

Fairlight ESP Ltd.

File Exchange Manual V3

Software Versions 15.6 / 16.3

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1.0 INTRODUCTION

Version 3 of the File Exchange Manual was written and tested in conjunction with the following software.

Product	Software Version
MXF, FAME, Prodigy	15.6
FAME 2, Prodigy 2, Mfx3.48, Merlin	16.3

File Connectivity is available between Fairlight and the following formats and products: -

- Digidesign – ProTools
- Waveframe
- Akai
- Lightworks
- OMFI
- WAV
- Broadcast WAV

2.0 CONNECTIVITY PACKAGE OVERVIEW

From September 1999, the Fairlight File Exchange (Connectivity) options have been integrated into a single suite of File Exchange capabilities – the Connectivity Package.

A single software option now equips an MXF, FAME or Prodigy system with the entire suite of exchange facilities.

This change was necessitated by the increasing interdependence of the file exchange options and 24 bit hardware/software capabilities.

For example, the ability to open OMF files containing WAV format audio data requires the WAV option to be installed. The WAV option requires the system to be 24 bit capable in memory terms, and the ProTools option requires that the system be able to deal with 24 bit audio from ProTools/24 systems.

Rather than have a long list of conditions that would reduce the certainty of being able to open a particular file from an uncertain source, it was therefore decided to integrate the whole package, and require that it be run on a 24 bit capable system. In this way, the likelihood of success when opening a particular file is maximized.

3.0 SOFTWARE REQUIREMENTS

1. Systems must be fitted with the Fairlight Connectivity package (“Connect” on the dongle specification) to use the facilities referred to in this document.
2. Systems must have “Wide Words” enabled on their dongles in order to utilize the Fairlight Connectivity package. The Wide Word software is free of charge to all users who have a hardware specification that will support it (see below).

4.0 HARDWARE REQUIREMENTS

In order to use the Fairlight connectivity package, the following table describes what hardware, Fairlight products need to be equipped with: -

Product	Hardware Requirements
MFX, FAME, Prodigy	<p>DCCs with 6 or 8 MB of RAM (denoted as DCC6 or DCC8 on the card as viewed in the card cage) on all “Output-Only” channels</p> <p>DCCs with 8 MB of RAM (DCC8) on all “Input and Output” channels.</p> <p>64 MB of RAM fitted to the Wave Executive. An upgrade kit is available from your local Fairlight distributor or office. The amount of RAM fitted is displayed on the initial boot up screen.</p>
Merlin, Fame 2, Prodigy 2, MFX3.48	QDC Engine

5.0 CONVENTIONS

Throughout this Manual whenever the term MFX is used it is a reference to FAME, FAME 2, Prodigy, Prodigy 2, Merlin and an Mfx3^{PLUS} products.

Whenever ProTools is mentioned it is a reference to Avid Technology’s Digidesign ProTools product.

Whenever the name Macintosh is mentioned it is a reference to the Apple Mackintosh computer.

All trademarks are the property of their respective companies and are used in this Manual solely for identifying a particular product for reference purposes only.

6.0 Digidesign - ProTools

6.1 OVERVIEW

MF3 Software version 15.6.01 / 16.3 supports session/project, audio and fade information transfers between Digidesign ProTools 4.x sessions and MF3 projects.

File Exchange can be done either via SCSI based disk drives or by using a Fairlight MediaLink Server and network.

Fat-16 formatted PC disk drives may be used to transfer files to an Apple Macintosh running 8.0 or higher Operating System. Or by using a PC running Microsoft Windows 98 Windows NT.

HFS Apple formatted disk drives may be used to transfer Sessions from the ProTools application to an Fairlight MF3.

Iomega Jazz disks may be used in either FAT16 or HFS formats. Please read the appendix at the end of this manual for details on formatting disks.

6.2 ITEMS TO CONSIDER BEFORE EXPORTING TO PROTOOLS

The following items contain vital information, which if followed, allow successful transfers to be made between MF3 and ProTools.

6.2.1 BIT DEPTH

ProTools only supports sessions containing one bit depth. Sessions can either be 16 bit or 24 bit audio.

When MF3 projects which contain audio sampled at different bit depths. (eg 16 bit and 24 bit clips contained within the same project)

Users will be prompted to select which clips to export. The following message appears on the user interface

**This project contains recordings with the following sample sizes: 16-bit 24-bit
Only audio of the selected sample size will be exported.**

16 24 CANCEL

If you have 20 bit audio recordings in you project, the MF3 will prevent exporting them, since ProTools cannot handle 20 bit audio.

This issue should be taken into account when the Bit Depth is set when a project is started if it is kown that the project may be transferred to ProTools during the production.

6.2.2 SAMPLE RATES

At present ProTools supports Sample rates of 44100 kHz and 48000kHz.

If an export from an MFX project has a different sample rate such as 32000 or 44056 kHz, the audio which is exported will not play at the correct pitch.

During an export a message box will appear informing users that ProTools does not support the sample rate of the project.

“The project sample rate (XXXXX kHz) is not supported by ProTools. Exported Audio will not play at the correct pitch.”

Proceed? (Yes / No)

If No is selected the export will be cancelled.

6.2.3 INCOMPATIBLE AUDIO DATA

Audio files come in either “big-endian” or “little-endian” format. The MFX can handle either audio forms but, on an Apple Macintosh based ProTools, only supports “big-endian” based audio files.

ProTools does not support “little-endian” based audio files. Examples of “little-endian” audio files which may be inside an MFX project are:

- WAV
- AKAI
- WaveFrame
- Lighworks based audio files.

