

**PACIFIC COMPANY SYSTEM DESIGN CHANGES,  
SPECIFICATION CHANGE NOTICES,  
ENGINEERING CHANGE NOTICES,  
CHANGE CLASSIFICATIONS AND RATING  
EQUIPMENT AND APPARATUS**

**1. GENERAL**

**1.01** This section prescribes procedures to be followed by the maintenance engineers, the Business Service Engineering (BSE) Managers, and Residence Managers Installation and Maintenance (I&M), hereafter referred to as maintenance engineers regarding Change Notices.

**1.02** It is reissued to:

- Include the appropriate legend on Page 1 in accordance with AT&T's "Guidelines and Procedures for Safeguarding Information" and Pacific Company's (PAC) System Instruction (SI) 178.
- Add information for Specification Change Notices (SCN).
- Change organization titles and responsibilities.

*Note:* Marginal arrows used to denote changes are omitted.

**Scope**

**1.03** This appendix defines change classifications and ratings of PAC standard circuit schematic drawings (PSDs) as they relate to equipment and apparatus.

**1.04** System Design Change (SDC) is the type of correspondence that the Design Services uses to notify maintenance engineers of a change to a PSD.

**1.05** Specification Change Notice (SCN) is the type of correspondence Design Services issues to notify Western Electric Company (WE) or General Trade Manufacturer (GTM) of a manufacturing change to equipment or apparatus. PAC

equipment or apparatus standard drawings are identified as either PJ, PED or PTS.

**1.06** Engineering Change Notice (ECN) is the type of correspondence Design Services issues to notify PAC maintenance engineers and WE that a PAC standard drawing reissue has been completed. It includes the new issue letter of the drawing and the reason for the reissue. PAC standard drawings and supporting information are available at the PAC Engineering Centralized Files.

**2. DEFINITIONS OF TERMS**

**2.01** *SDC* announces any major or minor change of design in a system circuit, equipment, or apparatus to PAC drawings prior to their reissue. They are distributed to all Headquarters and Sector maintenance engineers (see Chart A and Exhibit 1).

**2.02** Headquarters maintenance engineers will review the SDC and prepare and distribute a transmittal letter to Sector maintenance engineers concerning the logistics for implementing the SDC.

**2.03** Change classification letters A, B, C, etc are used on SDCs to denote the type and urgency of the change.

**2.04** The maintenance engineer in each Sector is responsible for implementing minor changes, work done by Telephone Company (TELCo) field forces. The maintenance engineer is also responsible for changes requiring WE Pacific Regional Center Engineering, for major changes which require WE installation labor and follow up by field forces to implement the changes.

**2.05** *SCN* announces any manufacturing change, either major or minor, in a PJ Specification (PJ-Equipment), PT Specification (PTS-) for sys-

**NOTICE**

Not for use or disclosure outside the  
Bell System except under written agreement

**SECTION 005-100-105PT**  
**APPENDIX 1**

tem equipment assemblies or printed wiring assemblies, circuit packs (see Chart B and Exhibit 2).

**2.06** Manufacturing of PJ equipment is through WE San Leandro or Los Angeles Installation and Service Centers. Manufacturing for PTS equipment is on a contract basis either through the General Trade Products Division or WE.

**2.07** When an SCN, manufacturing change, also requires field action a corresponding SDC will be issued for the maintenance engineers.

**2.08** *ECN* is used to notify all PAC maintenance engineers and WE that a PAC standard drawing reissue has been completed and the drawings and supporting information are available at the Centralized Files. The ECN identifies the new issue (letter) and the reason for the reissue. It is distributed for information only (see Chart C and Exhibit 3).

**2.09** *Equipment* — A product is classified as Equipment when it provides functional circuitry to form an integral part of a complete system. It is not readily interchangeable, due to its wiring, and options are provided to alter the functions of the basic circuit. It is different from and does not meet the definition of Apparatus covered in 2.11.

**2.10** In general, Equipment products have the following characteristics:

- (a) **Not Easily Interchangeable:** Except for plug-in type units, Equipment products are usually applied to telephone facilities by direct wiring between associated products, and are customarily mounted on bays and other types of frameworks.
- (b) **Provide Functional Circuitry:** They will usually consist of functional circuits such as switching, observing, signaling, trunk, or test circuits which form a part of a complete system.
- (c) **Options May Be Provided:** In most cases, they have or may have options which will alter the functions of the circuit. Service options may also be included.

