

SELECTION OF APPARATUS BY CLASS OF SERVICE AND ZONE

1. GENERAL

1.01 This section contains information to be used in order to select the appropriate station equipment required in various transmission zones. It also provides information which describes the various resistance transmission strategies used in conjunction with Long Route and Uniguage designed loops.

1.02 This section is reissued to:

- Define the various zones and designate the station apparatus alternatives which are available to provide telephone service
- Define the selection of station sets and apparatus required for general use, in each of the zones formerly covered by Section 500-122-180 which is hereby canceled

Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 For individual telephone set connections, refer to the specific practice which covers the individual set. For telephone sets associated with PBX systems, key equipment, outdoor sets, and sets for special applications, refer to the appropriate sections listing these sets for their specific uses.

1.04 For ringer limitations, refer to Section 500-114-100.

2. ZONE IDENTIFICATION

2.01 In order to provide a practical means or exchange of information, a system of Resistance Zoning is employed. This will define what equipment is required at the Central Office and the station location in order to provide satisfactory telephone service.

2.02 For subscriber Long Route Design, the zones are identified as follows:

Zone 13—up to 1300 ohms from central office

Zone 16—1301 to 1600 ohms from central office

Zone 18—1601 to 2000 ohms from central office

Zone 28—2001 to 2800 ohms from central office

Zone 36—2801 to 3600 ohms from central office

2.03 Uniguage zoning is based on a different concept of cable plant and is primarily designed to be used with No. 5 Cross-bar and ESS offices. It is divided into:

- (a) **Short Loop**—up to 1300 ohm loop.
- (b) **Uniguage or Loaded Uniguage Loop**—from 1301 to 2500 ohm loop.

2.04 Information as to the zone involved should appear on the service order. An absence of any zone information indicates that the order is in zone 13, or short loop uniguage.

3. CENTRAL OFFICE ACCOUNTING—PARTY IDENTIFICATION

3.01 All tip party stations, of a 2-party dial service requiring central office accounting identification, must be wired with a resistance from the tip side of the line to ground, when the receiver is off-hook. The following services require this identification:

- (a) Message Rate (MR).
- (b) Zone Registration (ZR).
- (c) Automatic Message Accounting (AMA) centers associated with the following:
 - (1) Centralized Automatic Message Accounting (CAMA) used with Automatic Number Identification (ANI).
 - (2) Local Automatic Message Accounting (LAMA).

**Reprinted to comply with modified final judgment.

SECTION 500-110-100

3.02 For tip party identification requirements and connections, refer to Section 500-114-100.

Note: For Long Route Design, the 11A extender should be used in conjunction with the D-180489 ANI kit for tip party identification. This allows ringer isolation in addition to Automatic Number Identification. The ring party requires only an 11A extender. In non-ANI offices, both stations require only the 11A extender.



The D-180489 ANI kit can not be used with the TRIMLINE® set.

4. STATION EQUIPMENT

4.01 Tables A, B, and C show the associated station apparatus recommended, for different classes of service, by types of telephone set.

4.02 Beyond zone 13, all classes of service require a 500-type set or equivalent (i.e. The transmission equivalent of a 500-set).

4.03 In areas of high inductive noise, ringers must be isolated from ground in order to provide better balance and prevent bell taps. The D-180036 ringer isolator accomplishes effective isolation, however, the 11A extender affords greater range extension and supports all ringing alternatives of Long Route Design. For connection information for the 11A Extender, refer to Section 501-322-101.

5. TABLES

5.01 To use tables:

- (1) Select table corresponding to set being used.
- (2) Find zone on table that matches zone designated on service order or line card.
- (3) Bullets on table will identify what classes of service set is applicable to in this zone, and what coupling device is recommended.