The MFX warns if the project being exported contains any “little-endian” data and informs the user that it will not be exported, with the following message:

This project contains recordings encoded in little-endian data format (eg WAV). Only audio of big-endian data format will be exported.

6.2.4 FADE TRANSFERS

The MFX automatically places real time fades at the head and tail of each clip within a project to prevent digital clicks.

The size of the fade can be controlled using the fdef command.

When a MFX project is exported as a ProTools Session, during importation ProTools creates (renders) a fade for each head and tail of every clip.

This can be very time consuming.

Before exporting the project from the MFX, type -

fdef 0

Now only fades created by the user will be exported to ProTools.

6.2.5 SESSION DURATION

ProTools only supports Sessions which have a duration of 12 hours or less.

When you export an MFX project, to a ProTools Session, which is longer than 12 hours the MFX will display a message on the user interface :

Destination format is limited to 12 hours duration. Clips after %T will not be transferred.

Proceed?

6.3 ITEMS TO CONSIDER BEFORE EXPORTING FROM PROTOOLS

6.3.1 AUDIO FILE CONSIDERATIONS

The MFX allows 4096 files per node and 1000 files per folder. Folders / directories count as files.

Each ProTools Session sits inside a ProTools Session folder, which contains a ProTools Session file and various folders, typically one folder called "Audio Files" and another called "Fade Files".

If there are more than 999 files in any of these folders, it is necessary to rearrange them into more folders prior to importing them into the MFX.

On the Apple Macintosh, create extra folders inside the ProTools session folder, then move the audio files between folders so there is no more than 999 files in any one folder.

Once this is done the import can continue smoothly.

6.4 USING REMOVABLE MEDIA

6.4.1 REQUIRED SETUP

An MFX, a ProTools system running on an Apple Macintosh and 2 portable storage devices.

- Import - HFS formatted storage device.
- Export – FAT formatted 16 storage devise.

See the Appendix at the back of this manual for more details on formatting these devices.

6.4.2 IMPORT

1. Attach an HFS formatted storage device to a ProTools Apple Macintosh SCSI chain.
2. On the Macintosh, save the ProTools session.
3. Locate the ProTools session folder on the local disk drive and copy it to the attached HFS volume.
4. Disconnect the HFS formatted storage device that contains the ProTools session.

5. Connect the HFS formatted storage device to a MFX.
6. In the Project menu, browse to the HFS formatted storage device. This should contained the the ProTools session folder.
7. Highlight the Protools Session file and press ENTER.
8. Select the destination location for the MFX project, which will be created from the ProTools session selected.
9. Name the ProTools session that is about to be created. It is important that you follow the naming rules.

Files should be named using no more than 8 characters, A - Z, a - z, 0 -9, _ (underscore

Once this is done, press Enter.

10. A project will be created containing all the ProTools audio, fade and Session information.

This project will then open automatically and a message will tell inform users that the import process is complete.

6.4.3 EXPORT

1. Connect a Portable storage device that is formatted as FAT 16 to an MFX SCSI chain.
2. Open the MFX project to be exported.
3. Go to the EXPORT Menu and select PROTOOLS.
4. You will be prompted to select a destination – this is the destination point of the ProTools session folder that will be created from the current project.
5. Browse to the FAT 16 formatted storage device and press OKAY.
6. Name the ProTools session that is about to be created. It is important that you follow the naming rules.

It is important to name the file with up to 8 characters., A - Z, a - z, 0 -9, _ (underscore)

Although MFX will allow entry of some other characters, you are advised NOT to use them, as they may cause problems in exchange with other computer systems.

Once this is done, press Enter.

7. A pop up message will appear indicating how much audio needs to be copied to complete the export:

8. Select YES and the MFX will create a ProTools session folder on the FAT 16 device, from the project that is open. When it is finished the following message will be displayed:

“Export to Protools Completed

9. Disconnect the FAT 16 formatted storage device containing the exported project.

10. Connect the FAT 16 device to the Apple Macintosh SCSI chain.
11. Copy the ProTools session folder (which will be in MacBinary form) from the FAT 16 device to a local HFS device on the Macintosh.
12. Use Stuffit Expander to unzip the Macbinary files contained within the ProTools session folder. (Refer to the Appendix Utilities section for an explanation of how to use Stuffit).
13. Once they are unzipped and stored onto a local HFS device, Locate the Session file (which will now look like any other protocols session) and double click on it to open it.

6.5 WITH A MEDIALINK SERVER NETWORK

6.5.1 REQUIRED SETUP

For information on how to setup a MediaLink network please refer to the MediaLink Installation and User Manuals.

For more information on how to connect and configure an Apple Macintosh computer into a MediaLink network please refer to the MediaLink Installation and User Manuals.

6.5.2 IMPORT

1. On an Apple Macintosh computer, save the ProTools Session.
2. Browse to the ProTools Session folder (containing the ProTools Session file and all associated audio and fade folders and files) on the local disk and copy it to the NT volume mounted on the Apple Macintosh desktop.
3. On the MFX you want to import the Protocols session onto, In the Project menu, browse to the NT server volume where the ProTools session folder is located.
4. Highlight the ProTools Session file and press ENTER.
5. Select the destination location for the MFX project file that will be created from the ProTools session selected.
6. Name the MFX project that will be created (the default name is the same as the session name.)

It is important to name the file with up to 8 characters., A - Z, a - z, 0 -9, _ (underscore)

7. The machine will now create an MFX project containing all the session, audio and fade information within the ProTools Session.