(d) **Improvements May Be Made On Telephone Company Premises:** Changes to improve existing characteristics, correct undesirable conditions, or provide new operating features can be expected to be made on the products. These changes will usually be made on the TELCo premises by WE.

(e) **Drawing Information Will Be Provided For The Sectors:** Drawings such as PSDs, with their associated PCDs, wiring (PT) drawings and assembly drawings will be furnished to provide information for servicing and maintaining Equipment products.

**2.11** *Apparatus* — A product is classified as Apparatus when it is a small, common and interchangeable unit which cannot or should not be modified or repaired while connected in its service location, except when Bell System Practices (BSPs) are issued for such modifications or repairs.

**2.12** In general, Apparatus products have the following characteristics:

- (a) **Standard Unit:** It is a standardized unit with possible repetitive use in one or more systems.
- (b) **Small and Functional:** It is generally small, performs a single function, and may or may not have wiring.
- (c) **Interchangeable:** It is mechanically and electrically interchangeable with previously manufactured products of the same code.
- (d) **No Changes:** It is not likely to have circuit changes that would require field modification.

**3. RESPONSIBILITIES FOR SDC OR SCN REVIEW, ACCEPTANCE AND TRANSMITTAL**

**3.01** This part gives general guidance as to who is responsible for the various aspects of processing SDCs or SCNs. In individual cases it may be desirable to deviate from these guidelines somewhat. However, this should be done only by mutual agreement, eg, between the maintenance engineer and WE or TELCo Staff.

**3.02** Reviewers of SDCs and SCNs must ensure that each SDC and SCN provides enough information to permit an adequate decision regarding application. In addition there must be sufficient information to permit desired changes to be implemented efficiently.

**3.03** The Headquarters maintenance engineer is responsible for reviewing the SDC or SCN and is also responsible for decisions concerning the logistics of implementing the change within PAC.

**3.04** A number of possible courses of action may be taken to implement the change. Deciding upon the action is the responsibility of the maintenance engineer. The course of action must conform to practices and policy within the company. Such procedures may include formal request to the Central Office Equipment (COE) engineer to implement the change, requisitions or purchase orders to vendors, etc.

**3.05** It may be necessary to request an office circuit inventory search from WE in cases where Pacific Standard PJ or PTS equipment was installed by WE. In some instances the assistance of field forces may be needed for on-the-spot counts or verification. Section 790-120-240 should be used for general guidance in those cases where it is desired to contract with WE for work associated with the change.

#### 4. CHANGE CLASSIFICATIONS — GENERAL

**4.01** A classification letter (A, AC, AR, B or D) for Equipment and Apparatus is included on SDCs, SCNs and ECNs subsequent to drawing Issue A. This classification letter is intended to indicate the type and reason for change including the manner in which the change should be applied.

#### 5. EQUIPMENT AND APPARATUS CHANGE CLASSIFICATIONS

**5.01** A change classification letter A, AC, AR, B, or D, is applied to PSD drawings covering circuit changes for equipment products and is used as follows:

**A Use** — For inoperative electrical or mechanical conditions, or extremely unsatisfactory maintenance or operating conditions such as safety hazards. Regardless of the condition the use of the Class A designation has the following impact:

(a) Analysis of the change will determine at what stage of production the change will be incorporated. In many cases, the change will cause factory production to be stopped. Requires SCN to inform the manufacturer of the change.

(b) Factory and WE Service Center stocks will be modified.

(c) GTM stocks will be modified.

(d) Shipment of product will stop until the change is incorporated.

(e) Requires Design Services Change Notice (SDC) action to inform the installer of the change. This could possibly affect installation dates and necessitate origination of a remedial order in some cases to correct equipment which has been turned over to the TELCo.

(f) Requires notification to the Sectors of Class A changes through SDCs and ECNs.

**Application** — Immediate action shall be taken to correct the condition on all jobs or products in the hands of WE, GTM or the TELCo.

**Record** — No record of figures and options (such as wiring and apparatus) previously shown on the drawing shall be maintained.

**AC Use** — Same as A except that the inoperative or unsatisfactory conditions are caused by circuit combinations or options which exist on certain jobs and are a matter of record in WE.

