COE Bar Code Methods and Procedures

Contents

(continued)

Contents, continued

continued

Contents, continued

1. General

1.1 Purpose

This practice provides standard procedural guidelines for Central Office Equipment (COE) bar coding.

1.2 Filing Instructions and Supersedures

Discard all previous issues and associated addenda of this practice and file this issue numerically in your GTE Telephone Operations practices set.

This practice supersedes and cancels:

- All policies, procedures, general instructions, letters, and memoranda which address this subject including any previous cancellation notices of this practice.
- Any document which provides information contrary to the information contained in this practice.

1.3 Reason for Reissuing

This practice has been reissued to incorporate multiple changes in the content. Read this entire practice to ensure your familiarity with the new information.

1.4 Responsibility

This practice was written by the Infrastructure Provisioning Systems Support Staff in GTE Network Services and published by the GTE Network Services Enterprise Services Department. For more information about this practice, contact the Headquarters Infrastructure Provisioning Systems Support Department.

1.5 Disclaimer

This practice was prepared solely for the use of GTE Network Services. It must be used only by its employees, customers, and end users when installing, operating, maintaining, and repairing GTE Network Services' equipment, facilities, and services. Any other use of this practice is forbidden. The information contained in this practice may not be applicable in all circumstances and is subject to change without notice. By using this practice, the user agrees that GTE Network Services will have no liability (to the extent permitted by applicable law) for any consequential, incidental, special, or punitive damages that may result.

2. Overview

2.1 Use

The bar coding procedures contained in this practice are used in, but not limited to, managing the following projects:

- New Central Offices (COs).
- Equipment retirements.
- Equipment additions.
- Transmission projects, including pair gain.
- Lig htwave networks.
- Switching system rearrangements.
- Equipment transfers.
- Equipment movement within a CO.
- Virtual colocated equipment installations (see Section 11.12).
- Spare Card Inventory Management.
- Below The Line (BTL) Equipment in a CO

2.2 Objectives

The integrity of the Central Office Equipment Property (COEP)/Central Office Equipment Model (COEMOD) database for inventory control depends largely upon the quality and thoroughness of bar coding. The issue of inventory control, however, has migrated beyond an exclusively engineering and property operations concern to a business strategy required to support:

- Front-end service fulfillment.
- Reduced provisioning intervals, provisioned correctly the first time.
- Plug-in provisioning based on customer demand activity.
- Integrated systems and enhancements to support the physical placement of hardware and customer assignment processes, such as:
  - Circuit Network Administration System (CNAS)/Telephone Business Solutions (TBS).
  - Mechanized Assignment Record Keeping (MARK).
  - GTE Advanced Materials System (GTEAMS).
  - COEMOD.
- Cost containment through timely and accurate inventory control.
- Timely retirement of equipment.
- Elimination of paper records required to move equipment in support of:
  - Customer demand.

    OR
  - Repair activity.

2.3 Definitions

The following chart defines the acronyms and terms used in this practice.

Acronym or Term	Definition
AC	Alternating Current
BSN	Bar Code Serial Number
BZT	Business Zone Technician
CNAS	Circuit Network Administration System (see TBS)
C O	Central Office
COE	Central Office Equipment
COEC	Central Office Equipment Construction
COEM	Central Office Equipment Maintenance
COEMOD	Central Office Equipment Model
COEP	Central Office Equipment Property
CPMS	Capitol Program Management System
CPR	Continuing Property Record
CXR	Carrier
CZT	Customer Zone Technician
DBA	Database Administrator
DLC	Digital Loop Carrier
DSX	Digital Cross Connect
EAX	Electronic Automatic Exchange
EP	Engineering Procedure
ERS	Electronic Repair Service
ICP	Inventory Control Point
ID	Identification
NiCad	Nickel Cadium
NOC	Network Operations Center
OPCEN	Operations Center
PCN	Product Change Notice

continued

2.3 Definitions, continued

Acronym or Term	Definition
PWC	Printed Wiring Card
RAM	Random Access Memory
RIM	Region inventory Management
RSU	Remote Switching Unit
SVR	System Version Release
SXS	Step-by-Step
TBS	Telephone Business Solutions (Formerly CNAS)
TECH	Technician
WO	Work Order
XREF	Cross Reference

2.4 References

The following chart provides sources of supplementary information relating to this practice. The documents could be required for performing certain tasks.

See...	**For Information About...**
Practice 007-005-015	Handling Static-Sensitive Materials
Practice 007-220-002	COE Bar Code Equipment Movement Tracking Procedures
Practice 007-220-003	COE Bar Code Laptop Program Procedures (DOS)
Training Course 50001	COE Bar Coding Ongoing
Version 1.0	Spare Card Remote User's Guide (ICELAND)

2.5 Help Desk Contacts

The following chart provides the telephone numbers for the Bar Code Help Desks.

Region...	Telephone Number...
California Region	760-245-0625
Florida Region	813-483-2494
Hawaii Region	808-546-3579
Midwest Region	6 14-383-0666
North Region	6 14-383-0666
Northeast Region	6 14-383-0666
Northwest Region	425-26 I -6367
South Region	919-317-5884
Texas/New Mexico Region	972-7 17-2296
Virginia Region	9 19-3 17-5884

3. Trakker Data Collector/Laser Scanner

3.1 Description and Use

A Trakker® data collector/laser scanner:

- **Is** a hand-held, portable unit equipped with a keypad and display unit attached by a coiled cable to an external laser scanner.
- Is used in applications requiring scanning of bar code-labeled COE.
- Provides:
  - Fast non-contact scanning of in-service equipment.
  - Ability to scan labels on the edge of cards (non-forward facing labels).

Some applications for Trakker data collectors/laser scanners are:

- Initial inventories.
- Spot audits.
- Movement of equipment into, out of, or within a CO.
- As-built gross addition WO's (new equipment additions).