6.5.3 EXPORT

1. Open the MFX project to be exported.

2. Select the EXPORT menu and select PROTOOLS. You will be prompted to select a destination, this is the destination for the ProTools session folder which will be created from the current project.

3. Browse to an NT server volume which can be seen from the Mac desktop and press OKAY.

4. Name the ProTools Session that is about to be created.

It is important to name the file with up to 15 characters., A - Z, a - z, 0 -9, _ (underscore)

Although MFX will allow entry of some other characters, you are advised NOT to use them, as they may cause problems in exchange with other computer systems.

Once this is done, press Enter.

5. A ProTools Session folder will be created from the project. It will contain a session file and two folders – the audio files folder and the fade files folder.

6. On the Macintosh, Copy the session folder from the NT volume mounted on the desktop to a local HFS volume.

7. Open the ProTools Session.

7.0 WAVEFRAME

7.1 OVERVIEW

The MFX allows access and playback of up to 24 tracks of a Waveframe project, from a Waveframe native disk.

It is possible to access all the audio data stored on a Waveframe formatted disk regardless of whether it is part of a particular Waveframe project or not, and publish it into AudioBase or play it back directly.

7.2 WAVEFRAME EXPORT CONSIDERATIONS

7.2.1 ENTIRE WAVEFRAME PROJECT

To export a Waveframe project it is important to set the drive being used for recording the Waveframe project to Removable.

WaveFrame machines treat removable drives differently to non-removable drives. Specifically, if a WaveFrame project is being recorded onto a drive that has been defined within the WaveFrame as “removable”, then upon close of that project, the playlist (or “editlist”) for that project is automatically transferred from the WaveFrame’s internal PC disk to the removable drive where the audio resides.

This transfer is performed silently, and the user is not informed. MFX import does not use the WaveFrame’s internal PC disk. Hence if you want to import a WaveFrame PROJECT, make sure that the drive the project’s audio is on also contains the playlist file (i.e. that drive has been defined as “removable”).

Drives are assigned removable in the WaveFrame system by the following procedure:

In the WaveFrame PC’s autoexec.bat file there will be an entry “set nremoveid=N” where N indicates a SCSI ID. If your audio drive’s SCSI ID is greater than N, then that audio drive will be treated by WaveFrame as removable.

7.2.2 WAVEFRAME LIBRARY

If you do not wish to import a WaveFrame project into MFX, but instead want to import a WaveFrame library into MFX or just be able to play all the audio you have on a given WaveFrame audio disk, then the concept of removability is not important.

7.2.3 THE MFX MOUNTING PROCESS

When a WaveFrame formatted disk is connected to an MFX, the following processes occur automatically:

1. All the WaveFrame playlists (Projects) that are found on the disk appear in the MFX browser. These files contain no audio, have the extension .wvf, and can be opened by the user to begin the WaveFrame project import process.

2. A single “artificial” file called `wvfm_library.wvf` appears in the MFX browser and contains references to all audio found on the disk. This file can be opened by the user to begin the WaveFrame library Import process. The file is referred to as “artificial” to indicate that it is transitory. It exists only in MFX memory – it is not written to or read from disk – and has been created by the MFX.
3. A database file is automatically produced (“`database.wvf`”) which is a collection of database details about each file found on the WaveFrame disk. Whilst this file can be seen in the MFX browser, it cannot be opened by a user. It is used by the import software only. It’s contents correspond closely to the WaveFrame notion of a database (that used by the sound selector) however it is not an exact copy of the WaveFrame database file.

Since the information stored in the WaveFrame database file is redundantly stored in each WaveFrame file’s header, there is no need to access the WaveFrame database file and it is not used.

All the audio files found on the WaveFrame disk are “bundled” into artificial files called “`audio0N.wvf`”, which appear in the MFX browser. Each artificial file can be at most 4GB in length and hence the ‘N’ in the filename increments as required. These artificial files cannot be opened by a user.

7.2.4 TO PLAY THE WAVEFRAME PROJECT

1. Make sure that the disk that the required WaveFrame project is on is defined as removable within the WaveFrame system.
2. Mount the WaveFrame disk on the MFX.
3. Open the `.wvf` file that corresponds to the WaveFrame project name onto an MFX drive.

At this point, the MFX performs some checks on the file to see whether any reduction on the import needs to take place. A reduction is **required** if:

The file contains more than 24 tracks
The file references more than 4096 audio files
The file contains more than 8170 clips

In any of the cases mentioned above, a message will pop up on the MFX screen, allowing the user to select a number of sequential tracks for import. After this selection has been made, the system will check the criteria again, and offer an opportunity for further reduction if appropriate.

7.2.5 IMPORTING ALL THE WAVEFRAME AUDIO INTO AUDIOBASE

It is possible to import a Waveframe library into AudioBase. To do so:

1. Mount the WaveFrame disk on the MFX.
2. Open the file called `wvfm_library.wvf` onto an MFX drive.
3. Perform a “Keep all Borrowed”.
4. Publish the resultant MFX project to AudioBase.

8.0 LIGHTWORKS

8.1 Overview

The following Lightworks Digital Non Linear Video Editing systems can export audio files for playback on the MFX.