**SECTION 005-100-105PT  
APPENDIX 1**

**Application** — Immediate action shall be taken to correct the condition on those jobs affected, both in the hands of WE, GTM and the TELCo. The change shall be applied as specified on the change authorization.

**Record** — A detailed record of figures and options (such as wiring and apparatus) previously shown on the drawing shall be maintained.

**AR Use** — Unsatisfactory electrical or mechanical condition, or unsatisfactory maintenance or operating condition of the circuit or equipment, which may be allowed to exist on a temporary basis.

**Application** — This change shall be made on all jobs in the hands of WE, GTM or the TELCo as soon as possible. Those jobs in the hands of WE or GTM shall have the change made before turnover or delivery to the TELCo, except where turnover or delivery would be delayed, in which case the change shall be applied as soon as possible after turnover or delivery.

**Record** — No record of figures and options (such as wiring and apparatus) previously shown on the drawing shall be maintained.

**B Use** — To incorporate urgent improvements in design resulting in better operating, testing, or maintenance conditions, longer life, or important savings; or to add urgent new features.

**Application** — This change shall be processed by WE in sufficient time to enable them to accept orders for changed products not later than 6 months after release of final information by Design Services. When the 6 months interval cannot be met, the interval required shall be established by agreement between PAC and WE.

**Record** — A detailed record of figures and options (such as wiring and apparatus) previously shown on the drawing shall be maintained.

**D Use** —

(a) To incorporate improvements in design, or to add new features not sufficiently urgent to require a Class B application.

(b) To facilitate manufacture.

(c) To effect a cost reduction not sufficiently important to justify a Class B application.

(d) Routine changes such as changes in ratings, titles, clarification of notes, etc.

**Application** — This change shall be processed by WE, or GTM in sufficient time to enable them to accept orders for changed products not later than 12 months after release of final information by Design Services. When the 12 months interval cannot be met, the interval required shall be established by agreement between PAC and WE.

**Record** — A detailed record of figures and options (such as wiring and apparatus) previously shown on the drawing shall be maintained.

## **6. RATINGS**

**6.01** The following ratings are used on circuit schematic drawings:

(a) PT&T Co. Standard: Drawings covering designs that have been approved for general use throughout PAC.

(b) A&M Only (Additions and Maintenance Only): Drawings covering designs that are no longer recommended for general use in connection with installation of new equipment but which may be used for additions to or maintenance of existing equipment.

(c) MD or Mfr. Disc. (Manufacture Discontinued): Drawings covering designs that are no longer recommended for new installations or for additions to existing equipment except where it is economical to equip previously wired circuits.

- (d) PT&T Co. Provisional: Drawings covering designs which are not yet standardized but for which standardization is contemplated.
- (e) Special or PT&T Co. Special: Drawings covering designs which are intended for use under special conditions only and do not apply generally throughout the Bell System.

- (f) Preliminary: Drawings covering designs in the early stages of development. Generally used on trial installations, and restricted to a particular system, part of a system, or telephone office.

