

**Columbia Pictures  
THEATRICAL DISTRIBUTION DELIVERABLES**

**2D & 3D DELIVERY SCHEDULE**

DELIVERY OF EACH PICTURE TO COLUMBIA SHALL NOT BE COMPLETE UNLESS AND UNTIL:

(1) ALL OF THE ITEMS **(3D ITEMS REQUIRED ONLY FOR 3D MOTION PICTURES)** LISTED BELOW ARE SUBMITTED TO THE APPLICABLE DESTINATION AND INDIVIDUAL LISTED BELOW WITH A COPY OF A TRANSMITTAL LETTER TO COLUMBIA, 10202 WEST WASHINGTON BOULEVARD, CULVER CITY, CALIFORNIA 90232, ATTENTION: GABRIELLA ARIAS.

(2) COLUMBIA CONFIRMS ACCEPTANCE OF SUCH DELIVERY. COLUMBIA SHALL HAVE A PERIOD OF THIRTY (30) DAYS AFTER SUBMISSION OF AN ITEM TO INSPECT THE SAME. IF A SUBMITTED ITEM IS DEFICIENT, COLUMBIA SHALL SO NOTIFY COMPANY IN WRITING AND COMPANY SHALL HAVE A PERIOD OF TEN (10) DAYS FOLLOWING RECEIPT OF SUCH NOTICE TO CORRECT THE DEFICIENCY. IF COLUMBIA FAILS TO GIVE WRITTEN NOTICE OF A DEFICIENCY IN A SUBMITTED ITEM WITHIN SUCH THIRTY (30) DAY PERIOD, THEN THE SUBMITTED ITEM WILL BE DEEMED FULLY DELIVERED.

NOTWITHSTANDING ANY CONTRARY PROVISION OF THE AGREEMENT, CERTAIN MATERIALS, AS INDICATED BELOW, REQUIRED BY COLUMBIA IN CONNECTION WITH THE ADVERTISING AND/OR PUBLICITY OF THE PICTURE MUST BE DELIVERED AS SOON AS AVAILABLE (i.e., IRRESPECTIVE OF THE OUTSIDE DATE FOR DELIVERY OF THE PICTURE SET FORTH IN THE AGREEMENT).

**I.A D.I. MASTER FILES, DCDMs (Uncompressed Image & Uncompressed Audio), DCP, DKDM/DSM/Master Render**

*Deliver Materials Per the Following. Electronic Delivery is via ASPERA. A file transfer service other than ASPERA must be approved by Columbia Pictures.*

|  |   |
|--|---|
| Electronic Delivery of DCDM & DCDM-Audio   | Physical Delivery of LTOs and HDDs to:                        |
| DELUXE DIGITAL CINEMA<br>300 S. Flower Street<br>Burbank, CA 91502<br>Attention: Amanda Vackrinos<br>Amanda.vackrinos@bydeluxe.com<br>818-260-3684 | Michael Friend<br>Michael_friend@spe.sony.com<br>310-244-7426 |

I.A.1 Electronic Delivery of DCDM – Transmit via Aspera to Amanda Vackrinos at Deluxe Digital Cinema (DDC).

I.A.2 4K Digital Cinema Distribution Master – Image (DCDM-Image) One (1) 4K Digital Cinema Distribution Master – Image in TIFF (.tiff) 16 bit, XYZ file format of the full feature, manufactured in accordance with DCI and SMPTE Digital Cinema Distribution Master-Image standards in effect at the time of manufacture, conforming in all respects to the Picture specifications, titled with the animated head and static tail logos of

the applicable Columbia designated distribution entity appended thereto and delivered electronically and on LTO7, LTFS 2.2, or later.

- I.A.3 D.I. Master Archival File – All digital cinema data files used to make the DCDM specified in item I.A.2 above and the Textless Backgrounds specified in item I.B.1 below, in either the form of DPX or EXR P3 masters WITH the color baked in, delivered on LTO7, LTFS 2.2, or later.
- I.A.4 Digital Cinema Distribution Master - Audio (DCDM-Audio) One (1) DCDM – Audio for each sound format (i.e., 5.1, 7.1, etc.) being released in Digital Cinema, made from the print master specified in III.A.2 below (or corresponding print masters for additional formats such as 7.1, Dolby Atmos, etc.), conformed to be in perfect synchronization with the DCDM-Image in paragraph I.A.2 above, manufactured in accordance with the SMPTE Digital Cinema Distribution Master Audio standards in affect at the time of manufacture. The DCDM-Image shall be formatted for the DCP and QC'd before delivering electronically to Deluxe Digital Cinema (DDC).
- I.A.5 4K Digital Cinema Package (DCP) on CRU hard drive. One (1) complete 4K Original Version Digital Cinema Package (DCP) for each studio approved sound format being released in Digital Cinema, manufactured in accordance with DCI and SMPTE Digital Cinema Package standards in effect at the time of manufacture [Compressed (JPEG 2000), Encrypted (AES-128), Wrapped (MXF) file] on a CRU or Columbia approved hard drive compiled with all applicable Image, uncompressed Audio, and Subtitle files which shall be the first Columbia approved DCP created from the DCDM-Image and DCDM-Audio specified in I.A.2 and I.A.4 above. A separate, properly formatted MPAA rating card for the picture should be included. The DCP must be manufactured by Deluxe Digital Cinema (DDC). The quality of the picture image and of the soundtrack(s) shall conform to the quality established by Columbia's current practice.
- I.A.6 Distribution Key Delivery Message (DKDM) Files One (1) Key Delivery Message File targeted to the mastering devices specified by Columbia Pictures usable for I.A.5 above (the DCP). **Email Deluxe Digital Cinema (DDC) for the most current Distribution Certificate: [sonystudiosupport@bydeluxe.com](mailto:sonystudiosupport@bydeluxe.com)**
- I.A.7 DSM/Master Render Files of the DPX or EXR P3 Masters, colored but WITHOUT the color baked in, with LUT, delivered on LTO7, LTFS 2.2 or later. This is the final assembly of all frames, including VFX, titles and opticals, with no cropping or masking, in a single camera space (e.g. Slog, LogC, Cineon, ACES/logACES) with color offsets (i.e. color correction changes) applied to each frame. A single output display LUT must be used for monitoring, but this LUT is not to be rendered into these files. Additionally, Textless insert files must be delivered matching the color space and numbering of the master render. See Schedule C for SPE Master Render detailed specifications.

Additional files to be delivered with the DSM/Master Render are:

- a. Color session files (e.g. project or scene files: Baselight scene export, Resolve project export, etc.)
- b. Output display LUT(s) files used in color session files
- c. Any input LUTs used in color session files or if applied prior to import to color session.
- d. Documented description of how the master render was created, including LUT usage.

## **I.B TEXTLESS BACKGROUNDS, TITLES, DIALOGUE & SPOTTING LISTS**

### **Deliver to:**

COLUMBIA PICTURES, INT'L POST PRODUCTION  
10202 W. Washington Boulevard  
Burns Building, Room 117  
Culver City, California 90232  
Attention: Alison Anthony  
Alison\_anthony@spe.sony.com  
310-244-2492

- I.B.1 4K Textless Background Digital DCDM Data Files One (1) 4k DCDM data files in TIFF (.tiff) 16 bit, XYZ file format, on LTO7, LTFS 2.2, or later, of ALL background material (textless, i.e., without any superimposed lettering) for the main and end title credits of the Pictures and any inserts along with all photographic effects present in the titles or inserts such as fades, dissolves, blowups, freeze frames, multiple exposures, etc. The head end of the textless main titles must include the Columbia animated logo.
- I.B.2 All title and text elements, including subtitles, free from feature background and exactly matching the Original Version (O.V.) DCP. To be delivered as Data Files on LTO7, LTFS 2.2, or later.
- I.B.3 Textless Backgrounds for D.I. Master Archival File WITH the color baked in in either the form of dpx or exr P3 masters corresponding to item I.A.3 above, on LTO7, LTFS 2.2, or later.
- I.B.4 Textless Backgrounds for the DSM/Render File WITHOUT the color baked in, with Lut either in the form of dpx or exr P3 masters, corresponding to item I.A.7 above, on LTO7, LTFS 2.2, or later.
- I.B.5 Master English Dialogue List - One (1) electronic copy (.doc, .rtf, or .pdf) of a complete industry standard theatrical English language annotated dialogue list of the Final Theatrical Picture specified in Paragraph I.A.4 above, or for 3D pictures, paragraph I.C.4 below, including footage notations of all scene ends, all verbatim dialogue (including all grunts, groans, efforts, and the like), lyrics (if any), translations and phonetic transcriptions of all spoken dialogue spoken in other than English, and annotations of all colloquial slang, historical events, technical terms, and the like. Dialogue lists should be calculated on an AB-reel basis (2,000-foot reels) and referenced to 35mm film running at 24 frames per second. The Master English Dialogue List must be created by a Columbia Pictures approved vendor.
- I.B.6 Master English Spotting List - One (1) electronic copy (.doc, .rtf, or .pdf) of a complete industry standard theatrical English language annotated spotting list of the Final Theatrical Picture specified in Paragraph I.A.4 above, or for 3D pictures, paragraph I.C.4 below, including subtitle-by-subtitle in, out, and length footages, lyrics (if any), speaker and addressee identification, annotations of all colloquial slang, historical events, technical terms, and the like, and laboratory and translator instructions. Spotting lists should be calculated on an AB-reel basis (2,000-foot reels) and referenced to 35mm film running at 24 frames per second. The Master English Spotting List must be created by a Columbia Pictures approved vendor.

**3D DELIVERY MATERIALS  
(APPLIES ONLY TO 3D MOTION PICTURES)**

**I.C 3D D.I. MASTER FILES, DCDM (Uncompressed Image & Uncompressed Audio), DCP, DKDM, DSM/Master Render**

*Deliver Materials Per the Following. Electronic Delivery is via ASPERA. A file transfer service other than ASPERA must be approved by Columbia Pictures.*

| Electronic Delivery of DCDM & DCDM Audio to:   | Physical Delivery of LTOs and HDDs to:                        |
|--|---|
| DELUXE DIGITAL CINEMA<br>300 S. Flower Street<br>Burbank, CA 91502<br>Attention: Amanda Vackrinis<br>Amanda.vackrinis@bydeluxe.com<br>818-260-3684 | Michael Friend<br>Michael_friend@spe.sony.com<br>310-244-7426 |

I.C.1 Electronic Delivery of the 3D 2K DCDM – Transmit to Amanda Vackrinis at Deluxe Digital Cinema.

I.C.2 3D 2K Digital Cinema Distribution Master – Image (DCDM Image): One (1) “Right Eye” and One (1) “Left Eye” 3D 2K Digital Cinema Distribution Master – Image in TIFF (.tiff), 16 bit, XYZ file format, manufactured in accordance with DCI and SMPTE Digital Cinema Distribution Master-Image standards in effect at the time of manufacture, conforming in all respects to the Picture specifications, titled with the animated head and static tail logos of the applicable Columbia designated distribution entity appended thereto and delivered electronically on LTO7., LTFS 2.2, or later. One (1) for silver screen 3D systems, **and only if requested by Columbia Pictures**, one (1) for white screen 3D systems.

I.C.3 3D Left Eye & Right Eye D.I. Master Archival Files All digital cinema data files used to make the DCDM specified in I.C.2 below and the Textless backgrounds specified in I.B.1 below, either in the form of .dpx or .exr P3 masters WITH the color baked in and delivered on LTO7, LTFS 2.2, or later.