Product	Software Versions	Export Audio File Type
Lightworks Turbo	V4	Native lightworks .S24 files
Lightworks Turbo	V6	Native lightworks .S24 files
Heavyworks	V6	Native lightworks .S24 files
Heavyworks	V2	Native lightworks .S24 files
Lightworks V.I.P 4500	V2 / V3	Native lightworks .S24 files / OMFI

- Note the Lightworks V.I.P 4500 can export OMFI files for playback on the MFX.
- Lightworks and Heavyworks V6 software can export OMFI 2 files but the MFX does not support this format. The MFX only supports OMFI.
- Lightworks formatted disk drives must be used to transfer the .s24 lightworks audio files to a Fairlight MFX.
- See the Lightworks / Heavyworks User Guides for more information on formatting FAT-16 disk drives.
- All Audio source material must be digitised on the Lightworks at PRO Quality (uncompressed)

8.2 EXPORT LIGHTWORKS / HEAVYWORKS AUDIO FILES

1. First Consolidating the Edit you wish to export.
2. Display the Menu for the edit.
- 3 Left-click on the Consolidate command to display the Consolidate Panel.
4. Select the handle size.

The consolidate operation will copy extra material (handles) at the start and end of each shot.

The default size of the handles is two seconds, but you can set any value you require, by typing a number into the Handle Size field.

5. Choose the destination volume.
6. Left-click on the Destination Volume button until it shows the name of the volume you want to use. This determines where the new material created by the consolidate will be stored.

You can consolidate to a hard disk or to an optical disk. In either case, there must be enough space for the new copies of the material to be made.

7. Next, Open the Edit viewer for the new edit. Find the EDIT COOKIE for the new consolidated edit by moving the GENERAL COMMANDS menu on the Lightworks user interface over the open Edit viewer, and selecting the "Show Cookie" option. The Cookie will be displayed as something like "CE00357A". Make certain that you are displaying the Cookie for the consolidated Edit. Note down the name.

8. Quit to DOS.

9. Type "SNOOP <RETURN>". This will display a list of all the Projects, together with the PROJECT Cookie numbers. Write down the PROJECT Cookie number that corresponds to the Lightworks Project that you were working in.

10. Quit from the SNOOP program.

11. The EDIT Cookie will be found in the directory C:\LWPROJ\xxxxxxx, where "xxxxxxx" is the PROJECT Cookie number as found using the SNOOP program.

The EDIT Cookie is the file in this directory that has the name that you wrote down whilst in the Lightworks program ("CE00357A" in our example) followed by the extension ".ED2".

12. Copy this EDIT Cookie for the consolidated edit to the removable drive that you consolidated the edit to. Note that you will see many other .ED2 files in the same directory. These are Cookies for the individual sound files, and do not contain the Edit information. These may be copied across to the removable media if desired, and will allow you to open each individual sound file independently. However, the final edited piece may only be retrieved by opening the "master" EDIT Cookie.

13. Inspection of the removable drive will reveal the presence of 2 directories: MATERIAL and SOUND. The MATERIAL directory is used to store any Video clips used in the consolidated edit. The SOUND directory will contain a number of files of the form XXXXXXXX.S24, where XXXXXXXX can be any combination of letters and numbers. These are the actual sound files used in the edit. If you do not see these directories and files, then the consolidation has not been correctly performed.

14. Power down the system and remove the drive for transfer to the MFX.

8.3 IMPORT ONTO MFX

1. Connect the drive to the MFX by the appropriate method for the media you are using.

2. When the drive is detected by the MFX, it will display a new device for each of the DOS partitions on the drive. These will be of the form "CX00" and CX01" where "X" is the SCSI address of the drive. CX00 is the first partition on the drive, and CX01 is the second partition, if it exists.

3. On selecting these devices, you should see all the directories and files that were placed there on the Lightworks system.

4. In the MFX Project Menu, select the master "Cookie" ("CE00357A.ED2" in our example), and press "Enter" to open it. The system will prompt you for a destination and offer you the opportunity to change the name of the project if desired (for example to something more useful than the Cookie name...). The destination must be on a different device. When you have selected the destination and changed the name if required, press "OKAY" to open the file.

5. After a short period of time during which some status messages will appear, a project will open on the MFX that contains the edited audio.

6. What you have at this stage is an MFX project ("YOURNAME.MT") on an MFX drive, which is BORROWING all the audio from the original source files on the DOS drive from the Lightworks system. If required, this MFX project may be closed and subsequently moved on to the DOS drive to keep everything on the same drive.

Alternatively, the Lightworks audio may be transferred into the MFX project by using the "Keep all Borrowed" and/or "Translate" features of the MFX. All additional edits or recordings will be in the MFX project, regardless of whether the audio is "kept" or not.

8.4 Summary

1. Consolidate all the audio to a removable DOS drive
2. Copy the Edit "Cookie" to that drive
3. Mount the drive to the MFX
4. Open the .ED2 file that corresponds to the Lightworks Edit Cookie name onto an MFX drive.

9.0 AKAI

9.1 OVERVIEW

The MFX allows access and playback of AKAI Projects stored on an AKAI formatted native disk.

The resultant imported .MT file on the MFX disk may be edited and recorded to, and the original AKAI file may be “Kept” into the MFX project at will.

THE MFX supports AKAI file formats “NORMAL”, “EXTENDED” and “DDPLUS”.

9.2 THE AKAI EXPORT PROCESS

1. There are no special considerations, apart from ensuring that all the required audio contained in Project files and Library files is on the same disk (usually an optical disk).

