

RECEIVER UNIT - U TYPE

This index lists the information that forms a part of, or supplements this specification, and indicates the authorized issues thereof.

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| DATE           | PREV AUTH                       | 8-72 | 12-72 | 9-74 | 2-75 |  |  |  |  |  |  |  |  |  |  |  |       |                      |
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| SUPL SPECS     |                                 |      |       |      |      |  |  |  |  |  |  |  |  |  |  |  |       |                      |
| BSRS-350.001   | c                               |      |       |      |      |  |  |  |  |  |  |  |  |  |  |  |       | General Requirements |
| BSRS-420.901   | c                               |      |       |      |      |  |  |  |  |  |  |  |  |  |  |  |       | Diodes and Varistors |

c—Information in accordance with that currently authorized.

For WECO Use Only

FILE IN HANDBOOK:

RS-505 Bk-1 Tab M

IP-5 RS-505Q

TCI Library: [www.telephonecollectors.info](http://www.telephonecollectors.info)

1. GENERAL

1.01 This specification covers the repair for reissue (Class C) of the U1, U2, U3 and U4 Receiver Units returned as separate units or as components of handsets not meeting the requirements of specifications BSRS-362.023 or BSRS-451.207.

1.02 The applicable requirements of the specifications listed on the index as SUPL SPECS shall be followed in the repair of these receiver units in addition to the requirements given herein.

1.03 Omitted on Issue 5 of this page.

Requirement Needing Special Consideration by the Telephone Company

1.04 This specification includes a certain requirement which needs special consideration and, in some cases, action on the part of the telephone company. The paragraph number and a brief description of this requirement are shown below.

Paragraph No.

Requirement

2.03

Touch-up or refinishing of ferrule grids

2. FINISH AND APPEARANCE

Cleaning

R 2.01 Cleaning fluids shall not be used to clean the parts of the assembled receiver units.

Note: The use of cleaning fluids is likely to result in damage to the units.

2.02 The metal parts of the receiver units shall be free of heavy deposits of corrosion (formation of salts) and foreign matter. Small deposits of corrosion are not objectionable. Discolored or tarnished metal parts are not objectionable. Where necessary, corrosion and foreign substances shall be removed from the exterior metal surfaces by brushing. Care shall be taken not to remove code, date, or repair markings.

2.03 When requested by the telephone company, ferrule grids having areas of exposed metal may be touched up or refinished with one or two coats of "brown lacquer." In applying the lacquer, care shall be taken to keep it from coming in contact with the moisture-resistant membrane.

3. MECHANICAL

- R 3.01 Receiver units shall not be dismantled during repair.
- 3.02 Omitted on Issue 4 of this page.
- 3.03 The perforated portion of the metal grid shall not be conspicuously distorted.
- R 3.04 The visible portion of the moisture-resistant membrane may contain punctures, tears or holes provided the membrane is generally intact (i.e., is not torn to such an extent that it touches the diaphragm), and meets the output requirements outlined in Paragraph 4.02 - 4.05.
- 3.05 The seating surface of the receiver unit shall be free of foreign substance which would impair even seating in the receiver cavity of the handset. Visible markings resulting from scratch brushing are not objectionable.
- R 3.06 Receiver units having obviously damaged terminal plate assemblies shall not be reissued.
- R 3.07 The acoustic resistance screen shall be clean and free of foreign matter.
- R 3.08 Defective varistors shall be replaced.
- R 3.09 Receiver units with terminal plates that are loose enough to result in breakage of the coil leads shall not be reissued.
- 3.10 The molded projections on receiver units may be cracked or missing, except on units using 44A Varistors, in which case the inner projection on the side of the small terminal of the varistor shall be present. If inner projection near the small varistor terminal is broken or missing, the 44A Varistor may be replaced with a 104A and 100A Varistor and the unit recoded per Paragraph 6.01.
- 3.11 All U-Type Receivers Units having Lavender Terminal Plate Assemblies ← shall have the 841380413 Repair Terminal Screws.

4. TESTS

Insulation Breakdown

- R 4.01 Receiver units shall be capable of withstanding an insulation breakdown test of 500 volts ac, applied between either terminal and the case.

Output and Magnetic Adjustment Requirements

- R 4.02 The output and magnetic adjustment requirements for the receiver units, when tested on the Telephone Instruments Testing Machine, shall be as follows:

Machine Settings

|                            |  |
|----------------------------|--|
| Band 1 - Minimum Frequency | 1000 cps   |
| Bandwidth                  | 0 (single frequency)   |
| Band 2 - Minimum Frequency | 1000 cps   |
| Bandwidth                  | 2000 cps   |
| Open Circuit Voltage       | -18.4 db relative to<br>1.9 volts for U1 units<br>-12.4 db relative to<br>1.9 volts for U2 units |
| Circuit Impedance          | 128 ohms for U1 units<br>512 ohms for U2 units   |
| Position Control D-10      | 3 for U1 units<br>5 for U2 units   |
| Sweep Rate                 | "slow"   |
| Test Fixture               | Fixture for U1<br>Receiver Unit  |

- R 4.03 The output of the receiver unit at 1000 cps (band 1) shall be minimum, 31.0 db above 1 dyne per square centimeter.
- R 4.04 The output at any point in the frequency range between 1000 and 3000 cps (band 2) shall not exceed the output at 1000 cps (band 1) by more than 4.0 db.
- R 4.05 The output at any point in the frequency range between 1000 and 3000 cps (band 2) shall not be lower than the output at 1000 cps (band 1) by more than 5.0 db.
- R 4.06 With the varistor terminal to the left of the code marking disconnected and insulated from the receiver terminal, and a superimposed dc of +0.100 amp (aiding) applied to the U1 receiver unit or +0.050 amp (aiding) applied to the U2 receiver unit, the output at 1000 cps shall not decrease by more than 5.0 db from the output without the superimposed dc. In this test, the positive side of the superimposed dc shall be applied to the receiver unit terminal from which the varistor terminal was disconnected.

- R 4.07 All 44A Varistors that are more than six years old shall be replaced.
- R 4.08 The 44A, 100A, and 104A Varistors shall either meet their respective requirements as specified in BSRS-420.901, or shall be tested per Paragraph 4.10.
- R 4.10 Without the varistor disconnected, the dc voltage across the unit shall be not more than 1.0 volt for the U1, U2, and U4 Units, and not more than 0.6 volt for the U3 unit, when 0.125 ampere flows through the unit in each direction in turn.

5. MARKING

5.01 Omitted on Issue 7 of this page.

6. CONVERSION

6.01 Where the 44A Varistor needs replacing on the U1 and U2 Receiver Units, the unit shall be converted to U3 and U4 Units, respectively, as follows:

- (a) Equip the U1 Unit with a 104A Varistor.
- (b) Equip the U2 Unit with a 100A Varistor.
- (c) Stamp the new code in 1/8 inch characters in white ink directly over the old code.
- (d) Omitted from Issue 7 of this page.