



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 14 2016

**Test Method for
Hex Crimp Tool Verification/Calibration**

NOTICE

The Society of Cable Telecommunications Engineers (SCTE) Standards and Operational Practices (hereafter called “documents”) are intended to serve the public interest by providing specifications, test methods and procedures that promote uniformity of product, interchangeability, best practices and ultimately the long term reliability of broadband communications facilities. These documents shall not in any way preclude any member or non-member of SCTE from manufacturing or selling products not conforming to such documents, nor shall the existence of such standards preclude their voluntary use by those other than SCTE members.

SCTE assumes no obligations or liability whatsoever to any party who may adopt the documents. Such adopting party assumes all risks associated with adoption of these documents, and accepts full responsibility for any damage and/or claims arising from the adoption of such documents.

Attention is called to the possibility that implementation of this document may require the use of subject matter covered by patent rights. By publication of this document, no position is taken with respect to the existence or validity of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from the standards developer. SCTE shall not be responsible for identifying patents for which a license may be required or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Patent holders who believe that they hold patents which are essential to the implementation of this document have been requested to provide information about those patents and any related licensing terms and conditions. Any such declarations made before or after publication of this document are available on the SCTE web site at <http://www.scte.org>.

All Rights Reserved

© Society of Cable Telecommunications Engineers, Inc.
140 Philips Road
Exton, PA 19341

Table of Contents

Title	Page Number
NOTICE	2
Table of Contents	3
1. Introduction	4
1.1. Executive Summary	4
1.2. Scope	4
1.3. Benefits	4
1.4. Intended Audience	4
2. Normative References	4
2.1. SCTE References	4
2.2. Standards from Other Organizations	4
2.3. Published Materials	4
3. Informative References	4
3.1. SCTE References	5
3.2. Standards from Other Organizations	5
3.3. Published Materials	5
4. Compliance Notation	5
5. Equipment	5
6. Verification Of Hex Crimp Size	5
7. Crimp Tool Adjustment Method	6
8. Documentation	6

1. Introduction

1.1. Executive Summary

This document details a procedure to evaluate crimp tool operation and adjust tools if required.

1.2. Scope

To determine and verify the actual crimp dimension of hex crimp tools. Provide a calibration technique for adjusting hex crimp tools.

1.3. Benefits

Crimp tools can go out of adjustment with use, potentially resulting in performance impairments such as low cable retention, shielding degradation, poor grounding and generation of unwanted intermodulation signals.

Properly adjusted tools will ensure connector/cable junction performance in accordance with connector manufacturer's published specifications.

1.4. Intended Audience

Installers, maintenance technicians and field supervisors

2. Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this document. At the time of Subcommittee approval, the editions indicated were valid. 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, they are reminded that newer editions of those documents might not be compatible with the referenced version.

2.1. SCTE References

- No normative references are applicable.

2.2. Standards from Other Organizations

- No normative references are applicable.

2.3. Published Materials

- No normative references are applicable.

3. Informative References

The following documents might provide valuable information to the reader but are not required when complying with this document.

3.1. SCTE References

- No informative references are applicable.

3.2. Standards from Other Organizations

- No informative references are applicable.

3.3. Published Materials

- No informative references are applicable.

4. Compliance Notation

<i>shall</i>	This word or the adjective “ <i>required</i> ” means that the item is an absolute requirement of this document.
<i>shall not</i>	This phrase means that the item is an absolute prohibition of this document.
<i>forbidden</i>	This word means the value specified shall never be used.
<i>should</i>	This word or the adjective “ <i>recommended</i> ” means that there may exist valid reasons in particular circumstances to ignore this item, but the full implications should be understood and the case carefully weighted before choosing a different course.
<i>should not</i>	This phrase means that there may exist valid reasons in particular circumstances when the listed behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.
<i>may</i>	This word or the adjective “ <i>optional</i> ” means that this item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because it enhances the product, for example; another vendor may omit the same item.
<i>deprecated</i>	Use is permissible for legacy purposes only. Deprecated features may be removed from future versions of this document. Implementations should avoid use of deprecated features.

5. Equipment

Machinist’s outside micrometer having a flat anvil and flat spindle, calibrated to read directly to at least 0.005 inch (0.127 mm), with each division of a width that facilitates estimation of each measurement to 0.0005 inch (0.0127 mm). As an alternate use digital calipers calibrated to read directly to at least 0.0005 inch (0.0127 mm).

6. Verification Of Hex Crimp Size

1. Crimp an empty F-fitting (no cable) of the appropriate size in the front-most hex cavity.
2. Using a micrometer or digital caliper, measure and record the dimensions across each of the three sets of hex flats.

No single measurement across hex flats should deviate more than ± 0.005 inch (± 0.127 mm) of the published hex size.

3. Average the three measurements recorded in the above step.

The average hex crimp measurement should be within ± 0.003 inch (0.076 mm) of the published hex size.

Repeat procedures above for each hex cavity.

If discrepant measurements are obtained, proceed to section 7, Adjustment Method.

7. Crimp Tool Adjustment Method

If crimp tool is adjustable, adjust the tool cam adjustment mechanism per the tool manufacturer's instructions. Adjustments should be made one notch at a time so that the tool is not over-adjusted or damaged.

Secure the cam keeper, crimp an F-fitting (no cable) and measure the flats as described in section 6.

Continue the adjusting process until the correct hex specification is measured.

If correct hex measurements cannot be obtained by adjustment, the crimp tool must be rebuilt or replaced.

8. Documentation

Crimp Tool Manufacturer -			
Crimp Tool Part Number -			
F-Fitting Manufacturer -			
F-Fitting Part Number -			
Hex Crimp Dimensions			
	Hex Number 1	Hex Number 2	Hex Number 3
	a)	a)	a)
	b)	b)	b)
	c)	c)	c)

Average -			
Published Hex Dimensions			
Maximum Difference			
Average Difference			