FTM Read Me First

Contents

System Requirements

FTM/Win requires either TransEra's HT BASIC for Windows (HT BFW), revision 5.1 or greater, or Hewlett-Packard's HP BASIC for Windows (HP BFW), revision 6.2 or greater. These products are nearly identical, even though the revision numbers are not.

FTM/Win requires a PC capable of running HT or HP BASIC for Windows and a GP-IB card that is supported by those products. In general, this means a 486 or Pentium-based PC, running Windows 3.1 or later, with a GP-IB card purchased from Hewlett-Packard or TransEra, although other systems and GP-IB cards are supported. Memory required is 8 MB. FTM installation requires 10 MB hard disk space; additional hard disk space is required for storing results files.

FTM/Win installation on a PC does not require an HP Measurement Coprocessor board, and it does not require the HFS binary or an HFS file system partition on the PC hard disk. The Installation Guide has not yet been updated to reflect these changes.

FTM Upgrade Installation

If you have an existing version of FTM on the HFS file system, or FTM/DFS, that you are upgrading, please use the document Transfer Existing FTM Installations to FTM/Win, before installing FTM/Win. If you are not upgrading an existing FTM installation, please skip to the next section. Please contact AccuMeasure Software if you do not have this document.

FTM/Win Installation

Follow these instructions if you are installing FTM/Win on a new system or you are upgrading a previous version of FTM/Win or FTM/DFS. For information on the differences between FTM/Win and FTM/HFS, please read the section of this document entitled FTM/Win Details.

To install FTM for Windows:

Install HT (or HP) BASIC for Windows if you do not yet have it installed on your PC. Before starting HT (or HP) BASIC, click on the HT (or HP) BASIC icon, then click on File-Properties in Program Manager. Modify the application command line to have the following options (your path may vary):

```
c:\htbWin\htbWin.exe -w4M  -gr on
```

This command line can be found by first doing a single mouse click on the HT (or HP) BASIC icon in the appropriate Windows group. Select the File menu selection and then Properties. The command line used to start BASIC is listed there.

Start HT (or HP) BASIC. You will now need to load the BFW GP-IB binary to access your GP-IB card, if you have not already done this. An example of the command you will use follows:

```
LOAD BIN "GPIBH;BASE CC000 INTERRUPT 5"
```

Please refer to chapter 6 of the HT (or HP) BASIC installation manual for the options to this command for your specific GP-IB card. It is a good idea to add this line to your AUTOST file, as described in your BFW manual.

With BFW running, insert the FTM install media into the floppy disk drive.

MSI to the disk drive containing the install media. For example, type:

`MSI "A:"` and then press [Return]

Load the install program. For example, type:

```
LOAD "INSTALL"
```

Type:

```
RUN
```

and then press [Return] to run the install program.

Follow the screen prompts and respond as needed.

When prompted, enter the home directory in the format:

`HOME##` (in which ## is the node number for the home

directory, such as `HOME00`).

Continue with the installation process until installation has run to completion.

After you've completed the FTM installation, you may find it useful to run the Ez-demo example program and to do the examples in the Getting Started Guide.

To start FTM for Windows at a later time when it is not started by the INSTALL program or the FTM AUTOST program:

```
MSI "\FTM\HOME00"     (MSI to your HOME directory)

LOAD "\FTM\CODE\MAIN"

RUN
```

Codeword Security

Software codeword security has been added to FTM/Win. This feature enables AccuMeasure to enter new markets with FTM/Win, without concern for non-licensed code duplication. This security is based on the security module provided with BFW.

There are two options for codeword security: for FTM customers who have purchased an FTM License, you will want to use the serial number of the HP or HT BASIC security module; for customers who would like to do a 30-day evaluation of FTM/Win before purchasing an FTM License, you will want to use the evaluation code.

To determine the serial number of the security module or the 30-day evaluation code, LOAD and RUN FTM. Select Shell-commands, then Set-user; enter the user name as "DEVELOPER" and the password as "AM". Then, select Shell-commands/Add-codeword. The security module serial number and the evaluation code will be displayed (note that the security module serial number is mostly numbers, while the evaluation code is mostly letters). For the serial number of the security module, you could also look at the security module itself.

NOTE: Each license-to-use will work with just one security module, since each codeword is created based on the serial number of a particular module. Therefore,

if you decide to move FTM from one PC to another, you will also need to move the BFW security module.

Please contact AccuMeasure Software immediately to get your software security codeword. Please send the serial number from the BFW security module or the evaluation code to AccuMeasure by phone or by Fax. Using this serial number, AccuMeasure will create your codeword and send it to you. The AccuMeasure Software, Inc. phone and Fax numbers are listed at the end of this document.

