COMMON LANGUAGE
TRANSMISSION EQUIPMENT IDENTIFICATION
STANDARD CODING PROCEDURES

CONTENTS PAGE

1. GENERAL

1.01 This section describes the standard procedure used to identify selected transmission equipment or products by means of distinctive codes. These codes provide a uniform feature oriented language to replace the wide variety of ways in which this equipment has been specified in the past. They are intended to be used in the Telephone Companies as an adjunct for circuit design, circuit layout, assignment and inventory control work as well as the ordering and estimating functions. Standard ordering procedures have been formalized to interface with Western Electric systems to handle orders received in Common Language Codes. The codes are also used for interfacing with various BIS Systems at appropriate levels in their structured identification hierarchy.

1.02 General information is provided herein for all 795-2XX-XXX practices. This series supersedes and replaces Section 005-202-101. The practices are issued on an individual basis to facilitate updating.

1.03 The reference drawing conversion tables are separated from the encoder tables so that either may be used or updated separately. They are companion practices in adjacent sublayers of the 795-200 layer.

2. EQUIPMENT CODE PLAN

2.01 The equipment identification code consists of ten characters. Characters one to seven present a concise summary of standard circuit capabilities in coded form. The eighth character identifies the schematic or coded apparatus reference. Characters nine and ten are described in Part 3.

2.02 The Encoder tables and the Reference Drawing Conversion tables have been generally developed for equipment rated AT&T Standard, and for A & M and MD rated equipment that has been installed in quantity or is in general use. MD feature codes are shaded on the Encoder Tables and MD drawings are identified in the Code Digit 8 reference table. Also, selected Long Lines drawings and some non-Bell System equipments having widespread application by many companies have been coded.

2.03 Some equipments are available only as components of shop wired bays. It is necessary in these cases to provide an "identification only" code for a mounting or unit to be used for assignment purposes. These codes are not orderable and have been identified by a supplemental class mark "@" in the code column under Character Position 8 on the encoder tables. See 3.04, Note D.

3. EQUIPMENT CODE STRUCTURE

3.01 The standard 10-character equipment identification code is comprised of four sets of components; characters 1 to 4—Basic Code, characters 5 to 7—Features, character 8—Reference, and characters 9 and 10—Supplemental Identification. The code is alpha-numeric with restrictions on 8, 9 and 10 as described later. The 10 character code format is shown in Fig. 1.

3.02 The Basic Code is generally mnemonic. Thus:

(a) Character Positions 1 and 2—Equipment Family: The equipment family consists of two characters suggestive of the equipment type. For example, equipment in the Signal Converter family is coded SC.

(b) Character Positions 3 and 4—Equipment Subfamily: The equipment subfamily characters indicate the category within an equipment type. For example, a loop-to-E&M signaling converter is coded LE. Therefore, the basic 4 character code for a loop-to-E&M signal converter is SCLE.

3.03 Character Positions 5 to 7—Features: Three characters are used to identify the optional circuit features available with a basic equipment code. In some situations a single-character may be used to identify one or more features. The applicable code will be the one shown in the Option Tables as being common to the required combination of features. For example (see below), with feature A required (Yes) and feature B not required (No), code character 2 will be used since it is the only character that is common to both conditions.

FEATURES	REQUIRED	CODE
Feature A	Yes	1, 2
	No	3, 4
Feature B	Yes	1, 3
	No	2, 4

3.04 Character Position 8—Reference: This position identifies the reference drawing used when determining the features coded in 5, 6 and 7. Schematic drawings are used as reference except as follows:

- Coded apparatus
- "ED" assemblies without circuit drawings
- Shop-wired or assembled bays

Entries for character position 8 are as follows:

ENTRY	
A to Z	Standard Units (except selected Long Lines Drawings as noted in 2.02)
1 to 5	Operating Company drawings and Non-Bell System drawings
6 to 9 & 0	Reserved for future use

Note A: Bay codes are primarily for ordering purposes and have not been used in assignment (See 2.03). No reference indicator has yet been required under Code Digit 8 for Bays. Additional families of equipment are being encoded however, and in some situations, a reference indicator may be necessary for use in connection with System assignment. Exploratory development indicates that reference for Bays might be identified and handled in a manner similar to the Decoder tables for plug-in units.

Note B: Entries 1 to 5 have been allocated for Operating Company and/or outside supplier drawings.

