

APPLICATION GUIDE FOR THE PREPARATION OF DETAILED
DIAL CENTRAL OFFICE EQUIPMENT REQUIREMENTS

Purpose: The purpose of this addendum is to:

1. Subdivide the category of 3201-4500 ohms loop resistance of long subscriber lines in order to accommodate Bidders which are not willing to guarantee operation of their central office equipment beyond 1500 ohms and choose to employ loop extenders or long line adapters to extend the normal range.
2. Revise the loop resistance limits for paystation lines.
3. Include on the wire chief's test set a feature whereby a test for exchange battery, including elevated voltages, may be made. This has become necessary because of the extensive use of booster power in CMO, loop extenders, long line adapters, etc.
4. Furnish a jack field for all interoffice trunks in order to facilitate the testing of these trunks.
5. Call attention to the susceptibility of CX and SX signaling circuits to interference from power induction and to recommend DX signaling as a standard wherever practicable.

Deletions: Strike out the paragraphs numbered 2.061, 2.062, 2.071 and 2.53033. Make a notation alongside these paragraphs "See Addendum No. 1."

Additions:

2.061 Most types of equipment purchased under the REA Central Office Equipment Specification are capable of serving subscriber lines with loop resistances, including the telephone set up to and including 1900 ohms without long line adapters or loop extenders. The addition of extra equipment such as long line adapters or loop extenders may be necessary for other types of central office equipment where the loop resistance of some lines exceeds 1500 ohms and where the Bidder is not willing to guarantee operation without adapters or extenders. If there are any lines with a greater loop resistance, the number of such lines

should be indicated in the appropriate space. The Bidder is required by the specification to provide long line adapters or loop extenders for all lines which are above 1500 ohms, if this is the upper limit for its standard equipment. It should be assumed that the resistance of a telephone set is 200 ohms on all loops. Refer to Item 1.021, Part I.

2.062 The subscriber loops exceeding 1500 ohms resistance are divided into four categories; namely, 1501-1900 ohms, 1901-3200 ohms, 3201-3500 ohms, and 3501-4500 ohms. Long line adapters or loop extenders used in the 1501-3200 ohms categories shall supply 72 or 96 volts to the line, and those used in the 3201-4500 ohms categories shall supply 96 volts to the line. (See Part I, Item 1.022.) If a 48-volt booster is required for one or more long line adapters, it should be applied to all long line adapters. The long line adapters or loop extenders supplied by most manufacturers will operate satisfactorily over these long loops, but additional treatment may be necessary to provide acceptable voice transmission. Refer to TE & CM 424, "Design of Two-Wire Subscriber Loop Plant."

2.063 Item 3.01 in Part III, REA Form 558c of the Central Office Equipment Contract should be revised to read as follows:

3.01 Number of regular lines having a loop resistance, including the telephone set, greater than 1500 ohms:

1501-1900 ohms	_____
1901-3200 ohms	_____
3201-3500 ohms	_____
3501-4500 ohms	_____

2.071 This item will include the number and type of paystation service to be provided in any one exchange area and the outside plant loop resistance, where the outside plant loop (excluding the paystation instrument) exceeds the following resistance values:

a. Semi-postpay	1000 ohms
b. Local-prepay	1200 ohms
c. Prepay	1200 ohms

As outlined in the current issue of TE & CM 703, Paragraph 5, "Line Loop Considerations," maximum outside plant limits must be consistent with transmission objectives and the minimum line current values necessary to operate the paystation coin mechanism.

2.508 A one-second ring period is not sufficient to generate a solid ring on long lines. When it is possible to specify only four or less ringing frequencies then the following note should be added under Item 23 of REA Form 558c, Part III: "The ring period for the long ring shall be at least 1.3 seconds in length."

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

11. 12. 13. 14. 15.

16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.