Data collected is used to:

- Associate the equipment to the bar code serial number label identification.
- Provide as-built data to:
  - COEP.
  - COEMOD.
- Provide retirement data that is used to electronically retire the equipment record using the bar code serial number (license plate identification number).
- Track movement of equipment within and between COs (equipment moves and transfers).
- Notify ERS that a defective unit is being sent in for repair.
- Provide data on spare inventory levels and their locations in emergency repair situations (ICELAND).

A Trakker data collector and laser scanner is GTE Telephone Operations standard for use in the equipment movement tracking program. See Section 13 for hardware requirements.

NOTE: A Trakker might require a software upgrade. To determine if an upgrade is required:

- **At the Trakker *Main Menu* type Q, and press *<enter>.***
- **Verify that the screen reflects a version of 5.00 or higher. If information provided on the screen indicates that the Trakker is a version lower than 5.00, or if the screen does not provide version status, contact the COEP Help Desk as soon as possible for information about hardware/software compatibility. See Section 2.5 for the contact list.**

4. Benefits of Bar Coding

4.1 Benefits

Applying a bar code serial number label to all COE CPR equipment:

- Provides each piece of equipment with a unique identification number (license plate) which serves as a relational address to all attributes of the equipment's financial and engineering record.

  EXAMPLE: A user scans a plug-in card's GTE bar code serial number and provides the number to the COEPKOEMOD DBAs. The COEP/ COEMOD DBAs are able to provide information regarding:

  - Where the equipment is located including:
    - Plant.
    - SubPlant.
    - Bay.
    - Shelf.
    - Position.
  - Part number and Issue number.
  - Original placing WO and year placed.
  - Material and installation costs.
  - Other information from additional fields.

  The following illustration depicts a serialized bar code label:

- Provides a mechanized means to track equipment inventory.
- Enhances initial inventory and subsequent audit speed and accuracy, due to:
  - On-site scanning and collection of data.
  - On-site verification of data uploaded.
  - Electronic upload to COEPKOEMOD (no manual keying required).
- Provides ongoing paperless equipment tracking.
- Solves record update problems in that:
  - Movement of equipment is captured by scanning.
  - The Engineering record systems are electronically updated.
- Results in subsequent inventories requiring less time than initial bar code

4.1 Benefits, continued

inventory and much less time than conventional manual inventories.

The bar code process also provides the following benefits:

- Maintaining an accurate bar code inventory provides:
  - Ongoing purification of the COEPKOEMOD database to reflect actual office equipment.
  - Identification and removal of obsolete plant.
  - Identification and removal of excess equipment (especially plug-ins).
  - The ability to locate spare cards.
  - The ability to locate cards requiring a product change, upgrade, or replacement.
- A foundation for Spare Card Management or just-in-time provisioning for:
  - Accurate records (updated and maintained via bar coding).
  - The ability to easily record (scan equipment) movement into, within, and out of offices.
  - The reduction of non-revenue producing COE investment and depreciation expense.
- Timely, accurate, ongoing retirements are processed by:
  - Removing equipment.
  - Scanning the bar code serial number label.
  - Uploading Trakker data to COEPICOEMOD.
- COEPKOEMOD electronically processes retirement information when data is uploaded. Early retirement improves GTE's expense position.
- Eventual replacement of manual office processes with electronic records for:
  - Repair and Return form.
  - TBS (formerly CNAS).

4.2 As-Built Drawing Requirements

Since COEMOD is fully implemented, the data collected with a Trakker and then uploaded serves as the as-built drawing for the COEPICOEMOD database. The as-built bar code information for the equipment installed phases out most needs for providing a marked set of prints and specifications. Bar coded as-built information replaces marked equipment rack drawings.

NOTE: **An exception to this rule is frame and floor layout drawings.**

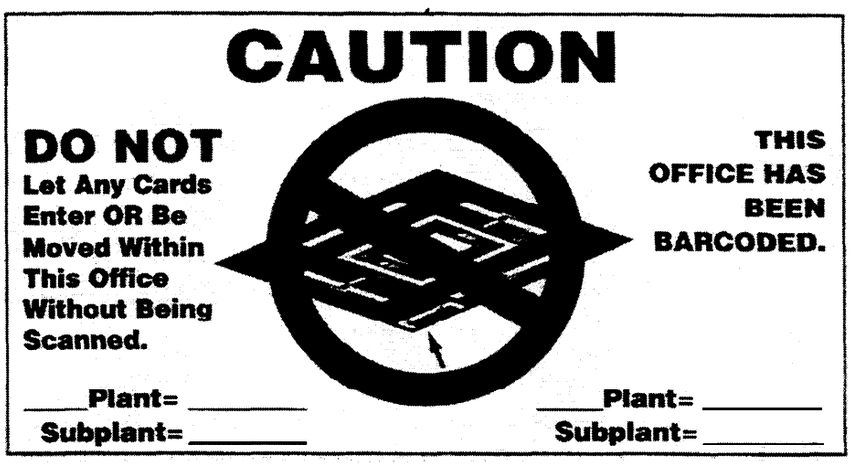
5. Bar Code Label Process

5.1 When to Bar Code

The ongoing bar coding process is now underway. Bar coding must be performed:

- At the completion of any new WO.
- When equipment is:
  - Transferred into or out of the CO.
  - Moved within the CO.
  - Retired.
  - Sent to or received from repair.
  - Changed.
  - Swapped.

Post a caution sign on the inside of entrance doors to COs, remotes, DLCs, and any other location where bar-coded CO equipment is located (see the following illustration).



NOTE: The work order Installer Notes must also denote that the office requires bar coding.

5.2 General Bar Code Information

The GTE standard bar code serial number label provides:

- An eight-character bar code serial number label.
- A non-replicating number system. (The COEPKOEMOD system verifies that no duplication of serial license plate numbers exists.)
- A unique license plate bar code number for each piece of equipment.

