



***Society of Cable  
Telecommunications  
Engineers***

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**ENGINEERING COMMITTEE  
Interface Practices Subcommittee**

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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 14 2016**

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

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## **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.

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### 3.1. SCTE References

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- No informative references are applicable.

### 3.3. Published Materials

- No informative references are applicable.

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<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.
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## 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  $\pm 0.005$  inch ( $\pm 0.127$  mm) of the published hex size.

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

The average hex crimp measurement should be within  $\pm 0.003$  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			