2. This is achieved by performing a “compile” on the AKAI product.

9.3 MOUNTING AN AKAI DISK ONTO AN MFX

When an AKAI disk is connected to an MFX, the following files will be seen:

- Akamap.AK (This file is not accessible within the MFX)
- Audionn.AK (This file is not accessible within the MFX) where “n” increments from 0 as required
- XXXSET.AK where XXX is any combination of characters (This file is not accessible within the MFX)
- XXXLIB.AK where XXX is any combination of characters (This file is not accessible within the MFX)
- XXXPRJ.AK where XXX identifies a Project as it was named on the AKAI. These are the files that may be opened.

The following describes the this procedure -

1. In the Project menu, browse to the required XXXPRJ.AK file and press “ENTER”. The system will then prompt you for a destination.
2. Browse to an MFX disk, and press “OKAY”. It is necessary to open an AKAI file onto an MFX drive, as the MFX cannot write to an AKAI drive. At this stage you will be offered the opportunity to change the name for the resultant MFX project, or leave it the same as the original AKAI file.
3. Press “ENTER” when ready.
4. The AKAI import process will commence. This can take a while, depending on the size and complexity of the file. When the process has finished, you will be presented with a normal MFX project.

9.4 TO PLAY AN AKAI FILE

1. Mount the AKAI disk or disks containing the audio onto the MFX.
2. Open the required XXXPRJ.AK file onto an MFX drive.
3. At this point, the MFX performs some checks on the file to see whether any reduction on the import needs to take place. A reduction is **required** if:

The file contains more than 24 tracks

The file references more than 4096 audio files

The file contains more than 8170 clips

In any of the cases mentioned above, a message will pop up on the MFX screen, allowing the user to select a number of sequential tracks for import. After this selection has been made, the system will check the criteria again, and offer an opportunity for further reduction if appropriate.

10.0 OMF FILE IMPORT

10.1 OVERVIEW

1. Open OMF consolidated export files in AIFF-C or WAV formats from a correctly formatted HFS Macintosh or DOS disk or an MFX disk, and play the audio contained in them from that disk.
2. Edit and Record further audio into the resultant project, which will be on an MFX disk. Original audio will be “borrowed” from the OMF file.

10.2 OMF EXPORT

10.2.1 The Software Checklist:

1. The Avid Media or Film Composer[®] should be running software version 6.53 onwards and if a Macintosh system, or from Version 8.0 on Windows NT based systems.

OMFI File Exchange was tested for inclusion within this manual using Version 10.

2. For OMF to function correctly, the MFX must also be fitted with 64 MB of RAM (consult your local Fairlight Office or Distributor for further details).
3. QDC Engine based Fairlight products come fitted with the correct amount of RAM.

The OMF Hard Drive Checklist:

1. HFS Macintosh formatted disk drives should be used to transfer OMF files. Information on how to formatting can be found within the Appendix at the rear of this manual. X files

The Avid Drive Utility can be used to initialize OMF Drives that are already formatted to 512 bytes per sector. Most Avid supplied hard drives are already configured this way. When using this utility, please select the “Macintosh” option as the format type, not “Avid”.

3. Iomega formatted Jaz disks can be used as a transfer medium only. Fairlight does not recommend playing media directly from these devices. If using Jaz disks, either copy the OMF file directly onto an MFX drive and open from there, or use the “Keep Borrowed” option from the “Space” menu on the MFX3^{plus} immediately after completing the import. Once completed, eject the disk.
4. Do not initialize the OMF Drive with the Apple initialization software supplied with your Macintosh.
5. The OMF Drive can be set up with more than one partition, but the OMF files should always be located on the first partition, otherwise they will not be found by the MFX3^{plus}.
6. Try to restrict the files on the OMF Drive or the first partition of the OMF Drive to OMF files only. Remove all other files.

10.2.3 The Video Editing Checklist:

1. Before digitizing the media for the video edit session, please set the audio file system on the Avid to OMF, or AIFF, and not SDII. This is critical to the success of OMF exports for users of Media or Film Composer® 7.0. – 10.0. This does not apply to 6.53 users.
2. Do not use the Group Clip function in Media or Film Composer®. Please contact Avid Technology for more information about exporting OMF files from sequences containing group clips.

10.2.4 The OMF Export:

1. When you are ready to create your OMF export, duplicate your sequence, open the duplicate sequence and delete the video tracks.
2. Remove all audio effects. These will not be needed on the audio system and cause the OMF file size to be larger than required. If the transfer of these effects is essential, render them, or bounce them to another track prior to exporting. Clips containing level or pan information may not appear on the MFX3^{plus} so please remove all this information from the edited audio in the timeline.
3. If there is a music track in the sequence, it's often a good idea to record the whole music piece and place it one minute after the end of the sequence.
4. If the sequence contains clips that have lost their links to media, use the "Find Orphans" option to reset the links.
5. Consolidate the sequence to a media drive connected to the system that has no media files from that project. This will assure the handle sizes will be correct and will also allow safe deletion of unneeded media from the system after exporting. It will also reduce the level of file references in the OMF Export File to be brought down to one. This assures the OMF export file will point directly to the audio media and not through multiple file references.
6. Select the sequence or sequences and then export them as OMF 1.0 Composition and Audio. If using Media or Film Composer® 7.0, select OMF 1.0 Composition and Audio with Media. See diagram below –

The image shows a dialog box titled "Export File Type". It contains several radio buttons and checkboxes. The "OMFI Composition" radio button is selected. To its right are two stacked text boxes: "Standard - AIFC" and "Audio Only". Below these is a "Version" label followed by a text box containing "OMFI 1.0". Below the version box is a checked checkbox labeled "With Media". At the bottom, there are two more radio buttons: "QuickTime" and "Sound". To the right of "QuickTime" is a text box containing "Video and Audio". To the right of "Sound" is a text box containing "SD2".

