Lora displays a window with the commands available to begin the chat or to stop the user's request. When the user asks for this function, Lora looks in the current directory for a file called 'PAGE.DAT', containing the notes of the music that is played in the wait of the sysop's answer.

The file is a normal ASCII text; each line may be a comment (if the first character is ';' or '%'), or a tone/length command, or a pause command. Please look at the PAGE.DAT file for a clear explanation about music composition.

In the "Data" field it is possible to specify the following parameters:

/T=<sec> - Duration (in seconds) of the music (default is until the end of the file).

/F=<file> - Music file to use instead of the default PAGE.DAT.

/NL - Do not log this request both in the log file and on the status line.

/A="<s>" - Advertisement to display to the user instead of the default string found in the language file (the quotes are mandatory).

7 - User status

Displays a coded internal page related to the present configuration of the on-line user. All the shown parameters are also available as embedded commands.

If you specify the /R flag in the "Data" field, Lora issues a 'Press [Enter] to continue' message after the status page is displayed to the user.

8 - User list

Displays the all of the users of the BBS. Also, a user can find somebody by specifying a part of the name that they are looking for.

It's possible to set the following switches in the "Data" field:

/L[=x] - Displays only the users who called in the last x days. If the command is given in the short form /L, the user may specify the number of days.

/T[=x] - Displays only the users who called at least x times. If the command is given in the short form /t, the user may specify the number of times.

/H - Displays the users aliases, instead of their real names.

/S - Swap the first and last name of the users displayed.

/F - Displays the users with an active filebox only.

9 - Version information

Displays the program copyright and version number, and more additional information, like the processor type, the free memory in the heap (variable's space in Borland C), free disk space, etc.

10 - Run external program

Executes an external program in a OS shell. The full name of the file to be executed must be set in the "Data" field. It's possible to execute also batch files.

It's possible to set other special commands to give some additional information to the called program. The commands are the following:

*0 - Path of the current file area.

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- *1 - Path of the current message area.
- *B - Baud rate (0 if in local mode).
- *F - User's first name
- *G - 0=No graphics, 1=Ansi, 2=Avatar.
- *H - Disables FOSSIL driver before executing the program.
- *L - User's last name.
- *M - Swap of the total memory occupied by Lora, leaving only 1.5K for the recovery routines.
- *N - Task number.
- *P - Serial port (1=COM1, 2=COM2, etc.).
- *R - User's position inside the user's database (record number).
- *S - Don't read the LORAINFO file after the end of running the external program.
- *T - Time left for the current call.
- *W - Activates the FOSSIL watchdog. If the carrier drops, the FOSSIL driver will reboot the system.
- *X - Prevents the creation of the LORAINFO.T?? by Lora.
- *! - Stops time during the door execution. Upon exiting the external program and returning to Lora, the user will have the same amount of time as when they entered the external program door.
- *# - Disables the 'wants chat' flag. Useful for external chat programs.

For compatibility with Scott Dudley's Maximus-CBCS 2.00, the following commands are available:

- %A - User's first name, all capital letters.
- %b - Baud rate (0 if in local mode).
- %B - User's last name, all capital letters.
- %c - The place of the call.
- %C - The last answer to the questionnaire ^OR command (see the EMBEDDED COMMANDS section for more details).
- %d - The number of the current message area.
- %D - The number of the current file area.
- %E - Length, in lines, of the user's screen.
- %f - User's first name.
- %F - Path of the current message area.
- %g - 0=No graphics, 1=Ansi, 2=Avatar.
- %G - User's daily download limit.
- %h - Voice phone number of the user.
- %H - Kilobytes number downloaded today.
- %i - Total download.
- %I - Total upload.
- %j - Connection time for the current call.
- %k - Task Number.
- %l - User's last name.
- %L - In remote calls the flag is replaced with the '%pX %bY' string, where X is the serial port (1=COM1, 2=COM2, etc.) and Y is the baud rate. In local calls the flag is replaced with the '%k' string.
- %M - Path of the current message area.
- %n - User's first name.
- %N - BBS name, as defined in the configuration file.
- %p - Serial port (0=COM1, 1=COM2, etc.).
- %P - Serial port (1=COM1, 2=COM2, etc.).
- %q - Path of the current message area, without final backslash.
- %Q - Path of the current file areas, without final backslash.
- %s - Sysop's last name.
- %S - Sysop's first name.
- %t - Time left for the call, in minutes.
- %T - Time left for the call, in seconds.
- %u - User's number.

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%U - Substituted with the underscore '_'.
%v - Path of the upload directory.
%V - Path of the upload directory, without the final backslash
%Z - User's full name in capital letters.

11 - Bulletin menu

Displays the file set in the ARGUMENTS field, in the same way as menu type 5. At the end of the display the user must write a suffix of 8 -<filename length> characters. The file whose name is made out of the "Data" field name plus the characters entered by the user is displayed, in the same way as menu type 5.

For example, if the BULLET name is set in "Data" field, the BULLET.AVT (or ANS, ASC, BBS) file is displayed. Then the user enters two characters; if the user digits "1B", the BULLET1B.AVT (or ANS, ASC, BBS) file will be displayed, if available.

To stop the command the user has to press Enter on an empty line.

13 - Show quotes

Displays a sentence taken from the text file called QUOTES.BBS, in the directory specified in the "Textfiles path" field of the current language. Each quote must be separated by a blank line. The English language version of Lora comes with an extensive listing of quotes, which more can be added in at a later time.

17 - Change area

Displays the list of areas (message of file area depending on the currently active section) in one column and allows the user to choose one of them.

Valid optional parameters for the "Data" field are:

/M - Lists message areas.
/F - Lists file areas.
/2 - List areas on two columns,
/3 - Lists area on one column, with the area "Short name" after the number. Selection is possible using the short name also if this option is set.
/4 - List areas on one column, with the are "Short name" instead the area's number. If the short name field is empty, the area's number is displayed. Selection is possible using either the area's number or the short name with this option set.
/G[=<n>] - Limits list to the areas belonging to the group specified by <n> only. If /G only is specified, the default user group will be shown.

51 - Press enter to continue

Displays the message 'Press [Enter] to continue' and waits for the user to press the Enter key. It is possible to set text to be shown in the "Data" field instead of the default message defined in the language file.

83 - Comment to next caller

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Allows the user to leave a message to the next user calling the system. The message will be displayed after the WELCOME.* file, then deleted.

To write the message the user has to use the line-oriented editor, (even if he choose the full screen editor). In this way about 70 lines of 80 characters each are available.

The utility developers for Lora should note that the name of the file created is NEXT<n>.BBS, where <n> is the current task number. The file is in the Fido format message (*.MSG).

90 - Time statistics

Displays a few statistical lines related to the current user's usage of the BBS.

97 - Display system file

Reads and displays a file from the directory set by "Textfiles path" of the current language. In the "Data" field you must place the filename, without path.

If no extension is specified, Lora looks for the following: .AVT, .BBS, .ANS (if ANSI is active) and .ASC.

The file can contain the special internal commands.

By default a clear screen code is sent before displaying the file. If you don't want to use it, you must insert a /NS command in the "Data" field.

If you specify the /R flag in the "Data" field, Lora issues a 'Press [Enter] to continue' message after the file is displayed to the user.

98 - Display last callers

Displays a list of the calls received in the last 24 hours on every line.

104 - Set counter

Inside the users' database, there are four counters, with values ranging each from 0 to 255.

These are available for use with an application. This menu type allows you to change the contents of these parameters.

In the "Data" field you must set the counter number and the action to execute, with the following switches:

/C<n> - Counter number from 0 to 3.

/R<n> - Set the <n> value to the counter.

/D<n> - Decrease the counter by <n>.

/I<n> - Increase the counter by <n>.

105 - Usage graphic

Shows a vertical bar graph with the average usage percentage of the BBS in a 24 hour period.

Computation is made from the time of that the system first became active.

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8.0 Areafix and Raid functions

Since Lora can provide a built-in support for echomail and TIC file processing, Lora provides the tools that allows your downlinks to maintain their echomail and TIC links, all without manual intervention and without relying on external utilities.

Two "robot" answers at the "Areafix" and "Raid" names, they are the managers for echomail and TIC file processors respectively. I have choosen these names because of their popularity throughout the FidoNet community.

8.1 Areafix function usage

The Areafix function allows remote nodes to link and/or unlink message areas of the system by means of netmail messages.

A typical message to Areafix is as follows:

```
From: Marco Maccaferri (2:332/402.1)
To: Areafix (2:332/402)
Subj: PASSWORD
_____ (Message content follows)
-CARTONI.332
+CARTONI.ITA
%LIST
---
```

The calling node must be authorized to use Areafix on your system. The receiver must be Areafix (case insensitive) with your system address. In the 'subject' field the password of the sender's node and must be present.

The message text contains commands that Areafix will execute following the order. In the previous example, the CARTONI.332 will be unlinked, the CARTONI.ITA will be linked, and a available areas request will be answered.

Areafix will answer the sender with one or more messages for operation confirmation. Lora's Areafix function interprets the following commands (compatible with Fabiano Fabris' standard proposal FSC-0057.002):

[+]AREATAG	- Link an area (+ is optional).
-AREATAG	- Unlink an area.
%-ALL	- Unlink every area.
%+ALL	- Link every area.
%LIST	- Send a list of the available areas.
%QUERY	- Send a list of the already linked areas.
%UNLINKED	- Send a list of the available and not yet linked areas.
%RESCAN	- Exports every message contained in the echomail areas specified on the following lines to the node that has requested the command.
%PWD <pwd>	- Allows the change the password to be used with Areafix.
%SESSIONPWD <pwd>	- Allows to changed the mail session password.
%PKTPWD <pwd>	- Allows to change the password to be put on the mail packet headers.
%PACKER <type>	- Select the default packer. <type> must be the word under the ID column specified in the Manager/ Packers menu. The parameters

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- allowed are: ZIP, ARJ, LHA, ARC.
- #OLD : NEW - Allows you to changed the tag of an echomail area from OLD to NEW. To use this command a node must have an access level grater or equal to that specified in the Mailer / Areafix menu.
- %FROM <node> - Allows the user to make changes for another node. The following lines are traded as if originating from node <node>. To use this command the node must have an access level greater or equal to that specified in the Mailer / Areafix menu.
- %HELP - Send the help message to use Areafix.

For compatibility with other Areafix programs, if the subject contains a '-q' switch, Lora will send a list with the linked areas in the same message as well as the operation confirmation, and the '-r' switch enable the rescan of the echomail areas linked.

8.2 Raid function usage

The Raid function allows remote nodes to link and/or unlink file areas of your system by means of netmail messages.

A typical message to Raid is as follows:

```
From: Marco Maccaferri (2:332/402.1)
To: Raid (2:332/402)
Subj: PASSWORD
_____ (Message content follows)
-SDSRA
+LORA_OS2
%LIST
---
```

The calling node must be authorized to use Raid on your system. The receiver must be Raid (case insensitive) with your system address. In the 'subject' field the password of the sender's node must be inserted.

The message text contains commands that Lora/Raid will execute in the following order. In the previous example, the SDSRA file area will be unlinked, the LORA_OS2 file area will be linked, and the available area request will be answered.

Lora/Raid will answer the sender with one or more messages for operation confirmation.

Lora's Raid function interprets the following commands (compatible with Fabiano Fabris' standard proposal FSC-0057.002):

- [+]AREATAG - Link an area (+ is optional).
- AREATAG - Unlink an area.
- %-ALL - Unlink every area.
- %+ALL - Link every area.
- %LIST - Send a list of the available areas.
- %QUERY - Send a list of the already linked areas.
- %UNLINKED - Send a list of the available and not yet linked areas.
- %RESCAN - Exports every message contained in the echomail areas specified on lines following this one to the node that requested the command.
- %PWD <pwd> - Allows the change the password to be used with Raid and the TIC

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- processor.
- #OLD : NEW - Allows you to change the tag of an echo file area from OLD to NEW. To use this command a node must have an access level greater or equal to that specified in the Mailer / TIC processor menu.
- %FROM <node> - Allows the user to make changes for another node. The following lines are treated as if originating from the node <node>. To use this command the node must have an access level greater or equal to that specified in the Mailer / TIC processor menu.
- %HELP - Send the help message on how to use Lora/Raid.