Note C: Equipment plug-in units have an SD Drawing reference. The circuit design reference is required as an interface in the BIS-TIRKS and is not used for equipment identity. Equipment information is the only basis for accurately tracking vintage of plug-in units and is used in the conversion practices.

CODING DATA	EQUIPMENT FAMILY	EQUIPMENT SUBFAMILY	FEATURES	REFERENCE	SUPPLEMENTAL IDENTIFICATION
Character Positions	1 and 2	3 and 4	5 to 7	8	9 and 10

Fig. 1—Format for Equipment Identification Code

Note D: Certain supplemental modifiers have been standardized for use with digit 8 as an aid in identifications:

Supplemental Mark	Meaning
*	Current Orderable
%	Plug-in or furnish only
@	Coded for Identification Only, Non-Orderable

Note E: The table constructed under code digit 8 on the encoder shows which features are available from a particular drawing when there are multiple entries. Where no entry is made under a specific column in the cross reference table, all features in that column are available from any of the drawings.

3.05 Character Positions 9 and 10—Standard Equipment: When standard arrangements are ordered, Western will use character positions 9 and 10 to complement 1-8 in identifying these standard arrangements provided, but not necessarily reflecting all the specific office conditions. The ongoing Western Translator or Decoder identifier will be two alpha characters. Existing translator documents identified by alpha-numeric combinations will become alpha-alpha on the next reissue. Identification of the older issues will remain unchanged.

3.06 Character Positions 9 and 10—Operating Company use: Two numeric characters may be used in this space for Operating Company identification of nonstandard arrangements of standard equipment or other special characteristics specific to a particular application. Such data placed in these character positions is valid only for use within a company, or between a Company and Western Electric and proper translation information must be filed with Western. When Western implements such an order the input numerics will be used in positions 9 and 10 in all "feedback". Existing nonstandard arrangements picked up in inventories can also be identified in this manner.

3.07 Nonstandard Codes: Provisions have been made to enable an Operating Company to code nonstandard equipment, using the standard code format. Reference identification of nonstandard drawings is covered in 3.04. The letter Q should be placed in any of the character positions 3 to 7 to identify nonstandard features of such codes to avoid mistaking them with the standard codes. These "Q" codes are immediately recognizable as being peculiar to an Operating Company and references must be identified as pertaining to a specific Operating Company. They are valid only for use within that Company or to order from Western Electric. When used to order, translator information must be filed with Western. (The selected Long Lines drawings referred to in 2.02 have standard codes rather than "Q" codes because of their widespread use. Any other drawings for which this treatment seems desirable must be cleared with the AT&TCo Common Language Practices Coordinator for appropriate coding.)

3.08 An Operating Company may choose to use contractions of the standard codes in their internal operations. Abbreviated or incomplete codes will not be accepted by Western Electric as an ordering code.

3.09 All characters used in applications of the code plan, particularly when handwritten, should conform to AT&T Accounting Letter M-251,

Section 6, Electronic Data Processing Programming Standards. This provides the following character differentiation particulary when handwritten:

ALPHABETICAL	NUMERICAL
Ø (Looped O)	0
I	1
Z	2

However, in the printed encoder practices alphabetic character Z is not printed as indicated above because of adequate distinction between it and the printed numeral 2. The alphabetic Ø may be printed with a slash or as a looped Ø to distinguish it from the numeral 0.

3.10 When error corrections are necessary on published encoders, the changed information will be carried on a "lined out" basis for one issue and then dropped.

4. EQUIPMENT CODE TABLES

4.01 Cross reference tables are provided as follows:

(a) Cross reference Lists—Circuits Drawing to Basic Code (795-200-001)

(b) Cross reference Lists—Equipment Drawing (or Apparatus) to Basic Code (795-200-002)

4.02 Three kinds of equipment code tables are used and explained in (a) through (c).

(a) The Basic Code catalogs list the standard codes in alphabetic sequence. (795-201-001 for Terminating and Signaling Equipment). The practice number for the encoder is included to provide ready reference.

(b) The Encoder Options Table (795-201-XXX for Terminating and Signaling Equipment) assigns a code to each optional feature.