7. The file name should contain a maximum of 24 characters and a .OMF file extension.

8. Shut-down the Media or Film Composer[®] and remove the OMF Drive or Jazz Cartridge for transport to the Fairlight system.

10.3 The MFX Mounting Process:

1. Connect the Macintosh disk to an MFX, it will be recognized as such, and all the files of interest to an MFX will be visible.

Note that files that cannot be used by an MFX will not be shown.

2. In the Project menu, browse to the required OMF file and press "ENTER". The system will then prompt you for a destination. Browse to an MFX disk, and press "OKAY".
3. It is necessary to open an OMF file onto an MFX drive, as the MFX cannot write to a Macintosh drive. At this stage you will be offered the opportunity to change the name for the resultant MFX project, or leave it the same as the original OMF file. Press "ENTER" when ready.
4. The system will ask you to confirm the frame rate for the final project, and the OMF import process will commence. This MAY take a while, depending on the size and complexity of the OMF file. When the process has finished, you will be presented with a normal MFX project.

10.4 Summary

1. Make sure that the OMF file has been generated as a consolidated export onto a properly formatted disk, and is in AIFC or WAV format.
2. Mount the OMF disk to the MFX.
3. Open the OMF file onto an MFX drive.

10.4.1 Notes:

- There currently is no known and/or supported method of exporting OMF files from Pro Tools[®] sessions aside from importing the session into the Avid AudioVision[®] system and creating an OMF file from this system. When this recipe document was created, Digidesign[™]'s OMF tool could only be used to import OMF files from the Avid Media or Film Composer[®] into Pro Tools[®] sessions. Please contact Digidesign[™] for further information.
- The techniques used for exporting OMF files from Avid Media and Film Composer[®] systems can also be applied to the Avid AudioVision[®] system. The export type required is "Composition with Audio Media", not "Composition with Frame Accurate Audio Media".
- Media Composer[®], Film Composer[®] and Digidesign[™] Pro Tools[®] are registered trademarks of Avid Technology Inc.
- FWB Hard Disk Toolkit[®] is available from most Apple Macintosh resellers for around US\$150.00.
- FWB Hard Disk Toolkit[®] is a registered trademark of FWB Software LLC.

10.5 TROUBLESHOOTING OMF FILES

10.5.1 The Fairlight stops responding when I connect the Macintosh OMF Drive.

- Check if there are other, unnecessary files on the disk that are not OMF files and remove them. (This will need to be done on a Macintosh computer.)
- Connect the disk back on to the Macintosh and check to see if the drive can be accessed.

10.5.2 I can mount the OMF Drive, but I can't find the OMF file.

- The file name is not made up of between one and 24 alphanumeric characters and a .OMF extension.

10.5.3 The Fairlight stops importing and reports: Bad OMF File

- The export might have been created with OMF Type 2.0. Only OMF Type 1.0 files are currently supported.
- The file to be imported contains too many objects. Divide the sequence into two equal sections and re-export.

11.0 WAV FILES

11.1 OVERVIEW

MFX imports and exports audio in Broadcast Wave (and normal Wave) format :-

- WAV
- BWF

Broadcast Wave includes extended information and timecode settings contained in the file.

Machines which play normal WAV files only, can still play Broadcast Wav files – they simply ignore the extra information.

The MFX exports each clip selected as a separate wave file, however it is possible to import and export in bulk.

Imported BWFs can be placed at their Sync time on the timeline.

This is useful, for example in auto - conforming BWFs from recorder systems such as the Zaxcom Deva Field Recorder. In this case, the BWFs may be imported at their source times and simply conformed as if they were original Sync recordings from a DAT or other Source Machines.

MFX clips will be exported with timecode information that is compatible with the other equipment that has the capability to read the data.

11.2 IMPORTING WAV FILES

11.2.1 IMPORTING INDIVIDUAL WAV FILES

Open your project and go to the IMPORT menu and select BROWSE.

Browse to the WAV file you want to import and press Borrow or Keep on the console. A message will prompt you to select the track you want to import the selected WAV file to. Do this by selecting a Track key and pressing enter.

If the imported file is detected as a BWF file, the user can select to either import it to its sync position (as defined in the BWF's timecode reference) or to the current cursor position.

When the software determines that a file selected for Import is a BWF, a dialogue pops up:

“Place broadcast wave at sync time?”
(Yes, Cursor)

The name of the resultant imported clip is derived from the BWF's description field, truncated to 24 characters if necessary.

If the imported file is a normal WAV file, it will be placed on the track selected with the head of the clip at the cursor position.

11.2.2 IMPORTING BULK WAV FILES

1. Open a project, go to the IMPORT menu and select WAV Files.
2. A search menu appears in the top part of the screen, fill in the details of where you want to look for the WAV files.
3. The first line (search in) defaults to the folder that the project menu was last in, so you can browse to the menu you want to import the wav files from before going to the Wav import menu, to avoid typing in the correct path name.
4. Pressing enter will search the folder selected. The MFX will report how many files are found prompt you for the import method – keep or Borrow.
5. If the files are Broadcast WAV files, a message will pop appear on the user interface:

**When the first BWF is encountered, the following popup box will appear:
“Place broadcast waves at sync times?”
(Yes, Cursor , All , Never)**

6. Selecting “Yes” causes that BWF only to be placed at its Sync time – subsequent BWFs will repeat the dialogue.
8. “Cursor” places the BWF at the current cursor position – subsequent BWFs will repeat the dialogue.
9. “All” places all imported BWFs at their Sync times.
- 10 “Never” places all imported BWFs at the current cursor location.

