

**South Carolina ETV Network
Department of Engineering
Broadcast Operations**

Standard Operating Procedures

Technical Operating Standards for Existing Origination Sites and ETV Studios

Required

- Origination site must have a supervisor/facilitator available by phone for the duration of all originations. The supervisor/facilitator must be available to answer technical questions regarding the origination if needed, and as such must have a working knowledge of the operating systems at the origination site.
- All origination sites shall supply to their ETV scheduling contact a comprehensive contact list for operational contact, notification, verification, and trouble reporting services. This list must contain contact information for all possible broadcast times and locations (this includes codec, studio and after hours contact information – see attached form).
- Each site must have a control room telephone for contact during the duration of the origination.
- All origination sites must have equipment and means to monitor and adjust audio and video signal levels at the last point of origination before the signals are delivered to SCETV. This equipment shall include, but is not limited to, audio VU meters, audio distribution amplifiers, video waveform monitors and, video distribution amplifiers.

SCETV will provide technical service as required (for nominal fees), to assist any origination site with implementation of a technical standards plan. Upon request, SCETV will provide to any institution recommended, acceptable and approved broadcast quality studio equipment lists. All equipment used in the origination to SCETV Networks shall be operated and maintained in accordance to all applicable broadcast operating standards. Upon request, SCETV will provide assistance with this aspect of the requirement.

SCETV will attempt to contact origination site in the event of a feed anomaly to resolve the problem. SCETV will provide training and assistance to all who request it to ensure acceptable and legal standards from all originating sites.

Non-compliance

Any event during which a technical problem cannot be resolved as a result of SCETV's inability to contact technical assistance at the origination site may result in the removal of same event from the schedule and the scheduled broadcast channel.

Production Standards

Origination sites shall conform to all acceptable production standards for studio broadcast television originations including:

- never send spurious signals to air
- always provide audio/video content at all times
- always announce breaks with on screen visual
- leave break information up throughout entire break

- always use slates and music to cover dead air

It is imperative that a signal be kept on the origination circuit at all times so that network operators and technicians know whether or not a site is on the air. During non-broadcast periods all origination sites shall feed standard video and audio test signals (preferably with a ID), i.e. SMPTE Bars and Tone to their respective output circuit line. A power point slide could be used as a substitute, so that we can see at a glance that any particular site is originating. MCO will designate the ID information for each origination site to display.

Audio/Video Standards

Microwave

Required

- Studio Output/Input to Microwave Return Network; NTSC Video @ 1V P/P (100/0 100/0), 2 Channels Audio @ -4dBm.
- Output of Microwave/Input ETV; Video @ 1V P/P; 2 Channels Audio @ +4dBm (8dB gain in MW)

Non-compliance

If this cannot be achieved, OIR must be enlisted to re-configure microwave pad and /or provide an audio split to provide 2 channels.

Fiber

Required Fiber (Video)

- Video @ 1V P/P; 2 Channels Audio @ -4dBm Microwave, +4 dBm
- Studio Video Levels are measured into a standard 75 ohm load. Luminance shall be 100 IRE maximum; Sync Level @ -40 IRE +/- 5 IRE.
- Set-up level shall not exceed +7.5 IRE units (+/- 2.5 IRE).
- Picture level shall never reach or encroach blanking.
- Chroma Saturation shall not exceed 110 IRE units.

Required: Fiber (audio)

- Audio levels shall never exceed the peak level established at the input to the Microwave or Fiber (-4dBm).
- Average program levels at the origination should conform to acceptable Broadcast Standards and fall in the range of -10 to 0vu.

In consideration of the standards noted here, the reference levels at SCETV MC shall be Video @ 1V P/P and 2 Channels of Audio @ +4dBm from any/all Origination Sites.

Secondary Audio/Video Input Standards

Video Tape Playback

All videotapes played back from originating sites shall:

- conform to applicable SMPTE Standards and Studio Operational Standards.
- be played through a Time Base Corrector (TBC) or frame synchronizer
- never be rewound while switched to air

Computer

Computer usage, live or to tape, shall route through an approved VGA-Video converter card.

Video Tape Submissions

Required (tape format)

All tapes submitted for air through the SCETV Network from ETV Broadcast Operations shall use one of the following formats:

- Beta Cam SP
- SVHS
- DVCPRO

Required

All videotapes shall be new stock and must conform to the applicable SMPTE Standard for videotape compliance. SCETV will provide these technical specifications upon request.

