F-REPEAT Program Group

Version 3.1x

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DATACHIP

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Hammond, Indiana 46323

Compuserve [74720,224]

F-REPEAT version 3.1x PROGRAM GROUP MANUAL

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I. OVERALL DESCRIPTION

<u>BACKGROUND</u>
The F-REPEAT program group is a group of programs to automate and manage virus scanning using *Frisk Software International's* F-PROT.EXE program. F-REPEAT can be used on both stand-alone as well as networked personal computers.
The F-REPEAT program will run the F-PROT program to scan for viruses if a specified time/date interval has been exceeded. F-REPEAT is NOT a TSR. It is a shell for the F-PROT program.

FxREPEAT.EXE is the shareware version of the main program. F-REPEAT.EXE is the registered version of the main program. They are identical EXCEPT the error screens and keyboard actions can only be customized in the F-REPEAT version. In this manual, FxREPEAT and F-REPEAT are used interchangeably except when discussing custom error screens and keyboard actions.

Additional programs provided include:
> FERROR.EXE (F-REPEAT only) used to generate custom error screens.
> F-CHKOUT.EXE used to checkout the operation of F-REPEAT.
> F-CHK.EXE used to quickly check if a virus scan is needed.

II. Licensing and Registration

The FxREPEAT and support programs consisting of F-CHKOUT.EXE, F-CHK.EXE and the documentation files may be used free of charge by anyone on their own personally owned computer. The computer must not be used for any commercial and/or business purpose. These programs may be used for evaluation during a single 30 day evaluation period on any computer and/or computer system used for commercial and/or business purposes.

For use continued use in a government, commercial and/or business system, this software must be registered. Registration provides additional features for customizing displays and keyboard actions. These features are not available with the unregistered version.

See Section **IX. ORDERING INFORMATION** for more details on registering this software.

III. The F-REPEAT and FxREPEAT Programs

F-REPEAT is a program that executes the virus scanning program F-PROT.EXE
based on a time or date interval passed as a command line parameter. The date and time of

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the last successful scan is encrypted and stored in a Log File.

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When F-REPEAT is run, a command line interval parameter determines how often F-REPEAT calls the F-PROT program to check for viruses. If the command line interval is greater than the difference between the present time/date and the last time/date the personal computer was successfully scanned, the F-REPEAT program will exit without running F-PROT. A zero errorlevel will be returned by F-REPEAT.

If the time/date difference is greater than the command line parameter, F-REPEAT runs the F-PROT program. When the F-PROT program completes scanning, it returns an errorlevel to the F-REPEAT program. If the errorlevel returned is zero (successful completion of F-PROT with no viruses detected), the F-REPEAT program updates the time/date in the Log File then exits with an errorlevel of zero. If the errorlevel returned by F-PROT is not zero, F-REPEAT displays an appropriate error screen and sets a predetermined keyboard condition. When F-REPEAT exits, it returns the same errorlevel as returned by F-PROT.

Only the error screens and keyboard actions for F-REPEAT can be customized. This customized information is contained in the F-REPEAT.SCR file. This file must be in the same directory as F-REPEAT.

The FxREPEAT program does not have an option for custom error screens.

Some default error screens and keyboard actions for both F-REPEAT and FxREPEAT are listed in APPENDIX I.

IV. F-REPEAT Command Line Parameters

The command line for F-REPEAT is:

 F-REPEAT AAA BBB /C-DDDD EEE EEE EEE

 where:
   AAA is the full path to the F-PROT program. The path does not have
       to specify the F-PROT program itself.

       EXAMPLE: **F-REPEAT C:\F-PROT**   where F-PROT.EXE is in the
             C:\F-PROT\ directory.

       NOTE: If the F-PROT.EXE program and related files are located in the
             same directory as F-REPEAT, only **F-PROT** has to be specified
             for AAA.

       EXAMPLE: **F-REPEAT F-PROT** where F-PROT.EXE is in the same directory

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as F-REPEAT.

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BBB is optional. If included, it is the path or path and file name
of the Log File. If the path but not the Log File name is given,
a Log File named F-PROT.!LG will be used in the path specified.
If the path and Log File are both not included in the command line,
F-REPEAT will access or create a new Log File in the current
directory named F-PROT.!LG.

    EXAMPLE: **F-REPEAT C:\F-PROT C:\F-PROT.!LG** where C:\F-PROT.!LG
        is the log file.