TABLE A

500- OR 2500-TYPE TELEPHONE SETS

LONG ROUTE OR UNIGUAGE DESIGNED TRANSMISSION ZONES	CLASS OF SERVICE						COUPLING DEVICE						
	INDIVIDUAL OR BRIDGED (FLAT OR MESSAGE RATE)	TWO PARTY			4 PTY SEMI-SEL	4 PTY FULL-SEL	CAPACITOR	425A OR 426A TUBE	426N DIODE	RINGER ISOLATOR	10A EXTENDER	11A EXTENDER	
		RING PTY (FLAT OR MR)	TIP PTY NO IDENT GRD (FLAT RATE)	TIP PTY IDENT GRD REQ									
				1000 OHMS									2650 OHMS
13	•	•	•	•	•		•						
		•	•		•					•			
	•	•	•	•	•	•						•	
16†	•						•						
		•	•		•					•			
	•	•	•	•	•	•						•	
18†	•						•						
		•	•		•					•			
	•	•	•		•	•					•	•	
28													
	•	•	•		•	•						•	
36													
	•	•	•		•	•						•	
U OR LU	•						•						
		•	•		•	•				•			
	•	•	•	•	•	•					•*	•	

* Do not use if less than 1600 ohms from central office.

† Use bridged ringers only for single party service in zones 16 and 18. All other service requires grounded ringers.

◆ TABLE B ◆
700- OR 2700-TYPE TELEPHONE SETS

LONG ROUTE OR UNIGUAGE DESIGNED TRANSMISSION ZONES	CLASS OF SERVICE							COUPLING DEVICE					
	INDIVIDUAL OR BRIDGED (FLAT OR MESSAGE RATE)	TWO PARTY				4 PTY SEMI-SEL	4 PTY FULL-SEL	CAPACITOR	425A OR 426A TUBE	426N DIODE	RINGER ISOLATOR	10A EXTENDER	11A EXTENDER
		RING PTY (FLAT OR MR)	TIP PTY NO IDENT GRD (FLAT RATE)	TIP PTY IDENT GRD REQ									
				1000 OHMS	2650 OHMS								
13	•	•	•	•	•	•	•	•					
									•				
										•			
		•	•		•	•					•		
16†	•	•	•	•	•	•	•	•				•	
	•								•				
										•			
		•	•		•	•					•		
18†	•	•	•	•	•	•	•	•				•	
	•								•				
										•			
		•	•		•	•					•		
28													
	•	•	•		•	•						•	
36													
	•	•	•		•	•						•	
U OR LU	•								•				
	•									•			
		•	•		•	•					•		
	•	•	•	•	•	•					•*	•	

* Do not use if less than 1600 ohms from central office.

† Use bridged ringers only for single party service in zones 16 and 18. All other service requires grounded ringers.

◆ TABLE C ◆
220A OR 2220B HANDSETS USED WITH AC1 OR AD1 BASE

LONG ROUTE OR UNIGUAGE DESIGNED TRANSMISSION ZONES	CLASS OF SERVICE						COUPLING DEVICE					
	INDIVIDUAL OR BRIDGED (FLAT OR MESSAGE RATE)	TWO PARTY			4 PTY SEMI-SEL	4 PTY FULL-SEL	CAPACITOR	425A OR 426A TUBE	426N DIODE	RINGER ISOLATOR	10A EXTENDER †	11A EXTENDER
		RING PTY (FLAT OR MR)	TIP PTY NO IDENT GRD (FLAT RATE)	TIP PTY IDENT GRD REQ APPROX 2000 OHMS AVAILABLE								
13	•	•	•	•	•		•					
						•		•				
	•	•	•	•	•	•						•
16‡	•						•					
						•		•				
	•	•	•	•	•	•						•
18‡	•						•					
						•		•				
	•	•	•	•	•	•					•	•
28												
	•	•	•	•	•	•						•
36												
	•	•	•	•	•	•						•
U OR LU	•						•					
	•	•	•	•	•	•					•*	•

* Do not use if less than 1600 ohms from central office.

† 74C connecting block required; for additional information refer to Section 501-322-100.

‡ Use bridged ringers only for single party service in zones 16 and 18. All other service requires grounded ringers.