



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 87 2017

Graphic Symbols for Cable Systems

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. 2017
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
1.1.1. Basic Considerations	4
1.1.2. Proposed Drafting Practices	4
1.2. Scope	4
1.3. Benefits	4
1.4. Intended Audience	5
1.5. Areas for Further Investigation or to be Added in Future Versions	5
2. Normative References	5
2.1. SCTE References	5
2.2. Standards from Other Organizations	5
2.3. Published Materials	5
3. Informative References	5
3.1. SCTE References	6
3.2. Standards from Other Organizations	6
3.3. Published Materials	6
4. Compliance Notation	6
5. Abbreviations and Definitions	6
5.1. Abbreviations	6
5.2. Definitions	7
6. Pole Types	8
7. Cable Support Elements	21
8. Anchoring and Guying	23
9. Miscellaneous Symbols	26
10. House Drop Designations	36
11. Make Ready or Pole Line Preparation Symbols	38
12. Amplifiers	39
13. Splitting Devices	42
14. Powering Devices	43
15. Line Devices	46
16. Subscriber Taps	47
17. Line Terminators	49
18. Coaxial Cables	52
19. Optical Devices	57
20. Optical Splice Symbols	65
21. Miscellaneous Optical Symbols	71
22. Rack Mounted Equipment (RME) Symbols	80
23. Amp Datablocks	86
24. Signal Processing Locations	90
25. Wireless Devices	94
26. FTTX Symbols	99
27. Miscellaneous	107

ANSI/SCTE 87 2017

1. Introduction

1.1. Executive Summary

1.1.1. *Basic Considerations*

The symbols for devices do not indicate types or model numbers of any manufacturer. They represent the function of the device operated within a cable system. The symbols permit easy addition of model or type numbers within or near their outline. If such model or type designations are used, an explanation of these designations should be placed on a legend sheet for the drawing on which the symbols appear.

1.1.2. *Proposed Drafting Practices*

The orientation of a symbol on a drawing, including a mirror image presentation, does not alter the meaning of the symbol.

Line width does not affect the meaning of a symbol. In specific cases, a wider line may be used for emphasis. Generally, lines must be made sufficiently wide to avoid loss of resolution during photocopy reduction.

Symbols shown in this text are in the approximate correct size and proportion. This relationship should be maintained as nearly as possible on any particular drawing regardless of the symbol scale.

Symbols may be drawn to any proportional size that suits a particular drawing, depending upon reduction or enlargement anticipated. If essential for purposes of contrast, some symbols may be drawn relatively smaller than the other symbols on a drawing. The Standard recommends the use of no more than two sizes on a given drawing.

For simplification or clarification of a drawing, parts of a symbol for devices, such as amplifiers, may be separated. If this is done, suitable designations to show proper correlation of the parts must be provided.

1.2. Scope

The scope of this documentation is to illustrate the symbols recommended for Telecommunication drafting needs. It also provides recommendations for attributes both visible on the drafted map as well as embedded in the symbol when building a database mapping application. This will provide better data capturing and provide a better source of record for internal and external users.

It will provide much better benefit when moving to a mobile solutions to our boundary partners.

With the need for a cleaner and more intuitive maps the data captured is needed in more granular detail of information with embedded attributes or extended symbol attributes which allows for more comprehensive data. Due to the necessary crowding of symbols onto telecommunication system mapping and grid diagrams, some symbols are structured differently than those used in electrical and electronic diagrams

1.3. Benefits

The need for this is to provide a much better view at the system drafted maps and provide the designers and drafters a consistent input. This will support when developing a Rulebook for their drafting application that would assist in developing drafting standards and rules.