For compatibility with other Raid programs, if the subject contains a '-q' switch, Lora will send a list with the linked areas in the same message as well as the operation confirmation.

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9.0 - External programs

In this chapter we will describe the external programs included in the Lora Package, and how they can work with different programs.

9.1 - LMSG, Message area maintenance

LMSG is the message base maintenance program; criteria especially defined for each area are used. Be sure that the area is configured properly before using LMSG.

If LMSG is run with no parameters on the command line, the correct parameters for the available commands will be shown.

Message base limits

The Fido message base (*.MSG), PIP-base and Squish have no "logical" limits of number of and dimensions of the messages; the only limit depends on the space available on the hard disk.

The Hudson message base (QuickBBS) is limited as far as the file dimension and the number of the messages are concerned. That is due to its internal structure. The number of messages that can be stored is about 16000. You can configure LMSG so that this limit will never be exceeded.

The Hudson base is also limited with regard to the internal number of messages. This number cannot be higher than 32767. Renumbering your messages is suggested to insure that this number is never exceeded. This should be a part of your nightly maintenance procedures.

Command list

-I INDEX (Options: U, R)

This command rebuilds the message base indexes (QuickBBS and Pip-base only) by rewriting the MSGIDX.BBS, MSGTOIDX.BBS and MSGINFO.BBS files. For the Pip-base the files involved are MPTRxxxx.PIP and DESTPTR.PIP.

During the operation, you can choose to delete the messages stored in unknown boards (boards that have no corresponding area defined in the MSGINFO.DAT file) by specifying the U parameter in addition to the -I parameter.

With Fido *.MSG message areas, this command creates a file named MSGTOIDX.DAT used by the personal mail scanner to find out the what messages are waiting in the Fido *.MSG areas.

Setting the R option LMSG will also renumber the messages.

-P PACK (Options: K, R)

Packs the message base by physically overwriting the deleted messages and their text (QuickBBS, Pip-base and Squish only). Deleting messages by using the -K command, does not mean that they were removed from the base. They are simply marked as deleted. You have to pack the base to free the space occupied by these messages. The pack command allows also to delete messages following the directions selected in the configuration file, like the -K command, but which, however, does not pack the message base and to renumber the messages, like the -R command. In this way you can make all the standard maintenance selections with a single command.

-K Purge messages

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This command deletes the messages according to the directions selected in the area configuration under LSETUPS BBS/Messages. In the QuickBBS, Squish and PIP-base, the messages are not physically removed (you must use the PACK command to do it), whereas in the Fido base they are physically eliminated from the directory.

-R Renumber messages

Renumbers the QuickBBS and Fido *.MSG message bases. The PIP-base and Squish message bases do not need to be renumbered.

-L Link messages

Reply-link the messages using the subject field. You can then easily follow threads using the reply-link navigation commands of the BBS and/or of your message editor.

-X Exclude (Options: S, Q, F, P)

This switch allows you to exclude one or more message bases from the current operation. The options represent the Squish, QuickBBS, Fido *.MSG and Pip-base message bases. For example, if you want to renumber all the Fido message areas, but not the Hudson (QuickBBS) message base, you can use the following command:

LMSG -R -XQ

Note that Pip-base and Squish do not need to be renumbered.

9.2 - LUSER Users maintenance

LUSER is the program that performs the normal maintenance for the users' database. It not only physically deletes the users marked for deletion, but also allows the System Operator to delete all the users who have not called the BBS for an extended period of time as well as sort the database by first name or last name.

LUSER must be run from the directory that contains the user database files.

A list of available command line switches is shown below:

-P Packs the user database by physically removing all the deleted records.

-S Sort the users by last name.

-SP Sort the users by access level (higher first) and by last name.

-D[n] Deletes the users who have not been calling your system for [n] days. Please note that this command involves database packing.

-M[s] Tells LUSER not to delete users with an access level greater or equal to the one specified by [s]. [s] must be the first letter of the privilege level:

- T - Twit
- D - Disgrace
- L - Limited
- N - Normal
- W - Worthy
- P - Privel
- F - Favored

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E - Extra
C - Clerk
A - Asstsysop
S - Sysop

9.3 - LTOP Users statistics

LTOP is a statistical bulletin maker related to the users' database. On the command line what type of statistics will be generated and the resulting file name must be specified.

LTOP must be followed by the name of the file to be created (with full path name and extension) and one or more of the following switches:

- U<n> - Number of uploads
- D<n> - Number of downloads
- S<n> - Number of download Kbytes
- R<n> - Number of upload Kbytes
- C<n> - Number of calls
- M<n> - Number of written messages

For all the available switches, n stands for the number of users to be included in the statistic. As a result you have the top <n> users related to the specified data.

LTOP will always create the specified file, even if it already exists. If more than one switch is specified, the result of each statistics is appended in sequential order, with a pause after each result.

9.4 - FILEIDX File index creation program

This program allows you to create the file index file, useful to speed-up the file search during a file request.

The program is used as follows:

FILEIDX (file index file)

If you wanted to create a file index named FILES.IDX, the command would look like:
FILEIDX FILES.IDX.

The file will be created in the main Lora directory.

9.5 - External door support

Lora can invoke external doors by means of embedded commands or menus. In any case, it is not possible to shell to DOS with an Errorlevel. Each door is executed from inside the Lora main program. Before calling a door, Lora creates a file called LORAINFO.Txx, where xx is the line number, in hexadecimal form. The file contains the user's record and much other useful information. Please look at the Lora Application Program Interface files (LORA-API.ZIP) which was placed in the main Lora directory when you installed Lora, for more details on this file's format. Since it is a non standard file, not many doors support it.

Coming back from the door, the LORAINFO.Txx is read again and deleted. All the parameters, except for time (if it's not changed) and the access level are updated.

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For the programs that don't accept the alphanumeric form of Lora access levels, the equivalencies are listed here:

TWIT	16
DISGRACE	32
LIMITED	48
NORMAL	64
WORTHY	80
PRIVIL	96
FAVORED	112
EXTRA	128
CLERK	144
ASSTSYSOP	160
SYSOP	176
HIDDEN	192

9.6 - L2WORLD External door interface

This is the most powerful and useful utility distributed with Lora. With this utility, written by Marcello Ardini, Lora can be used with a large number of door programs, written for other BBS software.

L2WORLD is able to create the files needed to use the doors written for Opus 1.03, Opus 1.10, Opus 1.70, RemoteAccess 1.01, QuickBBS 2.64. It can also create the DORINFO1.DEF and DOOR.SYS files (Doorway compatible files).

Following is the command line format to use L2WORLD:

L2WORLD I|E <door type> [<options>]

I - The <door type> format should be imported inside the Lora's own drop file. This may be useful when you are using external doors that changes the user's parameters, such as timebanks and lotteries.

E - The <door type> format should be exported. This is the normal usage mode for L2WORLD. This option allows you to create a wide variety of drop file formats to use most doors currently not available for Lora.

<door type> - Is the drop file format to be used. It may be one of the following:

- LO110 - Lora 1.11 (LORAUSER.BBS)
- RA100 - Remote Access v. 1.0x (EXITINFO.BBS)
- RA111 - Remote Access v. 1.1x (EXITINFO.BBS)
- DI - QuickBBS (DORINFO1.DEF)
- DW - Doorway mode 1 (DOOR.SYS)
- DW2 - Doorway mode 2 (DOOR.SYS)
- OP103 - Opus 1.03 (LASTUSER.BBS)
- OP110 - Opus 1.10 (LASTUSER.DAT)
- MI - Message information (MSGED.BBS)

<options> - The following options may be specified:

- D - The directory where the drop file should be created (usually the door's path name). By default the current directory will be used.

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- I - The path where the Lora's drop file (LORAINFO.Txx) should be read. Usually this is the Lora's main directory. By default the current directory will be used.
- T - Specifies the task number.
- B - Overrides the baud rate written to the drop file.
- X - Insert the task number in the drop file (such as DORINFO2.DEF, DOOR3.SYS).
- O - Overrides the baud rate written to the drop file using the configured maximum baud rate.
- S - Log style format: 1-Opus, 2-Telix, 3-Mirror, 4-FrontDoor).
- M - Automatically writes the MSGED.BBS file (Message information) when using DORINFO1.DEF or Doorway drop files.
- Q - Operates quietly.
- E - Writes in the log file the errors only.
- P - Insert the real password (not the Lora's encrypted one) in the drop file.
- C - Overrides the COM port.

Note for OS/2 users: this is a DOS program even with the OS/2 package, due to technical reasons we cannot recompile it as a native OS/2 program.

If you wanted to create a DOORINF1.DEF file for use with BRE, the command line would look like:

L2WORLD e di -dc:\lora\bre

c:\lora\bre would be the directory that the file would be created in.

Also note: BRE must be set up to run with the DOORINF1.DEF file. The best settings I have been able to use are those for QuickBBS.

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10.0 - The Terminal Emulator

Although Lora was designed primarily as an e-mail and BBS system, it also features a powerful terminal emulator. The terminal emulator features very accurate and efficient terminal emulation and file transfer protocols, and several other features found in expensive and/or complex communications packages.

The terminal emulator is invoked by pressing ALT-T from Lora's main menu, or by specifying **TERMINAL** on the command line when Lora is started.

Most of the functions of the terminal emulator are reached by holding down the ALT key and pressing a key, A through Z. Each function and menu of the terminal emulator will now be described.

Download files (PgDn) - Receive one or more files from the remote system.

Upload files (PgUp) - Transmit one or more files to the remote system.

O.S. Shell (ALT-J) - Invokes a temporary operating system shell. Type EXIT and press [Enter] to return to the terminal emulator.

Leave terminal (ALT-X) - Depending on how the terminal emulator was invoked, this will return you to Lora's mailer screen or to the operating system.

Change baud rate (ALT-B) - Allows you to change the current DTE baud rate, regardless of the 'Lock baud' option setting.

Expand CR to CR/LF - Determines how a received CR character should be processed. If set to No, no expansion is made. If it is set to Yes, all received CR characters will be expanded to CR/LF sequence.

Local echo (ALT-E) - If the service you are connecting to do not echo the characters you type, it may be necessary to enable this option to see what you are typing. If the service echoes the characters you type and you are using this option, you will get duplicate characters, like "AATTZZ".

Auto-ZModem download - If the terminal emulator detects the special sequence of characters that a ZModem transmitter sends when a ZModem file download is started, Lora will automatically start the ZModem receiver. If you disable this option, you must use <PgDn> to receive files.

Capture (ALT-L) - Allows you to capture the characters received to a disk file or to a printer. The terminal emulator automatically filters the ANSI and Avatar sequences, they will never appear in a capture file.

Hang-up (ALT-H) - Disconnects the current call and displays the elapsed time of the call.

Initialize modem (ALT-I) - Transmit the modem init string as configured in the Terminal / Miscellaneous menu.

Reset timer (ALT-R) - Resets the on-line timer. The timer is automatically reset whenever a new connection is made.

Clear screen (ALT-C) - Clears the screen and moves the cursor to the upper-left screen corner.

Dialing directory (ALT-D) - Brings up the dialing directory manager. It's usage is explained in the next section.

The dialing directory

The dialing directory allows you to define up to 100 phone numbers. The terminal emulator keeps the dialing directory in a file named PHONE.DAT located in the Lora's main directory.

The information stored for each system are the following:

Name - System's name.

Location - City and country where the system is located.

Phone - Phone number. The number can be written either in the international format (such as 39-51-6331730) or in the local format (such as 6331730). The phone cost calculation is made only if the phone number is written in the international format, unless you have changed the default cost table (Manager /

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Costs menu) to work even with your local phone format.

Password - The password to be used with this system (shown as dots for security reasons).

