

MarshallSoft Client Mailer Library for Visual dBASE

Programmer's Manual

(MCM4DB)

Version 5.1

October 4, 2016

*This software is provided as-is.
There are no warranties, expressed or implied.*

Copyright (C) 2016
All rights reserved

MarshallSoft Computing, Inc.
Post Office Box 4543
Huntsville AL 35815

Email: info@marshallsoft.com
Web: www.marshallsoft.com

MARSHALLSOFT is a registered trademark of MarshallSoft Computing.

TABLE OF CONTENTS

1	Introduction	Page 3
1.1	MCM Features	Page 4
1.2	Documentation Set	Page 5
1.3	Installation	Page 5
1.4	Uninstalling	Page 6
1.5	Purchase	Page 6
1.6	KeyCode and Edition Key	Page 6
2	Application Notes	Page 7
2.1	Filenames	Page 7
2.2	Tables	Page 7
2.3	Forms	Page 7
2.4	MCM Files	Page 7
3	TestMCM Example Program	Page 8
4	SendMail Example Program	Page 8
5	GetReply Example Program	Page 9
6	Revision History	Page 10

1 Introduction

The **MarshallSoft Client Mailer for Visual dBASE** provides the capability to send **personalized** email to your clients or customers **directly** from your dBASE or dBASE Plus application program. The most current version of the **MarshallSoft Client Mailer for Visual dBASE** can be found at <http://www.marshallsoft.com/mcm4db.htm>

The “MarshallSoft Client Mailer for Visual dBASE Programmer Manual” contains dBASE programming specific details such as compilers, compiling and running example programs.

The **MarshallSoft Client Mailer** (MCM) functions can be called from any 32-bit dBASE or dBASE Plus program running on 32-bit & 64-bit Windows through Windows 10

Three example programs are provided. **TestMCM** displays the MCM version and related information. **SendMail** sends personalized email to a list of recipients. **GetReply** reads replies from previous sent email, updating the list of undeliverable email and updating the list of those who wish to be removed from future mailings.

Since all programming language versions (C/C++, Visual Basic, Delphi, FoxPro, dBASE and Xbase++) of MCM use the identical DLLs (MCM32.DLL/MCM64.DLL), once one programming language version is purchased, the **MarshallSoft Client Mailer** can be used with all supported languages.

Regardless of the programming language used, both the email letter to be sent (text or HTML) and the list of recipients are standard ASCII text files. These letter files can be created with any text editor (or HTML editor for HTML files) such as Notepad. The recipient list file can be created with either a text editor, exported from a database (such as Access, FoxPro, dBASE, Xbase++), email client (such as Outlook), spreadsheet (such as Excel), or created by a program such as VBA code in Access.

See Section 4 for details on the **SendMail** example program and Section 5 for details on the **GetReply** example program.

1.1 MCM Features

The features of the **MarshallSoft Client Mailer (MCM)** include:

- Send personalized email **directly** from an application, programmable database or spreadsheet.
- Uses macro substitution strings to personalize outgoing letters (Also called email merge).
- Can send plain text, rich text, or HTML formatted letters.
- Supports multiple attachments.
- Can handle arbitrarily large lists of recipients.
- Detects duplicate email addresses.
- Supports multiple lists of recipients that should always be skipped.
- Supports ASCII, UTF8, and ISO_8859 character sets.
- Supports WIN_1250, WIN_1252, and WIN_1255 character sets.
- Can use up to 32 connections simultaneously for fast email delivery.
- Can process "undeliverable mail" replies.
- Can process multiple user replies ("REMOVE", "CONFIRM", etc)
- Has extensive error detection and logging capability.
- Includes **SendMail** example program (with source) to send email.
- Includes **GetReply** example program (with source) to read replies.
- Includes **TestMCM** example program (with source) to verify installation and provide version information.
- Implemented as a standard Windows DLL, which will work with all versions of Windows.
- Supports both 32-bit and 64-bit Windows and includes Win32 and Win64 DLLs.
- Works with 32-bit and 64-bit Windows through Windows 10.
- License includes one year of technical support and downloadable updates for the MCM DLL.
- Royalty free distribution (no run-time fees) with your compiled application
License covers all programming languages (MCM4C, MCM4D, MCM4VB, MCM4FP, MCM4DB, MCM4XB)..
- Supports all versions of 32-bit dBASE (V7.0 through V7.5) and dBASE Plus .

