

1. GENERAL

1.01 This specification covers the scope and plan for the issuance of Bell System Repair Specifications (hereinafter referred to as BSRs) and Supplements. These documents are primarily intended for use in Western Electric Company Service Centers in the repair of apparatus and equipment removed from Telephone Company plant. Excepting, as stated herein, BSRs are issued by Western Electric Company with the approval of Bell Telephone Laboratories, Incorporated and American Telephone and Telegraph Company, and as such they cover the requirements deemed necessary to insure that repaired apparatus and equipment will give satisfactory service when returned to the Telephone Company. However, Bell Operating Companies may issue BSRs or Supplements to the above BSRs to cover deviations, options and other information pertinent to local administrative practices. Items repaired in accordance with BSR requirements and supplements remain the property of the Telephone Company and are classified by the Western Electric Company as Class "C" material.

NOTE: Repair as used herein and in the term "Bell System Repair Specifications" is used in the broad sense to include also recovery, testing and conversion.

2. SCOPE

Bell System Repair Specifications

2.01 Excepting as stated in 2.02, BSRs are issued by Western Electric Company with the approval of Bell Telephone Laboratories and American Telephone and Telegraph Company. As such, they cover the system requirements deemed necessary to insure that repaired apparatus and equipment will give satisfactory service when returned to the Telephone Company.

2.02 BSRs are issued by the Bell Operating Companies to cover repair requirements for only such items as are not covered in BSRs issued by Western Electric Company and to cover local repair administrative practices.

3. NUMBERING

BSRS

3.01 The BSR series is divided into three major divisions. Each major division is divided into subdivisions for the purpose of grouping BSRs with respect to subject. Titles of BSR major divisions and a brief description of the subject contained therein are as follows:

3.01 (Continued)

a. BSRS-100.00: General

This division covers the scope and plan for issuance of BSRSs, checking lists, indices and other information of a general nature.

b. BSRS-300.00: Recovery Requirements for Equipped Station Apparatus

Much of the equipped station apparatus (telephone sets, hand telephone sets, subscriber sets, etc.) is removed due to discontinuance of subscriber service and can be made satisfactory for further service without extensive work. The requirements for the recovery of these items as well as the requirements for the conversion of these items from one code to another, where the conversion does not entail extensive work, are contained in this division.

c. BSRS-400.00: Repair Requirements

This division covers the requirements for the repair of equipment items, and apparatus items other than those mentioned in "b." The requirements for the repair of components removed from equipped station apparatus for reasons other than to facilitate Shop operations and the requirements for conversions other than those mentioned in "b" are also covered in this division.

3.02 BSRSs are assigned specific numbers as per subject in accordance with BSRS-103.001. The numbers consist of six digits and are prefixed by "BSRS-." The first digit is determined by the major division to which the BSRS applies. The second and third digits are determined by the subdivision indicative of the subject covered. The first three digits are separated from the last three by a decimal point. The last three digits identify the individual BSRS within the subdivisions.

4. FORMAT

4.01 BSRSs are furnished in letter size (8 3/8" x 10 7/8") pages, punched for filing in approved binders available for this purpose. The printing of Bell Operating Company BSRSs should be on yellow paper as an aid to identification.

4.02 The first page, or pages required, of a BSRS consists of an index listing all the pages comprising the BSRS as well as the attached drawings and supplementary requirement information.

4.03 Each page and attached drawing of the BSRS bear an individual issue number.

4.04 The symbol "c" when used on the index of the BSRS indicates that the currently authorized issues of supplementary requirement information are to be used.

5. CANCELLATIONS, CHANGES AND REISSUES

- 5.01 BSRs should be reviewed periodically with the idea of canceling those which are no longer considered necessary. A BSR is canceled by a reissue of page 1, indicating cancellation.
- 5.02 In general, changes (revisions, additions or deletions) are indicated by marginal arrows to aid the reader in readily determining the changed material. However, if changes are extensive, marginal arrows are omitted and a statement to that effect included below the Index Table on page 1.
- 5.03 Changes in the attached drawings are described in the issue columns of the drawings.
- 5.04 BSRs are revised on an individual page or drawing basis. On this basis, only those pages or drawings affected by the revisions are reissued.

CAUTION: In no case should it be construed that the reissue of a part of a BSR replaced the entire document.

