

DIRECT REUSE AND REHABILITATION OF STEP-BY-STEP
CENTRAL OFFICE EQUIPMENT

1. GENERAL

1.01 This Section provides new guidelines and procedures to be followed in the evaluation and rehabilitation of all step-by-step (SXS) and associated central office equipment (COE) to be reused through direct reuse or placed in "CE" or "R" stock. "CE" stock is COE not required for direct reuse, held in the Chief Engineer's Class C stock. "R" stock is displaced COE held by the Chief Engineer either for emergency use or for sale outside the Southwestern Company. This Section complements Section 790-100-907SW.

1.02 This Section is issued to provide guidelines and procedures for evaluation and rehabilitation of all SXS and associated equipment.

1.03 SXS equipment will be classed into two categories, "A" and "B". Generally Category "A" will cover equipment vintage of 0-10 years. No defect evaluations will be required of this equipment before reuse. Generally Category "B" will cover equipment vintage of 11 years and older. All equipment planned for reuse in this category will be evaluated for defects as described under Part 5. The condition of equipment at a particular office may warrant an adjustment of these categories as determined at the pre-order meeting.

1.04 It is expected that all of the equipment to be removed will be maintained in an economical and trouble free condition to give acceptable customer service. Curtailment of maintenance or removing this equipment from the Controlled Maintenance Plan (CMP) is not justified even though it is known that the equipment is to be removed from service. It is not expected, however,

that the equipment to be removed be in a "like new condition". The equipment should meet the standard maintenance requirements necessary to provide good acceptable customer service.

2. PRE-ORDER MEETING

2.01 A pre-order meeting is required with every major removal (25 shelves or 10 frames) displacing company control equipment and is recommended for all other COE removals when requested by Area Engineering when:

- a. An inventory and/or evaluation will be made;
- b. Disposition will be by Western Electric Direct Reuse; and,
- c. The amount and types of displaced equipment offers transition, removal or reuse problems.

2.02 Generally the following criteria will be used in determining what portion of the removed equipment will be junked:

- a. Obsolete equipment for which there is no use demand within or outside the Bell System, such as, (North Electric "CX", Kellog Dial, Western Electric 356A, Automatic Electric Equipment, etc).
- b. Equipment not considered to be economical to rehabilitate after evaluation.

2.03 The following will be decided or discussed at the pre-order meeting:

- a. The equipment that will automatically be junked, regardless of condition or age.

- b. That portion of the reusable equipment which will be inventoried and/or evaluated.

2.04 The pre-order meeting should be held 24 weeks before the main order is due to Western Electric if an inventory and/or evaluation is required on equipment removal. The pre-order meeting should be held either at the removal location or at a location permitting the conferees to inspect the office.

2.05 The following personnel should attend the pre-order meeting:

- a. The Telephone Company Engineer responsible for removal or his representative shall act as Chairman.
- b. Western Electric Direct Reuse Coordinator (only if any part of the displaced equipment will be disposed of through Western Electric Direct Reuse).
- c. The Western Electric Line Engineer who shall act as Secretary.
- d. Western Electric Installation Representatives.
- e. Plant Department Representatives.
 - 1. Plant Supervisor or his representative.
 - 2. Equipment Chief.
 - 3. Chief Switchman.
 - 4. Evaluator(s) (Appointed by Plant Supervisor).
- f. The Traffic Engineer and Manager-Network Administration (only if transitions will be required).
- g. A Circuit Engineer (only if circuit equipment is to be removed or space being vacated will be assigned for future circuit equipment).

- h. A Switching Engineer (only if switching equipment is to be removed or the space being vacated will be assigned for future switching equipment).

- i. Other participants as deemed necessary.

3. EQUIPMENT INVENTORY AND EVALUATION PROCEDURES

3.01 Following the pre-order meeting the Telephone Company Engineer shall request the Western Electric Engineering representative to provide inventory and evaluation work sheets for all equipment specified for reuse. See Exhibits 1 thru 5 for types of equipment to be evaluated. The following information should be included:

- a. Year of manufacturer, inventory may be made by Plant or Western Electric and returned to the Telephone Company Engineer who will summarize the equipment to determine the number of units manufactured within 10 years and then return the work sheets to Plant requesting the necessary evaluation of equipment over 10 years old.
- b. Any equipment judged non-repairable during evaluation will be marked "J" (junk). All needed repairs will be shown on the appropriate work sheets for all repairable units. Where it appears likely that the needed equipment can be taken from units needing no repairs, they will be shown as "S" (save). When the necessary quantity of "S" units are found, the evaluation ends and the work sheets are returned to the Telephone Company Engineer.