I.C.4 Digital Cinema Distribution Master - Audio (DCDM-Audio) One (1) DCDM – Audio for each sound format (i.e., 5.1, 7.1, etc.) being released in Digital Cinema, made from the print master specified in III.A.2 below (or corresponding print masters for additional formats such as 7.1, Dolby Atmos, etc.), conformed to be in perfect synchronization with the DCDM-Image in paragraph I.C.2 above, manufactured in accordance with the SMPTE Digital Cinema Distribution Master Audio standards in affect at the time of manufacture. The DCDM-Image shall be formatted for the DCP and QC’d before delivering electronically to Deluxe Digital Cinema (DDC).

I.C.5 3D 2K Digital Cinema Package (DCP) on CRU hard drive – One (1) complete Original Version Digital Cinema Package (DCP) for each studio approved sound format being released in Digital Cinema for silver screen 3D systems, **and - only if requested by Columbia Pictures** - one (1) DCP for white screen 3D systems. DCPs to be manufactured in accordance with DCI and SMPTE Digital Cinema Package standards in effect at the time of manufacture [Compressed (JPEG 2000), Encrypted (AES-128), Wrapped (MXF) file] on a CRU or Columbia approved hard drive compiled with all applicable Image, uncompressed Audio, and Subtitle files which shall be the first Columbia approved DCP created from the DCDM-Image and DCDM-Audio specified in I.C.2 and I.C.3 above. A separate, properly formatted MPAA rating card for the picture should be included. The DCP must be manufactured by Deluxe Digital Cinema (DDC). The quality of the picture image and of the soundtrack(s) shall conform to the quality established by Columbia’s current practice.

- I.C.6 3D Distribution Key Delivery Message (DKDM) Files One (1) Key Delivery Message File targeted to the mastering devices specified by Columbia Pictures usable for I.C.4 above (the DCP). Email Deluxe Digital Cinema (DDC) for the most current Distribution Certificate: [sonystudiosupport@bydeluxe.com](mailto:sonystudiosupport@bydeluxe.com)
- I.C.7 Textless Backgrounds for the 3D 2K DCDM TIFF XYZ Archival File, 16 bit, on LTO7, LTFS 2.2, or later.
- I.C.8 Textless Backgrounds for the 3D D.I. Master Archival File of the dpx or exr P3 Masters WITH the color baked in on LTO7, LTFS 2.2, or later.

**I.D YCM s**

***Deliver to:***

Michael Friend  
Michael\_friend@spe.sony.com  
310-244-7426

- I.D.1 2D Digital-Source 35mm (YCM) Separation Fine Grain Master Negatives - One (1) set of three (3) complete 35mm separation master negatives (YCM) made from the DCDM DI data specified in I.A.2 above, laser recorded on Estar base 35mm film stock.
- I.D.2 Textless Backgrounds for 2D Digital Source 35mm YCM – One (1) set of three (3) complete 35mm separation master negatives (YCM) made from the DCDC DI data specified in item I.B.2 above, laser recorded on Estar base 35mm stock.

**I.E 35MM ARCHIVAL DIGITAL NEGATIVE, ANSWER PRINT & OPTICAL SOUND NEGATIVE (ONLY IF REQUESTED BY COLUMBIA PICTURES)**

***Deliver to:***

**FOTOKEM**  
2801 W. Alameda Ave.  
Burbank, CA 91505  
Attention: Ray Morfino

- I.E.1 One (1) Archival 2D 35mm 2K or 4K Digital Original Negative (DO): **Only if requested by Columbia Pictures**, One (1) 2D 2K or 4K resolution laser-recorded brand new Kodak spliceless, color, FULL FRAME picture negative on Estar base stock and the original Data Files (format to be approved by Columbia and delivered on LTO6 or LTO7), conforming in all respects to the Picture Specifications detailed in the Agreement, if any. The digital negative shall not contain any physical damage, shall be titled and conformed in all respects to the Digital Original Print specified in Paragraph I.E.2 below, with such negative to have the animated head and static tail logos of the applicable Columbia distribution entity attached thereto, and with the MPAA rating card affixed immediately after the end credits.
- I.E.2 One (1) 35mm Color Approved Composite or Silent Digital Original Print (from DO) **If an Archival DO has been requested by Columbia Pictures and only if Columbia Pictures requests a Print from that DO**, one (1) 35mm brand new, no-splice, color composite or silent print on Kodak stock, made from the digital negative specified in I.E.1 above. If the print is in composite form, it shall have an SR/SRD soundtrack made from the Optical Sound Negative specified in I.E.3 below and shall be in perfect synchronization with the photographic action. Such print shall be without scratches, spots, abrasions, dirt, cracks, tears or any other damage of any kind whatsoever. Quality of picture image and soundtrack shall conform to the quality established by current practice in pictures made by major motion picture studios in Los Angeles.

- I.E.3 One (1) 35mm SR/SRD Optical Soundtrack Negative **If a DO and Print have been requested by Columbia Pictures and only if Columbia Pictures requests an Optical Sound Negative**, One (1) 35mm wholly original, brand new, English language version Dolby SR/SRD optical soundtrack negative made from the 5.1 print master specified in III.A.2. below and the Dolby MOD or CF Card specified in III.A.4 below. Such soundtrack negative shall contain the soundtrack for the Columbia designated animated logo. The optical soundtrack negative shall be in perfect synchronization with the digital negative and shall not contain any physical damage or splices.
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**II. TRAILER DIGITAL FILES, D-M-E AUDIO FILES (ONLY IF REQUESTED BY COLUMBIA PICTURES)**

***Deliver to:***

SPE WORLDWIDE MARKETING  
10202 W. Washington Boulevard  
Thalberg Annex  
Culver City, California 90232  
Attention: Arthur Shapiro or as specified by SPE Worldwide Marketing

- II.1 Trailer Digital Files – 2D (and 3D if applicable) Digital files to be delivered electronically via ASPERA or another Columbia Pictures approved file transfer service. File must be 2K DCDM (.tiff, XYZ file format), native aspect ratio only, texted and textless with HD ProRez texted and textless.
- II.2 Trailer Uncompressed 48K Broadcast Wave Audio Format Digital Files of the separate Dialogue, Music, and Effects tracks with the 2-Track Stereo Final Mix and 2-Track Stereo Split Tracks and the 5.1 Final Mix and 5.1 Audio Stems delivered electronically via ASPERA or another Columbia Pictures approved file transfer service.
- II.3 Trailer Music Cue Sheet One (1) electronic copy (.doc, .rtf, or .pdf) of the music cue sheet for the trailer in the standard form showing particulars of all music synchronized with the Trailer, including but not limited to titles, composers, publishers, applicable performing societies (e.g. ASCAP, BMI), form of usage (e.g. visual, background, instrumental, vocal, etc.) and timings. The cue sheet shall indicate whether a master use license is required on each outside cue listed on the cue sheet along with its source (e.g. record company name).
- II.4 Combined Dialogue and Spotting List of the Original Language Version (OV CDSL) created by a Columbia Pictures approved vendor.
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**III. SOUND AND MUSIC DELIVERABLES**

**Audio Delivery Methodology and Archiving:** Unless otherwise authorized by Columbia Pictures, all audio files not created/mixed on the Sony Pictures Lot listed in this section including but not limited to stems, print masters, M&Es, pre-dubs and sound editorial sessions must be delivered to an approved Sony Pictures Aspera site and on a Columbia Pictures approved hard disk drive (HDD) to the location specified below for Sound Materials, for archiving onto Sony Pictures Entertainment’s (SPE) Audio Archive System. If mixed on the Sony Pictures Lot, they must be prepared as specified and delivered from the mix stage server to the PMC Archive Department for archiving onto Sony Pictures Entertainment’s (SPE) Audio Archive System.

All audio must be named, formatted and delivered to the specifications detailed in the SPE Audio Engineering Specifications, attached hereto as “Schedule A.”

All sound material to be delivered as Pro Tools V12 or later sessions with consolidated .wav audio files.

***Deliver Sound Materials via Aspera and HDD Per the Below:***

|   |
|---|
| SPE POST SERVICES<br>10202 West Washington Boulevard<br>Sound Shipping, Keaton 107<br>Culver City, California 90232<br>Attention: Brian Vessa/Feature Mastering<br><a href="mailto:Brian_vessa@spe.sony.com">Brian_vessa@spe.sony.com</a><br><a href="mailto:Feature_mastering@spe.sony.com">Feature_mastering@spe.sony.com</a><br>310-244-3306 |
|---|

**All 2D and 3D Motion Pictures**

**SOUND DEPARTMENT DELIVERABLES**

- III.A.1 Domestic Dub Final Mix Stems (“5.1 Wide Stems”), One (1) set of the separate Multiple Track Dialogue, Music, Effects and additional (“Stems”) digital discrete audio masters of the final domestic dub used to manufacture the multi-track stereo print masters specified in paragraph III.A.2 below, fully split and as wide as mixed (e.g. DX, MX, FX, BG, Foley, Crowd, Walla) and in perfect synchronization with the DCDM specified in paragraph I.A.2 above.
- III.A.2 6-Channel (5.1) Domestic Dub Printmaster (“5.1 Printmaster” ), One (1) 6-channel multi-track printing master mixed down from the stems specified in paragraph III.A.1 above to be used to manufacture the DCDM-Audio which is in perfect synchronization with the DCDM specified in paragraph I.A.2 above.
- III.A.3 International Music and Effects Stems (“6+2 M&E Stems”), One (1) set of the separate Multiple Track Music and Effects Fill, Music, Effects and additional (“M&E Stems”) digital discrete audio masters used to manufacture the 6+2 International Music and Effects Master specified in paragraph III.A.4 below, with the layout matching the Domestic Dub Final Mix Stems specified in paragraph III.A.1 above, (substituting the Fill Music and Effects Stem for the Dialog stem), and in perfect synchronization with the DCDM specified in paragraph I.A.2 above. (Note that the Fill Music and Effects Stem is typically the DX stem with all dialog muted, leaving only production effects, plus any fill that was created to cover production effects that were lost when muting the dialogue). See Appendix E for detailed specifications.
- III.A.4 6+2 International Music and Effects Master (“Main M&E”), fully-filled, with dialogue guide track and in perfect synchronization with the DCP specified in paragraph I.A.2 for 2D pictures or paragraph I.C.2 for 3D pictures. This must also include the final mix dialogue stem.
- III.A.5 International Multi-track Stereo Music and Effects Optional Units (“M&E Optionals”), created in conjunction with the 6+2 M&E in III.A.4 above. Quantity and type are determined per title. These are delivered in the same Pro tools “supersession” as the 6+2 Main M&E in III.A.4 above.
- III.A.6 Fully Filled Effects Stem (“5.1 Filled FX Stem”), One (1) 5.1 fully-filled effects stem, which is the Domestic Final Effects stem from III.A.1 that has been filled with additional material to replace production effects originally in the Dialog Stem, and used to manufacture the 6+2 International Music and Effects Master in III.A.4 above.
- III.A.7 Dialogue “Skeleton Session” for Foreign Dubbing One (1) Workstation session used to create the final mix Dialogue Stem in its Native Format (usually Atmos or 5.1), containing the automation and plug-ins with no media (audio files). Typically, there is a pro tools session that is created from the dialog stem mix session using “save copy” with no audio files.