Existing eight-character GTE bar code serial number labels (COEP/COEMOD and ERS type) on equipment are non-repeating and are used as the license plate of this equipment. All GTE bar code serial number labels are unique and may be

5.2 General Bar Code Information, continued

used interchangeably between GTE Regions.
Red eight-character GTE bar code serial number labels are also non-repeating and are used as the license plate on virtual colocated equipment and other non-financial records. These labels use a unique series of numbers and are not duplicated in the standard GTE labels.

Manufacturers, such as NORTEL, are beginning to place 12-character, non-repeating, license plate, bar code serial number labels on COE, reducing the number of labels having to be placed on PWCs. GTE uses the manufacturer-placed 12-character bar code serial number label if it is located on the card so that it can be scanned while the card is in-service. If you are not sure whether a manufacturer's label is acceptable, contact your local COEPICOEMOD DBAs for help. See Sections 8.1 and 8.2 for a list of the manufacturers placing acceptable labels.

The Trakker is programmed to accept only 8-character or 12-character bar code serial numbers that use Code 39, Code 93, or Code 128 format. No other labels are accepted when scanning for bar code serial numbers. If an 8- or 12-character bar code label is scanned and the scanner will not read the label, it is not using an acceptable coding format. Apply a GTE serial number label.

NOTE: See **Section 8 for information on correct placement of labels.**

6. Roles and Responsibilities

6.1 Overall Responsibility

Every GTE employee or contractor who installs, moves, removes, audits, or otherwise handles COE that requires bar coding, as described in this practice, is responsible for ensuring that the specific equipment item has an acceptable serial number label applied, is scanned, and uploaded into the COEPICOEMOD database for that CO.

6.2 **Customer Operations**

Customer Operations in this practice is used to refer to a broad scope of GTE employees many of whom are called: COEM, Span Met Crew, Day Crew, Night Crew, CZT, BZT, Zone Relook Technicians, etc. Compliance with this practice and the requirement of paragraph 6.1 is required even if your specific job title/ classification is not listed.

Customer Operations must:

- Place a bar code serial number label on every PWC entering the CO if it doesn't already have one. **This includes all PWCs received on Blanket WOS.**

  NOTE: ERS is responsible for correctly labeling replacement cards for those sent in for repair.

6.2 Customer Operations, continued

- Scan and upload all bar coded equipment into the COEPKOEMOD records for that CO including the re-scanning of any equipment that is moved within the office. All **equipment must be scanned to the bay, shelf, and slot position.**
- Scan all equipment leaving a CO (for repair or retirement only). Refer to GTE Telephone Operations Practice 007-220-002 for Trakker usage.
- Post a caution sign (see the illustration in Section 5.1) on the inside of entrance doors.
- Place equipment location labels (see the bay and shelf illustrations in Section 8.3) on all bays and shelves without them.
- Perform Annual ICP SITES Audits (see Section 12).
- Maintain integrity in the office's COEPKOEMOD records.

The Customer Operations Coach has the final responsibility for ensuring the integrity of the COEPKOEMOD database in the offices for which he or she is responsible. Bar coding compliance must be part of the final review of any new equipment added to a CO.

6.2.1 Bar Code Scanners

The preferred method for uploading information into COEPICOEMOD is to use a bar code Trakker. Depending on the amount of truck stock used, purchase a bar code Trakker (see Section 13) for Customer Operations Employees that work out of a truck.

NOTE: **If only four or five cards per week are used from truck stock, use other methods to enter the required** COEPKOEMOD **database information. If a card is replaced or sent in for repair, make a note of the required information for later input to a Trakker (see Section 6.2.2). Refer to GTE Telephone Operations Practice 007-220-002 for Trakker usage information on repair or replacement of equipment.**

6.2.2 Manual Upload

Bar coding information that is normally scanned can be hand keyed (manually uploaded) into a Trakker and uploaded to COEPKOEMOD. Due to the requirements of the Spare Card Inventory Management Program, upload the required information manually at the end of each shift.

NOTE: Bar code Trakkers are found in CO reporting centers.

6.3 Central Office Equipment Construction (COEC)

COEC is responsible for ensuring that:

- Each item of new equipment (including spares) placed in a CO has an acceptable bar code serial number label affixed, and that it is correctly uploaded to COEPICOEMOD no later than the Construction Complete Date. See Sections 8.1 and 8.2 for a list of the manufacturers placing acceptable labels.

6.3 Central Office Equipment Construction (COEC), continued

- The correct screen prompt (refer to GTE Telephone Operations Practice 007-220-002) is followed so that all required information is uploaded including the correct bay, shelf, and slot position. The uploaded data must include the correct part number and issue number information.
- Caution signs (see illustration in Section 5.1) currently exist (or are placed) on the inside of entrance doors to COs, remotes, DLCs, and any other locations where bar coded equipment is located whenever new equipment is installed.
- Equipment location labels (see the bay and shelf illustrations in Section 8.3) are placed on all new CO equipment bays and shelves.

6.4 Network Design

Network Design is responsible for ensuring that the:

- WO incorporates the necessary instructions and drawings that provide the requirements and guidance essential for the proper naming conventions and details of records to be bar coded.
- Placement of all items incorporated in a provisioning WO, where the actual COEC placement and bar coding differs from that specified in the WO, are reviewed and approved.

Bar coding exception reports that aid the engineer are available from the COEMOD system.

7. Shelf and Slot Numbering

7.1 Shelf Numbering

The general rule for shelf numbering is to count from bottom to top using the lower left mounting space of the equipment shelf as the designated shelf number. Shelves installed in a two sided bay with a common backplane to both sides follow the shelf numbering rule above. Non-continuous shelves in two sided bays (i.e., a different shelf in front than in the rear of the bay) are to have and “F” or "R" designation added to the end of the shelf number (e.g., 05F indicates a shelf in the front of a two sided bay that is mounted in position 05).