Download path - Where the files downloaded from this system should be kept.

Auto capture - This option allows you to automatically open the capture file when a connection to this system is made. The capture file is always opened in the append mode.

Capture - The capture file's name.

IEMSI - Allows you to automate the login to this system using the IEMSI (Interactive Electronic Mail Standard Interface) protocol.

Local echo - Tells the terminal emulator that each character typed should be written to the screen, because the remote system does not echo the characters typed.

Strip high bit - If set, this option automatically resets the 8th bit of each character received.

When the dialing directory is invoked, it shows a list of the stored entries and allows you to choose what system must be called. The bottom line of the list's window shows you the available keys:

ESC - Closes the dialing directory and return to the terminal screen.

ENTER - Dial the highlighted entry.

INS - Adds a new entry to the directory. The new entry is automatically saved to disk when you exit the editing window by pressing the ESC key.

E - Edit the highlighted entry. The modified entry is automatically saved to disk when you exit the editing window by pressing the ESC key.

DEL - Delete the highlighted entry (the system requests confirmation before deleting the entry).

When dialing a system you may see a window with the following information: attempted number, time-out for the current call, name, location and phone number of the called system, and the modem's response.

The following keys are available:

ESC - Aborts the dial and return to the terminal screen.

SPACE - Retry to call the system (if the phone is busy and your modem does not recognize the busy signal).

A - Add 15 seconds to the time-out. This option should be used if the remote system answers the phone few seconds before the time-out expires.

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11.0 - Miscellaneous

This chapter collects the functions that do not belong to a specific area covered in another chapter.

11.1 - Keyboard commands

Lora can execute certain operations by a particular key sequence. Usually it's a ALT + <key> combination.

The function associated to each key changes between different situations. The available situations are the following:

waiting for a call (section 11.1.1),
on-line user (section 11.1.2),
and terminal emulation (section 11.1.3).

11.1.1 - Waiting for a call

While the system is waiting for a call, either outbound or inbound, the following commands can be executed:

- ESC - It activates the pull-down menus (see later).
- ALT-A - Manual answer. It forces the modem the answer an incoming call by sending the answer string specified in the Modem/Commands menu.
- ALT-C - It calls LSETUP in a shell from Lora. Each modification executed (except for those related to users and the event scheduler) will be available when returning to Lora.
- ALT-D - It forces an immediate call. Lora will call the first node in the call listing immediately, without waiting for the delay time specified for the current event.
- ALT-E - This command invokes the Sysop message editor, in a shell from Lora.
- ALT-I - This command causes the modem initialization command to be sent.
- ALT-J - This command causes Lora to invoke an OS shell. This will work with the OS/2 version, but it is recommended that another OS/2 session be started.
- ALT-K - This command causes Lora to start a local connection log-in session. Log-in is made exactly like in a remote connection. Lora places the phone line in an off-hook condition before starting the BBS.
- ALT-L - This command locks the keyboard with a password. In locked mode, the ALT-K command is the only command available. To re-enable all other keyboard functions, the password must be entered correctly when Lora is in the wait-for-a-call mode. To completely disable keyboard locking, the "Password" field must be left blank. This command is only available if your copy of Lora is registered.
- ALT-M - This command creates a calling entry for a specific node. Lora will ask for the node number to be called and calling priority. If you specify "Immediate", Lora will immediately call the node disregarding the dial delay set in the events file. If you specify "Crash", Lora will dial the node after waiting for the dial delay. If you specify "Normal", Lora will call the node at the normal priority. If you specify "Direct", all information contained in the route.cfg file will be ignored and this node will be called direct.
- ALT-P - This command forces mail processing. This command will force the running of an IMPORT from the directory defined for the current event, an EXPORT of every echomail message, and a netmail and outbound packet PACK.
- ALT-Q - This command forces an outbound scan, updating the node window.
- ALT-R - It makes a file request from a specific node. Lora will ask for the node number to be called, the file(s) to be requested, and calling priority. If you specify "Immediate", Lora will immediately call the node; any other flag will be processed according to the current

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event. If you specify "Direct", all information about the node that contained in the route.cfg file will be ignored and the call will be placed in the Direct mode.

ALT-S - It makes a file attach to a specific node. Lora will ask for the node number to be called, the file(s) to be attached, and calling priority. Priorities are processed as in ALT-M..

ALT-T - It activates the internal terminal emulator (see later for specific commands).

ALT-X - Exits to DOS. Lora places the phone line in an off-hook condition before exiting.

Down/Up arrows - Node scrolling inside the window.

11.1.2 - User on-line

While there's a user on-line, the following commands are enabled:

ALT-F - Allows you to change user's flags.

ALT-H - Disconnects the user immediately.

ALT-J - Makes a DOS shell.

ALT-L - Disconnects the user immediately, and reduces his level to 0. A 0-level user cannot connect the system any more.

ALT-N - Toggles the "Nerd" flag for the current user. If the nerd flag is on and the user wants to chat, no sound will be produced. The user does not know that he is not paging you.

ALT-S - Allows the Sysop to modify the user's access level.

F1-F4 - They display a few stats about the on-line user and the previous call.

F9 - Displays a short list of available commands.

ALT-F1 - ALT-F10 - They display a file called ALTFxx.*, where xx ranges from 10 to 100 depending on the function key pressed (ALT-F1 exits with errorlevel 10, ALT-F2 exits with errorlevel 20, and so on). The files must be stored in the

"textfiles" directory specified for the current user language.

Grey Plus - It rises user's level by 1 unit (i.e. from Normal to Worthy).

Grey Minus - It lowers user's level by 1 unit (i.e. from Worthy to Normal).

Up/down arrows - They add/remove 1 minute to/from the current user's time left on this call.

11.1.3 - Terminal emulator

The function keys available for the internal terminal emulator are the following:

ALT-B - Changes the baud rate for this call.

ALT-C - Clears the screen and puts the cursor in the upper left corner.

ALT-D - Starts up the dialing directory selection menu. You can dial an entry, insert new entry, edit or delete existing entry.

ALT-H - Hangs up the call.

ALT-I - Sends the terminal initialization string to the modem. Please note that this string is different from the one used when Lora is in the waiting for a call mode.

ALT-J - Creates an operating system shell. This works even with the OS/2 version, but it is better to switch to an OS/2 window or Full-Screen session than to use this function..

ALT-L - Activates/deactivates the capture from the modem. When activating, Lora will ask for the file in which the information will be stored (by default, TERMINAL.CAP).

ALT-P - Changes the line settings from N81 (no parity, 8 bits transmitted, 1 stop bit) to E71 (even parity, 7 bits transmitted, and 1 stop bit). The default setting is N81.

ALT-R - Resets the time-on-line counter (displayed in the lower right corner).

ALT-X - Exits from terminal mode and goes back to "waiting for a call" mode, or returns you to the operating system. This depends on whether or not the terminal session was started from

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Lora or you started Lora with LORA TERMINAL..
ALT-Z - Activates the pull-down menus.

PgDn - File download: Lora will ask for the protocol to be used and, if necessary, the destination filename.
PgUp - File upload: Lora will ask for the protocol to be used and the filename to be uploaded. The file to be uploaded must exist in the upload directory defined in LSETUP for the terminal emulator.

11.2 - Command line Parameters

Lora accepts command line parameters, that allow you to manage many lines with a single configuration file.

- B<speed> - Connection speed: This parameter indicates there's a user on-line, so that the BBS is immediately loaded. If the carrier detect signal is not present, Lora exits immediately with the errorlevel specified for every call.
 - C<file> - Sets the configuration file to be read instead of CONFIG.DAT. If the file does not exist, LSETUP will be automatically run, allowing you to create the configuration file.
 - F<string> - Passes to Lora the flags reported by the modem. I.E.: Arq/HST/HST/V42bis.
 - I<string> - Tells Lora the modem initialization string to be used instead of the string defined in the configuration file. Useful for multiline systems with different modems.
 - L - Sets Lora to be run in local mode.
 - M - Disables the internal front-end mailer. After connection, the user will immediately enter the BBS, with no need to press ESC twice.
 - N<num> - Determines the task number. This parameter has priority over the same command in the configuration file. Evaluation copies (not registered) cannot define a number over 2.
 - NB - Prevents Lora from executing the before/after import/export/pack commands. Useful if you want to toss, scan or pack themail without any other processing made by the before/after commands.
 - O<address> - Tells Lora that the <address> node is on-line, and that your system generated the call.
 - P<num> - Sets the serial port to be used. This setting has priority over the same setting in the configuration file.
 - R<file> - Sets the log file name to be written. This parameter has priority over the same setting as defined in the configuration file.
- IMPORT - Unpacks the mail packets and tosses the messages into the echomail/netmail areas. The command 'TOSS' has the same effect.
- EXPORT - Exports the messages from the echomail areas to the nodes you are linked with. The command 'SCAN' will have the same effect.

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NODELIST - Starts the nodelist compilation and, if applicable, the nodediff update feature. When all the nodelists available are compiled Lora exits back to the OS prompt.

PACK - Exports all outbound netmail messages to the nodes that they are addressed to and packs the mail according to the rules set in the route.cfg tables.

POLL - Immediately polls the node specified after the keyword (for example: POLL 2:332/402). If the poll fails, Lora will exit with errorlevel of 1, if succeeds it can process the mail received or will exit with the errorlevel defined for the current event as the 'Aftermail exit' errorlevel.

TERMINAL - Brings up the terminal emulator. When the session ends, Lora will exit directly to the OS prompt.

TIC - Processes inbound TIC files, tossing them to the appropriate file areas and forwarding them to the appropriate receiving nodes.

11.3 - External support files

We will now list all the files that Lora displays to users for any messages that must be given to the user.

The files must be stored in the "textfiles path" directory defined for the current user language.

1ATATIME - Shown to the user who tries to connect himself to more than one line with the same name at the same time.

APHORISM - Shown by Menu type 13, before displaying the current quote.

APPLIC - Shown to the new users after the name confirmation and before asking them the calling site.

ALIASASK - Shown to the user before asking him if he wants to use a nickname, or his real name.

BADPWD - Shown when a user inserts a bad password too many times, before logging him out.

BIRTHDAY - Shown if the current date is the user's birthday.

BFAILED - Shown to the user who gives a wrong answer to the birthday check.

BVERIFY - Shown to the user before asking him his birthday for validation.

CB_HELP - Help file for the multiline chat (CB Chat system)

COMPHELP - Help file for the available packers.

CHGPWD - Shown when a user wants to change his password.

DAYLIMIT - Shown when a user has already spent all his available time for today.

DEFCOMP - Shown, if it exists, instead of the internally coded packer list. This file should contain all of the selections that a user can make for his/her default packer..

DEFPROT - Shown, if it exists, instead of the internally coded protocol list. This file should contain all of the selections that a user could make for his/her default file transfer protocol.

FGROUP - Shown by Menu type 121, when the user has to choose a file group. Usually it contains the list of the available file groups.

FILEAREA - Shown, if exists, instead of the internally coded file area list.

FSHELP - Help file for the internal full-screen message editor. This file can not include any embedded commands for pausing, color change, etc.

LEAVING - Shown to the user, before executing an external door. Usually this file is used to inform the user to wait for a little time.

LESSBAUD - Shown when the current baud rate is lower than the previous one.

LOCKOUT - Shown when the Sysop hits ALT-L to avoid any more calls from the on-line user.