- III.A.8 Pre-mix Elements (“Predubs”), typically Dialogue, ADR, Foley, BG’s and multiple Effects. **If these are virtual, they must be rendered (i.e. recorded) into flat audio files with all plug-ins and automation recorded in.** Note that these are distinct from the sound editorial sessions in III.A.9 below.
- III.A.9 Sound Editorial Sessions used on the mixing stage, typically Dialogue, ADR, Foley, BG’s and multiple Effects. Note that these are distinct from the Pre-mix elements in III.A.8 above.
- III.A.10 Sound Editorial Work Materials: To be delivered on HDD only, all original production dialogue and sound reports along with any other sound recorded for the picture; all Dialogue units, FX units, and music units. On a separate HDD, all ADR recorded for the Picture along with corresponding cue sheets. On a separate HDD, all TV/Airline ADR recorded for the Picture along with corresponding cue sheets with circled takes noted and the original lines/words and the replacement lines/words for use in preparing a TV/Airline version noted. The TV/Airline ADR should be clearly labeled “TV/Airline ADR.”
- III.A.11 QuickTime (QT) Work Picture on HDD, DVD-R or delivered Via Aspera A Quicktime (QT) of the feature with associated audio tracks, with one file per reel. This is the same picture source that was used on the mixing stage and by the sound editors, synchronous with the master audio files and in all respects a clone of the theatrical release version of the Picture. Preferred specs for the QTs are DNxHD 36 (1920x1080) in a Quicktime wrapper (.mov). ProRes Proxy (1920x1080 or 960x540) will be accepted; consult with Sony Post Services with any questions as to deliverable formats. To be delivered along with Sound Editorial Work Materials detailed in III.A.10 above.
- III.A.12 Home Theatre “Nearfield” Mix (Required unless waived by Columbia Pictures). An additional mix using nearfield loudspeakers at 75-79 SPL to be used in video mastering and home entertainment. Required audio elements and formatting are per Appendix E. Note this is a full-range mix optimized for the home and is not a broadcast-level mix to a broadcaster’s loudness spec.

#### **MUSIC DEPARTMENT DELIVERABLES**

*Deliver Music Deliverables Electronically and on HDD to:*

SPE POST SERVICES  
10202 West Washington Boulevard  
Sound Shipping, Keaton 107  
Culver City, CA 90291

Attn: Brian Vessa  
[Brian\\_vessa@spe.sony.com](mailto:Brian_vessa@spe.sony.com)  
310-244-3306

- III.A.13 Music Editorial Sessions used on the mixing stage to create the final mix stems. Delivery is on HDD
- III.A.14 All Original Music Score multi-track recordings, including both master takes and outtakes To be delivered on HDD.
- III.A.15 An electronic copy of the Music Score Log sheets containing all cues, takes and titles on the hard drives, indicating whether take is a Master or outtake.
- III.A.16 All Original Music mix-downs of recordings into any format (e.g. 5.1), including but not limited to record mixes (if such exist) on HDD.
- III.A.17 All Original Music stereo mix-downs of recordings, to standard CD, with 4 (four) copies thereof.
- III.A.18 Music Mix-down workstation sessions and audio files used to create the mixdowns in paragraph III.A.17 above on HDD



### **III.B Additional deliverables for 2D and 3D Motion Pictures with audio configurations greater than 5.1:**

#### **Additional deliverables for Motion Pictures mixed in 7.1 (ONLY IF REQUESTED BY COLUMBIA PICTURES):**

- III.B.1 Domestic Dub Final Mix Stems (“7.1 Wide Stems”), typically multiple Dialogue, Music, Effects and additional stems, fully split and as wide as mixed (e.g. DX, MX, FX, BG, Foley, Crowd, Walla).
- III.B.2 8-Channel (7.1) Domestic Dub Printmaster (“7.1 Printmaster”)
- III.B.3 International Music and Effects Stems (“8+2 M&E Stems”), typically M&E Fill, Music, Effects and additional M&E stems used to manufacture the 8+2 International Music and Effects Master specified in paragraph III.B.4 below, with the layout matching the Domestic Dub Final Mix Stems specified in paragraph III.B.1 above, (substituting the Fill Music and Effects Stem for the Dialog stem), and in perfect synchronization with the DCDM specified in paragraph I.A.2 above. (Note that the Fill Music and Effects Stem is typically the DX stem with all dialog muted, leaving only production effects, plus any fill that was created to cover production effects that were lost when muting the dialog.) See Appendix E for detailed specifications.
- III.B.4 (8+2) International Music and Effects Master (“Main M&E”), fully-filled, with dialogue guide track. This must also include the final mix 7.1 dialogue stem
- III.B.5 International Multi-track Stereo Music and Effects Optional Units (“M&E Optionals”), created in conjunction with the 8+2 M&E in III.B.4 above. Quantity and type are determined per title. These are delivered in the same Pro tools “supersession” as the 8+2 Main M&E in III.B.4 above.
- III.B.6 Fully Filled Effects Stem (“7.1 Filled FX Stem”), One (1) 7.1 fully-filled effects stem, which is the Domestic Final Effects stem from III.B.1 that has been filled with additional material to replace production effects originally in the Dialog Stem, and used to manufacture the 8+2 International Music and Effects Master in III.B.4 above.

#### **Additional deliverables for Motion Pictures mixed in IMAX 5.0 (ONLY IF REQUESTED BY COLUMBIA PICTURES):**

**NOTE: IMAX 5.0 is actually delivered as an 8.0. There are 3 optional channels that are rarely used but are in the format.**

- III.B.7 Domestic Dub Final Mix Stems (“IMAX 5.0 Wide Stems”), typically multiple Dialogue, Music, Effects and additional stems, fully split and as wide as mixed (e.g. DX, MX, FX, BG, Foley, Crowd, Walla).
- III.B.8 5-Channel (5.0) Domestic Dub Printmaster (“IMAX 5.0 Printmaster”).
- III.B.9 International Music and Effects Stems (“5.0+1 M&E Stems”), typically M&E Fill, Music, Effects and additional M&E stems used to manufacture the 5.0+1 International Music and Effects Master, with the layout matching the Domestic Dub Final Mix Stems specified in paragraph III.B.7 above (substituting the Fill Music and Effects Stem for the Dialog stem.), and in perfect synchronization with the DCDM specified in paragraph I.A.2 above. (Note that the Fill Music and Effects Stem is typically the DX stem with all dialog muted, leaving only production effects, plus any fill that was created to cover production effects that were lost when muting the dialog.). See Appendix E for detailed specifications.
- III.B.10 (5.0+1) International Music and Effects Master (“IMAX Main M&E”), fully-filled, with dialogue guide track. This must also include the final mix IMAX 5.0 dialogue stem.
- III.B.11 International Multi-track Stereo Music and Effects Optional Units (“M&E Optionals”), created in conjunction with the 5.0+1 M&E in III.B.10 above. Quantity and type are determined per title. These are delivered in the same Pro tools “supersession” as the 5.0+1 Main M&E in III.B.10.
- III.B.12 Fully Filled Effects Stem (“IMAX 5.0 Filled FX Stem”), One (1) IMAX 5.0 fully-filled effects stem, which

is the Domestic Final Effects stem from III.B.7 that has been filled with additional material to replace production effects originally in the Dialog Stem, and used to manufacture the 5.0+1 International Music and Effects Master in III.B.10 above.

**Additional deliverables for Motion Pictures mixed in Dolby Atmos (ONLY IF REQUESTED BY COLUMBIA PICTURES):**

- III.B.13 Domestic Dub Final Mix Stems (“Atmos Wide Stems”), typically multiple Dialogue, Music, Effects and additional stems, fully split and as wide as mixed (e.g. DX, MX, FX, BG, Foley, Crowd, Walla). This has the “stem beds” and all objects.
- III.B.14 Atmos Domestic Dub Printmaster (“Atmos Printmaster”). This has the “composite bed” and all objects.
- III.B.15 Atmos Domestic Dub Printmaster RMU File (“Atmos RMU Printmaster”). This is the Atmos printmaster that has been recorded into an RMU file using the Dolby RMU. Note, this is not the MXF file.
- III.B.16 Atmos Domestic Dub Printmaster RMU MXF File (“Atmos RMU MXF file”). This is the Atmos RMU printmaster that has been wrapped in MXF.
- III.B.17 International Music and Effects Stems (“Atmos M&E Stems”), typically M&E Fill, Music, Effects, additional M&E stems and all objects used to manufacture the Atmos International Music and Effects Master, with the layout of beds and objects matching the Domestic Dub Final Mix Stems specified in paragraph III.B.20 above (substituting the Fill Music and Effects Stem for the Dialogue Stem), and in perfect synchronization with the DCDM specified in paragraph I.A.2 above. Note that the Fill Music and Effects Stem is typically the DX stem and associated objects with all dialogue muted, leaving only production effects, plus any fill that was created to cover production effects that were lost when muting the dialogue). See Appendix E for detailed specifications.
- III.B.18 Atmos International Music and Effects Master (Atmos Main M&E”), fully-filled, with dialogue guide track. This must also include the final mix Atmos dialogue stem. This has the Main M&E bed, Atmos dialog stem bed, all objects related to the Main M&E and the dialogue stem.
- III.B.19 Atmos International Multi-track Stereo Music and Effects Optional Units (“M&E Optionals”), created in conjunction with the Atmos main M&E in III.B.25 above. Quantity and type are determined per title. These are delivered in the same Pro tools “supersession” as the Atmos Main M&E in III.B.25 above. This has the M&E optional beds and all related objects. Note that the Atmos M&E supersession will contain both the main M&E bed, dialogue stem bed, and the M&E optional beds plus all objects related to these.
- III.B.20 Fully Filled Effects Stem (“Atmos Filled FX Stem”), One (1) Atmos fully-filled effects stem, which is the Domestic Final Effects stem from III.B.20 that has been filled with additional material to replace production effects originally in the Dialog Stem, and used to manufacture the 12+2 International Music and Effects Master in III.B.24 above.
- III.B.21 ADM (Audio Definition Model) – One (1) ADM file of the Atmos printmaster in Broadcast Wave Format (“ADM BWF”) per ITU specifications. This is typically created from either the Atmos printmaster pro tools session or by converting the Atmos RMU Printmaster or MXF file with the Dolby Conversion Tool.

**Additional deliverables for Motion Pictures mixed in IMAX Immersive 12.0 (ONLY IF REQUESTED BY COLUMBIA PICTURES):**

- III.B.22 Domestic Dub Final Mix Stems (“IMAX 12.0 Wide Stems”), typically multiple Dialogue, Music, Effects and additional stems, fully split and as wide as mixed (e.g. DX, MX, FX, BG, Foley, Crowd, Walla).
- III.B.23 (12.0) Domestic Dub Printmaster (“IMAX immersive 12.0 Printmaster”).
- III.B.24 International Music and Effects Stems (“12.0+2 M&E Stems”), typically M&E Fill, Music, Effects and additional M&E stems used to manufacture the 12.0+2 International Music and Effects, with the layout matching the Domestic Dub Final Mix Stems specified in paragraph III.B.28 above (substituting the Fill Music and Effects Stem for the Dialog stem.), and in perfect synchronization with the DCDM specified in paragraph I.A.2 above. (Note that the Fill Music and Effects Stem is typically the DX stem with all dialog muted, leaving only production effects, plus any fill that was created to cover production effects that were lost when muting the dialog.) See Appendix E for detailed specifications.
- III.B.25 (12.0+2) International Music and Effects Master (“IMAX 12.0 Main M&E”), fully-filled, with dialogue

- guide track. This must also include the final mix IMAX 12.0 dialogue stem.
- III.B.26 International Multi-track Stereo Music and Effects Optional Units (“M&E Optionals”), created in conjunction with the 12.0+2 M&E in III.B.31 above. Quantity and type are determined per title. These are delivered in the same Pro tools “supersession” as the 12.0+2 Main M&E in III.B.31 above.
- III.B.27 Fully Filled Effects Stem (“IMAX 12.0 Filled FX Stem”), One (1) IMAX 12.0 fully-filled effects stem, which is the Domestic Final Effects stem from III.B.28 that has been filled with additional material to replace production effects originally in the Dialog Stem, and used to manufacture the 12.0+2 International Music and Effects Master in III.B.31 above.