To enter the codeword: After you have started FTM and signed on as DEVELOPER, select Shell-commands/Add-codeword. Enter the codeword you have received from AccuMeasure Software. Codewords will be 11 - 13 characters and may contain almost any keyboard character including: '!', '>' or '`'. Be careful entering the codeword, as the character " ` " is different from the character " ' ".

Without a security codeword, FTM/Win will run for 58 minutes and then give a 2-minute warning.

FTM/Win Details

Requirements:

Window width must be between 80 and 128 characters. If full screen is not at least 80 characters, either maximize window or change "-fn" font setting for BFW.
Must have an IEEE-488 GP-IB card and driver loaded (LOAD BIN); refer to your BFW documentation.

Configuration form:

Printer address defaults to 10.
For dumps, BFW only allows address 10.
For Sqc, Recall-data, and Set-sqc-limits, new dump device specs: WIN_DUMP_MONO, WIN_DUMP_COLOR (this is set in the Configuration form).

All upload-data to datacom functions have been removed:

Upload-dcom-parms, Man-upload-dcom, Auto-upload-dcom, Control-dcom, Terminal-mode, Control, Status, Timeout.
This upload feature is no longer necessary, as it was designed to upload data to a PC. FTM/Win does provide the upload to file feature.

Shell-commands:

Re-store on BFW version 6.2 can take about a minute to execute. On version 6.3 or greater, the Re-store time will be much less.
New Add-codeword feature: use to add codeword obtained from AccuMeasure for either 30 day evaluation period or right-to-use for specific id module serial number.

New Adjust-layout: use to reformat after interactively changing the size of the BFW window.

Filer:

Initialize-lif and Format-hfs have been replaced with Format-disc.
Convert-floppy has been added to convert from the FTM/DFS format floppy. A new associated error has been added: #(2520) No "TP_" test plan directories to convert.

New Ft_user_common variables:

COM /Ft_ram/ INTEGER Ram_unit_number,Tmp_dir$[80]
Since RAM volumes cannot be initialized in BFW, a temp directory is specified as: Tmp_dir$. Tmp_dir$="C:/FTM/TMP"

!!! WARNING !!! This entire directory (including all subdirectories and files) will be periodically purged.

COM /Ft_hpbw/ INTEGER Enter_key,Blinking_cursor,
Data_file_type$[4],Msi_maps$[26]

Enter_key=13

If Shift-Enter doesn't terminate editor, run KeyNum, press Enter,

and place result here.

Blinking_cursor=1

Use for blinking cursor in menu and editor, set 0 for no blink.

Data_file_type$="HP"

Allowed types: "HP" or "BFW"; all BDAT and ASCII files will be

created with this type.

Msi_maps$="ABCD"

Drives for which to create msi map, e.g. ":DOS,C"; see the

"CONFIGURE MSI ..." statement.

New error messages:

#(2171) Warning: Running in demonstration mode, FTM will lock in 60 minutes.

#(2172) Warning: days remaining in evaluation period.

#(2173) Warning: 2 minutes left in demonstration mode until FTM locks.

#(2174) Too many codewords

#(2520) No "TP_" test plan directories to convert.

New in NLS file:

CODEWORD

Phone AccuMeasure Software to obtain CODEWORD for serial number:

ADD_CODEWORD

Enter CODEWORD for serial: # or evaluation code:

Other Differences:

All previous versions of FTM-specific forms (ENVIRONMENT, TEST PLAN, etc.) and files (LIMITS, HELP, etc.) are compatible. Similarly, all files created by FTM/Win, by default, can be used in previous versions of FTM if the names are changed appropriately.
The main program has been renamed MAIN from FTM_MAIN5 or MAIN5.
When editing or browsing, the up and down arrow keys now move the cursor in the direction indicated by the arrow. This was changed to match BASIC for Windows and most other editors.
After browsing or editing any form (exiting browser/editor), a new menu entry has been added, Printer-fonts, that brings up a Windows dialog that allows you to select a font for the next print operation. However, there is a bug in HP BFW 6.2 and HT BFW 5.1 that only uses the selected font on the first page of output.
INSTALL will either modify the existing AUTOST file in the BFW install directory (typically /HPBASIC or /HTBASIC) to LOAD "/FTM/CODE/AUTOST" or, if /HPBASIC/AUTOST doesn't exist, will place a copy of /FTM/CODE/AUTOST there.
INSTALL will replace the following help files (if they previously existed): SHELLCMD, DEVINEDR, DEVINEDF, DEVINFIL, DEVINBRR, DEVINBRF, DEVINBRL, UPLOAD, FILER
New msus format: BFW expects filenames to have the drive specifier at the front instead of at the end, e.g. C:/FTM/HOME00 instead of /FTM/HOME00:DOS,C. However, FTM will still accept the old format for ":DOS,A", ":DOS,B", ":DOS,C", and ":DOS,D" by setting MSI aliases, see "customizing common" for how to expand to other drives or aliases.
QSTATS functions have been included but were not tested. Unfortunately, we did not have access to QSTATS II software. We will work with customers on this functionality if problems are found.
No replacement available for Button box (removed COM /Ftui_buttonbox_/ from Ft_user_common)
Only barcode readers supported are those that, from the application program's point of view, generate keyboard input.
FNFtui_is_a_pc_ returns 1 for blinking cursor, 2 for non-blinking