(c) The Conversion Tables (795-202-XXX for Terminating and Signaling Equipment) are designed as a cross reference showing the relationship between reference information and the code. The sub-layer identifier will always be one higher than its companion encoder practice (Encoder 795-201-010 is matched by Conversion 795-202-010). The last 3 digits of the Conversion Table practice number are the same as the last digits of the encoder practice. Generally one or the other of the following is used as applicable, although both sometimes appear:

(1) A conversion from code to schematic diagram, figures and options for wired equipment other than shop-wired bays. Only those figures and options applicable to the Code are shown. Symbols used in this table are explained in the following listing:

(comma), = and

Example: 2, 5 means Figs. 2 and 5

(dash)—between entries = or

Example: 104A-104B means 104A network or 104B

(dash)—(alone as entry) = lack of other figures and options shown in given code column.

Example:	Code Digit 7	Option
	1	—
	2	V

Presence of a "V" Option equates to a 2 in Code Digit 7. Lack of a "V" Option equates to a 1 in Code Digit 7.

(slant lines)// = encloses quantity of a particular Figure or Option which appears more than once.

Example: 1/4/, 3, 4/3/

Fig. 1 appears four times, Fig. 3 appears once, and Fig. 4 appears three times.

(2) A conversion from code to manufacturing drawing and lists or equipment specification information. Only those lists applicable to the code are shown. The early issues of the conversion tables for Plug-in units showed "00" in digits 9 and 10. The Western Electric identifier was then appended as one alpha plus one space left open, or one alpha plus a "-" or as two alpha characters:

795-206-123, Iss. 1 N1CVA10L00A

:

N1CVA10L00AA

795-206-123, Iss. 2 & later N1CVA10L00A—

:

N1CVA10L00AA

This change was made to avoid programming problems and missing second characters in the identification.

The refinement in use of Characters 9 and 10 limits Operating Company entries to "nn" which will also be used as feedback for nonstandard information content. For feedback of Standard information the two characters formerly shown beyond the 10th field will be moved into positions 9 and 10. These changes will be made as conversion practices are reissued. Thus "00" in positions 9 and 10 of any presently issued practice in the Conversion series may be ignored.

5. ORDERING BY COMMON LANGUAGE CODE

5.01 Order Input—The Common Language Equipment Code is designed to serve as the primary ordering vehicle for future orders placed on Western Electric Co—Engineer, Furnish & Install as well as Furnish & Install or Furnish Only for plug-ins. When ordering by code, the standard code characters shall be provided as follows:

(a) Characters 1 to 7

(b) Character 8, only when requesting Western Electric to provide A&M Rated equipment or when specifying particular equipment covered by more than one current drawing. When ordering "Q" codes see 3.07.

(c) Characters 9 and 10 (alphas) may be used when known for specifying A & M Rated equipment.

(d) Characters 9 and 10 (numerics) will be used only when ordering nonstandard arrangements as mentioned previously (3.06). In such cases the Telephone Company must provide Western Electric engineers with a means to translate the references and furnish all 10 digits of the ordering code.

5.02 Record Feedback—Generally full 10-character code. Western Electric will identify character 8 when not specified on order input. Coded identification of the specific equipment provided will be furnished in characters 9 and 10. When 8, 9, and 10 are available for bays, feedback will always be 10 characters.

(a) Standard equipment will be two alpha characters (see 3.05)—Interpretation of these codes will be available for complete detail identification when needed.

(b) When 10 digit special conditions codes are used as order input (see 3.06), the Western feedback will be the identical 10 characters used for input since the Telephone Company is responsible for providing translation information to Western in such cases.

(c) Where "Q" codes have been used as order input, the record feedback will be identical with the order input since the Telephone Company is responsible for providing translation information to Western.

5.04 Many Telephone Companies make up a standardized set of notes that they attach to most jobs, or at least refer to frequently. Where such "Company Standard" engineering notes are to be referred to in an order, the company issuing the order must provide Western with translation of the notes. The preprinted order forms to be used with Common Language Equipment Ordering include a note column for such note reference. These notes are expected to fall outside of the 10 Digit Common Language Code. Otherwise, usage of digits 9 and 10 for ordering and defining nonstandard arrangements may become confused with the note references.

6. USE TELCO IN RECORD SYSTEMS

6.01 It is intended that the Common Language Codes be used with mechanized record systems.

(a) The function oriented input code has been used—either in part or in full—for circuit layout and assignment systems.

(b) The full 10 digit feedback code provides a record of uniform field length covering equipment furnished. Where specific details are needed, a record can be established—addressed by 10 digit code—that has pertinent figures, options, lists, issue numbers, etc. spelled out in detail. The mechanized record and administration systems being designed by the Business Information Systems organization of the Bell Laboratories function in this manner and use these codes to address the record at appropriate levels in their structured equipment hierarchy.