**Additional deliverables for Motion Pictures mixed in DTS:X (ONLY IF REQUESTED BY COLUMBIA PICTURES):**

- III.B.28 Domestic Dub Final Mix Stems (“DTS:X Wide Stems”), typically multiple Dialogue, Music, Effects and additional stems, fully split and as wide as mixed (e.g. DX, MX, FX, BG, Foley, Crowd, Walla). This has the “stem beds” and all objects.
- III.B.29 DTS:X Domestic Dub Printmaster (“DTS:X Printmaster”). This has the “composite bed” and all objects
- III.B.30 DTS:X Domestic Dub Printmaster MDA File (“DTS:X MDA Printmaster”). This is the DTS:X printmaster that has been coded into a MDA file using the DTS plug-ins. Note, this is not the MXF file.
- III.B.31 DTS:X Domestic Dub Printmaster MDA/MXF File (“DTS:X MDA/MXF file”). This is the DTS:X MDA printmaster that has been wrapped in MXF.
- III.B.32 International Music and Effects Stems (“DTS:X M&E Stems”), typically M&E Fill, Music, Effects, additional M&E stems and all objects used to manufacture the DTS:X International Music and Effects Master, with the layout of beds and objects matching the Domestic Dub Final Mix Stems specified in paragraph III.B.34 above (substituting the Fill Music and Effects Stem for the Dialog stem.), and in perfect synchronization with the DCDM specified in paragraph I.A.2 above. (Note that the Fill Music and Effects Stem is typically the DX stem and associated objects with all dialog muted, leaving only production effects, plus any fill that was created to cover production effects that were lost when muting the dialog.) See Appendix E for detailed specifications.
- III.B.33 DTS:X International Music and Effects Master (DTS:X Main M&E”), fully-filled, with dialogue guide track. This must also include the final mix DTS:X dialogue stem. This has the Main M&E bed, DTS:X dialog stem bed, all objects related to the Main M&E and the dialogue stem.
- III.B.34 DTS:X International Multi-track Stereo Music and Effects Optional Units (“M&E Optionals”), created in conjunction with the DTS:X main M&E in III.B.39 above. Quantity and type are determined per title. These are delivered in the same Pro tools “supersession” as the DTS:X Main M&E in III.B.39 above. This has the M&E optional beds and all related objects. Note that the DTS:X M&E supersession will contain both the main M&E bed, dialogue stem bed, and the M&E optional beds plus all objects related to these.
- III.B.35 Fully Filled Effects Stem (“DTS:X Filled FX Stem”), One (1) DTS:X fully-filled effects stem, which is the Domestic Final Effects stem from III.B.34 that has been filled with additional material to replace production effects originally in the Dialog Stem, and used to manufacture the DTS:X International Music and Effects Master in III.B.39 above.
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**HOME VIDEO DISTRIBUTION DELIVERABLES  
(ONLY IF REQUESTED BY COLUMBIA PICTURES)**

Please see the attached addendum titled “Schedule B” - the “SPE Video Master Delivery Specifications” for detailed technical information of the following delivery items.

**IV. HD/UHD HOME VIDEO MASTERS**

*Deliver materials to:*

Sony Pictures Entertainment  
10202 West Washington Blvd.  
Burns Bldg., Room 210  
Culver City, CA 90232  
Attn: Kendra Cueva / Feature Mastering  
[Kendra\\_cueva@spe.sony.com](mailto:Kendra_cueva@spe.sony.com)  
[Feature\\_mastering@spe.sony.com](mailto:Feature_mastering@spe.sony.com)  
310-244-2489

**2D Masters**

- IV.A One (1) HDR UHD 16x9 Original Aspect Ratio Master (16-Bit TIFF files) delivered via Aspera P2P or on LTO6 or LTO7 or on another delivery format that has been approved by Columbia Pictures.
- IV.B One (1) SDR HD 16x9 Full Frame Master (10-Bit LOG DPX files) delivered via Aspera P2P or on LTO6 or LTO7 or on another delivery format that has been approved by Columbia Pictures.
- IV.C Video color correction project scene files used to create IV.A & IV.B along with any LUTs and metadata used in the finishing process.
- a. Color session files (e.g. project or scene files: Baselight scene export, Resolve project export, etc.)
  - b. Output display LUT(s) files used in color session files
  - c. Any input LUTs used in color session files or if applied prior to import to color session.
  - d. Documented description of how the video render was created, including LUT usage.

**2D Metadata**

Please see the attached addendum titled “Schedule B” for the SPE Mastering Metadata Delivery Specifications.

- IV.D.1 One Dolby Vision Metadata XML delivered via Aspera P2P or on LTO6 or LTO7 or on another delivery format that has been approved by Columbia Pictures.
- IV.D.2 All SMPTE ST 2086 and ST 2094 Metadata as specified in the attached “Schedule B” delivered via Aspera P2P or on LTO6 or LTO7 or on another delivery format that has been approved by Columbia Pictures.  
*Consult with SPE if there are any questions regarding capturing or delivering this metadata.*

**3D Masters (For 3D Motion Pictures Only)**

- IV.E One (1) 3D SDR HD 16x9 Original Aspect Ratio Master on LTO6 (or as a data file if created at Deluxe/Company 3) or on another delivery format that has been approved by Columbia Pictures.

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**TELEVISION & AIRLINE VERSION MATERIALS  
(ONLY IF REQUESTED BY COLUMBIA PICTURES)**

**V. TV & AIRLINE VERSION MATERIALS*****Deliver to:***

Michael Friend

[Michael\\_friend@spe.sony.com](mailto:Michael_friend@spe.sony.com)

310-244-7426

TV Version Running Time and S&P requirements are rarely solidified at the time of final production delivery. Therefore, in addition to a COMPLETED DIRECTOR AND STUDIO APPROVED TV OR AIRLINE VERSION, all elements that have been created or recorded to be used in a TV version of the film must be delivered as separate elements. (Runtime typically is inclusive of main titles & end credits, not to exceed ninety (90) minutes, or be less than eighty-eight (88) minutes, inclusive of one-minute end credits when projected at twenty-four frames per second (24 fps).

**V.A TV VERSION**

- V.A.1 The entire theatrical Avid project with all cutting room media on a portable hard drive(s). Within the Avid project the following must be clearly identified:
- a. Final Avid Bin which contains the Avid Sequences of the Final Theatrical Reels
  - b. Avid bin containing all alternative (TV safe) takes that were shot during production
  - c. Avid bin containing all approved TV ADR that was recorded.
  - d. Avid bin containing studio and director approved TV version of the film
- V.A.2 One (1) HDCAM-SR, or 1080p ProRes 422HQ (minimum resolution requirement) Of The Entire TV Version Of The Picture
- V.A.3 One (1) 2-Track TV Version Dolby Stereo (Lt-Rt) Print Master
- V.A.4 One (1) 6-Track (5.1) TV Version Discrete Print Master
- V.A.5 One (1) 6-Track (5.1) TV Version Final M&E (fully-filled with optional material and dialogue stem)
- V.A.6 All conformed/non-conformed TV Sound editorial audio including ADR and Audio for alternate or added scenes
- V.A.7 One (1) CD, DVD or portable hard drive containing 48k 23.98fps (or project frame rate) of the original TV Version ADR (Looping) sessions
- V.A.8 One (1) printed copy & one (1) MS Office Word document on CD or DVD containing the ADR log Notes and 'Takes' for the original TV Version ADR session

**V.B AIRLINE VERSION**

**Note: Airline Version Running Time** (inclusive of main titles & end credits) not to exceed one hundred twenty (120) minutes when projected at twenty-four frames per second (24 fps).

- V.B.1 The entire theatrical Avid project with all cutting room media on a portable hard drive(s). Within the Avid project the following must be clearly identified:
- a. Final Avid Bin which contains the Avid Sequences of the Final Theatrical Reels
  - b. Avid bin containing all alternative (TV safe) takes that were shot during production
  - c. Avid bin containing all approved Airline Version ADR that was recorded.

- d. Avid bin containing studio and director approved Airline Version of the film
- V.B.2 One (1) HDCAM-SR or 1080p ProRes 422HQ (minimum resolution requirement) Of The Entire Airline Version Of The Picture
- V.B.3 One (1) 2-Track Airline Version Dolby Stereo (Lt-Rt) Print Master
- V.B.4 One (1) 6-Track (5.1) Airline Version Final M&E (fully-filled with optional material and dialog stem)
- V.B.5 All conformed/non-conformed Airline Version Sound editorial audio including ADR and Audio for alternate or added scenes
- V.B.6 One (1) CD, DVD or portable hard drive containing 23.98fps (or project frame rate) of the original Airline Version ADR (Looping) Sessions
- V.B.7 One (1) printed copy & one (1) MS Office Word document on CD or DVD containing the ADR log Notes and 'Takes' for the original Airline Version ADR session

**Additional Television and Airline Version Materials:**

- V.C.1 One (1) 6-Track Separate Stereo Reduction of Domestic Dub ("DME") of Theatrical Printmaster.
  - V.C.2 Main and/or End Titles with Actor additions/deletions if in any way different from Theatrical;
  - V.C.3 Main and/or End Titles with Music additions/deletions if in any way different from Theatrical.
  - V.C.4 Music Cue Sheets if Music additions/deletions are in any way different from Theatrical version
  - V.C.5.a One (1) Consolidated document containing all song lyrics used in the Theatrical Version
  - V.C.5.b One (1) consolidated document containing all song lyrics used in the Television and/or Airline versions if in any way different from Theatrical version
  - V.C.6 HDCAM-SR 4:4:4 Dailies of alternative 'takes,' cover shots, or other material integrated into TV and/or Airline versions, segregated, clearly marked as "TV/Airline Augmentation Reel"
  - V.C.7 35mm Negative or HCAM-SR 4:4:4 if 2.40 or 1.85 with main, end, narrative titles for 4X3 1.33 TV format
  - V.C.8 Written log of all changes made for TV and/or Airline Versions and, if available, a CD of the Edit Decision List (EDL) using the theatrical version as a single source and all EDL events relate to changes made for the TV or Airline version.
  - V.C.9 One (1) consolidated document of the final end credits with non-contractual credits noted.
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**VI. WORK MATERIALS**

**35mm Negative & Positive Print Materials**

*Deliver to:*

Michael Friend

[Michael\\_friend@spe.sony.com](mailto:Michael_friend@spe.sony.com)

310-244-7426

- VI.A All Original Negative or electronic equivalent of all Cutouts, Outtakes, Trims And Lifts, Actor's Screen Tests, etc.
- VI.B All positive prints of all Cutouts, Outtakes, Trims And Lifts, Actor's Screen Tests, etc.
- VI.C All Soundtrack cutouts, outtakes, trims and lifts

**QuickTime Work Picture on HDD or delivered Via Aspera:**

*Deliver to:*

SPE Post Services  
10202 W. Washington Blvd.  
Culver City, California 90232  
Attention: Brian Vessa  
[Brian\\_vessa@spe.sony.com](mailto:Brian_vessa@spe.sony.com)  
310-244-3306

VI.D A Quicktime (QT) of the Work Picture & Audio Tracks with one file per reel. This is from the same picture source used on the mixing stage and by the sound editors, synchronous with the master audio files and in all respects a clone of the theatrical release version of the Picture. Preferred specs for the QTs are DNxHD 36 (1920x1080) in a Quicktime wrapper (.mov). ProRes Proxy (960 x 540 or 1920x1080) is accepted if DNxHD is not available; consult with Sony Post Services with any questions as to deliverable formats.