- Audio shall be SMPTE compliant including 2 channel: either Stereo L channel 1, Stereo R channel 2, or Mono Mix Channel 1 & 2.
- No split audio configurations shall be submitted for air.
- Two Standard Audio tracks shall be provided on all SVHS submissions.
- Longitudinal Drop Frame Time Code shall be present on each tape submission for air.
- SVHS submissions and origination feed tapes must have 2 channel Standard AM audio tracks.
- HiFi (FM) audio tracks may exist only in addition to the 2 channel Standard tracks.
- All tapes shall be timed to the frame.
- All tapes shall be properly labeled as to title, lesson number, audio configuration, and timing. Multi-cut (block-feed) reels shall be duly noted and shall not be scheduled with more than one cut to air in sequence. Is this requirement specific to tapes in SCETV inventory?
- All tapes submitted for air, shall be submitted to us no later than 1 week prior to air date, unless prior arrangements have been made through our Schedule Operations Department.
- All tapes submitted may be subject to a technical evaluation, successful completion of which, will certify the tape for air.
- Any tape submitted and certified that will air more than once may be scheduled to the Data Tape Archive to play from automation for successive schedules.

Non-compliance

All tapes submitted may be subject to a technical evaluation, successful completion of which, will certify the tape for air. Tapes that do not meet minimum technical requirements may be removed

from the schedule and returned to the provider. Further, tapes scheduled into the system without following the scheduling guidelines listed above may be removed from the schedule.

Technical Operating Standards for New Origination Sites & Studios

Required

All potential new origination sites shall submit an application letter of intent to SCETV Broadcast Operations once the appropriate SCETV Client Sponsor has approved their membership into system. This application will serve as a request for SCETV to provide a technical and production operation plan, and an ETV approved equipment list that the new origination site will use to build a technical facility that meets the requirements of ETV while maintaining nominal technical and production quality standards throughout the systems.

Required

SCETV will provide consultation services, as well as technical and production assistance to any origination site upon request. A formal consultation must take place between potential new origination sites and SCETV technical staff in order to more effectively manage the process of bringing new sites into the SCETV network.

Non-compliance

No site may originate feeds through the SCETV Network without a formal consultation with SCETV.

Origination Access and Goodnight Procedure

Origination Access and Goodnight

Required

All origination sites are now required to call MCO before accessing the network , AND must call MCO to goodnight a feed regardless of scheduled end time. If your site sends multiple feeds to a channel during a day and you keep an ID signal on the channel between feeds, you may call MCO prior to the initial feed and goodnight at the end of the last feed.

All origination sites are required to communicate any schedule deviations to SCETV. Prior to airtime, call your scheduling contact at ETV to make adjustments to your schedule. During a scheduled air time or after 5pm Eastern, call MCO with immediate schedule change information and follow up by notifying your ETV scheduling contact of the change.

If a site does not originate to the network on a weekly basis, your site is now required to call MCO for technical performance compliance verification one week prior to the scheduled event date and on the airdate, before accessing the network, AND must call MCO to goodnight a feed regardless of scheduled end time.

Non-compliance

Origination sites that routinely fail to “goodnight” a feed may be removed from schedule.

Schedule Requirements

Required

- Program(s) shall be added to the schedule **no less than 24 hours prior to air** without SCETV VP approval.
- All schedules submitted shall be conflict free and be complete with regard to daily programs and timings, including stipulations for holidays or other special days.
- Block Scheduling is discouraged due to time reserved but not used.
- Originating sites must at all times show programming or respond to trouble calls placed by ETV MC staff during scheduled windows.
- Origination sites must impose proper schedule verification to schedules submitted to SCETV. Please verify your schedule with your ETV scheduling sponsor prior to airdate and report any changes to your scheduling sponsor as soon as they occur.

Non-compliance

All schedules are subject to monitoring and review for compliance to established SOP. If a feed does not adhere to SCETV technical and scheduling requirements and/or there is no response to SCETV MCO efforts to contact the origination site technician, programming during that broadcast window the feeds becomes subject to override and cancellation by MCO.

Trouble Reporting and Discrepancies

- Be prepared to deal with technical problems.
- Know who and how to report any problems with your equipment, our service and/or your schedule.
- Perform routine performance verification tests on equipment and return paths as a proactive measure.
- Develop and implement realistic contingency plans.
- Have contingency plans in place and ready to deal with unforeseen circumstances.
- Document and follow-up on all discrepancy and trouble reports.
- Categorize issues in order to establish patterns and trends that can be used to develop and revise operational plans.
- Always check-in prior to any origination and verify signal path into the Columbia TOC.
- Always Goodnight each and every scheduled feed.