FTM/Win Directory Structure and File Names

The directory structure for the original FTM/300 (FTM/HFS) is not compatible with the DOS file system, because it allows directory and file names which exceed the DOS restriction on name length. This restriction limits the file and directory names to eight characters for the base and to three additional characters for the extension (xxxxxxxx.xxx). Because of this limitation, FTM users running on the BASIC language processor have had to partition their DOS disks to allow FTM to reside on an HFS partition.

The changes to the FTM file system can be grouped into three categories. Whenever possible, an attempt was made to minimize the impact of the changes and to retain the directory structure of the existing system. The first type of change included renaming files and directories by simply removing extraneous punctuation and prefixes which did not convey any useful information. For example, the directory "FTM_ALL_NODES" was renamed "ALLNODES". The second type of change involved moving related files or directories into new directories when shortening their names removed some information about their identity. For example, the test plan directories were changed by stripping off the 'TP' and moving them to a 'TP' directory (i.e.: 'TP_GSG_EXAMPL' is changed to 'TP/GSG_EXAM.PL'). The third type of change was the most complex in that it required altering the name encoding of some of the files and directories generated by FTM. For instance, time date codes were changed to base-36 numbers, thus reducing the required number of characters. Similarly, serial numbers encoded in file names were truncated by removing their two most significant characters when necessary. Although we have had to rename most of the files and directories of the FTM file system, we have attempted to insulate the user from those changes by preserving the information presented from the different FTM subsystems to be consistent with the manual set. For example, even though the naming conventions for the various directories of a given test plan have been changed, you will recognize the file names presented to you when processing a test plan. This is because the FTM program translates the new test plan file and directory names to their original names before displaying them to the user for selection. You will only have to be aware of the new naming conventions when you need to explicitly manipulate the files generated by FTM.

To help ease the transition to the new file system, the most significant changes to the files and directories of FTM are highlighted below. In addition, a figure is provided later in this document that gives an overview of the FTM/Win directory structure.

/FTM/CODE: the directory that contains all FTM supplied programs files. The file names in this directory have been shortened to a maximum of eight characters.

/FTM/ALLNODES: the directory in which FTM maintains files that are shared by all nodes on a networked version of FTM. The directory and file names in this directory have been shortened to a maximum of eight characters.

/FTM/ALLNODES/ENVIRON/tp-name: the file that contains the Environment Form for the test plan tp-name. The test plan name is filled to ten characters with underscores and is encoded in the file name as xxxxxxxx.xx (e.g. EZDEMO_ _._ _).

/FTM/HOME##: the home directory for node number "##". The file names in this directory have been shortened to a maximum of eight characters.

/FTM/UPLOAD: the directory that is used for temporary storage of intermediate DIF or CSV

format files created when uploading to either disk or datacomm.

/FTM/TP/tp-name/: the directory for the test plan tp-name, as all test plan directories now reside under the new directory /FTM/TP/. The test plan name is filled to ten characters with underscores and is encoded in the directory name as xxxxxxxx.xx(e.g. EZDEMO_ _._ _). The names of the directories under a test plan directory have also been shortened, but there were no changes to the directory hierarchy.

/FTM/TP/tp-name/REQUIRE/TESTPLAN/########: the file for a revision of this test plan form. The "########" in the file name is a base-36 8-character time date code of the time of the revision. This code replaces the previous base-10 12-character time date code.

> NOTE: All base-10 12-character time date codes used in file names have been converted to base-36 8-character codes. The new codes are equivalent to the old codes and thus retain the same accuracy. They are used exclusively to reduce the number of characters in file names; therefore, the time date information stored in the FTM files and returned by the relevant functions (e.g. FNFtda_encod_time$)is still the same 12-character code. This preserves the format of the files and the behavior of user test programs. In instances where you rely on the time date codes encoded in file names to process the information in those files, you can use the new FNFBase36to10$ subprogram to convert a base-36 8-character time date code back to the original base-10 12-character time date code. Please note that FTM will automatically translate the current files to their original encoding before displaying them.

/FTM/TP/tp-name/RESULT/IN######.##: a file containing an index of all test results files contained in the corresponding test revision directory. The "######.##" in the file name is a base-36 time date code.