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LOGO - Shown at the beginning of a call, before asking the user's full name.
LOGOFF - Shown at the end of a call, before dropping the line.
LOGONSEC - Shown to the user if his access level is not high enough to access the system.
LOGONFLA - Shown to the user if his active flags are not enough to access the system.
LOGONAGE - Shown to the user if his age is not high enough to access the system.
MGROUP - Shown by Menu type 121, when the user has to choose a message group. Usually it contains the list of the available groups.
MOREBAUD - Shown when the current baud rate is higher than the previous one.
MSGAREA - Shown, if exists, instead of the internally coded message area list.
NEWS - Sysop's news bulletin. Displayed before entering the main menu. Here you can place the current news of what is happening with your system.
NEWUSER1 - Shown after the environment question sequence, and before the new password request sequence.
NEWUSER2 - Replaces the rookie file at the first login only.
NOTAVAIL - Shown when the user try to yell at the Sysop, outside the paging hours defined in the BBS / Paging hours menu.
NOTIME - Shown when the user does not have enough time remaining on this call to complete the download that he just requested.
PAGED - Shown to the user after the yell to the Sysop stops.
PREDNLD - Shown to the user after selecting the download command, and before asking him the download protocol and filename.
PREREG - Shown when a new user tries to enter a system that does not allow new users (see the LOGON LEVEL parameter in the LSETUP configuration program).
PREUPLD - Shown to the user after selecting the upload command, and before asking him the upload protocol.
RATIO - Shown when a user who exceeds the download/upload ratio, and tries to begin a download.
RETURN - Shown to the user when coming back from an external door.
ROOKIE - Used to give help to the new users and to let them get to know the system. You can choose how many times this file has to be displayed in the LSETUP program.
SEC# - Displayed before the mail checker, only if the file exists. The # character represents the user's access level in numeric form. See the external doors chapter for more details on the numeric security level numbers.
SECALL - Shown to the user if the sec#.* related to the online user's level does not exist.
SHELLBY - Shown to the user when the Sysop makes a DOS shell whilehe is online.
SHELLHI - Shown to the user when the Sysop comes back from a DOS Shell.

STARTCHT - Shown to the user at the beginning of a user-Sysop chat.
ENDCHT - Shown to the user at the end of a user-Sysop chat.
TIMEWARN - Displayed when the time left to the user overflows to a forced or non BBS event. The time is adjusted automatically.
TODAYK - Displayed when the total file dimension exceeds the daily download limit as defined for the users' access level.
TOOSLOW - Displayed when a user tries to connect himself at a too low a baud rate.
TRASHCAN - Displayed if a user tries to use a name that is not allowed on this system (listed in the file TRASHCAN.DAT, described below).
TRASHPWD - Displayed if a user tries to use a password that is not allowed on this system (listed in the file TRASHPWD.DAT, described below).
ULSPACE - Shown where there isn't enough free disk space remaining on the file area's upload drive, as defined in the BBS/General options menu, 'Min. upload space' field..
WARNPWD - Shown when somebody tried (with no success) to force the current user's password (see the BADPWD file).
WELCOME - Shown after the password introduction by the user. Usually it contains a welcome message.
WHY_ANSI - Help file for the question about ANSI graphics.

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WHY_AVT - Help file for the question about the AVATAR code transmission.
WHY_COL - Help file for the question about color.
WHY_FULR - Help file for the question about the full screen message reader.
WHY_IBM - Help file for the question about displaying extended IBM character set.
WHY_NEW - Help file for the "Did you write the name exactly?" question.
WHY_OPED - Help file for the question about the full screen ANSI editor.
WHY_PVT - Help file for the question about private messages.
XFERHELP - Help file for the file transfer protocol selection.

The following files are used for special tasks and must be created in the main directory of Lora:

TRASHCAN.CFG - Contains all the unusable users' names, or part of users' names, in ASCII format. No one will be allowed to enter the system if his name contains any of the words listed in this file. If someone tries to do so, the file TRASHCAN.??? will be displayed, then they will be logged off.
TRASHPWD.CFG - Same as the TRASHCAN.CFG, but for the password field. If a user tries to enter a password that contains a word listed in this file, the external file TRASHPWD.??? will be displayed, then they will be logged off.
NAMES.CFG - This file contains the names and node numbers of people you write often from your BBS. The format of the file is as follows:
 <Name>, <Address>
 Marco Maccaferri, 2:332/402.1
When a user enters a netmail message to <Name>, Lora automatically fills the destination address field with <Address>.

AREAS.BBS - This file is used by the echomail processor, as an alternative to the definitions made using LSETUP, for the echomail import/export operations. Following is an example of a valid AREAS.BBS file:

```
Arci Computer Club Bologna ! Marco Maccaferri
;Name of the BBS and Sysop separated by an exclamation mark
C:\MSG\CLANG CLANG.ITA 332/403 22402/1 2 3 332/402.5
;This is a Fido (*.MSG) area
130 FIDO_STYLE.ITA 332/403
;This is a Hudson message area
$C:\MSG\LORA LORA.400 332/403 418 419
;This is a Squish<tm> area
!2 MSDOS.400 332/403 332/402.5 .6
;This is a Pip-base message area
## HELP_ARC 332/418 22402/2
;This is a pass through area. All messages are repacked to the forwarded nodes and then
;deleted.
```

The first line is ignored by Lora but is required by other mail processors and/or Areafix message handlers. The following lines are examples of how to specify the message base for each echomail area:

CLANG.ITA is a Fido *.MSG area,
FIDO_STYLE.ITA is an Hudson (QuickBBS) board,
LORA.400 is a Squish<tm> area
and MSDOS.400 is a Pip-Base area.
HELP_ARC is a special area called Pass-through, messages sent to this area are exported immediately to the destination nodes, and then deleted.

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The following are flag files, i.e. special files that Lora look for in the current directory while waiting for a call. These features will only work with registered systems only.

RESCAN.NOW - If this file exists Lora re-scans the outbound directory. Useful if you use an external mail processor in a multitasking environment.

ECHOMAIL.RSN - This file signals Lora to perform an attempt at exporting new echomail messages. Usually used with a message editor, like GoldEd or WEdit, to immediately process the messages written.

NETMAIL.RSN - This file signals Lora to perform an attempt at exporting netmail messages.

LEXITxx.yyy - If Lora found in the current directory a file named LEXIT<num>.<err> (like, for example LEXIT1.15), then Lora configured with the line number <num> terminates the current call (if any) and exits to DOS with the errorlevel <err>. In the example above the line #1 will exit with an errorlevel of 15.

VIRSCAN.BAT - This batch file, if exists in the current directory, will be executed after each upload and allows the Sysop to check files for viruses. Lora will put four parameters on the command line:

- %1 - The full file name with the drive and the path (C:\File\Uploads\FOO.BAR).
- %2 - The destination directory with the trailing backslash (C:\File\Uploads\).
- %3 - The file's name without the extension (FOO).
- %4 - The file's extension with the leading period (.ZIP).

The batch file must move the file (and eventually flag it on the log file) if it is not allowed on the system.

RCVFAX.BAT - This batch file is called when a FAX call is received by the mailer section and the 'FAX Errorlevel', in the Modem/Hardware menu, is set to 0. Lora will put three parameters on the command line:

- %1 - The serial port number (1=COM1, 2=COM2, etc.).
- %2 - The modem connection speed (always set to the 'Maximum baud rate' value).
- %3 - (OS/2 version only). The serial port file handle.

The batch file should call the FAX receiving software with the appropriate parameters, then return to the BBS. If the carrier signal is still high, Lora will automatically hang-up the modem.

If FAX messages are successfully received, the batch file can create a file called RCVFAX.FLG in the Lora system directory. This flag allows Lora to display a flashing "FAX" in the bottom-right corner of the mailer screen, informing you that new FAX(es) have been received.

11.4 - Embedded commands

Each file displayed by Lora may contain the control code sequences listed below. They can be used for status file creation, or for questionnaire generation.

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These commands are compatible with those available in Opus 1.72, RemoteAccess 1.10 and Maximus 2.00. In case of conflict between homonymous commands, the Maximus 2.00 standard has been used.

11.4.1 - Single commands

^A - Stops the output and wait for the user to press the Enter key. If followed by another ^A, then the message 'Press [Enter] to continue' will be displayed.

^D - Enables the pause at the end of each screen page, even if the user has disabled this setting.

^E - Disables the pause at the end of each screen page, even if the user has enabled this setting.

^G - The computer emits a beep.

^H - Backspace

^I - Tab

^J - Line feed

^K - If the character following isn't present on the character set shown in the 'Compound commands with ^K, it prevents the user from stoping scrolling with a ^C.

^L - Clear the screen (it will be translated to the correct emulation sequence or in a series of CR/LF sequences if the user has not set either of the ANSI or AVATAR emulations).

^M - Carriage return

^Q - Used for XON/XOFF controls. Unavailable.

^S - Used for XON/XOFF controls. Unavailable.

^V - Avatar commands.

^X - External door execution. The lines will be treated as a DOS command and interpreted accordingly. The following parameters can be specified:

***0** - Path of the current file area.

***1** - Path of the current message area.

***B** - Baud rate (0 if in local mode).

***F** - User's first name

***G** - 0=No graphics, 1=Ansi, 2=Avatar.

***H** - Disables the FOSSIL driver before executing the program (DOS versions only). The OS/2 version will translate this parameter to be the serial port file handle.

***L** - User's last name.

***M** - Swap of the total memory occupied by Lora, leaving only 1.5K for the recovery routines (Registered DOS version only).

***N** - Task number.

***P** - Serial port (1=COM1, 2=COM2, etc.).

***R** - User's position inside the user's database (record number).

***S** - Do not read the LORAINFO file at the termination of the external program.

***T** - Time left for the current call.

***W** - Activates the FOSSIL watchdog. If the carrier drops, the FOSSIL driver will reboot the

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- system (DOS version only).
- *X - Prevents the creation of the LORAINFO.T?? by Lora.
 - *! - Stops time during the door execution. The user will be have as much time as he had before entering the door.
 - *# - Disables the 'wants chat' flag. Useful for external chat programs.

For compatibility to Scott Dudley's Maximus-CBCS 2.00, the following commands are available:

- %A - User's first name, all capital letters.
 - %b - Baud rate (0 if in local mode).
 - %B - User's last name, all capital letters.
 - %c - The place of the call.
 - %C - The last answer to the questionnaire ^OR command (see the EMBEDDED COMMANDS section for more details).
 - %d - The number of the current message area.
 - %D - The number of the current file area.
 - %E - Length, in lines, of the user's screen.
 - %f - User's first name.
 - %F - Path of the current message area.
 - %g - 0=No graphics, 1=Ansi, 2=Avatar.
 - %G - User's daily download limit.
 - %h - Voice phone number of the user.
 - %H - Kilobytes number downloaded today.
 - %i - Total download.
 - %l - Total upload.
 - %j - Connection time for the current call.
 - %k - Task Number.
 - %l - User's last name.
 - %L - In remote calls the flag is replaced with the "-pX -bY" string, where X is the serial port (1=COM1, 2=COM2, etc.) and Y is the baud rate. In local calls the flag is replaced with the '-k' string.
 - %M - Path of the current message area.
 - %n - User's first name.
 - %N - BBS name, as defined in the configuration file.
 - %p - The DOS version translates this parameter to the serial port number (0=COM1, 1=COM2, etc.). The OS/2 version translates this parameter to the serial port file handle (0 for local mode).
 - %P - Serial port (1=COM1, 2=COM2, etc., 0 for local mode).
 - %q - Path of the current message area, without the final backslash.
 - %Q - Path of the current file areas, without the final backslash.
 - %s - Sysop's last name.
 - %S - Sysop's first name.
 - %t - Time left for the call, in minutes.
 - %T - Time left for the call, in seconds.
 - %u - User's number.
 - %U - Substituted with the underscore '_ '.
 - %v - Path of the upload directory.
 - %V - Path of the upload directory, without the final backslash.
 - %Z - User's full name in capital letters.
- ^Y - Repeats the first character after the command, as many times as specified by the second character after the command. For example to send out 5 underscores, type the following:
^Y_ ^E.

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^Z - End of File (not to be used).

11.4.2 - Compound commands with ?F

Commands preceded by ^F are related to the data of the on-line user and allow to create information text to be shown at the beginning of the connection.

- ^FC - Displays the CPS of the last file transmitted.
- ^FD - Displays the phone number of office/data.
- ^FE - Displays the phone number of home/voice.
- ^FF - Displays the date, without time, of the last login.
- ^FG - Displays the time of the last login.
- ^FH - Displays the percentage efficiency of the last file transmitted.
- ^FI - YES/NO IBM character set.
- ^FL - Displays the netmail credit.