**Picture Editorial Work Materials – Deliver on HDD & on LTO6 or LTO7 to:**

Michael Friend  
[Michael\\_friend@spe.sony.com](mailto:Michael_friend@spe.sony.com)  
310-244-7426

- VI.E An additional copy of the QuickTime (QT) Work Picture & Audio Tracks detailed in VI.D above.
- VI.F The entire theatrical Avid project backup with all of the cutting room media on HDD. Within the Avid project, the following must be clearly identified:
- a. Final Avid bin containing the Avid Sequences of the Final Locked Theatrical Reels including a copy of the EDL, Confidence Checks, and a LFOA of the Final Cut.
  - b. A complete backup of the all dailies, Avid media, and EDLs, Previews and any other alternate version of the Picture.
  - c. Avid bin containing all alternate TV/Airline safe takes that were shot during production.
  - d. Avid bin containing all approved TV/Airline ADR that was recorded.
  - e. Avid bin containing the D.I. and Final Mix files along with any other data bases created during post production.
  - f. All conformed/non-conformed TV/Airline sound editorial audio including ADR and Audio for alternate or added scenes.

**Original Camera Files and other Original Elements on LTO6 or LTO7:**

- VI.G.1 All original camera files  
VI.G.2 All rendered scan data: all files used to manipulate or log the manipulation  
VI.G.3 VFX files  
VI.G.4 All opticals  
VI.G.5 Title files  
VI.G.6 All stock footage used in the production  
VI.G.7 Any ancillary files or logs used in the digital intermediate process

**Lined Scripts, Code Books, Camera, Sound, Lab & Transfer Reports, Etc.:**

- VI.H Original Lined or Cutting Script (with notes) prepared by the Script Supervisor
  - VI.I Editor's Code Book
  - VI.J All Camera Reports, Laboratory Film Reports, Sound Recordings, and Transfer Reports
  - VI.K Detailed Inventory of All Editorial Film Materials (Picture & Sound) used/manufactured during Post.
  - VI.L All Edit Decision Lists (EDLs), Logs and other Databases created during Post
  - VI.M All Photographic & Non-Photographic Material for Main Titles, End Credits, inserts, locale titles, etc.
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VII. **MUSIC MATERIALS.**

DELIVER TO SONY PICTURES ENTERTAINMENT MUSIC DEPARTMENT, SONY PICTURES PLAZA, 10202 WEST WASHINGTON BOULEVARD, CULVER CITY, CALIFORNIA 90232, ATTENTION: Jaison Benjamin, 310-244-8428, [jaison\\_benjamin@spe.sony.com](mailto:jaison_benjamin@spe.sony.com)

- A. (1) Theatrical Music Cue Sheets: One (1) hard copy and an electronic copy as a Word Document, of the music cue sheets in standard form showing particulars of all music synchronized with the Picture, including but not limited to titles, composers, publishers, applicable performing societies (*e.g.*, ASCAP, BMI), form of usage (*e.g.*, visual, background, instrumental, vocal, etc.) and timings. The cue sheet shall indicate whether a master use license is required on each outside cue listed on the cue sheet and its source (*e.g.*, record company name).
- (2) TV/Airline Version Music Cue Sheets If the music in the Television/Airline version is altered from the theatrical version, a separate music cue sheet for the TV/Airline version shall be delivered. The cue sheet shall indicate whether a master use license is required on each outside cue listed on the cue sheet and its source (*e.g.*, record company name).
- B. Sheet Music: All sheet music and orchestrations comprising the composer's original score and the band parts of such music and all other original copies of music written or recorded either for the Picture or recordings by any device (*e.g.*, phonograph records, tapes) relating thereto.
- C. Licenses: Duplicate originals (or clearly legible copies, if duplicate originals are unavailable) of all licenses, contracts, assignments and/or other written permissions from the proper parties in interest permitting the use (including use in trailers and television spots) of any musical material of whatever nature used in the production of the Picture including, without limitation, synchronization and master use licenses.
- D. Personal Services Contracts: Duplicate originals (or clearly legible photostatic copies, if duplicate originals are unavailable) of all agreements or other documents relating to the engagement of music personnel in connection with the Picture including, without limitation, those for featured artists, composer(s), music supervisors, conductor(s) and related technicians and administrative staff.
- E. Music Publishing Rights: Duplicate originals of all agreements conveying to Company the exclusive, perpetual, worldwide right to own, copyright, administer, distribute, sell and grant licenses to use and perform the music and/or lyrics of all original musical compositions as well as the underlying background score embodied in the soundtrack of the Picture.



- F. AFM Contracts: If the Picture was produced under the jurisdiction of the AF of M, copies of all contracts for all AF of M members engaged on the Picture.

**VIII. PUBLICITY MATERIALS.**

- A. Color Stills: DELIVER TO PUBLICITY DEPARTMENT, 10202 WEST WASHINGTON BOULEVARD, CULVER CITY, CALIFORNIA 90232, ATTENTION: GLORIA HANN.

- (1) Not less than five hundred (500) original color negatives (or color transparencies or photographs on digital files, if original negatives are not available), as approved in advance of delivery to Columbia by all persons (*e.g.*, actors, key crew members) possessing approval rights over such materials, comprising production, publicity and portrait photographs in such proportions as Columbia may require, and each of which shall bear an explanatory caption. **ALL SUCH MATERIALS SHALL BE DELIVERED AS SOON AS AVAILABLE.**

- B. Press Kit and EPK Materials: DELIVER TO PUBLICITY DEPARTMENT, 10202 WEST WASHINGTON BOULEVARD, CULVER CITY, CALIFORNIA 90232, ATTENTION: JOE WHITMORE.

- (1) Four (4) copies of the synopsis of the Picture and biographies of the individual producer(s), writers, director(s), and principal cast members thereof (such biographies to be approved in advance of delivery to Columbia by all persons having approval rights over such biographies), and all production notes, interviews and other publicity and/or advertising materials which Company has prepared for the Picture (including all footage owned by Company or which is under Company's control which was shot in preparation of EPKs, featurettes, interviews or television specials, if any), in sufficient quantity and variety to enable Columbia adequately to publicize the Picture. **ALL SUCH MATERIALS SHALL BE DELIVERED AS SOON AS AVAILABLE.**

**IX. DOCUMENTS, CONTRACTS AND CREDIT MATERIALS.**

DELIVER TO COLUMBIA, 10202 WEST WASHINGTON BOULEVARD, CULVER CITY, CALIFORNIA 90232, ATTENTION: GABRIELLA ARIAS.

- A. Underlying Rights and Chain of Title: Duplicate originals (or clearly legible photostatic copies, if duplicate originals are unavailable) of all licenses, contracts, assignments and/or other written permissions from the proper parties in interest permitting the use of any literary, dramatic and other material of whatever nature used in the production of the Picture or upon which the Picture is based, including, without limitation, all "chain-of-title" documents relating to Company's acquisition of all necessary rights in and to the Picture and underlying materials.
- B. Personal Services Contracts: Duplicate originals (or clearly legible photostatic copies, if duplicate originals are unavailable) of all agreements or other documents related to the engagement of all above-the-line and/or below-the-line personnel in connection with the Picture, including those for individual producer(s), the director, all writers, all actors other than extras, technicians and administrative staff.
- C. Negative Cost Statement: A statement of the final negative cost of the Picture, certified as being true, correct and complete by an officer of Company; and a "top sheet" from the final budget for the Picture (signed by the producer and director) showing the components of negative cost and any adjustments thereto.

## 2D & 3D Delivery Schedule

- D. Subordination Agreements: Subordination Agreements in form and substance satisfactory to Columbia, from any entity to whom Company sold, transferred, assigned, mortgaged, pledged, charged, hypothecated or otherwise disposed of its rights in and to the Picture prior to the conveyance to Columbia.
- E. Short Form Assignment: A signed and notarized Short Form Copyright Assignment or instrument of transfer, conveying distribution rights to Columbia.
- F. Errors and Omissions Policy: A copy of the errors and omissions insurance policy for the Picture and of a certificate naming Columbia as an additional insured party; with the originals to: Janel Clausen, Sony Pictures Entertainment, Risk Management, 10100 Venice Boulevard, Room 313, Culver City, California 90232.
- G. U.S. Copyright Registration: The U.S. copyright registration certificate(s) for both the screenplay and Picture. (If the U.S. copyright registration certificate for the Picture is not yet available at the time of delivery to Columbia, a copy of the Form PA and evidence of submission and payment of deposit fees shall suffice until such time as the conformed certificate becomes available whereupon, a clearly legible photostatic copy shall be immediately provided to Columbia).
- H. Certificate of Origin: Fifteen (15) originals of a Certificate of Nationality and/or Certificate of Origin (as applicable) and a completed Questionnaire in the form attached hereto as Schedule "3." Note: If the Picture is not a United States production, additional documentation may be required from production personnel, e.g., screenplay writer(s). Please contact Gayle McDonald, Columbia Pictures, 10202 W. Washington Blvd., Sony Pictures Plaza, Room 1006, Culver City, CA. 90232, (310) 244-7553 for further details.
- I. Screen and Paid Advertising Credits: The complete statement of all screen and advertising credit obligations, restrictions and approval rights, including duplicate originals (or clearly legible copies, if duplicate originals are not available) of all contracts or those contractual provisions pertaining to credits pursuant to which any person or entity is entitled to receive screen and/or advertising credits in connection with the Picture; together with a proposed layout of the proposed screen and advertising credits in Columbia's standard format; it being agreed and understood, however, that (a) all screen and advertising credits shall be determined in accordance with the provisions of the Agreement and (b) no such screen or advertising credits shall be photographed without Columbia's prior written approval.
- J. MPAA Rating: A copy of the fully paid certificate issued by the Code and Rating Administration of the Motion Picture Association of America granting the Picture the rating required by the Agreement.
- K. Dubbing and Editing Obligations: A complete English-language statement of all dubbing obligations (if any) and any other third party restrictions and approval rights (including, without limitation, director's editing rights, video mastering consultation or approval rights, etc.), with excerpts from each applicable third party agreement setting forth the precise extent and nature of such obligations, restrictions, and/or approval and consultation rights attached thereto.
- L. Stock Footage/Picture Clips Agreements: Valid and subsisting license agreements from all parties having any rights in any stock footage or film clips used in the Picture, granting to Columbia the perpetual and worldwide right to incorporate said stock footage in the Picture (and/or in trailers and television spots for the Picture) and to distribute, exhibit, advertise and otherwise exploit the Picture or any portion thereof embodying said stock footage or clips in any and all media perpetually throughout the world.

- M. IATSE Seal: If any part of the Picture is produced in the United States, the seal of the International Association of Theatrical and Stage Employees (IATSE) (and/or other guilds or unions having jurisdiction, if required).
- N. Guilds and Unions: A letter, signed by the producer or director of the Picture setting forth all United States and foreign guilds and unions whose members rendered services on the Picture.
- O. SAG: If the Picture was produced under the jurisdiction of SAG, completed copies of the SAG "Final Cast Report" covering all actors engaged in connection with the Picture, including without limitation stunt players, actors rendering singing, looping and "voice-over" services in post-production and actors not appearing in the final cut of the Picture. Actors not appearing in the final cut of the Picture shall be listed on the Final Cast Report as "not photographed" or "cut."
- P. DGA: If the Picture was produced under the jurisdiction of the DGA: The name, social security number, loan out information (where appropriate) and job description of all DGA members engaged on the Picture; and the DGA approval of the final main and end title credits, signed by an authorized representative of the DGA.
- Q. WGA: If the Picture is subject to WGA jurisdiction: The name, address, social security number and loan-out information (where appropriate) for all writers receiving credit on the Picture; a copy of the notice of tentative writing credits delivered to the WGA; a copy of the final WGA notice of final determination of credit on the Picture, signed by an authorized representative of the WGA; and the WGA approval of the final main and end title credits, signed by an authorized representative of the WGA.
- R. AFM: If the Picture was produced under the jurisdiction of the AF of M: Copies of all contracts for all AF of M members engaged on the Picture.
- S. Dolby License Agreement: A fully-executed License Agreement with Dolby Laboratories, Inc (or the other licensor of any other sound system utilized with respect to the Picture).
- T. Product Placement: A letter, signed by Licensor, setting forth all product placement arrangements entered into in connection with the Picture and the consideration provided by both the supplier (e.g., payment, free or discounted product) and the production (e.g., visible display of labels, verbal mention of brand, etc.). For any non-monetary consideration received from suppliers, Licensor shall provide an estimate of the value of such consideration (in U.S. Dollars). The letter shall be accompanied by available substantiating documentation (e.g., written agreements, confirmation letters) as well as a listing of the footage notations determined on the same basis as the CCSL at which all such product placements are seen or heard.