    EXAMPLE: **F-REPEAT C:\F-PROT C:\NEW** where C:\NEW\F-PROT.!LG is
        the log file IF directory C:\NEW exists. If directory
        C:\NEW does not exist, C:\NEW is the log file.

C   is the time/date parameter **T** or **D**. T is used to specify a time
interval and D is used to specify a date interval.

DDD is the time or date interval parameter. F-PROT will be called
only if the time or date interval parameter has been exceeded.

If the **T** time/date parameter is specified, the minimum time
between the F-PROT scans is given in hours and minutes (minutes
are optional).

EXAMPLE: **/T-12:32**   means that at least 12 hours and 32 minutes
must pass before F-PROT is called again.

If the D time/date parameter is used, the interval is specified in
days:

EXAMPLE: **/D-2**   means at least 2 calendar days must pass before
F-PROT is called again.

    NOTE: **/D-1** and **/T-24** are not the same. /D-1 will execute F-PROT
        the first time F-REPEAT is executed on a new calendar day.
        However, /T-24 will execute F-PROT only after a minimum
        24 hour interval has elapsed.

        Specifying a time or date interval of 0 will result in
        F-PROT being called each and every time F-REPEAT is run.

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When using the /T parameter, the F-PROT program will be called automatically if the workstation's time/date is earlier than the time/date in the log file. When using the /D parameter, only the workstation date is compared to the log file date.

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EEE represents the command line parameters to be passed to the F-PROT virus scanning program. The /COMMAND parameter is automatically passed to F-PROT by F-REPEAT. It does not have to be specified.

Each parameter passed to the F-PROT program must be separated by a space on the command line. See the F-PROT program documentation for aid in choosing the desired F-PROT parameters.

NOTE: DOS limits the maximum command line length that can be parsed. Use of environmental variables on the command line can increase the maximum effective command line length.

EXAMPLES:

F-REPEAT C:\F-PROT /D-0 /HARD

F-PROT.EXE is in the C:\F-PROT directory. The log file is F-PROT.!LG in the current directory. The F-PROT.EXE program will be executed each time the F-REPEAT program is run. All hard disks will be scanned.

F-REPEAT C:\SCANNER C:\ /D-2 E: /REPORT=C:\F-PROT.RPT

F-PROT.EXE is in the C:\SCANNER directory.
The log file name is C:\F-PROT.!LG. F-PROT will scan the first time F-REPEAT is run 2 calendar days have elapsed since the last successful scan. E: drive will be scanned and a report written to the file C:\F-PROT.RPT.

F-REPEAT F-PROT F:\F-PROT.LOG /T-5:2 D:

F-PROT will be executed from the current directory.
The Log File name is F:\F-PROT.LOG.
F-PROT will scan D: drive the first time F-REPEAT is run after 5 hours and 2 minutes have elapsed since the last successful scan.

F-REPEAT F-PROT F:\F-PROT.LOG /T-5:2 %ABC%

Same as above except the environmental variable ABC contains the parameters to be passed to F-PROT.

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F-REPEAT   or   **F-REPEAT ?**

Either of these commands or a command line error will display
the F-REPEAT help screens.

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V. Generating Custom Error Screens with FERROR.EXE
(F-REPEAT ONLY OPTION)

Custom error screens and keyboard actions are contained in the F-REPEAT.SCR file. This file must be in the same directory as the F-REPEAT.EXE program.

The FERROR.EXE program is used to create, modify and delete custom error screens and keyboard actions in the F-REPEAT.SCR file.

Using FERROR, an error screen can be created for each errorlevel returned by the F-PROT program. An additional error screen can be created for all other non-zero errorlevels.

In addition to displaying error screens, the following keyboard conditions can be programmed for any errorlevel:
    1. Pause until a key is pressed,
    2. Lock the keyboard (requires a reboot to unlock) or
    3. Normal keyboard condition (no pauses or lock-ups).

An audible alarm can also be programmed for any non-zero errorlevel.

Use of FERROR is straight forward. Context sensitive help is available by pressing the <F1> key.

VI. SYSTEM CHECKOUT USING THE F-CHKOUT PROGRAM

A special program, F-CHKOUT.EXE, is supplied to checkout the operation of F-REPEAT. During checkout, F-CHKOUT.EXE is automatically executed instead of F-PROT.EXE. When this occurs, a special screen is displayed requesting the user to input an errorlevel (0 to 255) which will be returned to F-REPEAT. By inputting all possible values for errorlevels returned by F-PROT, the actions of F-REPEAT can be verified.