- 5.05 When pages or drawings are reissued, the index is reissued concurrently to indicate the newly authorized issue of the pages or drawings.
- 5.06 The BSR does not have an issue number for the entire document. However, for reference and record purposes, the issue of the BSR Index, page 1, is used.

6. RATINGS

- 6.01 BSRs do not bear ratings.

7. CHECKING LIST AND INDEX

- 7.01 BSRs, except those issued by the Bell Operating Companies, are listed alphabetically and numerically in BSR-104.011.

8. DISTRIBUTION

- 8.01 BSRs and individual BSR reissued pages and drawings thereof prepared by Western Electric Company are sent to the Telephone Companies at approximately the same time that they are forwarded to the Western Electric Company Service Centers. New and revised requirements are placed into effect in the Shop as facilities and other local conditions permit.
- 8.02 BSRs prepared by Bell Operating Companies are distributed in accordance with local administrative practices.

9. SUPPLEMENTS

9.01 Supplements to BSRs may be issued by the Operating Telephone Companies (BOCs) to cover the following:

- a) Deviations: Defined as OTC instructions to modify or omit the requirements covered by BSRs controlled by Bell Telephone Laboratories and administered by Western Electric (additional requirements are not included; see "c" below). Each proposed deviation should be supported by engineering or cost considerations. Since BSRs specify system requirements to insure Bell System quality, deviations should not be issued unless absolutely necessary and with the impact on quality and maintenance fully understood. AT&T will not approve deviations that relax "R" requirements in the BSR.
- b) Options: Defined as OTC election of optional requirements covered in BSRs. Options are not considered to be deviations. Options are usually prefixed in BSRs by: (a) "When specified by the OTC," or (b) "Unless otherwise specified by the OTC."
- c) Other Instruction: Defined as OTC additional requirement or special instruction regarding the product or process that is not covered in the existing BSR.

9.02 Before any supplement is written, the impact of the proposed changes on registration, warranty criteria, repair cost, product quality, availability and service performance must be considered. Supporting documentation should be included when supplements are submitted by the OTC for review. These even include short-term instructions that cover temporary shortages of materials.

BSRS Supplements should be submitted in the following format:

- A) Supplements should be furnished in letter size (8 1/2" x 11") pages, punched for filing in binders. The printing of supplements can be on yellow paper as an aid in identification.
- B) Use arrows next to the paragraph number that is being added or changed from the previous issue of the supplement.
- C) Attachment "A" is the recommended format to be used when submitting the supplement. The specified format can be changed to include local Company needs. Following are details of each numbered block of Attachment "A."

9.02 (Continued)

- (1) OTC NAME: Name of the Operating Telephone Company
- (2) TITLE: Title of the BSRS
- (3) BSRS: The BSRS Number
- (4) BSRS ISS: Issue number of the latest issue shown on page 1 of the BSRS
- (5) SUPP ISS: Issue letter of the supplement being issued. The current issue should include all supplemental requirements for the specified BSRS. Only one supplement should be in effect for a specific BSRS at any one time. When a change is required during the year, the entire supplement must be reissued. All supplement changes should be reflected by using the next letter of the alphabet.
- (6) PAGE ____ of ____: State the page number and the total number of pages in the supplement.
- (7) PARAGRAPH NO.: When a supplement is written for an existing BSRS paragraph, the same number should be used plus one additional digit; i.e., for paragraph 5.01, use 5.011 in the supplement.

When adding a new paragraph, use the next higher number with the additional third digit; i.e., if the highest existing number is 5.04, a new paragraph should be numbered 5.051. In addition, the word "new" should be added in the margin next to the number.

- (8) TYPE: Each item in a supplement should be identified by a "D" for "Deviation", "O" for "Option", and "OI" for "Other Instruction" as defined in the section above.
- (9) DESCRIPTION: Synopsis describing the supplement.
- (10) EXPIRATION DATE: All supplements must have an expiration date. The maximum length of time a supplement can be in effect without a review is one year from the OTC date of approval. AT&T recommends that the review and approval process for all supplements be completed in the last quarter of each year, regardless of the number of times it is reissued during the year.
- (11) COMMENTS: This section can be used by the OTC to state special instructions, general information, etc., or for AT&T or the Western Electric Repair Engineering Control Center to state the reasons why any paragraph number has not been approved.