- ^FM - Displays the number of the last personal message read.
- ^FN - Displays the number of the last message read in the current area.
- ^FO - Displays the user's privilege level in verbal form.
- ^FQ - Displays the number of files sent.
- ^FR - Displays the number of Kbytes sent.
- ^FS - Displays the number of files received.
- ^FT - Displays the number of Kbytes received.
- ^FV - Displays the number of screen lines set by the user.
- ^FX - YES/NO ANSI toggle.
- ^FY - YES/NO end of page toggle.
- ^FZ - YES/NO formfeed code (ASCII 12) toggle.
- ^F0 - YES/NO full screen editor toggle.
- ^F2 - YES/NO hot keyed menu.
- ^F3 - Displays the user's handle.
- ^F4 - Displays the first login date.
- ^F5 - Displays the user's birthday.
- ^F6 - YES/NO mail check at login.
- ^F7 - Displays the user's registration.
- ^F8 - YES/NO AVATAR/0+ toggle.
- ^F9 - Number of upload/download ratio in the format 1:x.
- ^F! - YES/NO colors toggle.
- ^F^A - Displays the next quote reading it from the file defined in the configuration file (^FA also).
- ^F^B - Displays the user's full name.
- ^F^C - Displays the user's city (^FB also).
- ^F^D - Displays the current date.
- ^F^E - Displays the number of calls made by the user (^FP also).
- ^F^F - Displays the user's first name (^FW also).
- ^F^G - One second pause.
- ^F^K - Displays the total on-line time of the day (counting all the calls made during the day).
- ^F^L - Displays the on-line time of the present call (^FU also).
- ^F^N - Stops the connection.
- ^F^O - Displays the time left for the current call.
- ^F^P - Displays date and onset time of the connection. A CR/LF character is added.
- ^F^Q - Displays the number of different users who called on that day.
- ^F^R - Displays the net download of the user so far made (download - upload).
- ^F^S - Displays the user's signature (sentence to put at the end of each message written, like a signature on a paper).

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^F^T - Displays current time.
^F^U - Forces the user to answer a question.
^F^V - Allows the user to answer with a blank line.
^F^W - Displays the number of Kbytes sent.
^F^X - Displays the number of Kbytes received.
^F^Y - Displays the received/sent Kbytes ratio in x:1 format (^F: also).
^F[- Download remaining for today.
^F\ - The user's selected language.
^F] - Displays the comment field of the user's record (currently not implemented but available).
^F; - YES/NO full screen message reader.
^F% - Shows the default file transfer protocol.
^F" - Shows the default compressor.

11.4.3 - Compound commands with ^K

These commands are related to the general situation of the system, and have been introduced for compatibility with RemoteAccess 1.01.

^KA - Total number of calls to the system (all the lines).
^KB - Name of the last user who called the current line.
^KC - Displays the number of the current message's child (answer to this message).
^KD - Number of the first message (this command has been introduced for compatibility, and is always set to 1).
^KE - Number of the last message in the current area.
^KF - Displays the rest of the line only if the date and time of the last modification of the file specified after the command is greater or equal to the user's last call date.
^KG - Displays the day of the week.
^KI - Displays the current time in the form hh:mm:ss.
^KJ - Displays the current date in the form dd mmm aa.
^KK - Minutes on-line so far for the current call.
^KM - Number of personal messages found in the message base.
^KO - Time left for the current call.
^KP - Displays the number of the current message's parent (message that this message is an answer to).
^KQ - Time limit for each call.
^KR - Baud rate of the connection.
^KT - Daily download limit.
^KU - Number of minutes still available before the next forced or non BBS event.
^KW - Number of the line.
^KX - Stops immediately the connection.
^KY - Title of the current message area.
^KZ - Title of the current file area.
^K0 - Number of messages in the current area.
^K1 - Number of the currently active message area.
^K2 - Number of the currently active file area.
^K5 - Name of the currently active message area.
^K7 - Displays the user's time bank account.
^K8 - Displays the user's file bank account.
^K9 - Number of messages contained in the current message area.
^K[- Download remaining for today.
^K\ - Delete the line from cursor to the end.

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11.4.4 - Compound commands with ^O

These commands are related to the user-BBS interaction, and allow the creation of questionnaires, or the execution of programs needing particular parameters. It's also possible to execute batch file with the command described later.

^OC - Executes an external program. Everything written after the C character is passed to the OS exactly as it is. LASTUSER.BBS, LORAUSER.BBS and DORINFO1.DEF are created.

^OD - If the current file terminates for any reason, the file specified after the command will be displayed to the user.

^OE - The rest of the line is displayed only if the user has the ANSI or AVATAR graphics enabled.

^OF - Declares the file name to be displayed at the end of the current file (no matter in what way).

^OM - Saves the last answer given to the ^OR command in the answer file (if it has been opened), with the comment written after the M character.

^ON - Asks the user to write a line. If an answer file has been opened (see ^OO command), the line will be recorded with the comment written after the N character.

^OO - Opens or creates a file in which the answers to the questionnaire will be recorded. The filename must follow the command. Example: ^OOC:\Lora\Answer.Txt.

^OP - Saves the essential data of the on-line user (name, city, last time called) in the answer file.

^OQ - Ends the file. If another file has been defined with the ^OF command, the control passes to that file.

^OR - Allows answers. After the R character the list of letters constituting a valid answer must be inserted. The file execution will continue only if the user answers with one of the letters specified above.

^OS - The control passes to the file set after the S character.

^OT - Makes a 'GOTO beginning of file' function (to be used cautiously because there's no way to terminate the file execution without the ^OQ command).

^OU - Immediately after the U character, a capital letter must be written. All of the line will be displayed (or executed) only if the last answer to the ^OR command was the same as that of the specified letter.

^OV - Makes a 'GOTO offset (number of bytes from the beginning of file)' function, in digit form. To be used cautiously and with programs that can compute the offset with precision.

11.4.5 - AVATAR commands

The AVATAR commands (Advanced Video Attribute Translator And Recreator) allow to change the remote video attributes in an intelligent way. That means that, if the user cannot see ANSI graphics or his terminal is unable to receive directly the ANSI codes, they will be ignored (color codes) or transformed into TTY sequences to be displayed on simple terminals.

^V^A - Changes video attribute. The character that follows immediately represents the attribute to be changed. The bit meaning is equivalent to the attribute byte of the video card. Please note that if the attribute is CTRL-P, it has to be repeated twice.
(^V^A^P -> ^V^A^P^P).

The following are the color codes that can be changed with the ^V^A command:

Foreground

0 - Black
1 - Blue
2 - Green
3 - Cyan

Background Colors

0 - Black
1 - Blue
2 - Green
3 - Cyan

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4 - Red	4 - Red
5 - Purple	5 - Purple
6 - Brown	6 - Brown
7 - White	7 - White
8 - Grey	
9 - Bright Blue	
A - Bright Green	
B - Bright Cyan	
C - Bright Red	
D - Bright Purple	
E - Bright Yellow	
F - Bright White	
0 - Flashing Black	8 - Black
1 - Flashing Blue	9 - Blue
2 - Flashing Green	A - Green
3 - Flashing Cyan	B - Cyan
4 - Flashing Red	C - Red
5 - Flashing Purple	D - Purple
6 - Flashing Brown	E - Brown
7 - Flashing White	F - White
8 - Flashing Grey	
9 - Flashing Bright Blue	
A - Flashing Bright Green	
B - Flashing Bright Cyan	
C - Flashing Bright Red	
D - Flashing Bright Purple	
E - Flashing Bright Yellow	
F - Flashing Bright White	

Examples:

43 - Red foreground on a Cyan background.

01 - Blue on a black background.

FB - Flashing Bright White on a Cyan background.

^V^C - Cursor toward the top of the screen.

^V^D - Cursor toward the bottom of the screen.

^V^E - Cursor toward left.

^V^F - Cursor toward right.

^V^G - Deletes the current line from the cursor position to the end.

^V^H - The two following bytes represent the x and y coordinates to which the cursor will be moved.

^V^Y - Repeat the specified string a given number of times. The complete format of the command is ^V^Y<len><s><n>, where <len> is the length of the string to be repeated, <s> is the string itself, <n> is the number of times the string <s> has to be repeated.

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11.4.6 - Compound commands with ^W

Some of the following commands have been already presented. They have been added for compatibility with Maximus-CBCS 1.02.

- ^W^A - Displays the last login date.
- ^W^B1 - The rest of the line will be displayed only if the baud rate is equal to, or greater than, 1200 baud.
- ^W^B2 - The rest of the line will be displayed only if the baud rate is equal to, or greater than, 2400 baud.
- ^W^B9 - The rest of the line will be displayed only if the baud rate is equal to, or greater than, 9600 baud.
- ^W^C - Displays the board's name as defined in the system configuration file.
- ^W^D - Displays the Sysop name, as defined in the system configuration file.
- ^W^E - Displays the last string written with the ^ON command.
- ^W^FA - Displays the number of the current file area.
- ^W^FN - Displays the title of the current file area.
- ^W^G - Only local ring beeps.
- ^W^MA - Displays the number of the current message area.
- ^W^ML - Displays the number of the last message read.
- ^W^MN - Displays the title of the current message area.
- ^W^MH - Displays the number of the last message.
- ^W^M# - Displays the total number of messages present in the current message area.
- ^W^NB - The same as ^NC.
- ^W^NC - Displays the user's netmail credit.
- ^W^ND - Since Lora does not consider the netmail debit, this command returns a 0. Included for compatibility.
- ^W8 - The rest of the line will be displayed only if the user's screen has 80 columns or more.
- ^WA - Put the last answer to a ^ON command in the log file.
- ^Wa - Send the last answer to a ^ON command to all the users currently on-line as a broadcast message.
- ^WB - Toggle capitals letters on/off.
- ^WcA - The rest of the line is sent only if the user is connected locally (not via modem).
- ^WcR - The rest of the line is sent only if the user is connected to the system with a modem.
- ^WD - Deletes the file set after the D character.
- ^WGA - Displays the number of the current file area.
- ^WGN - Displays the title of the current file area.
- ^WIL - The rest of the line is sent only if the user is connected locally (not via modem).
- ^WIR - The rest of the line is sent only if the user is connected to the system with a modem.
- ^WkF - Turn off the flags specified after the command.
- ^Wkl - Displays the rest of the line only if the user flags match with the flags specified after the command. The flags are separated from the rest of the line with a single space character.
- ^WkO - Turn on the flags specified after the command.
- ^WkT - Toggle on/off the flags specified after the command.
- ^WpD - Lowers the user's access level by one unit.
- ^WpU - Raises the user's access level by one unit.
- ^WL - Link the current file with another. After completion of the other file, the control is returned to the calling file.
- ^WP - Displays the voice phone number.
- ^WR - Displays the user's handle.
- ^Ws - Gives to the user the level indicated after the s character.
- ^WW - Writes the rest of the line in the questionnaire answer file.
- ^Ww - Displays the current on-line users.
- ^WXD - The same as XR (implemented for compatibility).

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^WXR - Executes an external program (the same as ^OC).

The ^W command, used alone, stops file reading for half second.

11.4.7 - Compound commands with ^P

These commands are related to the actions to be taken according to the access level of the on-line user.

The access levels must be specified with the initial letter (Twit, Disgrace, Limited, Normal, Worthy, Privel, Favored, Extra, Clerk, Asstsysop, Sysop).

^PB - The rest of the line is displayed only if the user's level is equal to, or lesser than, a specified level.

^PL - The rest of the line is displayed only if the user's level is equal to, or greater than, a specified level.

^PQ - The rest of the line is displayed only if the user's level is equal to a specified level.

^PX - The rest of the line is displayed only if the user's level is different from a specified level.

By setting only the level letter after the ^P character, file reading will go on only if the user's level is equal to, or greater than a specified level.