4. RESPONSIBILITIES OR EVALUATORS

4.01 It will be the responsibility of the evaluator to determine the condition of equipment planned for reuse that is subject

to service affecting deterioration due to usage and/or age. Results of the evaluation could cause the equipment to be junked rather than saved or identify repairs needed before the equipment can be placed in service.

4.02 The evaluator(s) will take the list of equipment to be evaluated, using the Inventory and Evaluation Worksheet, Exhibits 1 thru 5, and evaluate all equipment planned for reuse that falls under Category "B" (equipment 11 years and older) for repairs that must be made by this office prior to removal and reuse. The results of the evaluation will be recorded on the Inventory and Evaluation Worksheet on lines 3 and 4 of Section B using Section C as a guide.

4.03 The evaluator will initial and return completed worksheets, along with the list of corrections to be made to the Telephone Company Engineer.

5. EQUIPMENT EVALUATION - METHODS

5.01 The following items will be the criteria used for evaluating 197 type switches, dial pulse repeaters, rotary out trunk switches and other associated dial equipment:

197 Type Switches

- a. Wipers - worn, broken or single weld type.
- b. Wiper Cords - worn or frayed.
- c. "D" Condition Contacts - all relays.
- d. V.O.N. Spring Assembly - contacts and adjustments.
- e. Mechanical Parts - worn, broken or loose, including shaft bearings, etc.
- f. Banks (non-mechanical type).
- g. Broken Separators and/or Insulators (mechanical type).

Dial Pulse Repeaters

- a. "D" Condition Contacts - all relays.

Rotary Out Trunk Switches

- a. Rotor Cleaning (See Note).
- b. Bank Cleaning (See Note).
- c. Lubrication (See Note).
- d. Mechanical Parts (worn, broken or loose).

Associated Equipment

- a. No evaluation required unless specified at pre-order meeting.

NOTE: Maintenance items corrected at receiving end (if required) but billable to Area of removal.

6. AREA PLANT CONTROLS AND RESPONSIBILITIES

6.01 The Area Plant Supervisor's office will be the control location on all job removals within his jurisdiction. He will be responsible for:

- a. Appointment of evaluator(s).
- b. Protection of equipment after inventory (equipment not relocated or cannibalized by local Plant).
- c. Rehabilitation of equipment (as noted by evaluation).
- d. Notifying equipment engineers of job completion (equipment repaired and ready for removal).

7. RECEIVING OFFICE RESPONSIBILITY

7.01 The following listed maintenance items and other minor repairs (excluding rotary out trunk switch repairs) will be corrected with costs of such repairs absorbed by the receiving location.

- a. Switches, according to the manufacturing date, that fall within the vintage dates of 0-10 years. (this vintage equipment not evaluated at removing location).

- b. Switches and associated equipment will be blown or wiped clean outside of equipment room. (this work to be billed to the reusing office by Western Electric).
- c. Switch operational tests.
- d. Bank and wiper alignment.
- e. Bank and wiper cleaning - 197 type switches.
- f. Switch lubrication - 197 type switches.
- g. Rotor and bank cleaning - rotary out trunk switches (See Note).

NOTE: Costs associated with rotary out trunk switch repairs and bank cleaning if necessary may be billed back to the removal Area. (see Par. 9.01). Items b, c, & d, shall be performed by Western Electric prior to turn-over to Plant (See Par. 8.01 and 8.02). Items e, f, & g, shall be performed prior to turn up for service by Plant and placed in the CMP for regular classification and frequency as prescribed by the Equipment Test Lists for that equipment.

7.02 Any equipment received in a damaged condition as a result of packing and shipping will be immediately referred back to the Telephone Company Engineer for proper disposition.

8. INSTALLATION REQUIREMENTS AND ACCEPTANCE PROCEDURES

8.01 Equipment or apparatus furnished by the Southwestern Company, whether new, reused or relocated, and equipment affected by wiring changes, shall be verified and tested by Western Electric using regular verification inspection and test procedures, unless otherwise specified by the Southwestern Company. The Southwestern Company is responsible for assuring that any material it furnishes requires no adjust or test effort in excess of that normal for new equipment and the Southwestern Company assumes all responsibility for the proper functioning of any used material it furnishes.