10.01 COMPONENT CODES

When a component other than the specified one is substituted during repair, the Western Electric component code should be specified. When a Western Electric substitute is not available, a sample and, if available, a specification sheet of the outside supplier's component should be submitted to AT&T with the supplement.

SUPPLEMENT APPROVAL PROCESS FOR PRODUCTS OTHER THAN RESIDENCE PRODUCTS

- 11.01 All supplements which include changes in BSRS requirements and special instructions regarding refurbished products should be submitted to Western Electric Company by the OTC.
- 11.02 All supplements must be signed by the designated representative of the OTC.
- 11.03 All supplements will be reviewed by the Western Electric Repair Engineering Control Center responsible for the product involved. Requirements in BSRSs that are identified with an "R" which are non-deviable items that impact on the network and/or personnel protection related will not be approved.
- 11.04 Supplements covering deviations from BSRS requirements for products approved by the Underwriters' Laboratories shall be submitted to AT&T prior to issuance by the OTC.

SUPPLEMENT APPROVAL PROCESS FOR RESIDENCE PRODUCTS

- 12.01 All supplements to the BSRSs listed in Attachment "B" which include changes in BSRS requirements and special instructions regarding refurbished products should be submitted to AT&T by the OTC.
- (1) OTC APPROVAL: All supplements must be signed by the Residence Engineering Fourth Level or his delegated authority. It is the responsibility of the Residence Engineer to acquire the necessary approvals from other OTC organizations; e.g., Inventory and Material Management. The impact on the repair process and cost should be determined by reviewing the proposed supplement with the local Western Electric Service Center. Approvals should be on the last page of each supplement. Subsequent to the OTC approval, send all supplements to AT&T for concurrence. Supplements shall be submitted for information purposes even if the expiration date will pass before AT&T receives it.
- (2) AT&T CONCURRENCE: All supplements must be reviewed by the Residence Products Management Technical Support. AT&T will not approve supplements that relax requirements in BSRSs that are identified with an "R." These are non-deviable items that impact on the network and/or are personnel protection related. Functional Test and Installability (FT&I) quality audit requirements must also be met. All supplements will be reviewed for system applications and, whether approved or not, will be returned to the OTC by AT&T. FT&I requirements will be identified and commented on at that time.

WESTERN ELECTRIC QUALITY ASSURANCE

- 13.01 When a supplement with the required information and authorized OTC approval is received by the Western Electric Quality Assurance Organization, it will be implemented into the refurbishment process. However, for supplements that AT&T has rejected, Western Electric Quality Assurance will terminate them 30 days after the date of rejection unless the Fourth Level OTC Residence Engineer's organization overrides the rejection.
- 13.02 The Western Electric Quality Assurance Engineering Control Center (QAECC) located in Indianapolis will maintain a current list of all supplements in their computer data base. This will enable easy and rapid access to all supplements for evaluation.
- 13.03 Attachment "C" outlines the approval process and indicates the disposition of forms for all BSRS Supplements.

BELL SYSTEM REPAIR SPECIFICATION
SUPPLEMENTBSRS _____
BSRS ISS _____
SUPP ISS _____
PAGE _____ OF _____PARA.
NO.TYPEDESCRIPTIONEXP.
DATE

COMMENTS:

OTC APPROVAL: _____
DATE _____ TITLE _____
AT&T DIV. MGR. _____

- ☐
- APPROVED
-
- ☐
- RECOMMENDED WITH COMMENTS
-
- ☐
- NOT APPROVED

BELL SYSTEM REPAIR SPECIFICATIONS
RESIDENCE PRODUCTS

<u>BSRS</u>	<u>TITLE</u>
350.001	GENERAL REQUIREMENTS
350.002	CIRCUIT PACKS AND PRINTED WIRING BOARD ASSEMBLIES, GENERAL REQUIREMENTS
350.003	TELEPHONE SETS - GENERAL REQUIREMENTS
350.005	APPEARANCE STANDARDS - STATION APPARATUS - GENERAL REQUIREMENTS
361.004	RINGERS - E TYPE
361.005	RINGERS - F TYPE
361.006	SUBSCRIBER SETS - 592 TYPE - RECOVERY REQUIREMENTS
361.023	SUBSCRIBER SETS - 685, 686, 687, 688, 690, 696, 1690 AND 2690 TYPES
361.062	51A RINGER
361.065	16 NO. REPERTORY TYPE TELEPHONE SET RECOVERY REQUIREMENTS
361.066	870A1 & 2870A1 DIALS - RECOVERY REQUIREMENTS
361.068	TOUCH-A-MATIC ^R 12 REPERTORY ADJUNCT - RECOVERY REQUIREMENTS
361.203	HAND TELEPHONE SETS - HANGING TYPE
361.301	TELEPHONE SETS - 302, 303, 304, 305, 306, 307 AND 309 TYPES
361.308	TELEPHONE SETS 500, 501, 502, 503, 510, 511, 513, 514, 515, 529, 1500, 1502, 1510, 1511, 1514, 1515, 2500, 2502, 2504, 2510, 2511, 2514, 2515 AND 3504 - TYPE RECOVERY REQUIREMENTS
361.315	TELEPHONE SETS, RAPID RECOVERY
361.316	TELEPHONE SETS, DESIGN LINE ^R TYPE - RECOVERY REQUIREMENTS
361.317	12 NUMBER REPERTORY TYPE TELEPHONE SET RECOVERY REQUIREMENTS
361.323	TELEPHONE SET - 331A
361.348	HAND TELEPHONE SETS AND TELEPHONE SETS - MODIFIED AND RAPID RECOVERY

<u>BSRS</u>	<u>TITLE</u>
361.353	TELEPHONE SETS - 592 TYPE - RECOVERY REQUIREMENTS
361.356	TELEPHONE SETS - 532, 533, 535 AND 536 TYPES
361.357	TELEPHONE SETS - 554, 555, 556, 557, 558 AND 559 TYPES
361.362	TELEPHONE SETS - PRINCESS ^R TYPES - RECOVERY REQUIREMENTS
361.370	PANEL-TYPE TELEPHONE SETS - RECOVERY REQUIREMENTS
361.373	TELEPHONE SETS - TOUCH-TONE ^R WALL TYPE - RECOVERY REQUIREMENTS
361.374	TELEPHONE SETS - TRIMLINE ^R - RECOVERY REQUIREMENTS
361.376	581A TELEPHONE SET BASE & F-56659 & F-56660 TELEPHONE SET - RECOVERY REQUIREMENTS
361.377	TELEPHONE SETS - ANTIQUE - MODIFICATION AND RECOVERY REQUIREMENTS
361.382	TELEPHONE SET BASES - 500, 554, 702, 2500, 2554 AND 2702 TYPES AND TELEPHONE BASES - AC1 AND AD1 TYPES
361.383	TELEPHONE SET BASES 526A, B & 2526B TYPES, 526A HOUSING AND 53A, B & C TYPE FACEPLATES
361.384	TELEPHONE SETS, MODULAR TYPE
361.801	TELEPHONE SETS-TRIMLINE HOSPITAL TYPE-RECOVERY REQUIREMENTS
362.012	RECEIVERS - 731 AND 732 TYPES
362.021	HANDSETS - F - TYPES
362.023	HANDSETS - G1, G3 and G5 TYPES
362.113	RINGERS - B TYPE
362.114	RINGERS - C, H AND J TYPES
362.115	RINGERS - D TYPE
362.116	RINGERS - G, M, N AND T TYPES AND 9-TYPE BUZZERS
362.117	RINGERS - P TYPE
362.142	NETWORKS-425, 495, 498, 854, 861, 4010 AND 4044 TYPES
362.143	EQUALIZER - 311A
362.201	STATION CORDS
362.203	MODULAR STATION CORDS
362.304	DIALS - 40 AND 41 TYPES
362.305	DIALS - 21 TYPE - RECOVERY REQUIREMENTS
362.306	DIALS, 22-, 25-, 35(LC)-, AND 66-TYPE
362.307	DIALS - 26, 36 AND 67 TYPES-RECOVERY REQUIREMENTS
362.312	DIALS-6, 7, 8, 9, 10 AND 11 TYPES
362.313	DIALS - 1008, 1025, 1035, 1036 AND 1066 TYPES

