

REPAIR AND RETURN
PACKING AND SHIPPING PRINTED CIRCUIT CARDS

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1. GENERAL

1.01 This practice provides general guidelines for packing and shipping printed circuit (PC) cards being returned for repair.

Acronyms

1.02 The acronyms used in this practice are:

ACRONYM	EXPLANATION
EPROMS	Equipment Repair Order Mechanized System
MDS	Metal oxide semiconductors
PC	Printed circuit
Telco	Telephone operating company

2. REFERENCES

2.01 Refer to the following GTE Practices for additional information:

GTE PRACTICE. . .	PROVIDES THE GENERAL GUIDELINES. . .
007-005-015	<ul style="list-style-type: none"> • For packing and handling static-sensitive components. • And precautions for handling components and PC card assemblies sus-

007-005-015 (cont.)	ceptible to permanent damage or destruction when subjected to static discharge.
<ul style="list-style-type: none"> • 992-005-003 • 992-005-004 	For shipping materials according to Telco Supply Operations procedures.
<ul style="list-style-type: none"> • 992-600-001 • 992-600-002 • 992-600-003 	For the repair and return process.

3. PACKING AND SHIPPING

3.01 Repairs are performed by the following:

IF THE REPAIR IS . . .	THEN IT IS PERFORMED BY. . .
Internal	The Equipment Services Center.
External	Vendor shops.

3.02 Carefully pack all materials transported from one location to another. This applies to materials:

- Transferred within the company.
- Shipped to vendors.
- That are defective and require repair.

3.03 After packaging, shake the container to ensure that the equipment does not move. If the equipment moves, wrap it sufficiently with cushion paper or authorized material.

CAUTION: Due to the potential damage that static electricity can cause MDS integrated circuits, first bag PC cards containing MDS chips in anti-static black or pink plastic material. Place the appropriate anti-static caution labels on the outside of the bag and the container.

NOTE: Improper packaging techniques can increase repair costs.

Packing Review Process

3.04 Supply Operations personnel in each telephone operating company (Telco) should review all supply points, the Supply Center, and the Equipment Services Center to ensure that they use the proper cartons and packing material to safeguard materials in shipment.

3.05 Provide appropriate training in cases where improper packing techniques are used.

3.06 This packing review process is a continuing effort to:

- Improve efficiency.
- Reduce costs.
- Detect improper techniques that cause damage to materials in transit.

3.07 Remote locations (e.g., originators of R&R transactions) should properly pack materials returned to Supply. However, Supply locations must ensure that the packing will withstand further shipments to the final destination.

Boxes and Containers

3.08 Use the same boxes for shipping PC cards as are furnished by the supplier.

3.09 _____ should be similar to the types listed in Exhibits 1 and 2.

NOTE: The list shown should not supplant new and improved packaging methods.

3.10 The boxes and containers listed in Exhibits 1 and 2 contain adequate packing material for protecting equipment such as PC cards during shipment.

CAUTION: Do not store PC cards outside of boxes or containers. This technique may cause damage to the card.

3.11 Multiunit shipping or storage containers are satisfactory for:

- User storage of PC cards.
- OR
- Certain plug-in components.

Type of Boxes

TYPE	DEPTH	WIDTH	LENGTH
GT California Type 1 CD-119	3-1/2"	10"	12"
GT California Type 3 DC-121	1-1/2"	7-1/2"	18"
GT California Type 4 DC-1-2	4-1/2"	5"	15"
GT California Type 5 DC-124	3-3/4"	15"	15"
GT California EPC 600.057.1	2-3/8"	3-3/4"	9-3/8"
GT California EPC 600.084	3-1/2"	6"	12"

Shipping

3.12 Ship materials according to the Telco Supply Operations procedures (see Paragraph 2.01).

3.13 Although formal procedures exist for claims damage incurred with common carriers, each Telco Supply Operations Group should monitor and correct damages incurred as a result of internal shipment by company-owned vehicles.

3.14 All writing should be placed on one of the following:

- Tags
- Appropriate labels
- The shipping container

NOTE: Do not write on PC cards or similar materials, because ink cannot be removed and lead causes circuitry shorts. These damages can increase repair costs.

Printed Circuit Card Shipping Containers

GTE-AE PART NUMBER	DIMENSIONS IN INCHES			CONTAINS
	LENGTH		DEPTH	
H-17679-Assembly 1	14-1/8	9	1-1/8	13 inch low profile PC card*
H-17653-Assembly	16	9		Power PC card*
H-17588-Assembly 1	14-3/4	13-3/4	3-1/2	Matrix size PC card
H-110018-Assembly 1	14	9	2-9/16	13 inch high profile PC card*

* These containers can also be used for returning a number of other PC card sizes.