**X. RESIDUALS MATERIALS.**

DELIVER TO CRISTINA SILVERIO, DIRECTOR, RESIDUALS, SONY PICTURES ENTERTAINMENT, 600 CORPORATE POINTE, SUITE 834, CULVER CITY, CALIFORNIA 90231:

- A. A letter, signed and certified to be true and correct, from the producer or director of the Picture, setting forth any and all domestic and foreign unions and guilds whose members rendered services on the Picture.
- B. With respect to each foreign union or guild listed in IX.I, a statement specifying any and all residual obligations which exist in connection with Columbia's exercise of its distribution rights in the Picture, as well as, a copy of each applicable foreign union and/or guild agreement.
- C. All documents and information necessary for Columbia to comply with all residual obligations, including, without limitation, an itemized statement of the total amounts paid to each director, writer, actor, musician and technician employed or in connection with the Picture under the jurisdiction of any guild or union, together with the number of days worked by each, the social security number (or other applicable identification) of each and the name of the guild or union having jurisdiction.
- D. If residuals with respect to some or all media and/or territories have been "bought out," the names of the persons subject to such "buyout" and the method of buyout.
- E. If the Picture was produced under the jurisdiction of the I.A.T.S.E., a completed I.A.T.S.E. Proration Questionnaire in the form attached hereto.
- F. Copies of the materials described in Paragraphs IX.B, N, O, P, Q and R.
- G. The original or a complete photocopy of the Production General Ledger Detail ("Bible") for the production of the Picture.

## SCHEDULE A

### Audio Delivery Specifications

#### Guidelines and References

- Theatrical Audio Specifications and Formatting (see **Appendix A: Theatrical Session Formatting**) - Note each element has unique specifications
- The Reference Picture used on the mix stage must be provided (see **Appendix C: Reference Picture Materials**)
- Full Specifications: Master Delivery Schedule Long Form, Theatrical Audio Deliverables one sheet, Printmaster-M&E-Stems-Predub delivery requirements, SPE Audio File Naming Conventions

#### Required For All Titles

| Audio Elements For All Titles  |
|--|
| Reference Picture used on the mix stage (See <b>Appendix C: Reference Picture Materials</b> )  |
| 5.1 Printmaster (PM), in reels   |
| LtRt Printmaster (PM) (flat, no SR encoding, full level). May be waived if there is a home theater mix.  |
| 5.1 M&E session (MESP), fully-filled with optionals and dialog stem), in reels   |
| 5.1 “Wide” Stems (SMSP) (e.g. DX, Crowd, MX, BG, Foley, FX)  |
| 5.1 M&E “Wide” Stems (MESM), with Fill M&E stem replacing DX stem (e.g. Fill M&E stem, Crowd M&E Stem, MX M&E Stem, BG M&E Stem, Foley M&E Foley, FX M&E Stem)                             |
| 5.1 Fully-Filled Effects Stem (FFXSM)  |
| Dialog “Skeleton Session” for foreign dubbing, in reels, in the natively mixed format. This is the source session used to create the OV DX Stem, with automation and plug-ins but no media |
| Predubs (e.g. Dialog, ADR, Effects, BG & Foley) ( <a href="#">Must be recorded into flat audio files with all plug-ins and automation recorded in</a> )                                    |
| Sound editorial sessions (e.g. Dialog, ADR, Effects, BG & Foley)   |
| TV/Airline ADR and Cue sheets  |
| Music score multitrack recordings (both master and outtakes)   |
| Music score mixdowns (e.g. 5.1)  |
| Music score stereo mixdowns on HDD and CD of master cues   |
| Music workstation sessions used to create the mixdowns   |
| Music editorial sessions   |
| Music score log sheet with circled takes (file copy e.g. PDF, DOCX)  |

#### Additional Elements for Audio Greater Than 5.1

| 7.1 |  |
|-----|--|
|     | 7.1 Printmaster (PM), in reels   |
|     | 7.1 M&E session (MESP), fully-filled with optionals and dialog stem, in reels  |
|     | 7.1 “Wide” Stems (SMSP) (e.g. DX, Crowd, MX, BG, Foley, FX)  |
|     | 7.1 M&E “Wide” Stems (MESM), with Fill M&E stem replacing DX stem (e.g. Fill M&E stem, Crowd M&E Stem, MX M&E Stem, BG M&E Stem, Foley M&E Foley, FX M&E Stem) |
|     | 7.1 Fully-Filled Effects Stem (FFXSM)  |

### IMAX Standard 5.0\*

|  |  |
|--|--|
|  | 5.0 Printmaster (PM), in reels   |
|  | 5.0 M&E session (MESP), fully-filled with optionals and dialog stem, in reels  |
|  | 5.0 "Wide" Stems (SMSP) (e.g. DX, Crowd, MX, BG, Foley, FX)  |
|  | 5.0 M&E "Wide" Stems (MESM), with Fill M&E stem replacing DX stem (e.g. Fill M&E stem, Crowd M&E Stem, MX M&E Stem, BG M&E Stem, Foley M&E Foley, FX M&E Stem) |
|  | 5.0 Fully-Filled Effects Stem (FFXSM)  |

\*IMAX 5.0 is actually delivered as an 8.0. There are 3 optional channels that are rarely used but are in the format

### Additional Elements for Immersive Audio Titles

Note: The released formats for immersive audio will vary by title, and may include any or all of the below

#### ATMOS

|  |   |
|--|---|
|  | Atmos Printmaster (PM) session (composite bed plus objects), in reels   |
|  | RMU/RPL file ("RMU PM") (.rpl folder from original RMU recording.) (can be long form or reels)  |
|  | RMU/MXF file (MXF wrapped .rpl folder), in reels  |
|  | Atmos M&E (MESP) session (M&E bed plus objects, fully-filled with optionals and dialog stem), in reels  |
|  | Atmos "Wide" Stems (SMSP) (e.g. DX, Crowd, MX, BG, Foley, FX)   |
|  | Atmos M&E "Wide" Stems (MESM), (beds and all objects) with Fill M&E stem replacing DX stem (e.g. Fill M&E stem, Crowd M&E Stem, MX M&E Stem, BG M&E Stem, Foley M&E Foley, FX M&E Stem) |
|  | Atmos Fully-Filled Effects Stem (FFXSM)   |
|  | ADM of Atmos Printmaster (ADM-BWF). This is typically an export from Pro Tools or a converted RMU PM or MXF file  |

#### IMAX Immersive 12.0

|  |   |
|--|---|
|  | 12.0 Printmaster (PM), in reels   |
|  | 12.0 M&E session (MESP), fully-filled with optionals and dialog stem, in reels  |
|  | 12.0 "Wide" Stems (SMSP) (e.g. DX, Crowd, MX, BG, Foley, FX)  |
|  | 12.0 M&E "Wide" Stems (MESM), with Fill M&E stem replacing DX stem (e.g. Fill M&E stem, Crowd M&E Stem, MX M&E Stem, BG M&E Stem, Foley M&E Foley, FX M&E Stem) |
|  | 12.0 Fully-Filled Effects Stem (FFSXM)  |

#### DTS:X

|  |   |
|--|---|
|  | DTS:X Printmaster (PM) session (composite bed plus objects), in reels   |
|  | DTS MDA file (can be long form or reels)  |
|  | DTS MDA MXF file (in reels)   |
|  | DTS:X M&E session (MESP) (M&E bed plus objects, fully-filled with optionals and dialog stem), in reels  |
|  | DTS:X "Wide" Stems (SMSP) (e.g. DX, Crowd, MX, BG, Foley, FX)   |
|  | DTS M&E "Wide" Stems (MESM), (beds and all objects) with Fill M&E stem replacing DX stem (e.g. Fill M&E stem, Crowd M&E Stem, MX M&E Stem, BG M&E Stem, Foley M&E Foley, FX M&E Stem) |
|  | DTS:X Fully-Filled Effects Stem (FFXSM)   |

# APPENDIX A: Theatrical Session Formatting

## Audio Encoding

- Audio Codec: PCM
- Channels Per Audio File: One (one channel per audio file, no interleaved audio files)
- Container: .WAV
- Session Type: ProTools Version 12 or later (must be consolidated and have all plug-ins rendered into flat audio files)

### Accepted Formats For All Audio

- True 48.00K or 96.00K
- Sample size: 24 bits per sample
- True 24.00 fps
- 24fps time code (25 fps or 30fps TC accepted)

### Equivalent Accepted Formats For All Audio

- 47.952K/23.976fps and 95.904K/23.976fps (These are equivalent to 48K/24fps and 96K/24fps)
- 23.976 time code (29.97fps TC accepted) if delivering 47.952K/23.976fps and 95.904K/23.976fps

### Accepted Formats For Stems, Predubs, Editorial Sessions and Music ONLY

- True 48K, 23.976fps
- True 96K/23.976fps
- 23.976 time code (29.97fps TC accepted)

### Not Accepted Formats

- 25 fps at any sample rate

## Session and Folder Structure

- For each master audio deliverable, there must be one Pro Tools session per element per soundfield configuration (e.g. 5.1PM, Atmos MESP).
- There is to be a folder for each element and soundfield configuration. (e.g. 5.1 PM, LtRt PM, Atmos Stems, etc).
- For printmasters and M&E's, within each element and audio configuration folder there is to be one folder for each reel. Each reel folder will contain one flattened pro tools session for that reel and an associated "audio files" folder for that session.
  - For example, the 5.1 printmaster folder should contain a folder for each reel containing one pro tools session and one audio files folder with 6 audio files for that reel
- For Stems, M&E Stems and Filled Effects Stem, these can be one session/reel as above, or all reels in the same session at hour = reel
- For Stems, for a given soundfield configuration, all stem types are to be in the same Pro Tools session
- For the filled Music and Effects, this is to be delivered as a "supersession" with the M&E, Multichannel Optionals and dialog guide. A copy of the Dialog Stem is also put into the session.
- Putting the 5.1 and LtRt printmasters in the same session is not permitted
- The pro tools sessions must be "flattened" (consolidated) such that the audio files are contiguous from beginning to end for each reel.
- Each element for each soundfield configuration must be self contained. The Pro Tools session and the audio files folder for each element must be named per the SPE File Naming Specifications, and delivered together in a single folder that is labeled per the SPE File Naming Specifications. This is generally accomplished by "Save Session Copy."
- It is not acceptable to deliver pro tools sessions and audio files separately. Each pro tools session must be delivered with (only) its associated audio files.