7.2 Slot Numbering

The general rule for slot numbering is to count left to right, bottom to top. For a multi-level assembly, the bottom level is designated as the “A” level, the next level the “B” level, etc. (e.g., the lower left slot in a multi-level assembly would normally be designated as slot AOI). Slot numbering for shelves installed in a two sided bay with a common backplane to both sides of the bay are to have an 'IF” or “R” placed on the end of the slot number (e.g., 01 F, 05R, etc.). Slot numbering for non-continuous shelves in two sided bays are to follow the general slot numbering procedure.

NOTE: Direct questions concerning shelf and slot numbering to the local COEPICOEMOD DBA’s.

8. Bar Code Label Placement

8.1 General Information

Bar coding provides an accurate and credible method of inventorying and maintaining CO records. For equipment to be bar coded, it must have an 8-character GTE or an acceptable 12-character manufacturer's bar code serial number label affixed (see Section 8.3 for illustrations).

When scanned, the bar code label provides a unique, imprinted, alphanumeric code. This alphanumeric code is also printed in English on the label, in the event manual input is necessary.

The encoding schemes used today are "Code 39" and "Code 128". This refers to the way the bars and spaces represent actual numbers and letters.

Both GTE's standard serial number label and the red virtual colcolation label are covered with a laminate to enhance durability.

8.2 Manufacturer's Labels

For a manufacturer's bar code serial number label to be an acceptable, it must be:

- From Lucent (AT&T), NORTEL, or Siemens (Stromberg-Carlson).
- 12 characters in length.
- Scannable while the equipment is in-service.

8.2.1 AGCS

AGCS bar code serial numbers are not acceptable (scannable). However, their bar coded part number may be scanned. The scannable portion of the bar coded part number label may contain both the part and issue number or the part number alone.

8.2.2 Lucent

Lucent Technologies bar coded serial number labels are 12 characters in length and are acceptable if they may be scanned while the equipment is in-service. (See the Lucent illustration in Section 8.3).

8.23 NORTEL

NORTEL places both a scannable bar code serial number label and a part/issue number label (See the NORTEL illustration in Section 8.3). After scanning NORTEL's part/issue number label, the part and issue numbers are parsed into the correct fields in the Trakker. Also, NORTEL's bar coded serial number label is acceptable if it begins with the letters "NNTM", is 12 characters in length, and can be scanned while the equipment is in-service. In cases where the label is either not scannable while in-service or not 12 characters (i.e., 13-characters), a GTE bar code serial number label must be placed on the equipment.

8.2.4 Siemens

Siemens bar coded serial number labels beginning with the letters "STBG", "SCSP", or "SCPG" are 12 characters in length and are acceptable if they may be scanned while the equipment is in-service. (See Siemens illustration in Section 8.3).

8.3

Types of Labels

The following illustrations provide two types of labels:

- Bar code serial number labels (the following illustration) provide each component (PWC, shelf, bay, etc.) with a unique serial number.

STBG02664789 **SIEMENS LABEL**

NNTMF1057214 **NORTEL LABEL**

NT6X44AA 11

95OC09123456

LUCENT LABEL

GTE HI9OPB01

GTE LABEL

- Bar code equipment location identification labels, which identify:
  - Bay/Frame/Rack (the following illustration).

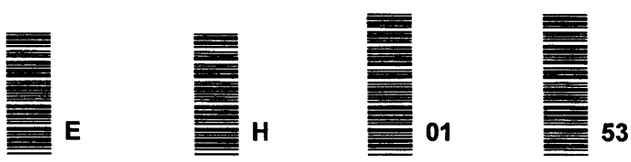
ELMF-010

LCEI-006

LLR-106

MISF-00

  - Shelf/File (the following illustration).



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Order equipment location labels with specific bay, frame, or relay rack bar codes. Place these labels when the new equipment is first installed or when the office is initially inventoried. Use the equipment location labels to identify bay and shelf information for ongoing maintenance and tracking.

NOTE: See Section 13 for ordering information.

8.4 Serial Number Label Dimension

The standard GTE bar code serial number label dimension is I/4" x 1". In the past, a slightly larger label (5/16" x 1 I/8") was used. The smaller label allows more latitude in the placement of labels.

8.5 Specific Label Placement Instruction

It would be difficult to list the serial number label placement for each type of PWC, special service equipment, and various components of transmission products currently in service. For this reason, follow the guidelines in this section when placing bar code serial number labels. These guidelines also apply to label placement on virtual colocated equipment.

Place labels in the vertical position in the lower left-hand corner of an item of equipment. When placing the label vertically, the GTE logo and alphanumeric number should be on the left, readable from bottom to top. This allows easy reading of the alphanumeric code if manual input becomes necessary.

When the lower left corner cannot be used because of placement restrictions (see Section 8.7) apply the following general rules in the order listed:

1. If the bar code serial number label will not fit vertically, place it horizontally.

   When placing the label horizontally, the GTE logo and alphanumeric number should be at the top, readable from left to right.

2. Place the bar code serial number label inside PWC handles; ensure that the label can be scanned.
3. Place the bar code serial number label in the first acceptable location, moving away from the lower left-hand corner.
4. For vertically edged, non-forward-facing cards with no faceplate, place the bar code serial number label so that the bar code is toward the front edge of the card.

8.6 Bay, Frame, and Shelf Identification

Place the bay, frame, and relay rack bar code identification label horizontally below the normal identification locations. If this space is not available, place the bay label as close to this location as practical, but not on the vertical side of the bottom bar. Place the shelf bar code identification labels vertically next to the normal shelf identification location. In locations where no shelf labels exist, place the shelf label vertically above the lower left mounting space, on the left side of the equipment frame.