Labels

3.15 Each Telco should develop and use gummed shipping labels for cartons containing repair-and-return-type materials. However, these labels will not preclude using labels required by any specific manufacturer.

3.16 Exhibit 4 on Page 5 shows examples of shipping labels used for internal use by General Telephone Company of California. Note that the prenumbered ERO number is the same number listed on each gummed label.

3.17 An Equipment Repair Order Mechanized System (EROMS) generated Delivery Manifest form (Exhibit 5 on Page 6) will accompany each shipment of equipment back to the originator. Also, apply a computer generated shipping label (Exhibit 3) to the outside of the equipment container for delivering the equipment to the originating location.

Shipping Label

<p>MANIFEST NUMBER: 12345678</p> <p>SHIP TO:</p> <p>RC: OH 2345</p> <p>BUILDING CODE: MARN</p> <p>SHIPPED FROM RC:</p> <p>BUILDING CODE:</p> <p>CITY: Marion, Ohio</p> <p>FUNCTION: EAX #2 Office</p> <p>ERO NUMBER: OH 367890 PART NUMBER: FB15115 ISSUE NUMBER: 1</p>

Exhibit 3

4. SPECIFIC PACKING INSTRUCTIONS

Six Pack Matrix PC Card

4.01 To pack a six pack matrix PC card using an H-17678-1 container kit:

- Follow this procedure.
- Refer to the illustration in Exhibit 6 on Page 7.

NOTE: All cards with metal oxiae semiconductors (MDS) devices must be placed in an anti-static bag (F-6008-R3) before personnel who are grounded handle the card.

STEP	PACKING A SIX PACK MATRIX PC CARD
1	<p>Obtain an H-17678-1 container kit consisting of:</p> <ul style="list-style-type: none"> • One H-17678-2 carton. • Two H-17678-3 ethafoam corrugated sheet inserts.
2	Open the container H-17678-2.
3	Place the H-17678-3, corrugated scored sheet with ethafoam attached into the left and right sides of the container with the detail flap up.
4	Place the first card into the slots of the ethafoam with the matrix card handle up.
5	<p>Place the cards in the ethafoam slots with the component side facing away from each other.</p> <p>NOTE: The maximum quantity to a container is six PC cards.</p>
6	Close and seal the container with 3 inch wide reinforced tape.

Matrix Size PC Card

4.02 To pack a matrix size PC card using an H-17588-1 individual carton:

- Follow this procedure.
- Refer to the illustration in Exhibit 7 on Page 8.

NOTE: All cards with MDS devices must be placed in an anti-static bag (F-6008-R3) before personnel who are grounded handle the card.

STEP	PACKING A MATRIX SIZE PC CARD
1	<p>Obtain an H-17588-1 individual matrix card container kit consisting of:</p> <ul style="list-style-type: none"> • One H-17588-2. • One H-17588-3.
2	Open the container H-17588-2.
3	Remove the ethafoam pad.
4	Break off the 1 1/2 x 2 inch piece from each end of the pad.
5	Place the matrix card (components up) in the container with the matrix card handle at the back of the container away from the packer.
6	Position two pieces of ethafoam at the end of the corners of the handle. (Continued)

STEP	PACKING A MATRIX SIZE PC CARD
7	Position a long strip of ethafoam in the front end of the matrix card opposite the handle.
8	Close the container with the: <ul style="list-style-type: none"> • Side flaps inside the container. • Corner flaps in the front container slots.
9	Seal the closed end of the container with two strips of reinforced tape.

Profile 13 Inch Logic PC Card

4.03 To pack a high profile 13 inch PC card using an H-110018-1 individual container:

- Follow this procedure.
- Refer to the illustration in Exhibit 8 on Page 9.

NOTE: All cards with MDS devices must be placed in an anti-static bag (F-6008-R1) before personnel who are grounded handle the card.

STEP	PACKING A HIGH PROFILE 13 INCH LOGIC PC CARD
1	Obtain an H-110018-1 PC card shipping container kit consisting of: <ul style="list-style-type: none"> • One H-110018-2. • One H-110018-3. • One H-110018-4.
2	Open the container H-110018-2.
3	Remove the detail 3 PC card holder.
4	Leave the detail 4 poly pad in the container.
5	Open the PC card holder H-110018-3.
6	Place the PC card with the tab end inserted into the slots of the rear and side rails as shown in Exhibit 7.