Below are screen shots illustrating the correct session and folder structure:

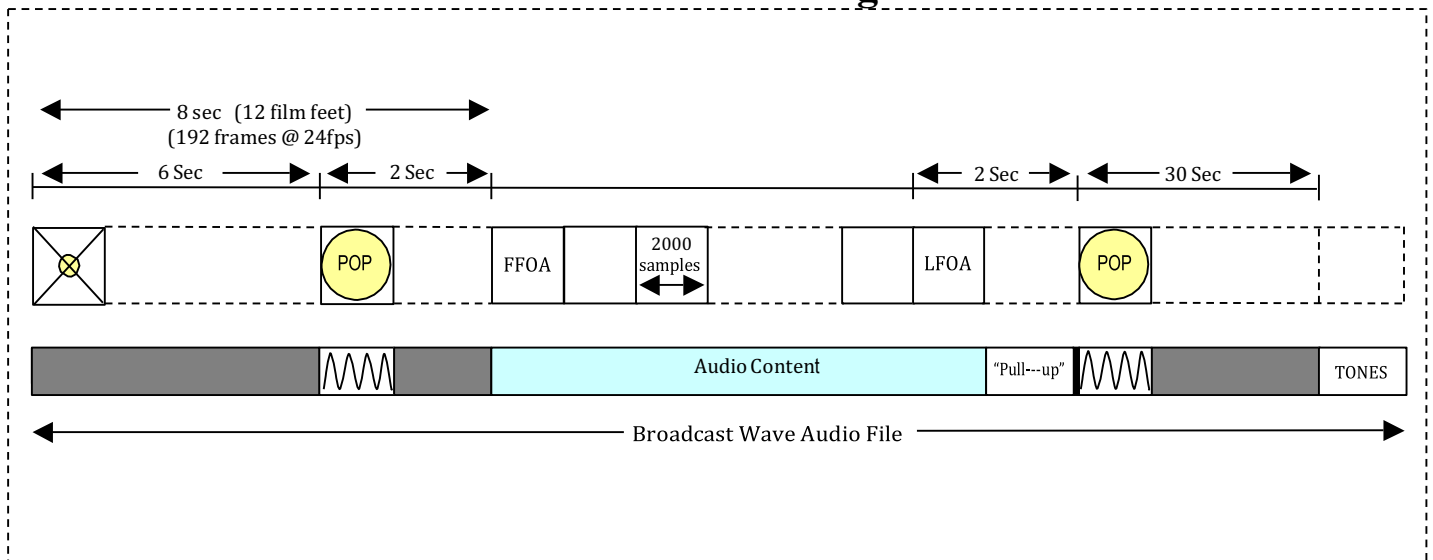




## Formatting and File Naming

- One session per audio element per soundfield configuration per reel. Stems and M&E stems and Filled Effects Stems may be delivered with all reels in the same session.
- Time code hour = reel number
- Audio files must start at exactly at zero feet (i.e. aligned exactly to the left edge of the picture start frame). Typically this is at an even hour time code location (e.g. 03:00:00:00 for reel 3), but the spec is referred to the picture start frame independent of time code
- There must be exactly 8 seconds (which is 12 film feet or 192 frames at 24 fps) from the start of the audio file to the FFOA.
- There must be a head pop at exactly 6 seconds (9 film feet) from the start of the audio file, one frame in duration. This pop therefore begins exactly 2 seconds before FFOA. All master tracks must contain this pop.
- There is to be a tail pop exactly 2 seconds from the beginning of the LFOA, one frame in duration. All master tracks must contain this pop
- Tones are to be included at the end of the reel ONLY, starting at approximately 30 seconds (45 film feet) after the tail pop
- Tones for each reel are to be consolidated into the audio files for that reel and are not to be in a separate session (i.e. "Tone Reels" are not permitted)
- Audio files should be contiguous from 0' to end of tones for each reel.
- In order to attain this if not recorded this way on the stage, select this duration and then consolidate. The resultant file will have the proper spec. This must be done prior to delivery
- Reel changeovers must be sample accurate between the LFOA of the outgoing reel and the FFOA of the incoming reel. This must be tested prior to delivery
- Track audio files must include their channel assignment as a suffix to the name.
- Alignment tones at tail, 30 seconds after tail pop

### Sound File Formatting Per Reel



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## APPENDIX B: Television Session Formatting

### Audio Encoding

- Audio Codec: PCM
- Sampling rate: 96K or 48K
- Sample size: 24 bits per sample
- Channels Per File: Mono
- Container: .WAV
- Frame Rate: 23.98 fps
- Time code: 23.98 or 29.97 DF
- Session Type: ProTools Version 10 or later (must have all plug-ins rendered into flat audio files)

### Formatting

- Production logos must be at the tail of the episode, followed by the appropriate Sony Pictures Entertainment logo (see contract for correct logo).
- Audio reference levels (ref tone @ -20dbfs) fall within AES/EBU specifications with matching program content. No clipping or distortion of the audio content is to be present.
- For each master audio deliverable, there must be one Pro Tools session per element per soundfield configuration (e.g. 7.1, 5.1, Atmos). All reels for a given element and soundfield configuration are to be put into the same session.
- For Stems, for a given soundfield configuration, all stem types are to be in the same Pro Tools session
- For the filled Music and Effects, a “supersession” is to be delivered with the M&E, Optional and dialog guide. A copy of the Dialog Stem is also put into the session.
- The pro tools sessions must be “flattened” (consolidated) such that the audio files are contiguous from 0 to the end of the content length (including leaders and tail). In order to attain this if not recorded this way on the stage, select this duration and then consolidate. The resultant file will have the proper spec. which must be done prior to delivery.
- Each element for each soundfield configuration must be self contained. The Pro Tools session and the audio files folder for each element must be named per the SPE File Naming Specifications, and delivered together in a single folder that is labeled per the SPE File Naming Specifications. This is generally accomplished by “Save Session Copy In.”
- It is not acceptable to deliver pro tools sessions and audio files separately. Each pro tools session must be delivered with (only) its associated audio files.
- All commercial blacks are to be pulled between :01 and :02 seconds in length.
- Consolidated episodes (ie. special 1 hour of Seinfeld) must be delivered in original length format (ie. 2-1/2 hour episodes).
- Audio track audio files must include their channel assignment as a suffix to the name, this is according to the **SPE Audio File Naming Convention.**

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## **APPENDIX C: Reference Picture Materials**

- Picture Reference is to be in reel lengths as DNxHD 36 (1920x1080) in a Quicktime wrapper (.mov). ProRes Proxy (1920 x1080 960X540) is accepted if DNxHD 36 is not available
- Reference picture must be delivered in conjunction with the audio sessions but as a separate delivery for piracy considerations.
- Picture to have property burn-ins, feet/frames, timecode, and picture version number (this is the version number the picture department gives to the particular cut of that reel)

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## **APPENDIX D: Music and Effects Stems Specifications and Delivery Requirements**

### **PREFACE:**

Music and Effects stems are currently being created on the theatrical mix stage as a precursor to the mixed, fully filled M&E, but are not delivered. This formally adds M&E stems to the audio deliverables.

M&E stems are to be delivered **in addition to** the mixed fully filled M&E, multichannel optionals and fully filled Effects Stem.

M&E Stem configuration should match the main Stem configuration of the Domestic mix, with the Fill M&E stem taking the place of the Dialog stem

### **DESCRIPTION:**

M&E Stems are the individual stems that make up the fully-filled music and effects element. The M&E stems are defined as follows:

**Fill M&E Stem:** This is all of the fill that needs to be added to the music and effects stems to create the filled M&E. It is typically the dialog stem with all dialog muted (leaving only production effects), plus any fill that was created to cover areas where production effects were lost when the dialog was muted.

**Group M&E Stem:** This is the Group stem with any specifics removed (i.e. discernable callouts, etc.). This is delivered only if a Group stem was created for the title.

**Crowd M&E Stem:** This is the Crowd stem with any specifics removed (i.e. discernable callouts, etc.) This is delivered only if a Crowd stem was created for the title.

**Walla M&E Stem:** This is the Walla stem with any specifics removed (i.e. discernable dialog, etc.) This is delivered only if a Walla stem was created for the title.

**Foley M&E Stem:** This is generally the same as the regular Foley Stem, but may have been updated depending on decisions made during the M&E process. It is renamed and delivered with the M&E stems

**Background M&E Stem:** This is generally the same as the regular BG Stem, renamed and delivered with the M&E stems

**Effects M&E stem:** This is generally the same as the regular FX Stem, renamed and delivered with the M&E stems

**Music M&E stem:** This is generally the same as the regular MX Stem, renamed and delivered with the M&E stems. However, in some cases this may be modified to remove vocals or an entire piece of music or song that is then put into an optional. This allows the vocal to be dubbed or the song replaced by music from a particular territory.

Any other stem that was created for the title that is part of the M&E would be included similarly to the above

### **SPECIFICATIONS:**

**Theatrical M&E stems:** Pro Tools 12 or above, 48.00 kHz or 96.00 kHz at 24.00 fps (47.952 kHz or 95.904 kHz at 23.976 fps is equivalent). 48.00 kHz or 96.00 kHz at 23.976 fps is accepted.

**Home Theater M&E stems:** Pro Tools 12 or above, 48.00 kHz or 96.00 kHz at 23.976 fps

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## **FORMATTING:**

M&E stems are delivered in their own pro tools supersession that contains all elements, placed at hour=reel on the timeline. If the project is long form, the M&E stems supersession is formatted to start at the beginning of the picture file (e.g. 00:59:30:00).

M&E Stem configuration should match the main Stem configuration of the Domestic mix, with the Fill M&E stem taking the place of the Dialog stem

NOTE, optionals are not delivered in the M&E stem supersession. Optionals continue to be delivered in the main M&E supersession.

## **DELIVERY:**

All titles must deliver a set of 5.1 M&E stems. A typical example would be:

5.1 Fill M&E Stem

5.1 Crowd or Group M&E Stem (if created for the title). Depending on the content, this may have specific dialog removed for the M&E

5.1 Walla M&E Stem (if created for the title)

5.1 Background M&E Stem

5.1 Foley M&E Stem

5.1 Effects M&E Stem

5.1 Music M&E Stem

If other formats are created for the title, deliver to the same pattern for:

7.1

Atmos

IMAX 5.0

IMAX 12.0

DTS:X

Auro 11.1

Auromax

## **FILE NAMING:**

Theatrical (TH) and home theater (HT) are in the “usage” field

In order to clearly differentiate M&E stems from the stems that make up the printmaster, the “Audio Element Type” abbreviation is MESM. Do not use ME\_SM.

The “Audio Content” abbreviation precedes the element abbreviation and is separated by an underscore. The abbreviations are the same, with the addition of “FILL”

The M&E stems supersession abbreviation is MESMSP

Examples:

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The supersession name would be:

TH\_MESMSP  
HT\_MESMSP

The individual M&E stems within the supersession are named:

TH\_FILL\_MESM  
TH\_GRP\_MESM  
TH\_CRD\_MESM  
TH\_FOL\_MESM  
TH\_FX\_MESM  
TH\_MX\_MESM

HT\_FILL\_MESM  
HT\_GRP\_MESM  
HT\_CRD\_MESM  
HT\_FOL\_MESM  
HT\_FX\_MESM  
HT\_MX\_MESM

---

## APPENDIX E: Home Theater Deliverables One Sheet

Sessions are 48.00 kHz, 24 bit, 23.976 fps unless source material is 96K.

If source material is 96K, keep all sessions at 96.00 kHz, 24 bit, 23.976 fps.

If doing Atmos, since DAMF files can only be 48K, record Atmos stems and PM at 96.00 kHz, SRC just before RMU.

See SPE home theater printmaster specifications for specifics on creating mixes and M&E's.

For each session in reels below, all reels for a given element can be in the same session, hour = reel#. For stems and edit sessions ONLY, all stem types for each reel can be in the same session, hour = reel#

All sessions are to be delivered complete with all audio files referenced by the session rendered as needed and placed in the audio files folder for that session by doing a "save copy in".

All sessions except edit sessions are to be consolidated and flattened prior to delivery-however, edit sessions still require all audio files referenced by the session to be included per above.