8.6 Bay, Frame, and Shelf Identification, continued

The preceding instructions also apply to the placement of bar code serial number labels on bays, frames, and shelves.

NOTE: Direct questions concerning the correct placement of a label to the local COEPKOEMOD DBAs. The local COEPKOEMOD staff coordinates directions with the Headquarters COEPICOEMOD staff, Irving, Texas.

CAUTION: Never remove an in-service PWC from service to place a bar code label. If labeling is necessary, always request assistance from the NOC coach.

8.7 General Label Placement Rules

Follow these rules when placing bar code serial number labels on equipment and PWCs:

- Label must be readable (scannable) when the PWC is installed (in-service).
- Label must have an acceptable appearance. It must be:
  - Clean.
  - Placed neatly (same location on all similar cards).
  - Placed in accordance to standard methods.
  - Placed straight with as little angle as possible. This placement allows for easier scanning.
- When placing a label horizontally, the readable portion must be on the top, reading left to right.
- When placing a label vertically, the readable portion must be on the left.
- When placing a label on a vertically edged, non-fonnrard-facing card with no faceplate, the bar code must be toward the front edge of the card.
- Label should not affect the working or testing of a PWC:
  - Do not place labels over printed wire circuitry.
  - If necessary, place labels on the circuit board, but select a location that is not on printed wire circuitry.
- Do not place label over any information, such as:
  - Issue numbers.
  - Part numbers.
  - Testjack information.
- Do not place label over other labels.

8.7 General Label Placement Rules, continued

- Do not place label over:
  - Screw heads.
  - Testjacks.
  - Any other protrusions.
- Place labels so that they cannot fall off accidentally or be easily removed. In addition, labels must not:
  - Overhang any portion of the equipment being identified.
  - Be placed on an uneven surface.
- Do not place labels on equipment whose temperature is below 50° F. Once properly applied, low temperature adhesion is satisfactory.

9. Equipment Protection

9.1 **Anti-Static Safeguard**

Wear an anti-static wrist strap when placing bar code labels on PWCs, equipment shelves, frames, or otherwise handling static sensitive equipment. Refer to GTE Telephone Operations Practice 007-005-015 for additional information on handling static-sensitive materials. This also applies to the handling of PWC's within an ICP cabinet.

10. Equipment Movement Tracking Program

10.1 Introduction

The Equipment Movement Tracking Program presents the user with the prompts necessary to gather and store the information required by COEPICOEMOD whenever equipment is moved, received, retired, or audited.

NOTE: A **Trakker data collector and laser scanner is GTE Telephone Operations' standard for use in the Equipment Movement Tracking Program. See Section 13 for hardware requirements.**

Repetitious data is scanned (entered) once, and defaults thereafter for greater speed and accuracy. This section provides an overview of basic scanning techniques. Refer to GTE Telephone Operations Practice 007-220-002 for detailed instructions on the use of the Equipment Movement Tracking Program.

10.2 Overview

The equipment movement tracking application provides the ability to:

- Make selections.
- Enter and edit data.
- Upload (transmit) the transaction to a central location.
- Download the new Trakker program.

Unless directed otherwise, make selections from the menus by pressing the key associated with your preferred choice, then pressing <enter>.

The general features/rules of a Trakker are as follows:

- When entering data:
  - <F4> back up one data field at a time until the previous menu screen is reached where the <exit> must be selected to backup further.
  - <F8> back up directly to the previous menu screen.
- When performing the scanning operation, follow these rules:
  - The distance from the end of the laser scanner (Trakker if a one piece unit) to the label should be less than four inches.
  - Point the laser scanner on a 45 to 80 degree angle to the bar code label and press the trigger. In the case of Trakker with integrated scanner, point the Trakker on a 45 to 80 degree angle to the bar code label and press the orange button on either side of the Trakker. Both the laser scanner and one piece Trakker emit a laser beam that should be pointed horizontally to the label's position (see Exhibit 1).

    NOTE: **If the one piece Trakker is held horizontally (flat, not on its side), the laser beam is projected in a vertical light beam.**

  - If the laser beam is not on the label, move the beam slowly toward the label, stopping when the center of the label is reached.

10.2 Overview, continued

- With each successful keyed input, a beep is heard.
- Each error is identified with a series of three louder beeps.
- If the Trakker requests information and no input is available, pressing <enter> moves to the next prompt. If three beeps are heard when pressing the <enter> key, the Trakker is indicating that this information is required.
- The following chart defines the maximum number of characters allowed by the software for each type of input request.

Input...	Maximum Number of Characters...
Operator ID (Combined)	3
Company Code	3
Plant Code	4
SubPlant Code	3
Work Order Number	7
Bay	up to 12
Shelf	up to 5
Slot	up to 4
Part Number	up to 18
Issue Number	up to 9
Bar Code Serial Number	8 or 12
Budget Center	4
ERO Number	8
Swap ID Number	up to 8

11. Equipment Requiring Bar Coding

11.1
What Is Bar Coded

The following equipment requires bar coding:

- All CPR Retirement items.
- Plug-in cards.
- Equipment shelves.
- Frames, relay racks, and equipment cabinets.
- Virtual colocated equipment (see Section 11.12).
- No. 2 EAX® additions (to previously bar coded switches).
- CXR Repeaters (going forward basis).
- Fiber DSX bays.
- BTL equipment in a CO.
- Power equipment.
- Test Equipment (when purchased to 22XXXX account).

Equipment types excluded from bar coding are:

- SXS equipment (including ITEC).
- Leich and Crossbar@.
- AE TSPS®.
- No. I EAX®.
- MDF and CDF equipment.
- CXP-5®.

NOTE: While the listed COE is not bar coded, transmission and special service equipment located within the office requires bar coding.