7	Close the inner and outer flaps.
8	Lock the flaps in place.
9	Place the holder and the PC card in the container with the PC card handle toward the front of the container.
10	Close the container with the: <ul style="list-style-type: none"> • Side flaps inside the container. • Corner flaps in the container's front slots.
11	Seal the closed end of the container with two strips of reinforced tape.

Low Profile 13 Inch Logic PC Card

4.04 To pack a low profile 13 inch logic PC card using an H-17679-1 individual container:

- Follow this procedure.
- Refer to the illustration in Exhibit 9 on Page 10.

NOTE: All cards with MDS devices must be placed in an anti-static bag (F-6008-R1) before personnel who are grounded handle the card.

STEP	PACKING A LOW PROFILE 13 INCH LOGIC PC CARD
1	Obtain an H-17679-1 PC card shipping container.
2	Open container H-17679-1.
3	Place the PC card on the cushioning with the components up.
4	Close the two short flaps.
5	Close the two long flaps;
6	Seal the container with one strip of reinforced tape.

Shipping Labels

GTE <small>FORM 6865B2</small> General Telephone Company of California	
From R C _____	<u>277802</u> <small>Serial No</small>
Dept. _____	
Stree? _____	
City _____	
To — SUPPLY SERVICES CENTER 2849 FICUS STREET POMONA, CALIFORNIA	
HANDLE WITH CARE	
----- PEEL OFF LABEL TO REMOVE	
Shipping Label "A"	

GTE <small>FORM 6865B2</small> General Telephone Company of California	
From _____	<u>277802</u> <small>Serial No</small>
SUPPLY SERVICES CENTER	
2849 FICUS STREET	
POMONA, CALIFORNIA	
To — RC _____	
DEPT. _____	
STREET _____	
CITY _____	
HANDLE WITH CARE	
----- PEEL OFF LABEL TO REMOVE	
Shipping Label "B"	

Exhibit 4

Delivery Manifest Form

<p>DELIVERY MANIFEST FORM 606919 REF AD 906.430</p>			<p>DISTRIBUTION <i>White & Pink - Send with material. White only to S&T file after delivery confirmation. S&T retains 6 months. Pink retained at destination 6 months. Yellow - Non S&T originators retain 30 days. S&T originating points retain 6 months.</i></p>			<p>SERIAL NO.</p> <div style="border: 1px solid black; height: 30px; width: 100%;"></div>	
SHIPPED FROM		ASSOCIATED DOCUMENT /ERO NO.		SHIP to			
RC _____ BLDG code _____				RC _____ BLDG CODE: _____			
SHIPPED BY _____				ATTENTION _____			
ITEM NO.	TOTAL PCS			CARTONS, BOXES OR PALLETS	SIGNATURES	DRIVER AT PICKUP	DATE
					RECEIVED BY	DATE	RC _____
REMARKS: SPECIAL INSTRUCTIONS, SHORTAGES, OVERAGES, ETC			SET USE ONLY				