<u>BSRS</u>	<u>TITLE</u>
362.314	DIALS - 51 TYPE
362.315	DIALS - 80 AND 82 TYPE
362.317	DIALS - 35 (RC) TYPE
362.318	DIAL AND NETWORK ASSEMBLY - P-90D220 - RECOVERY REQUIREMENTS
362.319	70-TYPE DIAL RECOVERY REQUIREMENTS
362.320	83-TYPE DIAL RECOVERY REQUIREMENTS
362.321	DIALS - 98 TYPE - RECOVERY REQUIREMENTS
362.322	DIALS - 73 TYPE - RECOVERY REQUIREMENTS
404.102	CORD REELS - KS-14975 AND KS-16124, 2A, 2B, 3A AND 3B
404.105	CORD REELS 2A, 2B, 3A AND 3B
450.204	RINGERS - B TYPE
450.217	L1A RINGERS
450.902	GONGS
451.201	HANDSETS - F TYPE
451.207	HANDSETS - G TYPE - SUBSCRIBER SET
451.214	HANDSETS - G TYPE
451.229	HANDSETS - F6 TYPE
451.230	HANDSETS - G6, G7, G8, G13 AND J1A TYPES
451.231	HANDSETS - G12 TYPE
451.232	HANDSET - M1A
451.502	TELEPHONE SETS - 300, 325 AND 525 TYPES - FOR OUTDOOR USE
451.503	570J AND K TELEPHONE SET BASES AND 111B, C, D and E APPARATUS BOXES
451.512	TELEPHONE SETS - 320 TYPE
451.902	APPARATUS BLANKS AND CARDHOLDERS
451.903	DIAL NUMBER PLATE - 147-, 149-, 150-, 158-, 164-, P-84A800- AND P-83B300-TYPES
451.905	DIALS - 103A AND 104A
451.914	DIAL - 21 TYPE
451.916	DIALS - 40 AND 41 TYPES
451.917	DIALS, 22-, 25-, 35 (LC)-, AND 66-TYPES
451.918	DIALS-26, 36, AND 67 TYPE REPAIRS
451.922	42A DIALS
451.923	DIALS - 80 AND 82 TYPES

<u>BSRS</u>	<u>TITLE</u>
451.924	43 TYPE DIAL
451.927	DIALS - 35 (RC) TYPE
451.928	53 TYPE DIALS
451.929	DIAL AND NETWORK ASSEMBLY P-90D220 - REPAIR REQUIREMENTS
451.930	70 TYPE DIAL REPAIR
451.931	1A35C TONE DETECTOR
451.933	83 TYPE DIAL REPAIR
451.936	DIALS - 98 TYPE - REPAIR REQUIREMENTS
451.937	DIALS - 73 TYPE - REPAIR REQUIREMENTS
452.020	TRANSMITTER UNITS - F1, 625A-3, D141914, AND D-173387
452.022	RECEIVER UNIT - HA TYPE
452.032	TRANSMITTER UNITS - T TYPE
452.033	RECEIVER UNIT - U TYPE
452.039	AMPLIFIER - 151 TYPE
452.040	TRANSMITTER - 657A
452.042	RECEIVERS - 716 TYPE, 717A, 718 TYPE, AND 723A
452.044	AMPLIFIERS - 153 TYPE
452.047	TRANSMITTER - 661A
452.053	RECEIVERS - 731 AND 732 TYPES
452.054	AMPLIFIER 236 TYPE
452.056	AMPLIFIER - 238 AND 276 TYPE
452.057	AMPLIFIERS - TYPES 241 AND 242
452.059	671 TYPE TRANSMITTER
452.066	AMPLIFIERS - 280A AND 281A
455.120	BACKBOARDS
455.131	KS-6846, KS-8108, KS-8109 AND KS-8110 BUZZERS - 4 AND 7 TYPES EXCEPT 70 AND KS-13783 AND 7 TYPE BELLS
455.132	BUZZERS - B TYPE
455.140	CONNECTING BLOCKS - 12, 40, 42, 44, 47 AND 1044 TYPES AND 101 TYPE COVERS
455.143	COVERS - 123 AND 125 TYPES
455.151	LOUDSPEAKER SETS - 100 TYPE
455.162	C AND D INSIDE WIRING CABLE
455.182	LOUDSPEAKER - 758 TYPE

<u>BSRS</u>	<u>TITLE</u>
455.208	CONNECTING BLOCKS - 57, 59 AND 60 TYPE
455.215	RINGER INSULATOR - P-90D011
455.224	ARTIFICIAL LARYNX - 5 TYPE - RECOVERY REQUIREMENTS
455.614	HANDSETS 1011, 1013 AND 1014 TYPE

PROCESS FLOW
FOR
BSRS SUPPLEMENTS