11.2
PWC Notes

Additional Notes on the bar coding of PWCs are:

- Piggy-Back (mother-daughter) boards are normally bar coded seperately unless the cards are kept (purchased, placed, repaired, and retired) as a unit. For example, CyberPOP NIC and NAC cards are purchased, placed, stored, and repaired as a unit. Therefore, a bar code serial number label is only placed on the NIC card and the unit is bar coded as one item.
- In some equipment configurations (e.g., Ascend TNT hub), the PWCs are located and bar coded from the rear.
- Some PWCs are located within a unit but not visible without removing a cover. If PWC spares for these units are provided on site, regionally, or elsewhere and the equipment is GTE maintained, then the internally located PWCs are to be bar coded when initially installed.
- PWCs that do not have room for placement of a bar code serial number label still require inventorying with a bar code Trakker. However, the word “NONE” is to be keyed into the BSN field. All other required entries remain the same.

NOTE: Direct questions concerning what to bar code to the local COEPI COEMOD DBAs. Also, some Network Design EPs show bar coding information for some equipment shelves. In addition, XREF bar coding shelf templates are also available from COEMOD.

11.3 Equipment Additions

All equipment additions (gross adds) require bar coding to the bay, shelf, and slot. This allows the COEPICOEMOD staff to:

- Associate the equipment to the bar code serial numbers.
- Provide as-built to COEMOD.
- Provide data to other groups:
  - NOC (PCNs).
  - Customer Operations/Network Reliability (Spares locations).
  - ERS (Cards sent to repair).

11.4 Retirement Work Orders

On retirement work orders:

- Physically remove equipment.
- Scan equipment bar code serial number labels. Use the Trakker Retirements menu (refer to GTE Telephone Operations Practice 007-220-002).

  NOTE: Because of reporting requirements, whole or entire office retirements are recorded by Property Operations at the new office's in-service date. Therefore, ONLY whole switch removals are NOT to be bar coded out. This applies to host switches and remotes down to the RSU level. The retired circuit equipment associated with the switch conversion must still be bar coded out.
- Package equipment for removal.
- Notify the local Material Control Department (GTE Supply) for final disposition of the equipment.

Scan all removed equipment with a Trakker when it is physically removed and placed in boxes for shipping. When uploaded, the information:

- Provides a mechanical update to COEPKOEMOD of actual equipment retired.
- Instantly retires from GTE's books, all equipment scanned out of a switch inventory (very timely retirements).

11.5 Equipment Modification (Changes)

On modification (SVR-type activity) WO's:

- Capture any changes to the part or issue number using the Changes menu.
- Scan all equipment updated in the field (part number change or issue update) to the bay, shelf, and slot level to capture these modifications for update to COEPKOEMOD.
- Follow the *CHANGE BSN* screens if the change involves a one-for-one swap (exchange) of cards, where the replacement card is in hand.

11.6 Equipment Sent In For Repair

Scan a PWC (being sent in for repair) out of the office using the To Repair menu (refer to GTE Telephone Operations Practice 007-220-002). Upon upload to COEPKOEMOD, the data is sent to ERS for processing and a replacement card sent on its way back to the CO or ICP location without the defective card having arrived at the ERS Center.

11.7 Equipment Returned From Repair

Bar code all equipment returned from repair to the bay, shelf, and slot using the *From Repair* menu.

11.8 Transfer Work Orders

Scan to the bay, shelf, and slot all equipment transferred or moved into a CO building, remote building, hut, mux, cabinet, etc. with a WO.

11.9 Equipment Moves

Scan to the bay, shelf, and slot all equipment moved into or within a CO building, remote building, hut, mux, cabinet, etc. without a WO. The Moves screens may also be used to update the database with cards suspected of having been moved.

11.10 Equipment Swaps

All equipment swapped out with no capital cost impact to GTE (i.e., Class A changes or SVR-type activity where equipment is replaced by circuit pack rotation) requires bar coding. When the equipment being swapped does not involve a one-for-one swap of cards (5 for 3, 2 for 4, etc.), use the Swaps *Menu.* Scan the equipment being removed (swapped out) out of the CO using the *Mass* Swap Outs menu (refer to GTE Telephone Operations Practice 007-220-002). Bar code in the new equipment being installed (swapped in) using the *Mass Swap Ins* menu and scan the new equipment to the bay, shelf, and slot.

11.11 **Equipment Audits**

Equipment being audited by Customer Operations as a part of their normal maintenance activities requires scanning using the whole Bay *Audit* menu (refer to GTE Telephone Operations Practice 007-220-002). Upon upload, this data updates the COEP/COEMOD records with any changes and generates an Audit Report that is fonrvarded to the Customer Operations CO Coach. See Section 12 for additional information on performing audits.

11.12 Virtual Co-Locations

Virtual colocation is an offering in which the ILEC owns (or leases) and excercises physical control over the equipment, located in the central office, that terminates the interconnector's facility. The interconnector purchases the equipment and transfers ownership to the ILEC for a nominal fee. The ILEC provides installation, maintenance and repair services on a nondiscriminatory basis.

Virtual colocated equipment requires bar coding to the bay, shelf, and slot position. Transaction types are as defined in Sections 11.3 through 11.11.

11.12 Virtual Co-Locations, continued

Red 8-character GTE bar code serial number labels are non-repeating and are used as the license plate on virtual colocated equipment. These labels use a unique series of numbers beginning with the letters 'I/CL" and are not duplicated in the standard GTE labels.

Red labels are ordered by calling the Headquarters COE Construction Support Department at 972-7 18-7463.

12. Audit Processes

12.1 Audits- General

The purpose of equipment audits is three-fold. First, audits verify compliance; second, audits verify the accuracy of the COEPKOEMOD database; and third, audits update the database with any changes that are found, therefore, equipment audits are an important step in maintaining a high level of record accuracy.