CHART A  
SDC FLOW CHART

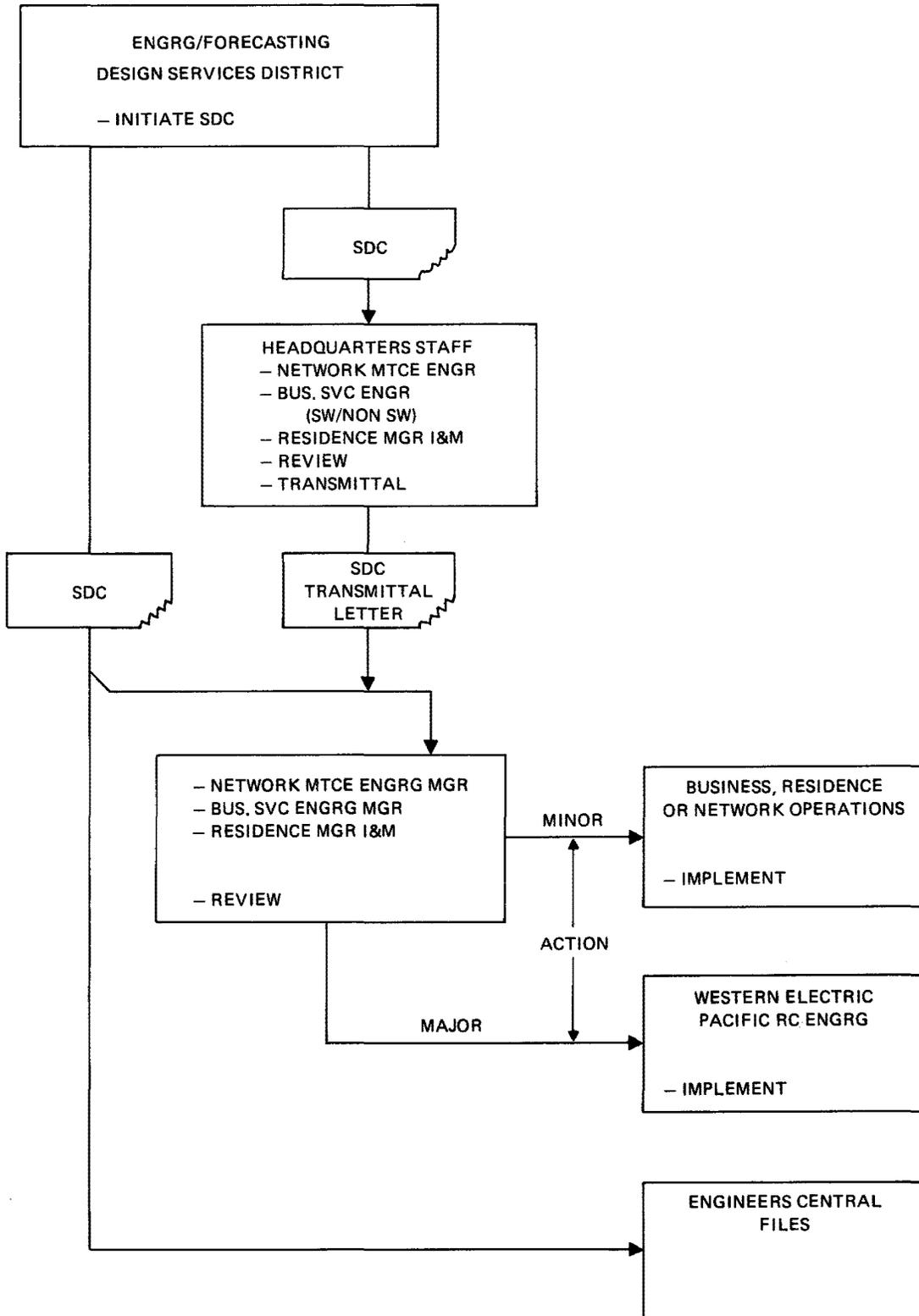


CHART B  
SPECIFICATION CHANGE  
