



## TECHNICAL SPECIFICATIONS

Revised December 7, 2007

1. SVOX's formats of choice for delivery of programs are HDCAM, IMX, Digital Betacam, Beta SX, DVC PRO50, DVC PRO, and Beta SP.
2. Reference colour bars and tone at the head of each tape must be a true indication of the Program's chroma, video, pedestal & phase, and audio levels. At least :40 seconds of bars and tone is required.
3. Slates, including series and episode title/number, program length and audio information, must follow bars & tone at the head of each tape. A slate should last :10 seconds. Please include :10 seconds of black between the slate and program start.
4. All programs delivered must have leaders on them that conform to the following standard. Time Code has to be continuous Vertical Interval Time Code (VITC) throughout the tape

09:58.00:00 Black and silence  
09:58.30:00 Colour bars and tone start  
09:59.30:00 Slate  
09:59.40:00 Black and Silence  
10:00.00:00 Program start

5. Stereo programs must have a stereo mix on left and right audio channels. Split track audio is not acceptable (i.e.: music and f/x on channel 1, v/o on channel 2). Program audio for monaural programs should be on both audio tracks 1 & 2. Audio for Described Video should be on channels 3 and 4.
6. Dolby C encoded programs shall conform to standard Dolby procedures and shall have both box and cassette labeled as Dolby C encoded. Vision TV will not accept Dolby A, B or DBX systems on any format.

SVOX will accept Dolby Surround Pro Logic and Dolby Pro Logic II encoded programs.

7. SPT 525/60 compensated vertical and linear time and control code (drop frame) time code must be present, continuous and uninterrupted from start of tape to 60 seconds after the end of the program. Time Code should be first generation on master videotape. Drop frame time code is the standard used at SVOX since it allows tape time to run perfectly in sync with real time.

8. Closed captions must be encoded on line 21 of the vertical blanking interval (VBI), and preferably conform to the CAB style guide. Closed captions must meet technical standards. The base of the captioning signal must rest between 0 and 2 IRE (digital or analog), and reach a level of 350 mV. In addition, the captions must decode correctly when using any of our benchmark decoders: EEG EN270600 (or higher), EEG EN470, Evertz 8074, Evertz 8084. Failure to decode correctly on any of these decoders will delay program acceptance.
9. No data or test signals shall be encoded on either field of vertical interval lines 7 through 22, inclusive without prior consent of SVOX. Permitted exceptions are vertical interval time code on lines 12 through 17 inclusive and line 21 field 1 which may be used for English language CC1 captions. Text and XDS data are not permitted without prior consent.
10. Videotape labels should include the series and episode title/number, program length, and information pertaining to audio track assignment, noise reduction, recording standard (NTSC) and tape generation.

Paid Programs (e.g. Mosaic) should also include airdates where possible.  
Canadian Paid Programs (e.g. Mosaic) should include Production year, CANREC # and Episode number.

11. Licensed program content length should not exceed 45:00 minutes in an hour, and 22:00 minutes in a half hour, unless otherwise specified in the Agreement.

Paid Program (e.g. Mosaic) content length should not exceed 57:00 min. in an hour and 28:30 min. in a halfhour, unless otherwise specified in the Agreement. Mosaic program refers to all paid airtime programming sponsored by Faith Groups and Broadcast Ministries.



## TECHNICAL SPECIFICATIONS FOR PROGRAM DELIVERY

Revised December 7, 2007

### Film to Tape Transfers

- A. 1. Digital master video transfer of the PICTURE. The negative from which the videotape master was manufactured must be free from splices and scratches, and fully panned and scanned if the PICTURE was produced in Cinemascope. See videotape requirements.

### Videotape Submissions

A. Type of recording stock

1. SVOX will accept programs on IMX, Digital Betacam, Beta SX, DVC PRO50, DVC PRO, and Beta SP.
2. HDTV will be accepted on HDCAM only.

B. Tape condition

1. All tape shall be bulkerased before recording to ensure that all residual signals are 70 dB below the recorded level.
2. The maximum average of dropouts (with a depth greater than 16 dB, and a width greater than 5 microsec.) acceptable is 10 per minute. No oneminute tape segment shall contain more than 20 dropouts.
3. The tape shall not contain any physical splices.
4. The tape shall not contain any scratches that cause visible picture degradation.
5. The tape shall not exhibit any binder breakdown (shedding).
6. The tape shall not exhibit any cinches or windows.
7. The tape shall not exhibit any edge damage or ripple.

8. To prevent a stepped pack, the tape shall be rewound in one continuous pass, from the end of the tape (not the end of the program) to the beginning.

**Please Note:**

Any of the above problems may/will cause tapes to be not playable to air. If these tapes are supplied to Vision TV they are supplied at the full risk of the supplier. No refunds for unplayable tapes will be entertained.