Exhibit 5

Six Pack Matrix PC Card Using H-17678-1 Container Kit

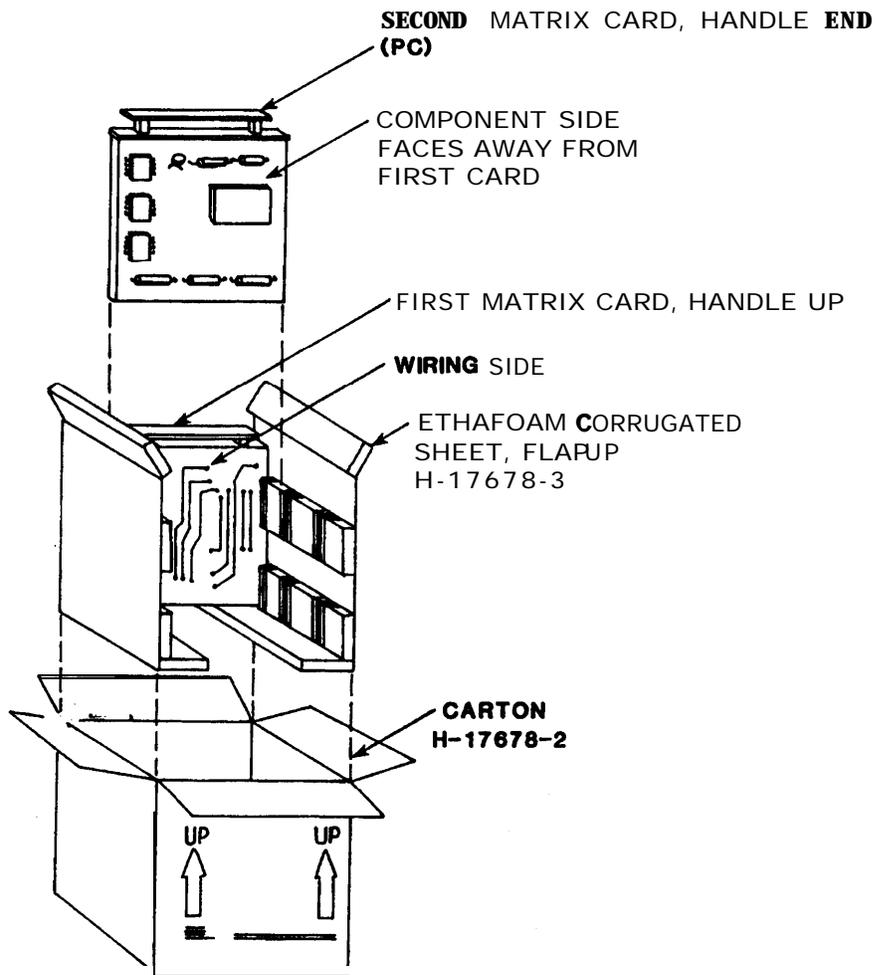


Exhibit 6

Matrix Size PC Card Using H-17588-1 Individual Carton

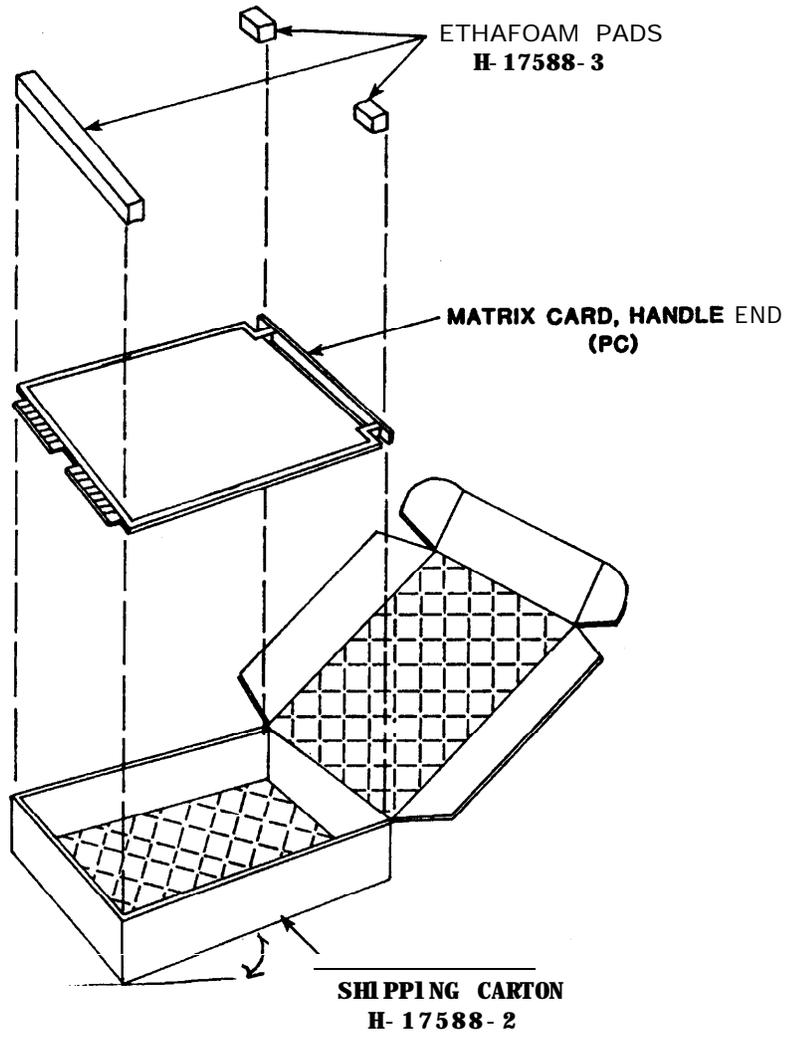


Exhibit 7