To use F-CHKOUT.EXE, first copy it to the same directory as the F-REPEAT program. Next, run F-REPEAT with the command line desired. If a Log File name is not specified on the F-REPEAT command line, the log file name will be F-CHKOUT.!LG.

After checkout has been completed, remove F-CHKOUT.EXE from the directory containing F-REPEAT. Also, if no Log File was specified, delete the F-CHKOUT.!LG file.

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VII. Quick TIME/DATE Interval Checking using F-CHK

The F-CHK.EXE program can be used in Menu scripts to "quickly" check if a virus scan is needed. The F-CHK program contains only minimal error checking.
The command line form for F-CHK is:

 F-CHK AAA /B-CCC
 where:

  AAA is the path and filename of the Log File.

     EXAMPLE: **F-CHK C:\F-PROT\F-PROT.!LG**
          The log file name is C:\F-PROT\F-PROT.!LG

  B   is the date/time parameter **T** or **D**. **T** designates a time interval and
     D designates a date interval.

  CCC is the time or date interval.

     EXAMPLE: **F-CHK C:\FPROT\F-PROT.!LG /T-02:03**
          The log file name is C:\F-PROT\F-PROT.!LG.
          The time interval is 2 hours and 3 minutes.

     EXAMPLE: **F-CHK C:\FPROT\F-PROT.!LG /D-3**
          The log file name is C:\F-PROT\F-PROT.!LG.
          The date interval is 3 days.

If the date\time interval since the last successful scan has not been exceeded, F-CHK will return an errorlevel of zero. If the interval has been exceeded, an errorlevel of one will be returned. If the Log File does not exist or there is an error level in the command line, an errorlevel of one will be returned.

When F-CHK exits, short status messages are displayed. To prevent these messages from being displayed the output can be redirected to the DOS NUL file.

     EXAMPLE: **F-CHK C:\F-PROT.!LG /D-1 >NUL**

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VIII. Networking Suggestions

Suggestion 1: Require each workstation to be scanned for viruses every 4 days before normal network activities are permitted.

Solution: Place F-PROT and the F-REPEAT programs in a network directory. Give normal users only Read and Find rights in the directory. When logging into the network, have the workstation execute F-REPEAT using a command line like:

 F:\VRS\F-REPEAT F:\VRS\F-PROT C:\F-PROT.!LG /D-4 /HARD /REPORT=C:\F.RPT

This command line will use the C:\F-PROT.!LG Log File and cause F-PROT to scan all the workstation hard disks every 4 days. In this example, the F-PROT programs and the F-REPEAT.EXE and F-REPEAT.SCR files are in the F:\VRS directory. A F-PROT scan report will be written to the C:\F.RPT file. The keyboard options can be programmed using FERROR to lock the keyboard for any non-zero errorlevel. This will effectively keep any non-scanned workstation from logging into the network and not scanning for viruses.

On a Novell network, the F-REPEAT.EXE file can also be given the <Execute Only> attribute. This helps prevent any changes to the program by a user with supervisor rights.

If this F-REPEAT command line is executed on all file servers, logging into a new file server will not require re-scanning. The same Log File on the workstation hard disk is used when logging into any of the file servers.

Suggestion 2: Incorporate the F-CHK.EXE program into the network menuing scripts. Example:

```
    F-CHK C:\F-PROT.!LG /d-4 >NUL
IF ERRORLEVEL 1 GOTO SCAN
GOTO CONTINUE
:SCAN
F:\VRS\F-REPEAT F:\VRS\F-PROT C:\F-PROT.!LG /D-4 /HARD /REPORT=C:\F.RPT
:CONTINUE
```

A non-zero errorlevel will be returned if more than 4 days have elapsed since the last successful virus scan. This will cause F-REPEAT to call F-PROT as explained in Suggestion 1.

Suggestion 3: If the command line becomes too long for DOS to parse, use environmental variables to increase the effective line length that can be parsed.

Suggestion 4: Use the /NOBREAK command line parameter for F-PROT. This will

prevent a user from aborting virus scanning by pressing the <Esc> key.