8.02 As part of the installation, tests shall be performed by Western Electric to verify all operating features and functions of the equipment furnished. These features and functions are outlined in the General and Specific Performance Requirements in the 800 series of Bell System Practices and Circuit and Transmission Requirements. These tests shall be performed after the completion of all verification inspections and prior to turnover of the equipment to the Southwestern Company.

9. PLANT AND WESTERN ELECTRIC MATERIAL AND LABOR CHARGES

9.01 Where applicable, the Plant labor hours expended in the repair of reused equipment should be reported to the appropriate location and account codes of the division from which the equipment was transferred. The hours should not be reported to the estimate which authorized the installation of the central office equipment. The hours and cost will be automatically inter-office billed by Accounting between divisions. This method will keep the hours and related costs out of the E-5300, General Plant Cost Results Summary, for the repairing division and properly include them on the E-5300 in the transferring division.

9.02 Where reconditioning work is to be performed by the Western Electric installer, a written request detailing work to be done must be prepared and signed at the division level before forwarding to the Engineering Manager-Equipment and Buildings. All material and labor shall be initially charged to the reusing location "R" account.

9.03 Where applicable, Western Electric charges shall be transferred by the Area Engineer to the removed location if notice is given by Plant within 60 days after the reusing job completes. No charges for

reconditioning work will be transferred after
the reusing order has been final billed.

NOTE: The procedure for transferring hours
between Areas will only apply when
both General Plant Managers have
agreed on work to be done and the
location to be charged.

EXHIBIT 4

		(B)															
		REP SW		REPT SWITCHES													
BAY		DESIG	CL	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	INVENTORY																
2	YR MANF																
3	EVALUATION																
4	REPAIR																
5	DISPOSITION																
1	INVENTORY																
2	YR MANF																
3	EVALUATION																
4	REPAIR																
5	DISPOSITION																
1	INVENTORY																
2	YR MANF																
3	EVALUATION																
4	REPAIR																
5	DISPOSITION																

CL	REPAIRS REQUIRED
1	REPLACE 'A' RELAY CONTACTS (NO.)
2	REPLACE 'B' RELAY CONTACTS (NO.)
3	REPLACE 'C' RELAY CONTACTS (NO.)
4	REPLACE 'D' RELAY CONTACTS (NO.)
5	REPLACE 'E' RELAY CONTACTS (NO.)
6	REPLACE 'F' RELAY CONTACTS (NO.)
7	REPLACE 'G' RELAY CONTACTS (NO.)
8	
9	

INVENTORY BY: _____
 DATE: _____
 EVALUATED BY: _____
 DATE: _____
 REPAIRED BY: _____
 DATE: _____
 PAGE _____ OF _____

(A) WIRING LIST T-				
CL	EQUIPMENT	DRAWING	LIST/ GROUPS	DISPOS

INV. & EVA. WORKSHEET SXS REPEATER EQUIPMENT		
TOWN _____	STATE _____	
OFFICE _____		
SPEC _____	SECTION _____	PAGE _____
SW-97-604 3/76		
SOUTHWESTERN BELL TEL. CO.		

- NOTES:**
1. BLOCK A-W.E. OR TELCO ENG. COMPLETES. NO 'X' CLASS TO BE ASSIGNED. (SEE NOTE 2) 'DISPOS' SHOULD SHOW 'S' FOR SAVE AND 'J' FOR JUNK.
 2. BLOCK B-W.E. INST. OR PLANT COMPLETES LINE 1 AND/OR 2-LINE 1-SAME CLASS, BLOCK A, OR MARKED BY AN 'X' FROM CORNER TO CORNER IN ANY SH POS NOT OCCUPIED BY A SWITCH; LINE 2-LAST TWO DIGITS OF YEAR MANUFACTURED AS SHOWN STAMPED ON EQUIPMENT.
 3. BLOCK B-PLANT COMPLETES LINE 3&4. LINE 3, 'A'-REUSE AS IS; 'R'-REUSE WITH REPAIRS; 'J'-NOT REUSABLE; LINE 4-SHOW REPAIRS PER BLOCK C INFO.
 4. BLOCK B-TELCO ENG. COMPLETES LINE 5-'D'-WEDR; 'T'-TELCO WILL DISPOSE; 'J'-JUNK.