12 Using the Lora Reverse Polish Notation (LRPN) Calculator

RPN Engine for Lora (LRPN) is a set of command internal to the Lora's text files that accomplishes the following functions:

- Mathematical calculations: additions, subtractions, etc.;
- Bitwise operations: NOT, AND, OR, XOR;
- Logical operations: NOT, AND, OR, XOR;
- Comparisons: equals, less than, greater than;
- User's flags handling;
- User's parameters handling;
- Cursor position and color codes handling;
- ... (and many others...)

Starting with LRPN

LRPN is based on a stack, a series of numbers (initially empty) from which is possible to extract the number in reverse order only (like a First-In-Last-Out stack). For example, if the stack contains the following values:

```
12 <--- Top of the stack
100
-6
43 <--- Current position
```

The next value extracted will be 43.

The numbers contained in the stack can be results from previous calculations, or can be inserted directly as constants, variable values (see below), user's flags, etc. The values can be used to make

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further calculations and/or comparisons or put in variables, etc.

The current position is named ACCUMULATOR. The accumulator is like a pre-chamber to the real stack and does not lose its contents when it is put on the stack, so it is possible to put the same value two or more times onto the stack. For example if the stack contents is like the above, to insert 3 times the value 459 you can use the following sequence:

459,,,

Where the digits form a number inside the accumulator and the colon means "put the accumulator's contents on the stack". LRPN interprets the characters with the following effects:

Character :	4	5	9	,	,	,
Stack :	12	12	12	12	12	12
	100	100	100	100	100	100
	-6	-6	-6	-6	-6	-6
	43	43	43	43	43	43
	4 *	45 *	459 *	459	459	459
			459 *	459	459	
(* = accumulator)				459 *	459	
				459 *		

As you can see, the accumulator acts like a normal calculator display and, for who know RPN calculators, the colon acts like the [Enter] key.

It's important to note that the blanks are ignored by LRPN, so writing 123 or 12 3 or 1 2 3 means the same thing, and if there are no digits before the 1, the accumulator contains the value 123 at the end of each sequence.

If the sequence ends with a digit and the following sequence begins with a digit, it will form a single number.

Data types

Normally LRPN uses 16 bit integers with sign, the values can range from -32768 to 32767. If an operation exceeds this range no error is generated but the results are unpredictable.

Some data types that are used by LRPN (such as the user's flags) are bit type and can only be 1 or 0, if you put a value to a bit type other than 0, by default it will be set to 1.

Variables

LRPN can use up to 200 variables numbered from 0 to 199, to which you can use to store the results of calculations or data that can be needed to be preserved from a text file to another. At the start of every connection to theBBS all variables will be zeroed.

User flags

There are the flags from 0 to 9 and from A to V. With LRPN these are translated to be the numbers 0 through 31. For example, the RPN flag #11 corresponds to the B flag.

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Counters

There are 10 counters, numbered from 0 to 9, that are the same used by Lora with the other embedded commands. The counters are saved in the user's configuration file so that their value can be preserved from one call to another by the same user. The counters are bytes, so their values can range from 0 to 255. When an assignment is made to a counter, only the least significant byte is considered.

User data

Individual user's data settings are saved in the user's configuration file and can be of various types and are not sequentially numbered. Following is the list of the data values available and their meanings:

- 1 - (bit) 1 IBM character set
- 2 - (bit) 1 screen clearing codes sent
- 3 - (bit) 1 color codes sent
- 4 - (bit) 1 ANSI graphics enabled
- 5 - (bit) 1 AVATAR graphics enabled
- 6 - (bit) 0 the Tabs are translated to spaces
- 7 - (bit) 1 More? prompt enabled
- 8 - (bit) 1 hot-keyed menus

- 21 - (bit) 1 logon mail check enabled
- 22 - (bit) 1 full screen mail reader enabled
- 23 - (bit) 1 full screen mail editor enabled
- 24 - (bit) 1 view message's kludge lines

- 41 - (bit) 1 if the user is hidden from the users list
- 42 - (bit) 1 if the user cannot be deleted by LUSER
- 43 - (bit) 1 if the yell from this user is ignored (nerd)
- 44 - (bit) 1 if the user has unlimited downloads

- 101 - (integer) User's selected language
- 102 - (integer) Screen length (rows)
- 103 - (integer) Screen width (columns)

- 121 - (integer) Default file transfer protocol
- 122 - (integer) Default packer
- 123 - (integer) Message group
- 124 - (integer) File areas group

- 141 - (integer) Access level (from 0 = Twit to 12 = Hidden)
- 142 - (integer) Netmail credit

Using LRPN's commands

When Lora encounters a ^R character inside a .BBS file, the rest of the text row will be interpreted as an LRPN sequence.

Note: - All unrecognized characters will be skipped

- All commands ARE CASE SENSITIVE; the lower case letters have opposite meanings from the upper case letters.

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Example : ^R12V2+12v4c10>!10f
(or) : ^R 12 V 2 + 12 v 4 c 10 >! 10 f

This means: Add 2 to the variable #12 then copy the value back to the variable, and to counter #4, then set the user's A flag if the result is greater than 10, else reset the flag.

LRPN commands

- DIGITS from 0 to 9

Inserts a number on the accumulator. It works like a calculator keyboard. If a digit follows an operation, it replaces the contents of the accumulator, which is automatically put on the stack. The only exception is the insert operation (the colon). IF a digit follows another digits, it is put in the accumulator without any other effect.

Note: When the digits causes the value on the accumulator to be greater than 32767, the value will be forced to 32767.

- STACK OPERATIONS

- , (comma) - Inserts the value in the accumulator on the stack.
- @ (at sign) - Get the value on the stack and put it in the accumulator. The previous value is lost.
- " (quotes) - Exchanges the accumulator with the value on the stack.

- ONARY OPERATORS

Acts on the accumulator, replacing the value with the result of the operation. LRPN recognizes the following operators:

- _ (underline) - Sign exchange
- \$ (dollar) - Absolute value
- ' (NOT `) - Sign (-1 if < 0, 1 if > 0, 0 if 0)
- # (pound) - Integer to bit conversion (1 if <> 0, 0 if 0)
- ~ (tilde) - Reverse all bits (one complement)
- ! - Logic negation (0 if <> 0, 1 if 0)

- BINARY OPERATORS

Acts on the last number put on the stack AND on the accumulator: the first number will be retrieved from the stack and the result replaces the contents of the accumulator. LRPN recognizes the following binary operators:

- + - Addition (acc = st + acc)
- - Subtraction (acc = st - acc)
- * - Multiplication (acc = st * acc)
- / - Division (acc = st / acc)

Note: 1) As a division between integers, the result is rounded to the nearest to zero integer.

So:

7 , 4 /
(acc = 7 / 4) the result is 1, and
7 _ 4 /
(acc = -7 / 4) the result is -1

2) If the accumulator is 0, the result will be:

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32767 if the stack is greater than or equal to 0.
-32768 if the stack is less than 0.

% - Remaining of the division or module ($acc = st \text{ MOD } acc$).

Note: 1) The result's sign will be positive if the signs of the operands are both positive or negative, negative if one operand is negative and the other positive.

2) If the divisor is 0, then the result will be 0.

L - Left shift. The result will be equal to the last number on the stack with the bits shifted to the left by accumulator positions.

R - Right shift. The result will be equal to the last number on the stack with the bits shifted to the right by accumulator positions.

& - Bitwise logical AND.

| - Bitwise logical OR.

^ - Bitwise exclusive OR.

= - Equal (1 if $st = acc$, else 0).

< - Less than (1 if $st < acc$, else 0).

> - Greater than (1 if $st > acc$, else 0).

- MISCELLANEOUS OPERATORS

W - Word assembler (the high byte will be taken from the stack, the lower byte from the accumulator, the result will be put in the accumulator).

w - Word disassembler (the higher byte of the accumulator will be put on the stack, the lower byte will be kept on accumulator).

- LOADING AND RECORDING

V - Loads the accumulator with the value on the variable numbered by the accumulator. Example: 12V loads the value in the variable #12 into the accumulator.

Note: If the accumulator is less than 0 or greater than 199, the result always is 0.

v - Put the value on the stack of the variable numbered in the accumulator. The value in the accumulator is kept as is.

Note: If the value on the accumulator is less than 0 or greater than 199, nothing is memorized but a number is taken from the stack.

F - Gets a flag, like the V command, but the flags are limited to 31.

f - Sets a flag, like the v command, but the flags are limited to 31. The flag is reset to 0 if the accumulator is 0, else the flag will be set to 1.

C - Gets a counter. Like the V and F commands, but the number of counters is limited to 9 and the value range is from 0 to 255).

c - Sets a counter.

U - Gets a user's parameter (see the user's parameter table above).

u - Sets a user's parameter.

P - Load the accumulator with the last terminal's cursor position. The row is put in the higher byte, the column in the lower byte.

p - Move the cursor at the position specified by the higher (row) and lower (column) byte of the accumulator.

C - Loads the accumulator with the last screen attribute set.

c - Changes the color attribute using the lower 8 bits of the accumulator. The relationship between colors and numbers is told in another chapter of this manual.

Usage examples

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Let's examine the following sequence following a ^R character in a generic text file:

```
P w " @ 102 U " W p
| | | | | | | |
+--|---|---|---|---|---> Reads the cursor position...
| | | | | | | |
+--|---|---|---|---|---> ...split it in 2 bytes. Now in the
| | | | | | | |      accumulator we have the column and
| | | | | | | |      on the stack the current row.
+--|---|---|---|---|---> Exchange (now the accumulator has
| | | | | | | |      the row and the stack the column)
+--|---|---|---|---|---> Get the column (the row will be lost)
| | | | | | | |
+++--|---|---|---|---> Put the accumulator (the column) on
| | | | | | | |      the stack and replaces it with the
| | | | | | | |      number 102.
+--|---|---|---|---> Replaces 102 with the USER'S DATA
| | | | | | | |      #102 (number of rows).
| | | | | | | |      The stack still holds the column..
| | | | | | | |      we can recombine it to form the new
| | | | | | | |      cursor position...
+--|---|---|---|---> ...but after a position exchange.
| | | | | | | |
+--|---|---|---|---> OK, now recombine the values in a
| | | | | | | |      single word...
+----> ...done, the cursor is on the last
| | | | | | | |      terminal row.
```

Even simpler: to move the cursor in the lower left terminal corner, we can use the following command sequence:

```
102 U , 1 p
```

The best way to learn how to use LRPN is the practice: how can we keep the current cursor position and colors set and display a message on the last terminal row with blue background and white foreground ? It's possible to create a pull-down menuing system with LRPN and the other embedded commands ? (Yes, I wrote LRPN for that purpose...).

13 - Events file definitions

With the Manager / Events menu is possible to define periods of time to execute the external maintenance programs or for calls to other BBSes for mail exchange.

In the event's viewing mode (default mode when entering the Manager/Events menu), the following commands are allowed:

PgUp/PgDn - Allow you to move along the event file.

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E - Edit an event item. After this command, an inverted-color bar will allow you to choose the option to be modified.

Add New Event - Allows you to add an event. The event saving method places the new event in the right position, so that you can add an event anywhere.

List - List the events actually present (one event per row) allowing a speed search of the events that have been defined.

Delete - Allows you to delete an event from the file. The system will ask for confirmation before physically erasing the event.

Copy - Copy the current event in a new slot. The system will ask for the days of execution and times that the event is to be executed between.

Events editing

Using the commands "Edit" and "Add New Event" you can change the following parameters, valid for any event:

Title - This field will be used as a "comment" regarding the task accomplished by the event. If present it will be put in the log file when the event is started.

Days - Defines the days in which the event is active. The letters are the initial of the English week days and means when the event will be active.

Start time - Event's starting time, in 24 hour notation. 10:00 am. is 10:00, 10:00 p.m. is 22:00.

Stop time - Event's ending time. To execute any event, Lora must be in the "waiting for a call" status anytime between the start and the end of the event.