1.2 Documentation Set

There are five manuals in Adobe PDF format for the **MarshallSoft Client Mailer**.

- **Tutorial Manual:** Introduces the basic functionality and overview of the **MarshallSoft Client Mailer**.
- **Servers Manual:** Covers background information on SMTP & POP3 servers.
- **User Manual:** Covers information that is not programming language specific (letter & list preparation, program logic, purchasing, performance, SSL, etc.).
- **Reference Manual:** Contains details for each individual MCM function specific for each programming language (dBASE, Visual FoxPro, Delphi, C/C++, VB, etc.).
- **Programmer Manual:** Contains programming language (dBASE, Visual FoxPro, Delphi, C/C++, etc.) specific information such as compiling and running example programs.

The manuals can be found in the DOCS subdirectory/folder in the **MarshallSoft Client Mailer** file structure when it is installed. Note that for clarity purposes some information may have been provided in more than one manual.

- **Tutorial Manual:** mcm_tutorial.pdf or online at http://www.marshallsoft.com/mcm_tutorial.pdf.
- **Servers Manual:** mcm_servers.pdf or online at http://www.marshallsoft.com/mcm_servers.pdf.
- **User Manual:** mcm_users.pdf or online at http://www.marshallsoft.com/mcm_users.pdf.
- **Reference Manuals** mcm4db_reference.pdf or online at http://www.marshallsoft.com/mcm4db_reference.pdf.
- **Programmer Manuals** mcm4db_programmer.pdf or online at http://www.marshallsoft.com/mcm4db_programmer.pdf

Links to the above manuals can also be found online on the **MarshallSoft Client Mailer for dBase** product page <http://www.marshallsoft.com/mcm4db.htm>

1.3 Installation

- (1) Before installation of **MCM4DB**, Visual dBASE should already be installed on your system and tested.
- (2) Unzip MCM4DB50.ZIP using any Windows unzip program.
- (3) Run the installation program SETUP.EXE which will install all MCM 4DB files, including copying MCM32.DLL to the Windows directory. Note that no DLL registration is required.

After SETUP is run, the MCM4DB files are copied to the directory specified (default \MCM4DB). Three sub-directories are created, as follows:

```
DOCS - Documentation files
APPS - Examples program and files
DLLS - MCM32.DLL
```

1.4 Uninstalling

Uninstalling MCM4DB is very easy.

First, run UNINSTALL.BAT (or UINSTALL.BAT), which will delete MCM32.DLL from the Windows directory, typically C:\WINDOWS for Windows 95/98/ME/2003/XP/Vista/Windows 7/Windows 8 or C:\WINNT for Windows NT/2000. Next delete the MCM4DB project directory created when MCM4DB was installed.

1.5 Purchase

Refer to the [MCM Users Manual](#), Section 1.2, for details on the four versions of MCM (personal, professional, professional-plus, and unlimited) and pricing at <http://www.marshallsoft.com/mcm.htm>

MCM4DB can be ordered at <http://www.marshallsoft.com/order.htm>

1.6 KeyCode and Edition Key

When a developer license is purchased, the developer will receive a new MCM32.DLL as well as a unique KeyCode for the MCM DLLs. Pass the KeyCode as the first argument to **mcmAttach**. The KeyCode will be found in the file named "keycode.cc". The KeyCode is 0 for the evaluation version. The KeyCode for the registered version will be unique 9 or 10 digit numbers. Note: Your KeyCode is NOT your Customer ID/Registration number.

Note that starting with Version 5.0 the Edition Code is no longer used.

2 Application Notes

2.1 Filenames

The filenames in the example programs use the following naming conventions:

- Recipient list filenames begin with "List" and end with ".txt" [e.g.: List.txt, List(Holliday).txt]
- Text letter filenames begin with "Letter" and end with ".txt" [e.g.: Letter(French).txt]
- HTML letter filenames begin with "Letter" and end with ".htm" [e.g.: Letter(Holliday).htm]
- HTML template filenames begin with "Template" and with ".htm" [e.g.: Template(Style1Blue).htm]
- Background tile filenames begin with "Tile" and end with ".jpg" [e.g.: Tile(BrownPaper).jpg]
- Image filenames begin with "Image" and end with ".jpg" [e.g.: Image(Holliday).jpg]