C. Video Specifications

1. All material on tape must conform to either SMPTE Specification 259M in the case of Digital or SMPTE Specification RS170A for Analogue. The exact specification can be obtained from the SMPTE web site – [www.smpte.org](http://www.smpte.org)
2. Reference colour bars shall be a true indication of the program's chroma, video, pedestal and phase. At least :40 seconds of bars & tone is required.
3. HDTV is preferred to be 1080i/59.94 for NTSC downconversion.

D. Aspect Ratio

1. SD submissions shot in 16:9 widescreen must be cropped or panned and scanned for 4:3.
2. HDCAM submissions must be 16:9 widescreen anamorphic.

E. Blanking

1. Horizontal blanking shall be 10.9 micro-sec., plus or minus 0.2 micro-sec.
2. Vertical blanking shall be 20 lines where possible.

F. Closed Captioning

1. Closed captions must meet technical standards. The base of the captioning signal must rest between 0 and 2 IRE (digital or analog), and reach a level of 350 mV. In addition, the captions must decode correctly when using any of our benchmark decoders: EEG EN270600 (or higher), EEG EN470, Evertz 8074, Evertz 8084. Failure to decode correctly on any of these decoders will delay program acceptance.
2. Closed captions must be encoded on line 21 of the vertical blanking interval, and displayed on the bottom of the screen.

G. Video Performance

1. Signal to noise shall not be less than 40 dB (CCIR WTG) for multigenerational.
2. Moire and microphonics shall not be visible in the picture.
3. Excessive lag and bloom are unacceptable (except for special effects purposes).

H. Monochrome programs

1. Recordings which are entirely monochrome shall contain colour burst signal during horizontal blanking and there shall be chroma (colour) information (sub-carrier) in the program signal.
2. Recordings that are predominantly monochrome in content shall have the colour burst during the monochrome portion.
3. Due to the "flash" apparent on many receivers upon burst/noburst/burst transitions, the burst must be turned "on".

I. Recorded in impairments

1. Head switching (swapping) in active video shall not be permitted (unacceptable source material).

## **Audio Specifications**

A. Levels

1. SVOX's standard for digital audio level is 20 dBfs (full scale). The equivalent analog level is 0 VU, 1000 Hz in the NTSC analog standard. The analog peak value is +16dB.

B. Cross-talk

1. Video cross-talk in program audio shall be inaudible.
2. Cross-talk from the control track into any audio track shall not be greater than 50 dB.

C. Distortion

1. Distortion shall not be greater than 1.0% at operating level.

D. Dolby "C"

1. Dolby "C" encoded programs shall conform to standard Dolby procedures, and shall have box and cassette identified as Dolby "C" encoded, with a standard

- yellow Dolby label.
2. Dolby "C" encoded programs on Betacam SP format are preferred.
  3. SVOX will accept both mono and stereo Dolby C encoded programs.

E. Audio Track Assignments

1. Mono: put program audio for monaural programs on both audio tracks 1 & 2.
2. Track 1: left channel for stereo programs or program audio for monaural programs.
3. Track 2: right channel for stereo programs, or duplicate mono channel for monaural programs.
4. Tracks 3 and 4 should be blank in both cases.
5. Audio for Described Video must be placed on Tracks 3 and 4.
6. Dolby Surround Pro Logic or Dolby Pro Logic II: Put matrix-encoded audio on audio tracks 1 & 2.

**Timecode Specifications**

1. Timecode shall be present and shall be SMPTE 525/60 vertical interval and linear compensated time and control code (drop frame).
2. Timecode shall be on the timecode track.
3. Timecode shall be first generation on the master videotape.
4. Recording levels for timecode, as measured on a VU meter, shall be 0.0 VU (+2 VU maximum).
5. Timecode shall be continuous Vertical Interval Time Code (VITC) from start of tape to 60 seconds after end of program.
6. If Linear Time Code (LTC) is present it must be identical to the existing VITC timecode.

**Packaging**

A. Tape Elements

1. Ten (:10) seconds of Black Leader.
2. Test: forty (:40) seconds minimum NTSC colour bars, with 1000 Hz tone at operating level of 0.0 VU (analogue) or -20 dBfs (digital).
3. Ten (:10) seconds visual slate containing the program name, production centre, and specific audio track information (i.e. stereo), program length and breaks. An attached cue sheet would also be acceptable.

B. Shipping

1. Programs must be accompanied by commercial cue sheets, if applicable.
2. Paid Programs (e.g. Mosaic) must be accompanied by music cue sheets, if applicable.

**Labeling**

A. The tape container labels shall contain the following information:

1. Master, Protection Master, or Dub.
2. Production company.
3. Program title/episode.
4. Program length (hours, minutes, seconds).
5. Recordings/Passes on tape.
6. Type of audio (stereo/mono) and Dolby encoding (if relevant).
7. Close Captioned (if relevant).
8. Descriptive Video audio tracks (if relevant).
9. HDTV resolution/frame rate (if relevant).