Forced - Defines a forced event. This is an event that must be executed absolutely at the starting time. The user's time limit will be adjusted accordingly. Example: if a user normally has a 30 minute time limit and calls your system 10 minutes before a forced event, Lora gives them only 10 minutes for this call.

Allow humans - Allows a human caller to log in your system. Normally this option should be set to No only when the system must do mail calls to other BBSes.

Errorlevel - Defines the errorlevel to exit to DOS with when the event starts. If this is set to 0, Lora will not exit to DOS.

Clock adjustment - Defines that within this event Lora must call the Galileo Ferraris Institute of Torino (Italy), or the site that you specified in the Global/Time Adjustment sub-menu to synchronize the PC clock.

Receive only - This parameter enables the system to receive calls only and prevents it from making outbound calls. The nodes that are waiting to be called are then marked "Temp.hold".

Max try - Defines the maximum call retry number for each node that can be called during this event.

Max failed - Defines the maximum failed calls retry number before the node is marked as

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undialiable. It's suggested to keep this number low (3 or 4), it counts the failed calls but only if the remote system answers and the call is unusually terminated..

Retry delay - Defines the delay between a call and the one that follows it. If the 'Random redial time' option in the Mailer/Miscellaneous menu is set to Yes, this value will be the medium time between each call.

Forced poll - If set to Yes, forces Lora to call the node defined with in the reserved node setting even if there isn't outbound mail waiting for that node. If set to No, a call to that node will be placed only if there is outbound mail for that node.

Mail behavior - Defines the parameters related to inbound and outbound mail.

In the "Mail behavior" menu you can defines the following parameters:

Allow file requests - Allows other nodes to request files from your system.

Make file requests - Outbound file requests are allowed during this event..

Send to CM systems only - Defines an event to call nodes with outbound crash mail packets (*.CLO and *.CUT) only. Nodes that have other types of mail pending will have their calls suspended for the duration of this event.

Send to non-CM systems only - Defines an event to call nodes without any outbound crash mail packets only. Mail for systems that have "Crash" mail pending will have calls suspended for this event.

Import normal mail - Allows the import of mail packets from the unknown nodes inbound directory (unknown nodes are nodes not present in any nodelist that Lora knows about).

Import know mail - Allows the import of mail packets from the known nodes inbound directory (known nodes are nodes present in the nodelist that Lora knows about, but do not have a session password defined).

Import Prot mail - Allows the import of mail packets from the protected nodes inbound directory (protected nodes are nodes with a session password defined).

Export mail - Allows the export of echomail and netmail messages after the import procedure.

Import at start of event - If set to Yes, the system imports mail packets from the directory defined above at the start of this event.

Export at start of event - If set to Yes allows the export of mail messages at the start of this event.

Dynamic - Defines an event that can end before the time defined in the "Stop time" parameter. For example: if the system must call the node 2:332/403 at 2:30, you can define a forced dynamic event from 2:30 to 3:00, as soon as a successfull call to the node (for example at 2:35) the event ends and the system can take care of the next event available.

Route TAG - Defines the routing file portion to execute within this event (see the commands related to echomail/netmail routing).

Aftermail exit errorlevel - Defines the DOS errorlevel to exit with if the system receives inbound

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mail packets from another node. The exit to DOS is made before the mail processing so that with this option active you cannot use the internal mail processor automatically, but you can use command line options to call the mail processor.

Process TIC files - This parameter enables the internal processing of received TIC files (echo file area file messages).

14 - Echomail/Netmail routing commands

Echomail/netmail routing is the procedure that allows the system to send messages addressed to certain nodes through other systems, to economize on phone bills, either because the messages are compressed (using the most popular compressors) and because multiple messages addressed to many distant nodes can be sent through a single node, that provides to send the messages to the respective addressee. This accomplishes two things: 1. It lowers the number of messages made to a certain system per day. 2. It reduces the amount of time that the system will not be available to users.

In this chapter we will see the commands that can be put in the ROUTE.CFG file. THIS FILE MUST BE PRESENT IN YOUR LORA SYSTEMS DIRECTORY, OR YOU WILL NOT BE ABLE TO SEND ANY MAIL TO OTHER SYSTEMS!

Note: even if there the 'echomail route' is mentioned, Lora doesn't support routed echomail, which is echomail addressed to a node different than ours, but it's possible to generate routed echomail using routing commands. Pay attention and be sure that the addressee of the mail packet supports routed echomail.

The mail packets that are subjected to routing commands are packets with the .OUT extension only. The built-in mail processor automatically generates this type of packets when exporting messages.

The nodes can be specified with the short format, the following examples are equivalent:

2:332/402 2:332/403 2:332/404 2:332/404.2
2:332/402 403 404 404.2
402 403 404 .2 (if the zone and net of your primary address is 2:332).

If possible to specify a group of nodes and/or points with the "ALL" keyword, as follows:

2:332/ALL - Every node in the net 2:332
2:ALL - Every node in zone 2
2:332/402.ALL - Every point of the node 2:332/402

Following are the commands allowed for the echomail and netmail routing:

Tag <name>

Defines the start of a command block that will be executed only at certain hours (see the relative option in the events configuration). The end of the block can be another "Tag" line or the end of the route.cfg file. Every command that is not preceded by a "Tag" line are executed at all times, unless there is a command line in the tag that changes this.

Poll <flag> <nodes>

Force the system to call one or more node. The <flag> can be "Crash", which creates a *.CLO file); "Normal", which creates a *.FLO file; or "Direct", which creates a *.DLO file.

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Send-To <flag> <nodes>

Compresses the outbound mail directly to the nodes specified in <nodes>. <flag> can be "Crash", "Normal", "Direct" or "Hold". This command can be shortened to "Send".

Change <flag1> <flag2> <nodes>

Changes the priority flag of the nodes specified in <nodes> from <flag1> to <flag2>. <flag1> and <flag2> can be "Crash", "Normal", "Direct" or "Hold". This command will only be found under the Tag line. It should be used to change the method of calling. In most cases this will be caused by the changing of phone call rates.

Leave <nodes>

Temporarily hides the mail addressed to the nodes listed in <nodes>. The files will have their names changed to have a *.N?T extension (for the *.?UT files) and *.N?O extension (for the *.?LO files). The mail packets with this extension are not recognized by Lora so they appear to be hidden from it.

UnLeave <nodes>

Execute the operation opposed to the command above. It will rename the files with the recognizable extension.

Route-To <flag> <dest> <nodes>

This is the most powerful and most abused command that can be placed in the Route.cfg file. Sends the mail addressed to nodes listed in <nodes> to the node specified in <dest>, with the flag defined in <flag>. The value that can be assigned to <flag> can be "Crash", "Normal", "Direct" or "Hold". This command can be shortened to "Route"

Sample Route.cfg for OS/2 Support, which at the time this was written was located in Seoul, Korea. I had the following information:

I was node 13 of the Taehan net (760) in Asia (Zone 6). My node number would be:

6:760/13. My uplink was 6:760/6, The Dragon Mountain BBS and he was also my Net Coordinator (6:760/0). So I asked for and received permission to route all out of Zone mail through him.

```
route-to crash 6:760/0 1:all 2:all 6:66/0
```

Here I routed all mail out of the net to my Net Coordinator.

```
route-to crash 6:760/100 1 2 14
```

I could not successfully call these systems, so I asked my hub to route traffic to them. (They were off of the same hub).

```
route-to crash 6:760/200 41 42 46
```

Ok, same deal here, but these systems were off of another hub. Send the traffic directly to their hub said the Net Coordinator, so I did.

```
send crash 6:760/all
```

Ok. Send all of the rest of the net their mail Crash.

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Now, I was a part of another network, OS2Net. The nearest Net Coordinator was long distance in state. It cost about \$.25 per minute to call him, but out-of state cost about \$.13 per minute. So here goes:

Route-to Crash 1:390/0 2:ALL 3:ALL 4:ALL 5:ALL 6:ALL

Day (Tag) I eliminated a few lines, but they were explained in the last example

Send-to Crash 1:309/All

Send-to Hold 1:ALL

Send-to Crash 81:305/2 3 5 (Local Systems in my net)

Route-to Hold 81:304/1 81:ALL (send everyone else's messages via that out of state system)

Night

Change Hold Crash (Ok, long distance rates are down now, send that echomail and hope that it goes out)

ZMH

Poll Crash 1:309/0

Poll Crash 81:304/1

(poll both nets)

15 - Explaining terminology (or the Glossary folks)

The Nodelist

The nodelist is Lora's telephone directory and is used for several purposes. Among these are to allow you to retrieve information about remote systems, such as the maximum supported baudrate, modem flags, and system capability flags, to check if a remote system is known to your system or should be treated as an unlisted system.

The Mailer portion of Lora requires that a nodelist be present whereas the BBS portion and the Terminal Emulator can both be used without one. A typical FidoNet nodelist contains over 20,000 (we recently went over 32,000) systems and has a fairly straight forward structure as follows:

Zone

Usually a large geographical area, such as North America, Europe, Australia and New Zealand, etc. At the time of the release of this package, the following FidoNet Zone numbers have been allocated:

- 1 North America (including Canada)
- 2 Europe
- 3 Australia, Tasmania, and New Zealand
- 4 Latin America
- 5 Africa
- 6 Asia

Region

Usually a somewhat smaller geographical area, such as a country or part of a (large) country. A collection of regions make up one zone.

Net

Usually a collection of systems local to each other. Typically a city and in some cases including its suburbs. A collection of nets make up one region.

Node

A single system within a net.

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Point

A single system belonging to a node. Typically, a point is similar to a user logging on to a BBS system using his/her terminal program, with the main difference being that a point performs most of his/her activities off-line and uses smart software to collect and transit his/her mail.

Hosts and hubs

The coordinator of a net is called the host or NC for Network Coordinator. The host is responsible for maintaining the nodelist segment for his/her net and to act as an inbound Netmail gateway for the systems in his/her net ("host routed mail").

In a large net, it is quite common that "sub-hosts", called hubs, are set-up to aid in mail distribution within the net. In other words, a hub has the same function for systems in a network that a host has for (remote) systems outside the same network.

Before Lora can use the information in a nodelist, it must be compiled with the built-in nodelist compiler. The nodelist that Lora needs to process is often referred to as the raw nodelist. It should not have been processed by Xlatlist, Parselist or a similar utility; but be only the nodelist you receive each week (if you are a FidoNet node) from your host.

Grab a somewhat recent version of a nodelist and decompress it. Place the resulting file (such as NODELIST.228) in the General/Directory/Path/Nodelist directory.

To compile your nodelist, type LORA NODELIST and press <Enter>, or let Lora handle this by simply running LORA. When Lora is started, it will compare the date of the raw nodelist and its index files. If the dates match no compilation will be made.

If you want to force compilation, run LORA NODELIST.

Points and pointlists

A point is similar to a user logging on to a BBS system using his/her terminal program, with the main difference being that a point performs most of his/her activities off-line and uses smart software to collect and transit his/her mail.

A point system is addressed by specifying the BOSSNode system's address followed by the point number. E.g. 2:332/402.1 is point one off of 2:332/402. The BOSSNode system is called point zero (2:332/402.0), but the .0 is normally left out.

Lora is a point smart software package and fully supports the "four-dimensional" (zone, net, node, point) addressing method. Lora also supports the "two-dimensional" point approach used by some software often called "FakeNetting". "Fake" because the software uses a non-existent network number to identify its "pointnet" and uses the node field for the point number.

The maximum number of points any system can have is 65,535, not including the BOSSNode, or point zero.

A pointlist is similar to a normal nodelist, with the exception that all entries are considered point systems. Add the pointlist file name to the Manager/Nodelist menu to send mail directly to point systems.

Here is a sample pointlist:

```
Boss,2:332/402
,1,Lora_Development,Bologna,Marco_Maccaferri,-Unpublished-,9600,MO,XX,V32B
```

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,2,U.T.M.,Lugo_(RA),Marcello_Ardini,-Unpublished-,9600,CM,XA,HST,ZYX

As you can see, a point list looks very much like a raw nodelist. The last field contains nodelist flags (HST, MO, CM, etc.) and if more than one flag is present, they are separated by commas.