2.2 Tables

Suppose that you have designed a table named "MyTable" with table fields "FirstName" and "LastName", and you want to copy the first and last names from the table to string variables in your dBASE program. This is done easily by:

```
USE MyTable
* copy table fields to string variables
FirstNameString = FirstName
LastNameString = LastName
CLOSE DATABASES
```

To copy a string variable from your dBASE program to a dBASE table, use the REPLACE command. For example:

```
USE MyTable
* copy string variables to table fields
REPLACE FirstName WITH FirstNameString
REPLACE LastName WITH LastNameString
CLOSE DATABASES
```

2.3 Forms

MCM functions can be called from dBASE forms in exactly the same way as from dBASE programs. The only difference is the dBASE code associated with the form itself.

2.4 MCM Files

mcm32.dll MCL Dynamic Link Library (DLL) file
mcm32.lib MCM Library (LIB) file
mcm32.cc dBASE function declaration & constants file

3 TestMCM Example Program

The **TestMCM** example program verifies that Windows can find MCM32.DLL at runtime and displays the MCM version and related information.

4 SendMail. Example Program

The **SendMail** example program sends a personalized letter to each recipient. The logic is as follows:

```
Step 1: Set configuration parameters
Step 2: Attach MarshallSoft Client Mailer
Step 3: Open the letter to be sent
Step 4: Open the list of recipients
Step 5: Open skip lists
Step 6: Connect to SMTP server
        LOOP: Step 7: Merge letter with next recipient
                Step 8: Send the mail
Step 9: Wait for all channels to complete
Step 10: Close connection on all channels
```

If you are not familiar with the above logic, read the MCM Tutorial, [mcm tutorial.pdf](#), and the MCM User's Manual, [mcm users.pdf](#).

The **SendMail** example program is very straight-forward and extensively documented. Open SendMail.prg and look through the code.

If your security software scans outgoing email, you may need to disable this feature since some security software does not handle multiple connections correctly.

5 GetReply. Example Program

The **GetReply** example program reads server and recipient replies. The logic is as follows:

```
Step 1: Set configuration parameters
Step 2: Attach MarshallSoft Client Mailer
Step 3: Open bounced email file
Step 4: Open reply files
Step 5: Connect to the POP3 server
      LOOP: Step 6: Read next reply
Step 7: Close connection to server
```

If you are not familiar with the above logic, read the MCM Tutorial, [mcm_tutorial.pdf](#), and the MCM User's Manual, [mcm_users.pdf](#).

The **GetReply** example program is very straight-forward and extensively documented. Open `GetReply.prg` and look through the code.

Delete Codes

GetReply divides incoming email into three mutually exclusive classes:

1. Failure messages ("bounced email") from the server.
2. User reply message (e.g., "REMOVE email-address").
3. Everything else.

As each email is read when **mcmReadReply** is called

```
function mcmReadReply(SubjectBuffer, BufferSize, DeleteCode)
```

the 'DeleteCode' argument specifies if an email is to be deleted after it is read.

<u>DeleteCode</u>	<u>Action</u>
1	Delete if message is a failure message
2	Delete if message is a recipient reply message
4	Delete if message is not one of the above.

The above DeleteCodes can be added. For example, pass 3 to specify that failure messages (DeleteCode = 1) and reply messages (DeleteCode = 2) are to be deleted, but nothing else. If no messages are to be deleted, use 'DeleteCode = 0'.

6 Revision History

Version 1.0: November 8, 2010.

- The official release of MCM for Visual dBASE

Version 2.0: January 14, 2011

- Added MCM_GET_TIME_STAMP to mcmGetString()
- Call mcmOpenList(NULL) or mcmOpenList("") to rewind recipient list.
- mcmOpenLetter, mcmOpenList, mcmOpenBounce, mcmOpenReply, mcmOpenSkip allow both filenames and pathnames to be passed.
- Added mcmSetString(MCM_SET_CC_ADDRESS) & mcmSetString(MCM_SET_BCC_ADDRESS)
- Added MCM_GET_AUTH_VERS_MAJOR, MCM_GET_AUTH_VERS_MINOR, & MCM_GET_CID
- Added MCM_SET_DUPLICATE_DETECT and MCM_SET_SERVER_TIMEOUT.
- The DLL runs indefinitely (does not stop working after one year).
- Maintenance updates are free.
- Activation Code Server allows up to 3 concurrent users with one activation file.