FLOW CHART

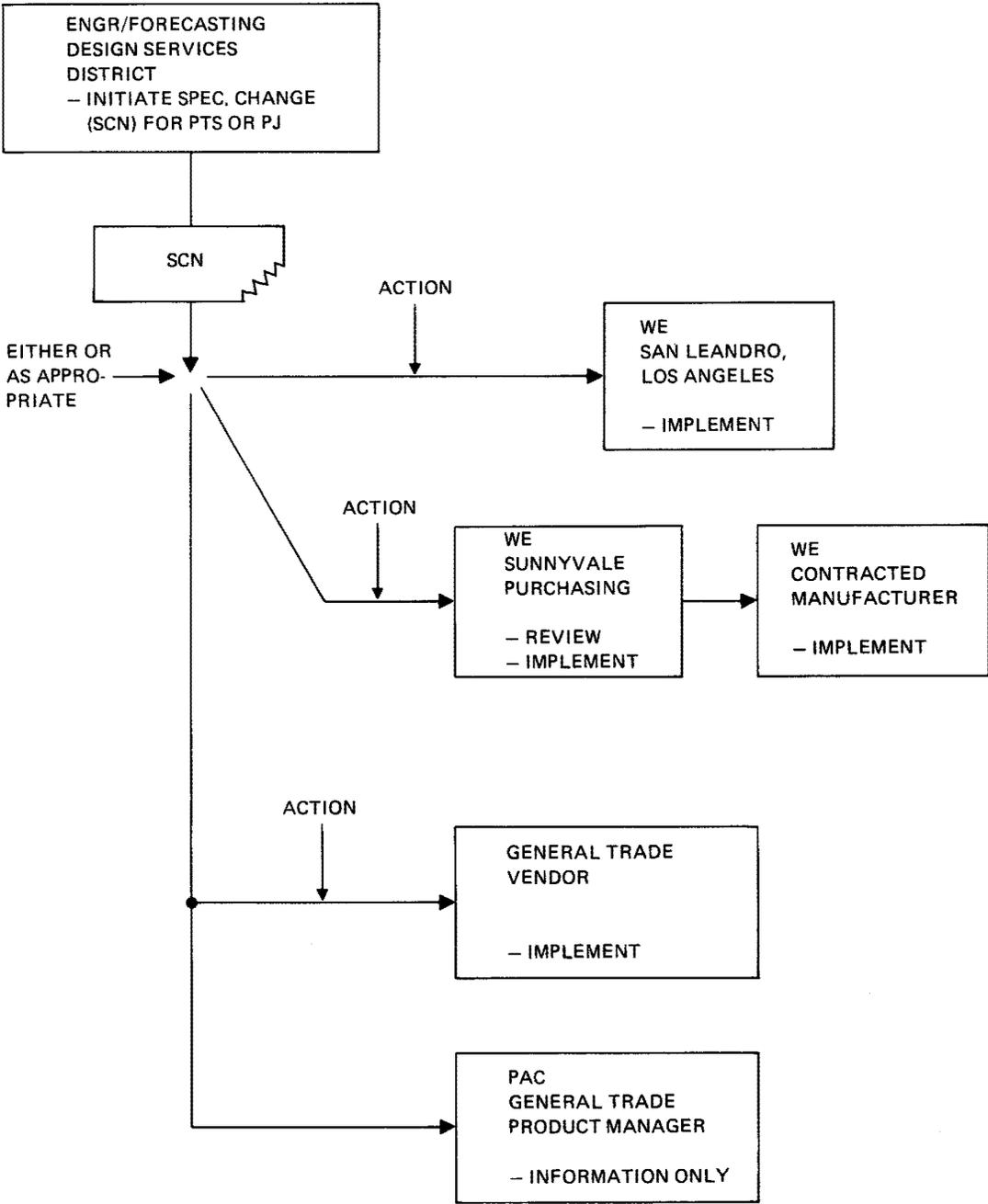
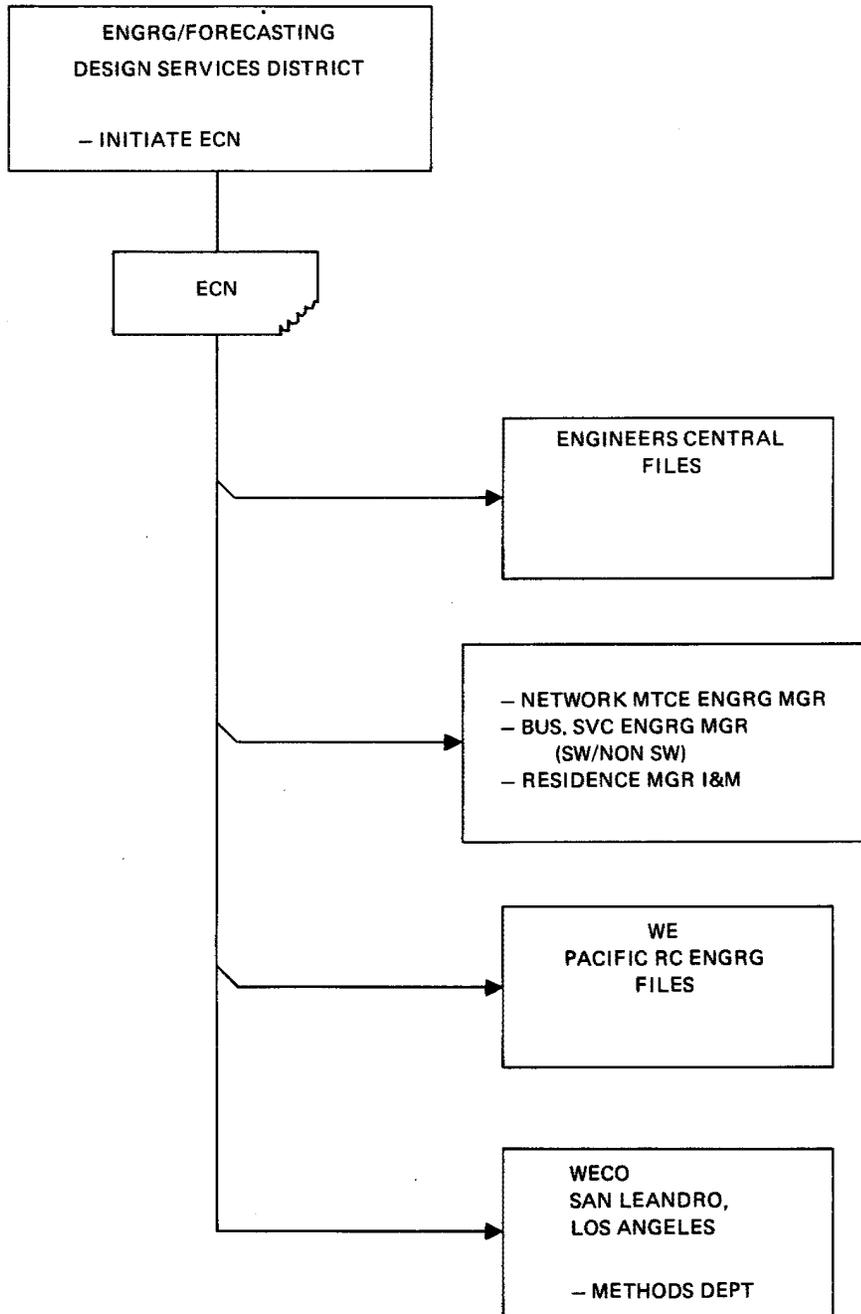


