

# INTERLAB

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File :bwf\_autosync\_with\_indaw

## BWF database cleaning and Auto-sync with INDAW.

Up to now 6.25 and DAT was the only way to carry pro-audio for Film and TV productions. With the arrival of Audio disk recorders, we have the opportunity to improve the workflow thanks to the unification of users and manufacturers around the Broadcast Wave audio file format.

On location, sound is recorded on Aaton Cantar 1 to 8 tracks with or without Mix-down or on Deva or Fostex (without mix-down).

Recording format is (Broadcast Wave) extension WAV or BWF for details about difference between Wave and Broadcast Wave please refer to:

[http://www.interlab-net.com/docs/aaton/docs/indaw/BWF\\_aaton\\_samples/bwf\\_structure.pdf](http://www.interlab-net.com/docs/aaton/docs/indaw/BWF_aaton_samples/bwf_structure.pdf)

## TWO Paths:

There are two possibilities:

One consists to work directly with BWF files and disregard the mix-down.

The other path is to use the mix-down in Picture Editing and auto-conform them to Original files. This path has our preference because picture editor do not have to worry about 4 even more tracks.

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## POST PRODUCTION

INDAW file import and preparation station.

### 1. Audio Job: Detect/Describes claps

[InDaw in audio-PreSync]

During the time that labs are developing and transferring to tape dailies, the assistant editor listen raw tracks or in the case of the Cantar the 7&8 Mix-down burned on a CDROM (audio dailies).

Indaw will detect automatically claps with accuracy, the assistant has still the option to correct and fill available field such as “Sequence”, “Take” and other fields who maybe useful in post. These fields maybe already filled by the sound engineer from location.

Once this quick operation is done, Indaw have the option to meet specific requirement if the NLE is no able to work with multiple BWF-M and resample in 16bits (AVID V7)

Indaw can also perform the Mix-down from original raw audio files if required.

Once this working copies for NLE are ready. Files and corresponding database are moved or via SAN or removable media (CD-ROM, DVD or Hard disk).

If it is required INDAW can, from the original files perform a new mix-down, if the one made on location on the Cantar is not good or present.

### 2. Audio-video sync: Tape “clean up” and generation of sync enriched database

(ALE or Flex) - (Indaw with Post Sync option)

Once the telecine transfer is made a working mute tape and a database arrive in Post. Indaw takes control of the VTR via RS-422 and use the database generated on telecine, at this point indaw can tweak the Flex database, setting more precisely camera starts, adjusting in and out points. All related labels are of course re-calculated (3 perfs case is also supported). Once this is done Indaw will complete the database with sound information relating audio in and out point on tape to the stored audio files.

Indaw produce a database under ALE, FLEX, ATN and ODB, containing precise and clean labels (VideoTC + KeyCodes + AudioTC). This database is to be used for digitizing in the NLE.

The database is interpreted by Avid and Lightworks Editing systems, placing scene, take, remarks on the right fields to deliver to the editor a filled timeline. The Cantar UnicityFilename appears in the field “SoundFile” used for the direct auto-conformation on Pyramix or Protools.

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## 3. Option: Recording of sound on SD or HD tapes

(Indaw with Post Sync option)

Indaw can inset into the mute working tape a sync sound. It is also possible to re-generate VITC and burn in picture windows bringing on screen sequence, take, and AudioTC.

Indaw with Post Sync option)

This synchronization ability allows the INDAW to sync HIGH DEFINITION tape, edited or not. It is possible as long as this tape holds the same Video Time code as the SD tape.

This make possible HD screening of HD rushes with very simply and quickly.

Indaw adapt audio play-out automatically to ANY requested speeds such as 23.98/24/25/29.97/30 fps.

## 4. Editing: DIGITIZING rushes in NLE

[Avid/LighTouch/FCP]

Recording is performed with the help of the Database cleaned on Indaw, it carries very accurate in and out points and is enriched with comments and scene and tk labels.

## 5. Editing: Importing/Sync. Sounds in NLE

[Avid/LighTouch/FCP]

Thanks to the correlated database made on INDAW, videoTC  $\leftrightarrow$  AudioTC, imported sound files via CDR or SAN network are instantly sorted and synchronized by the function AutoSync. Creating a Ghost shot made of a Video channel and one or more audio channels, just like if you had on location AatonCode or ArriCode cameras.

