



***Society of Cable  
Telecommunications  
Engineers***

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**ENGINEERING COMMITTEE**  
**Digital Video Subcommittee**

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**SCTE STANDARD**

**SCTE 230 2016**

**Recommended Practice for Proper Handling of Audio-  
Video Synchronization in Cable Systems**

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## SCTE 230 2016

# 1. Introduction

## 1.1. Executive Summary

It has historically been a ‘given’ that television content is comprised of moving pictures and sound – and that the pictures and sound are presented in synchrony in the viewing / listening environment. Complex signal processing, distribution environments and consumer equipment have all conspired to make the synchronous presentation of pictures and the accompanying sound to a consumer a challenging task.

This document describes the nature of video and audio synchrony, how to recognize and measure the loss of synchrony, and potential identification and remediation steps when that synchrony is lost.

## 1.2. Scope

This Recommended Practice specifies proper procedures for the measurement of and maintenance of Audio-Video Synchronization (commonly known as “Lip Sync”) through various aspects of a cable system – including the headend and distribution architecture and devices.

## 1.3. Benefits

This document assists the reader with recognition of the issue and where Lip Sync problems may have occurred and how to troubleshoot / mitigate those sync issues. Understanding the issues as outlined in this document will shorten the troubleshooting process and help to increase the ability of technical staff to communicate the issue to consumers as well as maintenance personnel.

## 1.4. Intended Audience

This document is intended for technical operations engineering and, potentially, customer contact personnel such as installers to be able to identify audio/video synchronization problems.

# 2. Informative References

All documents are subject to revision; and while parties to any agreement based on this document are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

## 2.1. SCTE References

- [1] ANSI/SCTE 197 2013, “Recommendations for Spot Check Loudness Measurements,” [http://www.scte.org/documents/pdf/Standards/ANSI\\_SCTE%20197%202013.pdf](http://www.scte.org/documents/pdf/Standards/ANSI_SCTE%20197%202013.pdf)

## 2.2. Standards from Other Organizations

- [2] CEA CEB-20 R-2013, “A/V Synchronization Processing Recommended Practice,” <https://www.cta.tech/Standards/Standard-Listings/R4-Video-Systems-Committee/CEA-CEB20.aspx>
- [3] ITU BT.1359, “Relative timing of sound and vision for broadcasting,” <https://www.itu.int/rec/R-REC-BT.1359/en>
- [4, 5] SMPTE ST2064-1; -2 <http://dx.doi.org/10.5594/SMPTE.ST2064-1.2015>; <http://dx.doi.org/10.5594/SMPTE.ST2064-2.2015>