/FTM/TP/tp-name/RESULT/RV######.##: a test results revision directory for a test plan. The "######.##" in the file name is the same base-36 time date code used in the associated index file.

/FTM/TP/tp-name/RESULT/RV######.##/ss######.##: a test results sequence directory. The "ss" in the directory name is still the sequence code in the range "00" to "ZZ". The "######.##" is now a base-36 time date code.

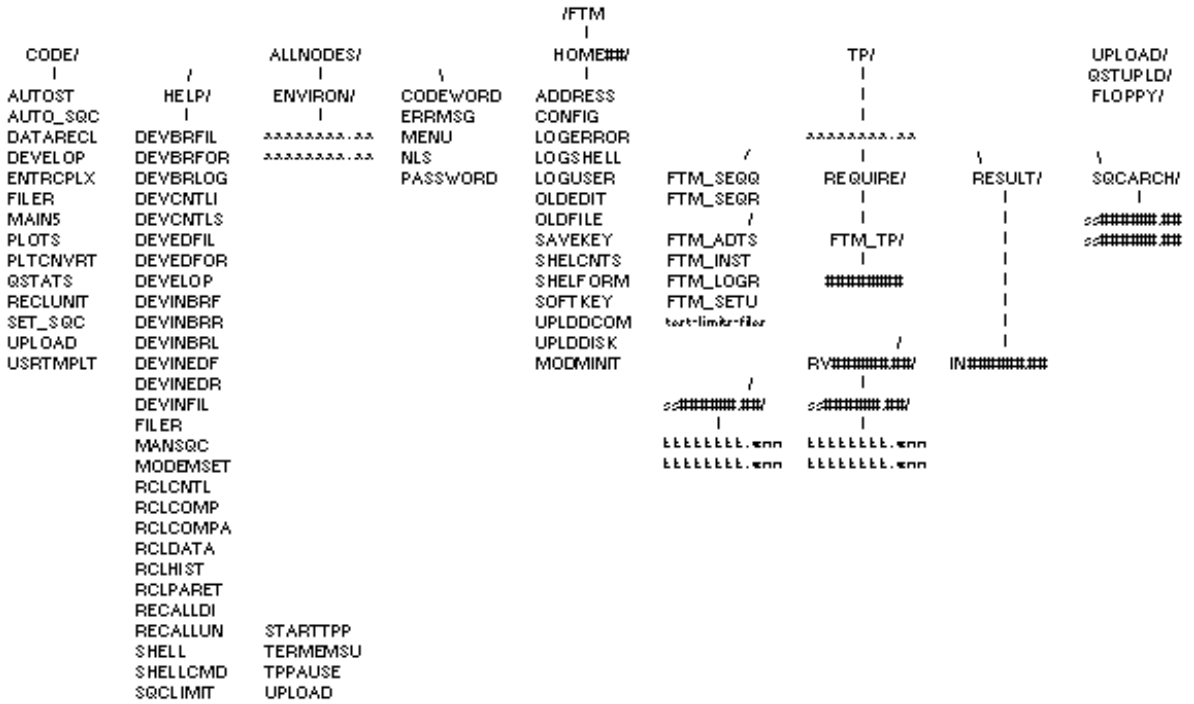
/FTM/TP/tp-name/RESULT/ss######.##/tttttttt.enn: a file containing all test results from one execution of a test plan. The "tttttttt" in the file name is an encoding of the 10-character UUT serial number as specified by the Ftre_sernum_set subprogram. The encoding of the serial number is as follows: if the length of the serial number is greater than eight characters, one or two of the most significant characters of the number are not represented in the file name to keep its length to eight characters. If the serial number is eight characters or less, it is filled to eight characters with underscores and fully represented in the file name. You should note that the UUT serial number is still filled to ten characters and stored in its entirety in the associated test results file. In the unlikely event that the truncation of serial numbers causes a file name conflict in a test results sequence directory, you can eliminate this problem by limiting the number of UUTs that are tested in each sequence directory by using the field "Number of UUTs per SQC Period" field in the Environment form. You can also use the FTM Filer to close out the current results sequence directory.

If Ftre_sernum_set was not executed for the test plan, the "tttttttt" is a base-36 encoding of the ten most significant digits of the UUT TIMEDATE stamp stored in the associated test results file.

The "enn" in the file name remains the same encoding of the exit code and results file number.

/FTM/TP/tp-name/SQCARCH/ss######.##: the file that contains the results of SQC analysis performed on the test results sequence directory that shares the same name (/FTM/TP/tp-name/RESULT/RV######.##/ss######.##).

FTM/Win and FTM/DFS Hierarchical File Structure



For More Information on FTM, EZ-Transfer, ITG, or AccuMeasure Software, contact Jim Rose:

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THANK YOU for your interest in AccuMeasure Software. We look forward to working with you!