IX. Ordering Information

No registration of FxREPEAT is required for personal use. After a 30 day
evaluation period, registration is required for all commercial, government,
or business use.

  Upon registration of FxREPEAT, the USER will receive:

  (1) F-REPEAT - A customized version of FxREPEAT which permits user
          customized error code screens and keyboard conditions to
          be programmed for different F-PROT conditions.

  (2) FPERROR - A program to customize the error code screens and keyboard
          conditions.

  (3) F-CHKOUT - A program that can be used to temporarily checkout and test
          the actions of F-REPEAT as configured by the user.

  (4) F-CHK   - A program that can be used in LAN Menus to "quickly" check
          if the Log File encrypted Time/Date has expired.

  (5) F-REPEAT.SCR - A collection of suggested error code screens for the
          the user's reference.

  (6) Documentation in both WordPerfect 5.1 for DOS and an ASCII text file
        format as well as a printout of the WordPerfect file.

  IN ADDITION, the next major program upgrade will be provided free.
  Details on additional upgrades will be provided to registered users.

                  PRICING INFORMATION
    (Prices valid through 1993. Write or eMail for pricing after 1993.)

    $50 per each 250 user or less LAN File Server with no restrictions on
       the number of concurrent program users on the LAN.

    $90 for each LAN file servers with more than 250 concurrent users.

    $1 per Personal Computer in other installations with a minimum of $50.

    $225 for an unlimited site-license of the F-REPEAT program group.

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$350 for an unlimited site-license of the F-REPEAT, M-REPEAT, L-REPEAT and REPEATIT program groups. These programs are for use with the copyrighted programs F-PROT by Frisk International, VIRUSCAN by McAfee Associates, LPScan by INTEL Corporation and for generic programs, respectively. This includes use on both LANs and stand-alone computers at a single physical site.

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To register, please fill out the information requested below:

From: Name:_____

 (Title):_____

 Company:_____

 Address:_____

 City, State, Zip Code:_____

 Country:_____

 Phone Number:__(____)_____

 Licensed to:_____
 (suggested license display when running program.)

 Today's Date:_____

 (Prices valid through 1993. Write or eMail for pricing after 1993.)

 F-REPEAT for use on a 250 user or less File Server $50._____

 F-REPEAT for use on a greater than 250 user File Server $90._____

 F-REPEAT for use on a personal computer ($1 per Personal
         Computer with a minimum of $50.)   _____

 F-REPEAT unlimited site-license $225 _____

 Unlimited site-license package of the F-REPEAT,
 M-REPEAT, L-REPEAT and REPEATIT program groups $350 _____

 Indiana residents add 5% sales tax   _____

                    TOTAL ENCLOSED: _____

 Diskette format (choose one):

             5.25" 1.2 meg disk ____

             3.5" 720K disk   ____

             3.5" 1.44 meg disk ____

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Payment Terms: Check or Money Order.

Mail to: DATACHIP

6618 Maryland Avenue

Hammond, IN 46323

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X. Warranty

Datachip warrants that the physical diskettes and documentation enclosed
to be free of defects in materials and workmanship for a period of sixty days
from date of purchase. In event of a defect in material or workmanship during the warranty
period, Datachip will replace the defective diskette(s) or documentation.

Datachip will not be liable for any special, incidental, consequential, indirect or similar
damages, even if Datachip has been advised of the possibly of such damages. In no event
will Datachip's liability for any damages ever exceed the price paid for the license to use
software, regardless of the form of the claim.

For customer support, contact DATACHIP on Compuserve (address [74720,224]) or write to:

> DATACHIP
> 6618 Maryland Avenue
> Hammond, Indiana 46323

NOTE: F-PROT and F-PROT.EXE are copyrighted programs by Frisk Software International.

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<u>APPENDIX I. F-REPEAT DEFAULT SCREENS</u>

The following are the default screens for common F-REPEAT errors and conditions (the FxREPEAT screens are same except replace all occurrences of F-REPEAT with FxREPEAT).

A. ERROR: Incorrect directory for F-PROT.EXE program.

DISPLAY MESSAGE

■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■
The directory \DIR could not be found.
Please check the command line parameters.
Please contact your PC or LAN Manager.

Press any key to continue.

B. ERROR: Incorrect drive letter for F-PROT.EXE or Log File location.

DISPLAY MESSAGE

■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■
There is no Q: drive. Please check the command line parameters.
Please contact your PC or LAN Manager.