High Profile 13 inch Logic PC Card Using H-110018-1 Individual Container

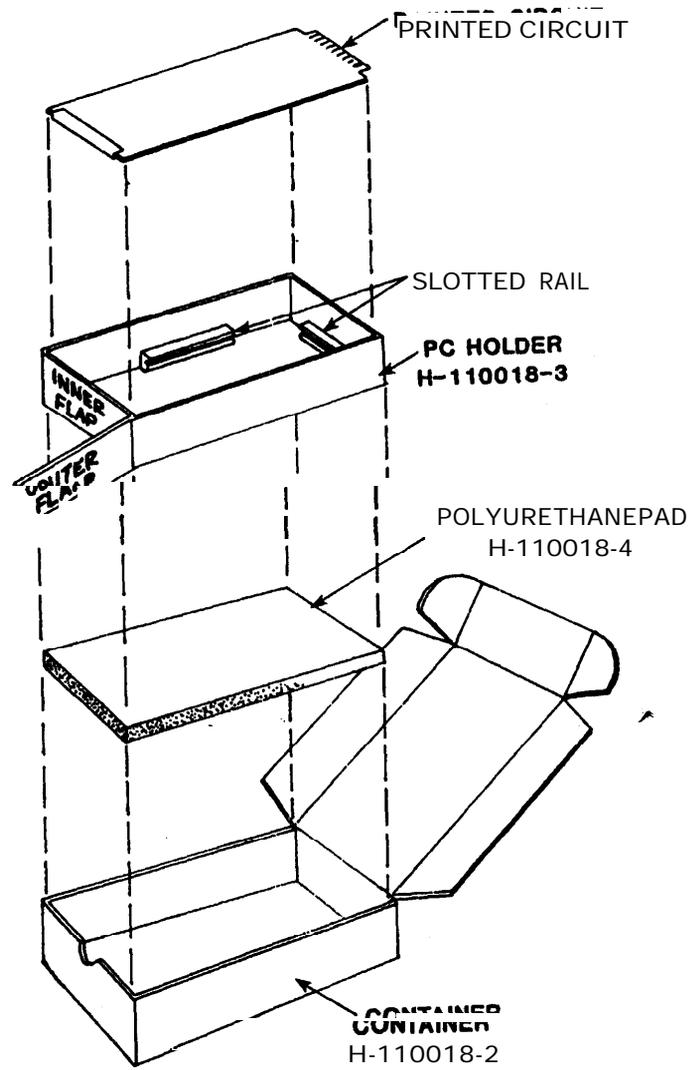


Exhibit 8

Low Profile 13 Inch Logic PC Card Using H-17679-1 Individual Container

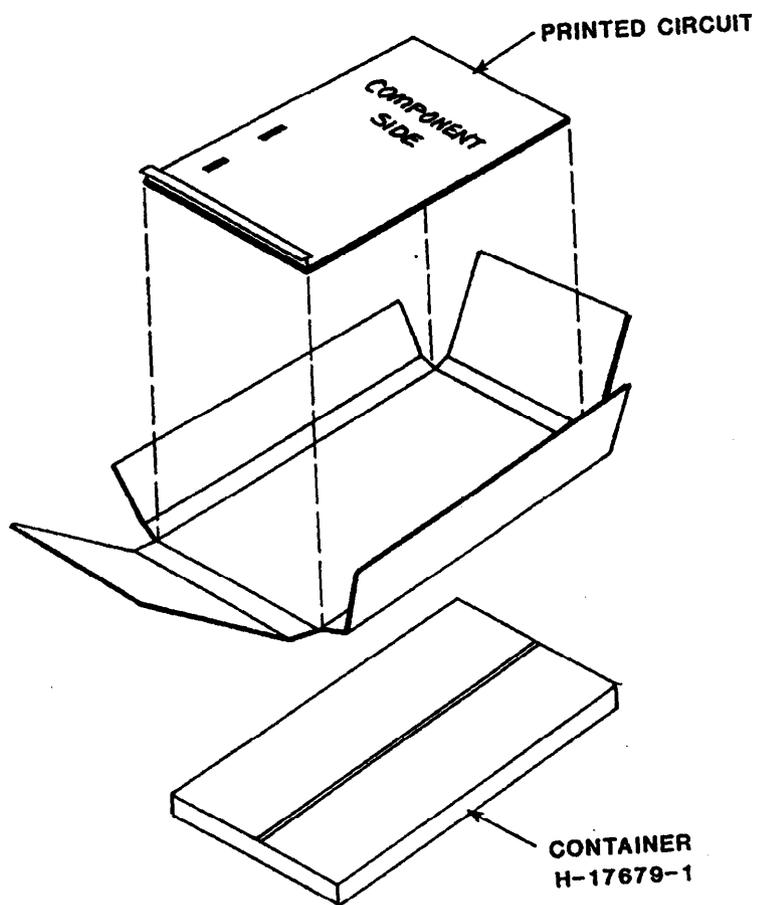


Exhibit 9