12.2 Annual "SITES" Audits

The annual ICP "SITES" audit population will consist of 100% of the ICP locations. The audit requirements for each ICP location will be to audit two cabinets or 10% of the total number of cabinets, whichever is greater (if location has only 1 ICP that cabinet must be audited in its entirety). The accuracy target is 97%.

12.2.1 Region Inventory Management Responsibilities

Region Inventory Management responsibilities include:

- Developing and publishing an annual ICP "SITES" audit schedule.
- Identifying for Region Customer Operations which cabinets are to be audited one week prior to the sceduled audit (see GTEP 007-005-015 and Section 9.1 Anti Static Safeguard of this practice).
- Tracking the number of audits performed and accuracy percents using the audit tracking spreadsheet (see Exhibit 2).
- Distributing the auditIre-audit tracking spreadsheet (see Exhibit 2) to the Area Customer Operations Manager, the Division/State General Manager, and the Region Network Reliability General Manager Monthly.
- Forwarding audit/re-audit results to HQ Inventory Management for IP. Scorecard Metric Reporting (number of audits performed, and the audit percent accuracy both compared to objectives).

12.2.2 Region Customer Operations Responsibilities

Region Customer Operations responsibilities include:

- Performing annual ICP "SITES" audits.
- Notifying the COEP Group of the audit location five days prior to the date of the scheduled audit (see Section 2.5 of this practice for a region contact list).
- Using the Whole Bay audit function.
- If initial audit results are below 97%, all cabinets are to be auditedIre-audited within 60 days of the release date of the original audit. The release date is printed in the upper left-hand corner of the audit report.
- Assisting COEP Group with audit reconciliation.
- CO Coach to review the report with his or her team and, if required, to follow up on the importance of records' accuracy, the accessibility of the barcode practices and procedures, and additional training.

12.2.3 COEP Group Responsibilities

COEP Groups responsibilities include:

- Audit reconciliation with assistance from Region Customer Operations
- Releasing the audit, calculating the "N" records into the percent accuracy, and forwarding the audit report to CO Coach and Region Inventory Management (See Section 11.5 of this practice for a contact list) within five days of receipt of the audit.
- The "N" Record calculation.
  - As part of a whole bay audit, the COEP Group will have released the audit as a marked audit. If any COEPKOEMOD records for that bay whole bay audit were not identified in the physical audit, the records are marked on the audit report and in COEPICOEMOD as "N" not found; however "N" records are not included in the initial accuracy rate. The standard calculation for audit accuracy rates include these "N" records. To do this, the total number of "N" records is added to the number of errors and divided by the total number of items scanned.

12.3 Central Office (CO) Audit

The integrity of COEP for inventory control and visibility is dependent upon accurate bar coding and scanning of all CO equipment movement including cards. The use of the Inventory management CO Audit Procedure will provide feedback to ensure accurate COEP records for CO equipment, The ultimate goal is records' accuracy.

The annual CO Audit population is to consist of at least 15% of the CO's (excluding ICP cabinets). At least 5% of all the bays within a CO will be audited (excluding the ICP cabinets). The audit method must be whole bay, and the audited bays (5%) should be divided between switching, transmission, and circuit bays, i.e.., total bays in the CO = 180, 5% of the total is 9 bays. Therefore perform whole bay audits on 3 switching bays, 3 transmission bays, and 3 circuit bays.

12.3.1 CO Audit Check List

A CO Audit Check List (see Exhibit 3) will be completed for each CO Audit.

12.3.2 Region Inventory Management Responsibilities

Region Inventory Management responsibilities include:

- Determining the size and makeup of the audit team required to complete audits in a timely manner. Normally, a two person will be required. Ideally, this team would comprise of an Inventory Managment representative and a Customer Operations technician.
- Developing and publishing a CO Audit schedule for Annual CO Audits.
- Contacting the COEP Group fives days prior to initiating the CO Audit (see Section 2.5 of this practice), and advise them of the location and the date of the audit.
- Tracking the number of audits performed and accuracy percents using the Audit tracking spreadsheet (see Exhibit 2).
- Providing the CO Coach with a copy of the CO Audit Checklist listing which specific action items are required to bring the office into compliance.
- Keeping the Action items as part of the office audit results and expect a completion notification from the CO Coach within 30 days of the audit.
- Completing and distributing the audit tracking spreadsheet (see Exhibit 2) on a monthly basis to the following:
  - Area Customer Operations Manager.
  - Division/State General Manager.
  - Region Network Reliability General Manager.
- Forwarding audit results to HQ Inventory Management for IP Scorecard Metric Reporting (number of audits performed, and the audit percent accuracy both compared to objectives).

12.3.3 Region Customer Operations/CO Coach Responsibilities

Region Customer Operations CO Coach responsibilities include:

- Addressing action items indicated on the CO Audit checklist to bring office into compliance.
- Forwarding a copy of the check list indicating the corrections/compliance status'of the action items to Region Inventory Management within 30 days of the audit.
- Reviewing the audit report with his or her team and, if required, follow up on the importance of records' accuracy, the accessability of the barcode practices and procedures, and additional training.

12.3.4 COEP Group Responsibilities

COEP Group responsibilities include:

- Audit reconciliation with assistance from Region Customer Operations.
- Releasing the audit, calculating the "N" records into the percent accuracy, and forwarding the audit report to the CO Coach and Region Inventory Management (see Section 2.5 of this practice for a contact list) within 5 days of receipt of the audit.
- The "N" Record calculation.
  - As part of a whole bay audit, the COEP Group will have released the audit as a marked audit. If any COEPICOEMOD records for that bay whole bay audit were not identified in the physical audit, the records are marked on the audit report and in COEPICOEMOD as "N" not found; however "N" records are not included in the initial accuracy rate. The standard calculation for audit accuracy rates include these "N" records. To do this, the total number of "N" records is added to the number of errors and divided by the total number of items scanned.