CHART C  
ECN FLOW CHART



<p>ITEM</p> <p>SHEETS AFFECTED</p> <p>APPARATUS CHANGES</p> <p>SYSTEMS DESIGN CHANGE</p>	<p><b>SDC</b> <u>3</u></p> <p>SHEET 1 OF <u>1</u></p> <p>SCHEDULED FOR:          PSD ISSUE <u>C</u>          PT ISSUE _____          PJ ISSUE _____          ISSUE _____</p> <p>CLASS OF CHANGE <u>A</u></p> <p>DRAWING NUMBERS <u>PSD-69070-01</u></p> <p>SYSTEM <u>Station</u></p> <p>TITLE <u>Business Office Interface Circuit</u></p> <p>EQUIPMENT CODES</p> <p>CONNECTING CIRCUITS</p> <p>ADDITIONAL COPIES TO</p>																												
<p>Reason for change:</p> <p>To correct marginal relay operation which causes excessive board failures.</p> <p>1. PSD-69070-01-J2, Issue B Schematic Change</p>																													
<p>2. All PTS-1011, G3 circuit packs should be returned to the manufacturer for modification. Modification and return shipping charges will be billed, by the manufacturer, against a Design Services purchase order. The circuit packs should be shipped, prepaid, to:</p> <p>Lee Mah Electronics, Inc.          1171 Mission Street          San Francisco, CA 94103</p> <p><u>Mark Packages:</u></p> <p>Attention: Repair Department For          Modification Per SCN #9          Purchase Order SSD 6938</p>																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">SYSTEMS</td> <td>QA</td> <td>DESIGN</td> <td rowspan="2" style="text-align: center; vertical-align: middle;">R. D. Allen</td> <td rowspan="2" style="text-align: center; vertical-align: middle;">3/6/80</td> </tr> <tr> <td>STAFF</td> <td>DFTG</td> <td>COSTS</td> <td>STAFF</td> <td>STAFF</td> <td style="text-align: center;">SIGNED</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="text-align: center;">MLC</td> <td style="text-align: center;">RSK</td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td style="text-align: center;">RDA</td> <td colspan="2" style="text-align: center;">SPECIAL SERVICES DISTRICT 415 542-7111</td> </tr> <tr> <td colspan="7" style="text-align: center;">THE PACIFIC TELEPHONE AND TELEGRAPH CO. GENERAL ADMINISTRATION ENGINEERING</td> </tr> </table>		SYSTEMS			QA	DESIGN	R. D. Allen	3/6/80	STAFF	DFTG	COSTS	STAFF	STAFF	SIGNED	DATE	MLC	RSK	X	X	RDA	SPECIAL SERVICES DISTRICT 415 542-7111		THE PACIFIC TELEPHONE AND TELEGRAPH CO. GENERAL ADMINISTRATION ENGINEERING						
SYSTEMS			QA	DESIGN	R. D. Allen	3/6/80																							
STAFF	DFTG	COSTS	STAFF	STAFF			SIGNED	DATE																					
MLC	RSK	X	X	RDA	SPECIAL SERVICES DISTRICT 415 542-7111																								
THE PACIFIC TELEPHONE AND TELEGRAPH CO. GENERAL ADMINISTRATION ENGINEERING																													