11.3 EXPORTING WAV FILES

All exports from the WAV export menu are now in BWF format.

From the WAV export menu, the user can choose to name the exported BWF by clipname, track clip number or some other string of characters.

The BWF format is 100% compliant with normal .WAV players, which simply play the files as normal WAV files, without recognizing the extra data chunks in the BWF format.

BWF compatible WAV players however are able to make use of the extra data incorporated in the Exported File. This data incorporates the following:

- **Description** = <clipname> from <track no> in <project name>
- **OriginationDate** and **OriginationTime** = The time and date of export.
- **Originator** = “Fairlight” <Name of the machine performing the Export>
- **Originator Reference** = The name of the current open project from which the Export was made.

- **Time reference** of the exported BWF is derived from the current timecode of the head of the original clip.

To export clips to a Broadcast WAV File:

1. Use the edit menu to select the clip or clips to be exported.
2. Ranges of clips can also be selected – with each clip entirely within the range being exported to a Broadcast Wav file.
3. Go to the EXPORT menu and select WAV EXPORT.

A menu appears in the top of the screen prompting for the destination and name of the Broadcast WAV file that will be created.

4. Selecting the Publish to AudioBase box will publish all the created WAV files into AudioBase.
4. Press ENTER to perform the export. All the clips selected will now appear as separate Broadcast WAV files in the folder specified.

12.0 APPENDIX

SUPPORTED DISK FORMATS

FAT 16

OVERVIEW

- MFX supports reading and writing to FAT 16 formatted devices.
- The maximum supported size of FAT 16 is 4GBs. The maximum partition size is 2GBs, it is possible to have 2 2GBs FAT 16 partitions on one device.
- The Fairlight will Record, Playback, Import and Export files too and from FAT 16 devices.
- There can be no more than 2 partitions per disk (or per side of a double sided removable disk).
- All filenames on a FAT 16 disk must comply with the 8.3 filenameing format.
- MS-DOS filenames can contain up to eight letters or numbers but cannot include spaces, points, slashes, brackets, asterisks, question marks and so on.

For a Apple Macintosh to mount a FAT-16 device large than 1GB, the Macintosh Operating System must be 8.5. onwards such as 8.6 / 9.0

FORMATTING

From Micorsoft Windows 95 / 98

- FAT-16 Partitions are limited to 2GB in size.
 - There can be no more than 2 partitions per disk (or per side of double sided removable disk).
 - The following procedure describes how to create 1 or 2 partitions and format a disk in FAT-16 format from within Windows 95/98.
1. From the "START" button select RUN and then type "fdisk". This program is Microsoft's disk partitioning software. After running this command you must respond with "No" to enabling large disk support (enabling large Disk support switches the system to FAT32, which MFX does not support).

Your computer has a disk larger than 512 MB. This version of Windows includes improved support for large disks, resulting in more efficient use of disk space on large drives, and allowing disks over 2 GB to be formatted as a single drive.

IMPORTANT: If you enable large disk support and create any new drives on this disk, you will not be able to access the new drive(s) using other operating systems, including some versions of Windows 95 and Windows NT, as well as earlier versions of Windows and MS-DOS. In addition, disk utilities that were not designed explicitly for the FAT32 file system will not be able to work with this disk. If you need to access this disk with other operating

```
systems or older disk utilities, do not enable large drive support.  
Do you wish to enable large disk support (Y/N).....? [N]
```

You will then be presented with a screen like this

```
Microsoft Windows 98  
Fixed Disk Setup Program  
(C)Copyright Microsoft Corp. 1983 - 1998  
  
FDISK Options  
  
Current fixed disk drive: 1  
Choose one of the following:  
1. Create DOS partition or Logical DOS Drive  
2. Set active partition  
3. Delete partition or Logical DOS Drive  
4. Display partition information  
5. Change current fixed disk drive  
  
Enter choice: [1]  
  
Press Esc to exit FDISK
```

2. Select option #5. This will display a list of drives that the system has detected during the boot phase. If the drive you wish to partition is not shown in this list then you will be unable to partition the disk. This is a DOS limitation.

Example of output:

```
Change Current Fixed Disk Drive  
  
Disk Drv Mbytes Free Usage  
1 4354 100%  
2 C: 4354 100%  
1021  
  
(1 MByte = 1048576 bytes)  
Enter Fixed Disk Drive Number (1-2).....[2]  
  
Press Esc to return to FDISK Options
```

In the above case the boot disk is Disk #1 (assigned drive letter C) and a Jazz removable disk has been assigned Disk #2.

3. Enter the drive number you want to partition.
You should now be presented with a screen like this

```
Microsoft Windows 98  
Fixed Disk Setup Program  
(C)Copyright Microsoft Corp. 1983 - 1998  
  
FDISK Options  
  
Current fixed disk drive: 2  
Choose one of the following:  
1. Create DOS partition or Logical DOS Drive  
2. Set active partition  
3. Delete partition or Logical DOS Drive  
4. Display partition information  
5. Change current fixed disk drive  
  
Enter choice: [1]
```

```
Press Esc to exit FDISK
```

Notice that the “Current fixed disk drive” is now 2. We can now create a DOS partition.