Press any key to continue.

C. ERROR: Date or Time interval too large (overflow).

DISPLAY MESSAGE

■■
■■■■■■■■■■■■■■■■■

The F-REPEAT program has aborted!

The F-REPEAT program was incorrectly called with the following command line:

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F-REPEAT C:\FPROT C:\ /D-9999999999 C:\DOS /NOMEM /COMMAND
 The Date\Time Integer is too large a number...........

                    To clear this display, press <Esc>.
            Press any other key to display the F-REPEAT Help Screens.

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D. ERROR: The F-REPEAT.SCR file is not in the same directory as F-REPEAT (This message is for F-REPEAT only).

DISPLAY MESSAGE

■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■■ ERROR ■■■■■
   File F-REPEAT.SCR is missing. Check the F-REPEAT program instructions.
            Notify your PC or Network Manager

      Press any key to continue with DEFAULT error screens.

E. Date interval not exceeded.

DISPLAY MESSAGE

Date parameter not exceeded. F-PROT virus scanning program was not run.

F. Time interval not exceeded.

DISPLAY MESSAGE

Time parameter not exceeded. F-PROT virus scanning program was not run.

G. If a virus is found when using the FxREPEAT program, a message is displayed and the keyboard locked. When using the F-REPEAT program, the keyboard condition and display message can be customized using the FERROR program.

H. Help and error screens are displayed if there are no F-REPEAT or FxREPEAT command line arguments or the command line arguments are incorrect.

I. Due to changes and enhancements in the future, it is possible that additional error levels not now programmed will be added to the F-PROT program. If F-REPEAT detects a new errorlevel, the numeric value will be displayed along with a special warning message.

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With F-REPEAT, the FERROR program can be used to program an error display for the new errorlevel. Since FxREPEAT is not user programmable, a new copy of the program must be obtained. Check Compuserve and your favorite Bulletin Boards for the latest version.

APPENDIX II. F-REPEAT ERRORLEVELS

The following errorlevels are returned by F-REPEAT.EXE:

0   Successful completion of F-REPEAT and F-PROT (if run).

1   Abnormal termination - an unrecoverable error occurred.
     (same as returned by the F-PROT program)

2   Selftest failed - the F-PROT program has been modified.
     (same as F-PROT)

3   A Boot/File virus infection was found. (same as F-PROT)

4   Virus Signature(s) were found in memory. (same as F-PROT)

5   Program was terminated with <Ctrl>-C or <Esc>. (same as F-PROT)

6   At least one virus was removed. (same as F-PROT)

7   Insufficient memory to run F-PROT. (same as F-PROT)

200   All other errors causing termination of F-REPEAT.

201   The Log File could not be opened after running the F-PROT program.

202   The path to the F-PROT program is not valid.

203   The Date or Time parameter is not valid.

204   The branch to the F-PROT program was not successful.

The F-REPEAT program normally returns the same errorlevel as it receives from
the F-PROT program. Exceptions are errorlevels 200 through 204 listed above.
These are used to signify problems experienced by the F-REPEAT program.

Note: The <Ctrl><Break> and <Ctrl><C> key combinations are inhibited while the F-REPEAT program is running. By using the /NOBREAK command line parameter for F-PROT, the user will not be able to abort virus scanning by pressing <Esc>.

APPENDIX III. F-CHK DISPLAY SCREENS

The following are the display screens for F-CHK conditions.

A. Time or Date interval exceeded.

DISPLAY MESSAGE

■■■■ MESSAGE ■■■■ MESSAGE ■■■■ MESSAGE ■■■■ MESSAGE ■■■■
MESSAGE ■■■■
        F-CHK Date\Time Parameter Exceeded.
          Scanning needed.

B. Log File does not exist or could not be found.

DISPLAY MESSAGE

■■■■ MESSAGE ■■■■ MESSAGE ■■■■ MESSAGE ■■■■ MESSAGE ■■■■
MESSAGE ■■■■
        F-CHK Log File not found.
         Scanning needed.

C. Date or Time interval not exceeded.

DISPLAY MESSAGE

■■■■ MESSAGE ■■■■ MESSAGE ■■■■ MESSAGE ■■■■ MESSAGE ■■■■
MESSAGE ■■■■
        F-REPEAT program Date\Parameter not exceeded.
          No Scanning Needed.