SSG 108 (6-72)  
PRINTED IN U.S.A. K&E 10 5545 7-72 51844\*

Exhibit 1

**SECTION 005-100-105PT  
APPENDIX 1**

**SPECIFICATION CHANGE NOTICE**

NOTE →

**REASON FOR CHANGE:**

Shorten header post height to prevent tip of post from shorting against adjacent circuit board in housing

PTS 366  
 CHANGE NO. 10  
 SHEET 1 OF 1 SHEETS  
 SCHED FOR ISSUE C  
 CLASS OF CHG A

**ITEM:**

Modify PTS-366-GR2 and GR4 Circuit Packs  
 PED-92356-10, Issue B – Changes:

Note: Identifies the  
 PJ Equipment or  
 PTS Specification

1. Cancelled on stocklist, lines 29 and 72  
 Quantity 2, Printed Circuit Header Amp 1-85875-5
2. Add to stocklist, lines 30 and 76  
 Quantity 2, Printed Circuit Header Amp 1-87403-4
3. Stamp – Mod A – on Ckt Board next to PTS-366 G2 (or G4) – A1
4. Units in production and stock with 1-85875-5 header (post height .75") should have approximately .25" cut from end of posts to reduce length of posts to about .5".
5. Until 1-87403-4 header is available in production stock, 1-85875 headers may be modified per Item 4 above.

**NOTES:**

1. ART WORK CHANGE REQUIRED \_\_\_\_\_
2. APPLIES TO UNITS IN PRODUCTION AND IN STOCK \_\_\_\_\_
3. APPLIES TO UNITS RETURNED FOR REPAIR \_\_\_\_\_
4. UNITS MODIFIED WILL REQUIRE FUNCTIONAL TEST \_\_\_\_\_
5. UNITS MODIFIED WILL REQUIRE RE-BURN-IN \_\_\_\_\_
6. VINTAGE NO. CHANGE REQUIRED \_\_\_\_\_

YES	NO
	X
X	
X	
	X
	X
X	

**REFERENCE:**

DIST	DFTG	ADMIN	DESIGN STAFF
CRS	RSK	THC	MJS

<u>N. D. Malman</u>	<u>10/4/79</u>
ENGINEER	DATE
DESIGN SERVICES	415-542-7111
THE PACIFIC TELEPHONE AND TELEGRAPH CO. ENGINEERING / FORECASTING	

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY  
ENGINEERING/FORECASTING  
DESIGN SERVICES

ENGINEERING CHANGE NOTICE

DATE: 3/17/80

CLASS OF CHANGE: D

(1) DRAWING RATING: PT&T Co. Std. PREVIOUS RATING: Same

(2) SYSTEMS: Common DSM NO: 870  
PTEL NO: 2006

(3) DRAWING TITLE: Private Line Automatic Ringdown Circuit

(4) PSD- 90139-01 NEW ISSUE: C (5) PCD- 90139-01 NEW ISSUE: B

PJ- \_\_\_\_\_ NEW ISSUE: \_\_\_\_\_ APPENDIX: \_\_\_\_\_

PT- \_\_\_\_\_ NEW ISSUE: \_\_\_\_\_ PREV. ISSUE: A

PED- \_\_\_\_\_ NEW ISSUE: \_\_\_\_\_ APPENDIX: A

(6) REASON FOR REISSUE:

6.1 To show resistance of relay D as 640 ohms

6.2 To show 2 thermistors (L) in App Fig. 1

6.3 To simplify installation and maintenance tests in the Circuit Description.

(7) SUPPORTING INFORMATION:

7.1 No System Design Changes (SDC) is superseded by this reissue.

ENGINEER: A. DeMasi, Jr.  
415 542-7111

PAGE 1 OF 1 PAGES

EXHIBIT 3