### DELIVER FOR ALL NEW RELEASE TITLES:

(The below may be in reels or long form. If in reels, all reels can be in the same session, hour = reel#)

1. 5.1 printmaster (PM) session
2. Lt-Rt printmaster (PM) session
3. 5.1 fully-filled M&E supersession (MESP). This contains a 5.1 M&E with dialog guide and one or more 5.0 multichannel optionals. LAYOUT IS IDENTICAL TO THE THEATRICAL MESP, BUT DOES NOT INCLUDE THE DIALOG STEM THAT IS OFTEN PUT IN THE THEATRICAL MESP
4. LtRt fully-filled ME supersession (MESP). This contains LtRt M&E with two mono optionals and mono dialog guide session (mono optionals are a crash down of multichannel optionals. Mixer to determine best way to combine the multichannel optionals to two mono optionals on a per-title basis.)
5. 5.1 "wide" home theater stems session (SMSP) (same stem types as theatrical)
6. 5.1 "wide" music and effects stems session (MESMSP) (same ME stem types as theatrical, same layout as PM stems but Dx stem is replaced by Fill M&E Stem.) Note that some M&E stems will have different content than PM stems (for example, due to content being pulled to an optional or additional foley added to a foley stem.)
7. 5.1 fully-filled effects stem (FFXSM). The fully-filled effects stem is a combined effects stem consisting of Backgrounds, Foley and Effects, plus the production effects and fill from the Fill M&E stem. Adding music to the FFX stem equals the fully-filled M&E. The fully-filled effects stem is in its own ProTools session. It is not in the same session with the M&E and Optionals (MESP).
8. 5.1 Home Theater Edit sessions (EDT). These contain the source elements and automation to get from the theatrical mix to the home theater mix. (For example, theatrical stems with mix automation.) Edit sessions must be rendered so the audio files are self-contained.

The below edit sessions must be delivered. They can be combined to a single session, or any combo of multiple sessions, depending on mixer preference. It is suggested that sessions be combined for ease in delivery.

- One common approach is one session with the printmasters and stems and another with the M&E's and M&E stems. In this case, the first session is rendered with the 5.1, LtRt printmaster and 5.1 stem audio files, and the second session is rendered with the 5.1 M&E, 5.0 optionals, LtRt M&E, mono optionals, dialog guide and 5.1 M&E stems audio files.
- If other soundfield configurations are being delivered (e.g. Atmos), can nest similar edit sessions together. See "Nesting" in the Atmos section
  - I. Home Theater 5.1 Printmaster edit session
  - II. Home Theater LtRt Printmaster edit session
  - III. Home Theater 5.1 Stems edit session
  - IV. Home Theater 5.1 MESP edit session
  - V. Home Theater LtRt MESP edit session
  - VI. Home Theater 5.1 M&E stems edit session

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## **FOR TITLES THAT ALSO HAVE 7.1, the below are added:**

(The below may be in reels or long form. If in reels, all reels can be in the same session, hour = reel#)

1. 7.1 printmaster (PM) session
2. 7.1 fully-filled M&E supersession (MESP). This contains a 7.1 M&E with dialog guide and one or more 7.0 multichannel optionals. LAYOUT IS IDENTICAL TO THE THEATRICAL MESP, BUT DOES NOT INCLUDE THE DIALOG STEM THAT IS OFTEN PUT IN THE THEATRICAL MESP
3. 7.1 “wide” home theater stems session (SMSP) (same stem types as theatrical)
4. 7.1 “wide” music and effects stems session (MESMSP) (same ME stem types as theatrical, same layout as PM stems but Dx stem is replaced by Fill M&E Stem.) Note that some M&E stems will have different content than PM stems (for example, due to content being pulled to an optional or additional foley added to a foley stem.)
5. 7.1 fully-filled effects stem (FFXSM). The fully-filled effects stem is a combined effects stem consisting of Backgrounds, Foley and Effects, plus the production effects and fill from the Fill M&E stem. Adding music to the FFX stem equals the fully-filled M&E. The fully-filled effects stem is in its own ProTools session. It is not in the same session with the M&E and Optionals (MESP).
6. 7.1 Home Theater Edit sessions (EDT). These contain the source elements and automation to get from the theatrical mix to the home theater mix. (For example, theatrical stems with mix automation.) Edit sessions must be rendered so the audio files are self-contained.

The below edit sessions must be delivered. They can be combined to a single session, or any combo of multiple sessions, depending on mixer preference. It is suggested that sessions be combined for ease in delivery.

- One common approach is one session with the printmaster and stems and another with the M&E's and M&E stems. In this case, the first session is rendered with the 7.1 printmaster and stem audio files, and the second session is rendered with the 7.1 M&E, 7.0 optionals, dialog guide and 7.1 M&E stems audio files.
- Can nest these with the 5.1 edit sessions. If other soundfield configurations are being delivered (e.g. Atmos), can nest similar edit sessions together. See “Nesting” in the Atmos section.
  - I. Home Theater 7.1 Printmaster edit session
  - II. Home Theater 7.1 Stems edit session
  - III. Home Theater 7.1 MESP edit session
  - IV. Home Theater 7.1 M&E stems edit session



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## FOR TITLES THAT HAVE ATMOS, the below are added:

- See page 4 for formatting to **long form picture and for procedure in creating an exact file start of 00:59:30:00.**
- **After recording the first 15 seconds of the DAMF file and stopping, verify the .atmos file offset is 3570 seconds by opening it in a text editor. It can also be viewed in a RMU menu. This corresponds to 59.5 minutes x 60 sec/min. If it is not exactly 3570, the file must be created again prior to proceeding with the record.**
  - NOTE: For Atmos, the stems session is to contain all stem beds and all objects. If the Atmos mix was created with only objects and no stem beds, or if there is only an LFE track in the stem beds, the stem bed tracks can be empty and are named MOS in addition to the bed channel name. In addition, a “read me” is put into the session folder explaining the layout of the stems session.
  - NOTE: For Atmos, the printmaster session is to contain the composite printmaster bed and all objects. If the Atmos mix was created with only objects and no bed channels, or if there is only an LFE track in the bed channels, the bed tracks can be empty and are named MOS in addition to the bed channel name. In addition, a “read me” is put into the session folder explaining the layout of the session.
  - NOTE: For Atmos, if the stems and printmasters are recorded simultaneously, **they must be split up into two sessions** after the fact per the above. **Both will contain all objects.**

**(The below are long form and are conformed to the IMF proxy picture with 10 second head pop and 20 second tail pop)**

1. Atmos printmaster (PM) session. **This contains the printmaster composite bed and all objects.**
2. Atmos DAMF file (Note, this is actually a folder or zip with 3 files).
3. IAB (Immersive Audio Bitstream) file. This is exported from the DAMF file in the RMU or Dolby Conversion Tool. This is done offline from the mix stage.
4. ADM (ADM-BWF) (Audio Definition Model Broadcast Wave) file. This is exported from the DAMF file in the RMU or Dolby Conversion Tool. This is done offline from the mix stage.
5. Atmos fully-filled M&E (MESP) with all M&E bed channels and objects, layout matching the printmaster. Any optional material that is present in the 5.1 M&E must also be appropriately presented in the Atmos M&E. If any of the optional material was part of the OV Atmos mix, it is also to be in the Atmos M&E.

**(The below are in reels or long form)**

6. Atmos “wide” stems session (SMSP). **This contains all stem beds and all objects.** (Can be in reels or long form. If in reels, all stem types for each reel in same session, hour=reel#)
7. (For new titles only) Atmos “wide” music and effects stems session (MESMSP)(same layout as PM stems but Dx stem is replaced by Fill M&E Stem.) Note that some M&E stems will have different content than PM stems (for example, due to content being pulled to an optional or additional foley added to a foley stem.)
8. Atmos fully-filled effects stem (FFXSM). The fully-filled effects stem is a combined effects stem consisting of Backgrounds, Foley and Effects, plus the production effects and fill from the Fill M&E stem. Adding music to the FFX stem equals the fully-filled M&E. The fully-filled effects stem is in its own ProTools session. It is not in the same session with the M&E and Optionals (MESP), and contains a FFX stem bed and objects that are pertinent to the FFX stem (not all objects).
9. Atmos Edit Sessions (EDT). These contain the source elements and automation to get from the theatrical mix to the home theater mix. For example, theatrical stems with mix automation.
  - For example, if this is an upmix, the edit session is elements, stems, objects and mix automation. If this is a home mix of a theatrical Atmos, this is the Atmos theatrical stems session with objects and mix automation.

The below edit sessions must be delivered. They can be combined to a single session, or any combo of multiple sessions, depending on mixer preference. It is suggested that sessions be combined for ease in delivery.

- One common approach is one session with the printmaster and stems and another with the M&E's and M&E stems. In this case, the first session is rendered with the Atmos printmaster and stem audio files, and the second session is rendered with the Atmos M&E, optionals, dialog guide and M&E stems audio files.

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- **Nesting:** It is recommended to self-contain just once for ATM + 7.1+ 5.1 + LtRT PM and Stems, placing these in a folder that includes separate sessions inside; and just once for ATM + 7.1+ 5.1 + LtRt M&E and M&E stems, placing these in a folder that includes separate sessions inside. These two EDT assets will cover all the formats.
- I. Home Theater Atmos Printmaster edit session
  - II. Home Theater Atmos Stems edit session
  - III. Home Theater Atmos MESP edit session
  - IV. Home Theater Atmos M&E stems edit session

**NOTE ON LIBRARY TITLE ATMOS UPMIXES**

Deliveries 1-3 are the same as above. Delivery 4 is the same stem layout the library title originally had, and can include additional stems for added sound design if appropriate. Delivery 5, 6 and Delivery 7 IV are optional and depend on the nature of the available material on the title.

**Table 1: Head Format: Long Form Audio Files**

| <b>MASTER TC REFERENCE</b><br><b>(Time code is 29.98)</b> | <b>ITEM DESCRIPTION</b>           | <b>NOTES</b>   |
|---|-----------------------------------|--|
| 00:59:30:00   | Beginning of file (must be exact) | <p>For DAMF files, since the RMU needs preroll, temporarily offset the source session to start at 59:15 and set RMU to have record start at exactly 59:30. Play and record up to 59:45 and stop. This will create the proper file start.</p> <p>Reset source session start to 59:30.</p> <p>Check .ATMOS file by opening in a text editor to make sure file offset is 3570 seconds. This corresponds to 59.5 minutes x 60 sec/min. This can also be viewed in a RMU menu. If it is not exactly 3570, the file must be created again prior to proceeding with the record.</p> <p>Play and punch DAMF before 59:45, be sure to catch pop at 59:50.</p> |
| 00:59:30:00 - 00:59:33:23                                 | Slate                             | No audio   |
| 00:59:34:00 - 00:59:36:23                                 | Black                             | No audio   |
| 00:59:37:00 - 00:59:46:23                                 | BARS, Charts & 1kHz Tone          | 1K at -20dBFS over bars  |
| 00:59:47:00 - 00:59:49:23                                 | Black                             |  |
| 00:59:50:00 - 00:59:50:00                                 | 10-pop                            | 1 frame of 1K tone at -40 dBFS on each channel   |
| 00:59:50:01 - 00:59:59:23                                 | Black                             |  |
| 01:00:00:00 - 01:00:00:00                                 | First Frame Of Picture (FFOP)     |  |

**Table 2: Tail Format: Long Form Audio Files**

| <b>MXF TRACK FILE</b>                   | <b>DURATION</b> | <b>ITEM DESCRIPTION</b>           |
|---|-----------------|-----------------------------------|
| LFOP + 00:00:00:01 - LFOP + 00:00:19:23 | 20 sec          | No audio                          |
| LFOP + 00:00:20:00 - LFOP + 00:00:20:00 | 1 frame         | Tail sync pop (20 sec after LFOP) |