4. Select “1” and you should see the following.

Create DOS Partition or Logical DOS Drive

```
Current fixed disk drive: 2
Choose one of the following:
 1. Create Primary DOS Partition
 2. Create Extended DOS Partition
 3. Create Logical DOS Drive(s) in the Extended DOS Partition
Enter choice: [1]
Press Esc to return to FDISK Options
```

After selecting “1” here to create a Primary DOS partition, you should see the following after the drive has been scanned.

Create DOS Partition or Logical DOS Drive

```
Current fixed disk drive: 2
Do you wish to use the maximum available size for a Primary DOS Partition
(Y/N).....? [Y]
Press Esc to return to FDISK Options
```

5. Reply “Y” to this and wait for fdisk to complete. When complete you should see the following.

```
Create DOS Partition or Logical DOS Drive
Current fixed disk drive: 2
Do you wish to use the maximum available size for a Primary DOS Partition
(Y/N).....? [Y]
Primary DOS Partition created. drive letters changed or added
Press Esc to continue
```

6. Press ESC as displayed. This will take you back to the main fdisk menu.

7. If you do not want a second partition, press ESC again to exit. The following will then be displayed. Otherwise, repeat steps 2 to 6 to create a second partition but at step 4, select “Create Extended DOS Partition”.

8.

```
You MUST restart your system for your changes to take effect.  
Any drives you have created or changed must be formatted  
AFTER you restart.  
  
Shutdown windows before restarting.  
  
Press Esc to exit FDISK
```

9. Press ESC again and you will be returned to the DOS prompt (or back to Windows).

10. Restart the system.

Once the system has restarted, the drive must now be formatted.

11. Bring up a DOS command shell and type "format X:". Where X is the partition letter of the partition you have just created.

```
C:\WINDOWS>  
C:\WINDOWS>format D:  
  
WARNING. ALL DATA ON NON-REMOVABLE DISK  
DRIVE D: WILL BE LOST!  
Proceed with format (Y/N)y  
  
Formatting 1,020,98M  
0% completed.
```

OR if you have removable media (assumes BIOS is reporting removable media correctly)

```
C:\WINDOWS>  
C:\WINDOWS>format D:  
WARNING. ALL DATA ON DISK  
DRIVE D: WILL BE LOST!  
Proceed with format (Y/N)y  
Formatting 1,020,98M  
0% completed.
```

While the drive is being formatted the percent complete should be incrementing. This can take from 2...45 minutes depending on the speed and size of the drive being formatted.

12. Enter volume name when prompted

13. If you only have one partition to format, exit the format program by replying "NO" to formatting another device. Otherwise, enter "Yes" and format the extended partition.

After formatting is complete, you should be able to get a directory of the device. See below.

```
C:\WINDOWS>dir d:  
C:\>dir d:  
dir d:  
Volume in drive D is FAT16  
Volume Serial Number is 183E-18F1  
Directory of D:\  
File not found  
1,070,284,800 bytes free  
C:\WINDOWS>
```

The procedure is now complete.

From MS Windows NT

1. Connect the drive to the SCSI Bus of the computer you wish to format the disk on.
2. Turn on the disk drive, wait 20 seconds then turn on the computer.
3. Log on Windows NT, You may have to log on as an Administrator to enable disk formatting.
4. Go to Start / Programs / Administrative Tools / Disk Administrator
5. Once the Disk Administrator application has started click on the black rectangle for the disk which will be formatted and select the Partition drop down menu and select create.
6. Enter a Partition size no large than 2000 MB's. If you do enter a size large than this the MFX will not see the FAT-16 partition.
7. Once this is done, select the Partition drop down menu again and select Commit Changes Now.
8. Accept the message and select the Format Drop Down Menu.
9. A Format window will appear, make sure that the file system selected is FAT, name the disk under Volume Label then press Start.
10. Once the Format has finished close the format Window and close Disk Administrator.
11. The format is now complete.

HFS

OVERVIEW

The MFX mounts Apple Macintosh formatted devices for Read – Only.

When formatting a disk, the disk name should not exceed 11 characters.

A number of utilities are available to format devices as HFS :-

FORMATTING

Apple Drive Utility

This allows SCSI based disk drives to be formatted as HFS. For more information on how to use Apple Drive Utility refer to the help application running on an Apple Macintosh computer.

Using Iomega HFS Installed Drivers

On a Apple Macintosh computer running OS 8.0 – 9.0, browse to the Utilities folder.

1. Open the Iomegaware folder.
2. Open the tools application.
3. Choose the 2nd option Erase / Initialize Disk Options, Follow the on screen instructions.

Using FWB Toolkit

On a Apple Macintosh computer running OS 8.0 – 9.0 which has FWB Installed, run up the application and follow the on screen instructions.

UTILITIES

STUFFIT EXPANDER

Stuffit Expander is an application, which runs on an Apple Macintosh computer. It is used to decompress compressed files.

To expand a Session, drag and drop the main folder that contains all the Session data and the Audio and fade sub-folders onto the Stuffit Expander icon on the Mac.

After this operation, a folder should appear on the on Apple Macintosh desktop with the name of the original MFX project. Within this folder will be a ProTools session file and two other folders – audio files and fade files. Within the audio files folder should be all your audio in SD2 format.

Open the Session file on the ProTools. It will open a Session window and render all the fades, and then be ready to play.

Note that there is a preference in Stuffit Expander that allows MB files to be deleted as decompression takes place.

Stuffit Expander can be downloaded for free from:

http://www.aladdinsys.com/expander/expander_mac_login.html