

TV TechCheck

The Weekly NAB Newsletter for TV Broadcast Engineers



CALM Act “Spot Check” Deadline Approaches

The next CALM Act regulatory deadline is December 13, 2013. Since December 13, 2012, TV stations have been broadly responsible for managing the loudness of commercials and interstitials for almost all content. The FCC rules gave an additional year to implement one option for demonstrating compliance with the CALM regulations. This is the so-called “spot check” option which enables relying upon the “safe harbor” provisions of the regulations. The “spot check” is a way to evaluate content that has embedded commercials by measuring it for a 24-hour period once a year. It is not needed if the program sources that deliver embedded commercials in content aired by a station have certified they are in compliance with A/85, or if a station has active loudness control processes to ameliorate disparate loudness independent of its source. The first set of these annual spot checks (if required) must be completed by December 13, 2013.

The full set of CALM rules for Broadcasters can be found in CFR 47 §73.682(e). They are summarized below:

1. Mandatory compliance with ATSC A/85:2011 – insofar as it concerns the transmission of commercial advertisements.
2. For commercials inserted by stations — installs, utilizes and maintains in a commercially reasonable manner the equipment and associated software to comply with ATSC A/85 (including record keeping requirements).
3. For content with embedded commercials – safe harbor via certification from source, or 24-hour spot check performed by station.
4. Use of a real-time audio loudness processor – commercially reasonable use with some record-keeping. (In lieu of #2 and 3 above.)
5. Commercials locally inserted by a station’s agent safe harbor like #3, but to cover use of a third-party vendor.
6. Demonstrating actual compliance – alternative to #2 through 5, in response to an enforcement inquiry; a station’s certifying that its own transmission equipment is not at fault can show compliance with #1.

Sections (3) and (5) of CFR 47 §73.682(e) contain the applicable provisions to enable the spot check

process as a way to establish a safe harbor for the broadcaster to cover a program supplier inserting a “too loud” embedded commercial. The other way for a broadcaster to establish this safe harbor is for producers (suppliers) of content aired by the broadcaster to certify they are in conformance with A/85. In addition, broadcast stations that had less than \$14.0 million in annual receipts in 2011 are exempt. (Check with your attorney for the details of that non-technical provision.)

The relevant FCC rules section is §73.682(e)(3)(iv) and reads in part (focusing on just the technical provisions – not the reporting and follow-up provisions):

“...For purposes of this section a ‘spot check’ of embedded commercials requires monitoring 24 uninterrupted hours of programming with an audio loudness meter employing the measurement technique specified in the ATSC A/85 RP, and reviewing the records from that monitoring to detect any commercials transmitted in violation of the RP. The television broadcast station must not inform the network or programmer of the spot check prior to performing it.

(A) Spot-checking must be conducted after the signal has passed through the television broadcast station’s processing equipment (e.g., at the output of a television receiver). If a problem is found, the television broadcast station must determine the source of the noncompliance.

(B) To be considered valid, the television broadcast station must demonstrate appropriate maintenance records for the audio loudness meter.

(C) With reference to the annual “safe harbor” spot check in 73.682(e)(3)(ii):

(I) To be considered valid, the television broadcast station must demonstrate, at the time of any enforcement inquiry, that appropriate spot checks had been ongoing.

(II) If there is no single 24 hour period in which all programmers of a given program stream are represented, an annual spot check may consist of a series of loudness measurements over the course of a 7 day period, totaling no fewer than 24 hours, that measure at least one program, in its entirety, provided by each non-certified programmer that supplies programming for that program stream.”

However, one will not find information about how to do a spot check in any version of A/85. The spot check “innovation” arose from the FCC’s NPRM process. It is the main tool that was intended to control loudness of commercials that are already embedded in the programming delivered to a broadcaster or MVPD.

The Society of Cable Telecommunications Engineers created a recommendation ([SCTE-197](#)) that outlines how to make the spot check loudness measurements and gather the relevant data. No guidance is provided on analysis of that data. NAB was involved in the recommendation’s development so that it would be an industry-wide process that applied to both MVPDs and TV stations.

There has been some confusion about the use of gated versus un-gated loudness measurements due to a footnote in the FCC rules asserting that the latest version of A/85 is to be used. Given that the difference in measured loudness for commercials varies little as a function of measurement per BS.1770 being gated or un-gated, SCTE-197 does not assert which is preferred. This is not an issue for the spot

check process because the original BS.1770-1 algorithm (the original FCC cite) still appears in ITU Rec. BS.1770-3 (the new A/85 cite), and a special provision in A/85:2013 (Section 5.2.7) references the use of the un-gated algorithm to produce the value for L_k for this situation. So equipment that uses any version of BS.1770 can be used, and that will remain true when the FCC updates its rules to reference to A/85:2013.

The test procedure in SCTE-197 has several measurement modes, listed in order of preference (see Table 1 of SCTE-197). Of the three options listed as most preferred in SCTE-197, a 100 millisecond integration and logging period should be the setting used (if your equipment supports it). Note that if your equipment does not support periods of one second or less, subsequent analysis of the data to find periods of variance in loudness will be more difficult due to the averaging period "smearing" the commercial boundaries.

SCTE-197 recommends that the measurement equipment record the value of dialnorm from the transport stream being measured for each interval. If you are operating using a fixed dialnorm (as per NAB's [CALM Best Practices](#), this value need not be recorded (since the analysis can be done by subtracting the fixed value in use).

The approach to subsequent determination of whether or not there was a problem is outlined in Section 6 and 7 of SCTE-197, but no specific methods are detailed.

The NAB Labs CALM Act Summary of Best Practices is available [here](#). For more background see *TV TechChecks* of Dec 19, 2011 and Dec 10, 2012. For guidance on legal responsibilities established by the FCC's CALM regulations NAB members may access [NAB Counsel Memo on CALM Act](#).



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