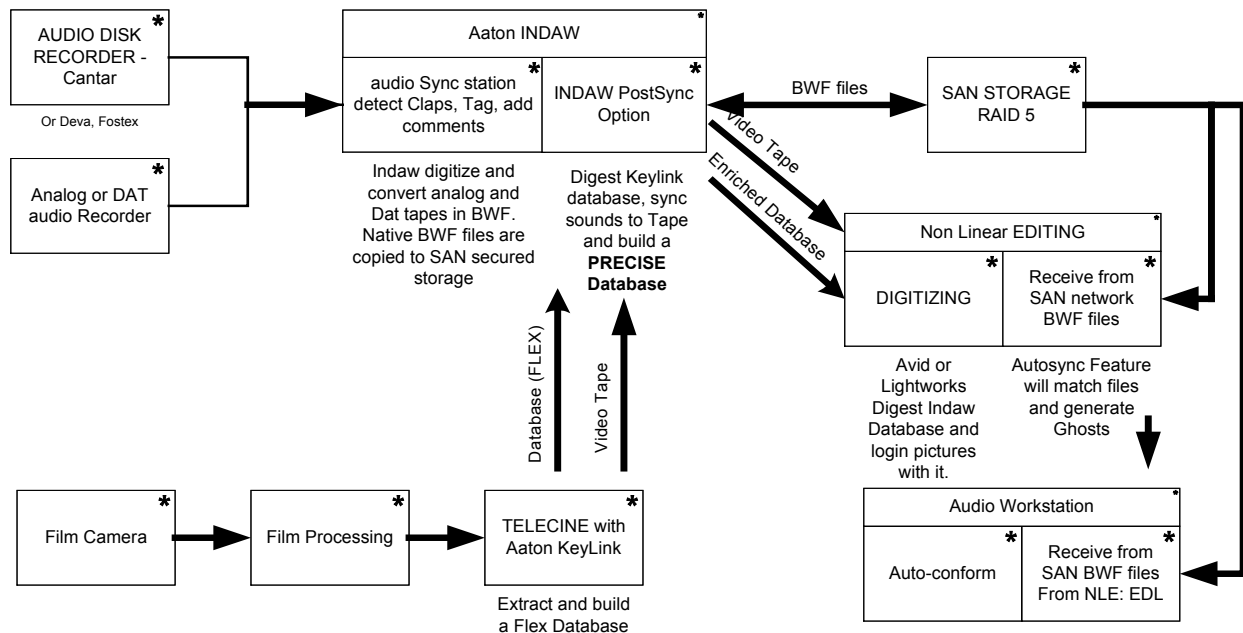
**Note 1:** Avid V7 will only handle 16bits polyphonic BWF files, Indaw is integrating an export / converted format to meet this requirement.

**Note 2:** Lightworks Touch accept Monophonic multiple files or Polyphonic files 16 or 24bits, so you can load or Original tracks or just the mix-down.

**Note 3:** Exported from Indaw 16bits polyphonic BWF files can be processed on AtonXfer to produce OMF for older Avid systems and Lightworks Heavyworks & Turbos NLEs.

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## 6. Audio finishing: SOUND 24bits Auto-conformation

[Pyramix, Protools, etc.]

After editing with mix-down sounds in 16bits or 24bits (mono or stereo), it is possible to produce an Audio CMX EDL, in witch the “UnicityFileNames” from the Cantar are stored in field “SoundFile”. They will be used to conform original 24bits multi-tracks to the EDL. This can be done on Piramix or on Protools with the help of the Titan-3 plug-in.

## GLOSSARY

- **BWF-M** = Monophonic sound file, each file contain ONE unique audio Track, simple and clear to handle, but slow optical recording devices can not handle simultaneous file recording.
- **BWF-P** = Polyphonic, sound files are embedded inside of one file. Multi-tracks are stripped and mixed in this single file. This format can be recorded on Optical DVDRam devices but this format is unusable in post-production.
- **BWF** = Broadcast WAV, is an enriched WAV keeping in header TC and other labels vital for professional applications, details refer to:

[http://www.interlab.fr/docs/aaton/docs/indaw/BWF\\_aaton\\_samples/bwf\\_structure.pdf](http://www.interlab.fr/docs/aaton/docs/indaw/BWF_aaton_samples/bwf_structure.pdf)

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