Points can not be added to systems in the master nodelist using the POINT keyword.

Modems and FOSSIL drivers

Lora works with most "Hayes-compatible" modems, including US Robotics HST and HST/DS, Telebit's Trailblazer, ANC, Everex, ZyXEL and Hayes. The general rule is that the modem must be able to send alphanumeric result strings. For most low-speed modems, the basic configuration is all that is required. For high-speed modems such as the US Robotics HST, a few extra settings are necessary.

To utilize high-speed modems in the most efficient way, it must be properly configured for use with Lora. Some high-speed modems are incorrectly configured for use with Lora when they leave their factory.

Lora require that your modem can return verbal result codes, such as "CONNECT 2400" and "NO CARRIER". In addition, if you want Lora to answer the telephone on inbound calls, the modem must be able to return a verbal code indicating a ring signal, such as "RING". The modem must not have DCD (carrier detect) forced. It should support disconnecting by lowering DTR (data terminal ready), but it is not necessary. DTR must, however, not be forced.

For high-speed modem users, it is usually recommended that you lock the DTE (computer <> modem) speed to the highest possible baudrate, which is usually 19200, 38400, or 57600 BPS.

The current version of Lora does not support manually operated modems with constant DTE speeds since most of them do not send any type of messages to the terminal (program).

A FOSSIL (Fido/Opus/SEAdog Standard Interface Layer) driver is a memory resident program (TSR) that works as a layer between the application program and your computer's hardware. Lora requires a FOSSIL driver to function. One of the advantages of the standard FOSSIL interface is that programs can be ported easily to other machines and/or operating systems, or to communicate with devices that do not normally function like a "Hayes compatible" modem, such as ISDN cards.

There are several FOSSIL drivers available. Lora has been tested with X00, and BNU with good results. X00 and BNU will be described here.

BNU

BNU, written by David Nugent, comes in two flavors. One is a device driver, the other is a .COM file, loaded from AUTOEXEC.BAT or another batch file. For a detailed description of the BNU driver, please refer to the documentation included in the BNU distribution archive.

Examples:
[AUTOEXEC.BAT]

BNU /R=1024 /T=512 /L1:38400

Sets BNU to use a receive buffer of 1024 bytes, a send buffer of 512 and locks Comm port 1 to 38,400bps.

If you are not using a high-speed modem the above example may not be what you want. The most common command line for BNU is:

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BNU /R=1024 /T=512

X00

X00, written by Ray Gwinn, is a device driver (later versions can also be loaded as an executable from AUTOEXEC.BAT), it is loaded from your CONFIG.SYS file when your machine is started. For a detailed description of the X00 driver, read the documentation included in the X00 distribution archive.

Example:

[CONFIG.SYS]

DEVICE=X00.SYS E 1 B,1,38400 T=512 R=1024

Does the same things that BNU did above, Enables the driver, locks Com port 1 to 38,400 bps, sets a transmit buffer of 512 and a receive buffer of 1024.

If you are not using a high-speed modem the above example may not be what you want. The most common command line for X00 is:

DEVICE=X00.SYS E 1 T=512 R=1024

The TIC processor, or how did that file get from there to here

The TIC is a program which does for files what echomail does for messages. When TIC operates, it looks for inbound files with the extension .TIC. These are "control" files which tell the program what the name of the "real" file is, the file echo area it is to go to, and what systems have already seen the file. The information is checked against the TIC configuration files, and if passwords match and the area exists, the file is tossed to the "destination directory" established when the AREA was set up. (The file is moved to the destination directory by renaming it if it is possible, or by copying and deleting the original if it is not possible). The FILES.BBS in that directory is appended with the description (again, part of the TIC file). If there are other nodes listed for that echo, TICK will then create new TICs for them, and will create FLO files to those nodes in the outbound directory. The attaches will send the new TICs and the "real" file to the other nodes. This does NOT happen if that node is already listed in the seenby line of the original TIC.

The TIC processor can be called automatically when new TIC files are received in the inbound directory or can be called in your batch file using the command line parameter TIC (see the command line chapter for more information).

In a TIC configuration file there are several lines. Most have to do with setting up the areas. Earlier in the documentation you seen a sample TIC file. Well, I ran TIC for a while too, thinking that it was the best file handler around, and it is. Well here is my TIC.CFG file with explanations on what it does for the TIC processor:

```
IN g:\lora\inbound
;My inbound directory
OUT g:\lora\outbound
;my outbound directory
ZONE 6 g:\lora\outbound
;my zone (6 for asia)
NET 760
NODE 13
```

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```
;The rest of my system information
HOLD G:\LORA\HOLDIR
;where to hold those real files that are outbound
QDIR G:\LORA\QDIR
;I forgot what this stands for but I bet the Q has something to do with it.
LOGPATH G:\LORA\TICK.LOG
;My tic log file
AREA G:\LORA\FILE\OS2SIG OS2SIG
;Ok, here is an area. First I tell TIC that this is an area line, where the area is
;and what it's name is
6:760/6 xxxxxxxx *C
;Ok, this is the system that is allowed to send and receive files, my password
;(did you think I was going to give that away?), the fact that I can send and receive
;files from him (the *) and that I send all files to him Crash (the other
;options are Direct, Normal and Hold.
AREA G:\LORA\FILE\ALLFILES ALLFILES
;Another area and I removed the line that must be between
;the two areas out for clarity
6:760/6 xxxxxxxx *C
;Same system, password and other stuff.
A TIC.CFG file could go on for several pages and cover many
file areas and networks. Lora only takes the following from the TIC.CFG
file:
The AREA Name, the directory that the files for that area will go into and the
forwarding system address. So for OS2SIG above the information taken will
be: G:\LORA\FILE\OS2SIG, OS2SIG and 6:760/6. The password, routing and
any other information will be disregarded. You will have to put the password
in the TIC password block in a node information page under the Manager/Nodes
sub-menu. Lora cannot originate TIC files with the 2.35 release.
```

16 - Examples

We will now show some batch file and routing examples, that could be useful for initial configuration of your system.

Examples cover "normal" situations; for particular situations it's better to carefully read through the manual.

16.1 - Routing examples

We will now show some mail routing examples for common situations: single point, multiple BBS point and HUB (mail sorter).

16.1.1 - Single point configuration

Route-To Crash 2:332/402 1:ALL 2:ALL 3:ALL 4:ALL 5:ALL 6:ALL

Send all netmail and echomail packets for the six FidoNet zones to 2:332/402.

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16.1.2 - Multiple point configuration

Send-To Crash 2:332/403
Route-To Crash 2:332/402 1:ALL 2:ALL 3:ALL 4:ALL 5:ALL 6:ALL

Assumes that the system is a point of the 2:332/403 and 2:332/402, send all mail directed to 2:332/403 to that node, and all the remaining packets to 2:332/402.

16.1.3 - Hub configuration

Send-To Hold 2:22402/ALL
Send-To Hold 2:332/418 419
Route-To Direct 2:332/403 1:ALL 2:ALL 3:ALL 4:ALL 5:ALL 6:ALL
Route-To Crash 39:102/302 39:ALL

Holds all packets directed to the point's Fakenet 22402 and two nodes, 2:332/418 and 2:332/419 (downlink), then route the packets directed to zones 1, 2, 3, 4, 5 and 6 to 2:332/403 (uplink).

Mail for zone 39 (AmigaNet) is routed to a different uplink.

16.2 - Sample batch files

Since Lora does not use external programs for normal operations, batch file creation is really simple.

If Lora does not need to exit to DOS for automatic maintenance, a batch file is not wanted nor needed.

A simple batch file, for a completely automatic system, is as follows:

```
@Echo off
:Loop
C:
Cd \Lora
Lora
If Errorlevel 10 Goto Daily_Maint
If Errorlevel 0 Goto End_Batch
Goto Loop
:Daily_Maint
LMSG -K -PR
Rem
Rem Put your daily maintenance here
Rem
:End_Batch
```

It's been supposed that there is a mail event that forces Lora to exit with errorlevel 10 at a given time.

It is possible to break out into another batch file from this batch file.

16.3 - Sample external files

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This section provides you with some examples on how create external .BBS files to execute some operations, like creating a DORINFO1.DEF files for running doors, or create a simple new users questionnaire.

Please note that the sequence ^W means the character ASCII code 23(17 hex), so make sure that your text editor can insert control characters inside the text file.

16.3.1 - DORINFO1.DEF (DORINFO.BBS)

```
^WDDorinfo1.Def      ; Deletes the old DORINFO1.DEF
^OODorinfo1.Def      ; Opens an answer file called DORINFO1.DEF
^WW%N                ; Writes the board's name
^WW%S                ; Writes the sysop's first name
^WW%s                ; Writes the sysop's last name
^WIL^WWCOM0          ; If local mode, writes COM0
^WIR^WWCOM%P         ; If remote connection, writes COMx
^WW%b BAUD,N,8,1     ; Writes the connection speed and parameters
^WW 0
^WW%A                ; Writes the user's first name
^WW%B                ; Writes the user's last name
^WW%c                ; Writes the user's city
^WW%g                ; Writes the emulation mode
^PQS^WW100           ; If level = SYSOP, writes 100
^PXS^WW50            ; If level not SYSOP, writes 50
^WW%t                ; Writes the time left for this call
^WW-1
^OQ                  ; Force the file termination
```

Following is an example on how to use the previous command file to run an external door:

Running an external door. Please wait

```
^WLDORINFO.BBS
^OCDOOR
```

The previous file is useful when running single line systems, but if you are setting up a multiline system and your are using doors that supports task numbers in the drop file name (such as DORINFO2.DEF, DORINFO3.DEF, and so on), you may change the first two lines with the following:

```
^WDDorinfo%k.Def
^OODorinfo%k.Def
```

The %k sequence will be replaced with the current task number, so that each running line will create a different drop file, that can be used as follows:

Running an external door. Please wait

```
%WLDORINFO.BBS
%OCDOOR -cDorinfo%k.Def
```

Inside the MISC directory you should find the command files to create the CALLINFO.BBS (CALLINFO.BBS) and DOOR.SYS (DOORSYS.BBS) drop files.

16.3.2 - New users questionnaire

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The following command sequence can be saved in a file named NEWUSER2.BBS so that it will be displayed at the first call of each user.

```
^OOANSWER.TXT
^OP
Write your real name: ^ONRealname
Address: ^ONAddress
ZIP, City: ^ONZipCity
Country: ^ONCountry
Voice phone number: ^ONVoicephone
Sex (M/F): ^ONSex
Where did you hear about this board?
^ONWhere
What are your interests and hobbies?
^ONHobby
^OQ
```

The output of these questions will be saved in a file called ANSWER.TXT. You will have to move them to the appropriate location on your system.

Ok, that is it to the manual. I know that you will have questions, so I will go over the method of getting those questions answered.

First, no question is a dumb question. We were once in your shoes, those of the new sysop, or the Sysop changing over to Lora.

Second, try to get the Lora FidoNet support echo. It is on the International Fidonet Echomail Backbone. If it is not available locally, try to make it be so. Show your friends this wonderful new software. Maybe they will try to install it and find the answer that you are looking for. If not, post a message there. Most of the Support BBS Sysops and I are there. Marco, is too. He might not answer you due to working on those bugs that you pointed out, or for other reasons. It might take some time for your question to be answered, but it will be answered.

Third. If you cannot get an answer to your question, post a letter to Marco. He may have missed your message for some unknown reason. Plus, with the letter, Marco will have a record of the problems you had installing Lora.

Fourth. There are several utilities out there. Ask about them in the Lora echo, then go out and get them. If you are switching from another type of BBS software to Lora, this might be just what you are looking for.

Fifth. Good luck and enjoy the world of BBSing. Once you are caught, you might never give it up.

James Mckenzie
Sysop, OS/2 Support, providing support to OS/2 and LoraBBS in Asia.