Version 3.0: May 19, 2011

- Removed requirement for activation code !
- Added mcmUtility function.
- Maximum channels increased to 32
- Fixed problem: GetReply handles email addresses with trailing whitespace
- Added MCM_GET_CUSTOMER_ID
- Added MCM_GET_ALLOWED_CHANNELS
- Added MCM_GET_ALLOWED_LIST_SIZE
- Added MCM_GET_ALLOWED_SKIP_FILES
- Added MCM_GET_ALLOWED_REPLY_FILES
- Added MCM_GET_EDITION
- Added MCM_GET_REGISTRATION
- Allow tilde ~ and caret ^ as delimiters in recipient list file.

Version 3.1: January 24, 2012

- Added "UNSOLICITED BULK EMAIL" as bounce subject when receiving mail.
- Increased (macro delimiter) field size from 64 to 256 characters.
- Added MCM_ALLOW_EMPTY_FIELDS. Allows recipient list fields to be empty.
- Allow insertion of files by use of @@filename in recipient list file.
- Set letter substitution delimiter to backquote or backslash with mcmSetInteger(MCM_SET_MACRO_DELIMITER, delimiter).
- Example: mcmSetInteger(MCM_SET_MACRO_DELIMITER, '`').
- Added mcmSetProxySSL(), which allows MCM to connect to servers requiring SSL.
- Added new merge code MCM_STAT_WITH_EMPTY_MACRO_STRING macro (1st list line) is empty.
- Added new merge code MCM_STAT_WITH_EMPTY_LIST_STRING entry in recipient list is empty.
- Added new stat code MCM_STAT_WITH_EMPTY_LIST_STRING counts "MCM_STAT_WITH_EMPTY_LIST_STRING" errors.

Version 4.0: October 19, 2012

- Added macro delimiters tilde ~, caret ^, and backquote `.
- Ignore Tab chars on list macro line unless tab is the delimiter character.
- Added MCM_GET_LAST_EMAIL_SENT to mcmGetString().
- Moved letter headers to separate header file (e.g.: letter.hdr).
- Added mcmOpenHeader() function to open header file.
- Allow comments (line starting with #) in header section of letter header files.
- Changed default macro delimiter from % (percent) to ` (backquote)
- Allow recipient list to have a single entry (no delimiters)
- Added "Header: string" to headers. Used to specify a user header.
- Fixed problem in mcmRelease - was sometimes releasing SEE prematurely.
- Option to automatically load (letter) header file:
mcmSetInteger(MCM_AUTO_LOAD_HEADER_FILE, 1)

Version 5.0: October 29, 2014

- Fixed problem in which not all reply strings (i.e., "REMOVE") were being detected.
- Fixed problem in which comments were counted as recipients in recipient list.
- Added MCM_SMTP_ONLY and MCM_POP3_ONLY error messages
- Increased MRG_STRING_SIZE from 5000 to 65536 (64K) characters.
- Removed edition codes (no limit on list size).
- Added MCM_GET_NBR_EMAILS_DELETED to mcmGetInteger().
- Fixed problem in which incoming emails were not deleted as requested.
- Added MCM_ADD_BOUNCE_STRING to mcmSetString (adds 'bounce' subject)
- Added mcmGetString2()
- Added MCM_GET_BOUNCE_STRING to mcmGetString2()
- Fixed attachment problem when using two lists (1st w/attachment, 2nd w/o)
- Updated to SEE version 7.2.6

Version 5.1: October 4, 2016

- Fixed buffer overflow problem.
- Strings exceeding limits in recipient list are detected.
- Fixed problem with accumulating CC addresses.
- Updated to SEE version 7.4.1
- Additional details written to log file
- Added MCM_SET_RCPT_TRACE_FILE to mcmSetString() to generate file of server commands & responses.
- Added MCM_GET_LAST_RESPONSE to mcmGetString() to get last email server response.
- mcmRelease forces all files closed.
- Allow vertical bar '|' to specify multiple addresses in recipients file, as for example
mailAddress, CCAddress, Attachments
mike@mike4.com, pam@mike4.com|lauren@mike4.com, widget_red.txt
- Time of day added to "Today is" string written to log file
- Added new HTML templates.
- Added function mcmSearch() that searches skip files for a specified string.