12.4 Central Office Equipment Construction (COEC) Audits

COEC and their contractors are responsible for the accuracy/integrity of their uploaded data. If the quality of the data uploaded to COEPKOEMOD does not meet the intent of this practice, they must return and correct the information as required.

NOTE: This policy is intended for major discrepancies and should NOT be invoked if only minor discrepancies are found.

12.5 Example of a Spot Audit

An Audit Report (see Section 12.6) detailing the results of the sample inventory is produced for the COEP Administrative Group and a copy forwarded to Property Operations.

An example of the Spot *Audit* bar coding audit process is:

- Scan a minimum of 50 cards (at random) in an office.
- Upload the data to COEPICOEMOD.
- Notify the COEP Group of the audit location (see Section 2.5 for the Region Contact List).
- A three-part audit report is produced and forwarded to the requesting department.

12.6 Bar Code Audit Report

The three-part Bar Code Audit report consists of:

- A summary level report showing GTE Company/Plant/SubPlant Compliance- accuracy rate at the SubPlant level.
- A summary level report showing Bay/Shelf/Position Compliance - accuracy rate to the slot level.
- A detailed report of the transactions that updated the COEPICOEMOD database including the from GTE Company/Plant/SubPlantlBay/Shelf/ Position.

13. Hardware Requirements and Ordering

13.1 Hardware Placement

Bar Code scanning hardware is to be located in all manned COs and other COs/remotes of greater than 1,000 lines in market segment 1 and greater than 2,000 in all other market segments. New COs/remotes fitting the above criteria, not currently equipped with bar coding hardware, are to be so equipped.

It is recommended that employees whose job function require them to handle more than 20 cards per day be supplied with their own bar code equipment.

13.2 Hardware Usage

The recommended bar code Trakkers, for use with the equipment movement tracking program, come equipped with either a:

- Rechargeable NiCad battery pack.

  OR

- Battery pack with replaceable alkaline batteries.

Usage dictates which type of Trakker is required. A Trakker equipped with NiCads (see Section 13.3) should be chosen if the Trakker will:

- Be located in a CO environment.

  OR

- Experience large numbers of scans per day.

Likewise, a Trakker equipped with replaceable alkaline batteries (see Section 15.4) should be chosen if the Trakker will:

- Experience only a small number of scans per day.

  OR

- Be located in a truck or other location away from recharging facilities.

M402 **Trakkers®** (Item ID 464539 or 464540) operate with either an alkaline or NiCad battery pack. Therefore, if an M402 Trakker is equipped with one type of battery pack and requirements later change, the appropriate battery pack for the new requirements can be ordered.

13.3 Central Office Scanning Locations

The following chart provides the bar code scanning hardware required for COs and other locations requiring large numbers of scans per day.

Item ID...	Part #...	Description...
464540	M402N	Trakker features include: . 128K RAM. • NiCad rechargeable battery pack.
464541	060576	Protective Rubber Holder
464542	1518BA	High Power Laser Scanner@ contains internal decode capability.
464543	063500-030	Trakker-Scanner Interface Cable
316524	060572	Spare NiCad Battery
316525	4ozAo3	Battery Charger/Discharger
318589	40D002	Communications Dock. This unit serves as a communications interface between the Trakker and the modem.
316526	'047793	AC Power Pack(s). This unit provides power to the: • Charger/Discharger. • Communications Dock.
504090	08-02760	Modem - Hayes Accura 33.60
837678	A01 25-006	Modem Cable
498737	062443	1518BA Scanner Pouch
498738	056541	Waist Belt (for Scanner Pouch and Holder/Case)

13.4 Other Scanning Locations

The following chart provides the bar code scanning hardware required for locations with only a small number of scans per day or locations away from recharging locations.

Item ID...	Part #...	Description...
464539	M402A	Trakker features include: • 128K RAM. • Battery pack containing replaceable alkaline batteries.
464541	060576	Protective Rubber Holder
464542	1518BA	High Power Laser Scanner contains internal decode capability.
464543	063500-030	Trakker-Scanner Interface Cable
472093	060573	Spare alkaline battery holder with batteries.
318589	40D002	Communications Dock. This unit serves as a communications interface between the Trakker and the modem.
316526	047793	AC Power Pack. This unit provides power to the Communications Dock.
504090	08-02760	Modem - Hayes Accura 33.6
837678	A01 25-006	Modem Cable
498737	062443	1518BA Scanner Pouch
498738	056541	Waist Belt (for Scanner Pouch and Holder/Case)

13.5 Discontinued Hardware

The Intermec 9445 Trakker with integrated laser scanner 9445ED020102 (Item ID 318588) is no longer recommended for new purchases due to its limited acceptability in bright sunlight or in locations away from recharging facilities. The 9445 Trakker must not be used with alkaline batteries due to the initial heavy current draw of the integrated laser. Although the 9445 Trakker is no longer recommended for new purchases, it can still be temporarily ordered (unit will become manufacturer discontinued during 1998) if there is compelling reason to do so. In addition, replacement NiCad battery packs 060572 (Item ID 316524) can still be ordered.

NOTE: A Trakker might require a software upgrade. To verify if an upgrade is required:

- **At the Trakker Main Menu type <Q>, and press <enter>.**
- **Verify that the screen reflects a version of 5.00 or higher. If information provided on the screen indicates that the Trakker is a version lower than 5.00, or if the screen does not provide version status, contact the COEP Help Desk as soon as possible for information about hardware/software compatibility. See Section 2.5 for the contact list.**

13.6 Hardware Ordering

Bar code scanning hardware is normally ordered through GTE's internal ordering system. However, contractors may order this equipment from GTE's supplier, Hayton Systems+Applications at 360-659-5804. Contact the local COEP Help Desk with questions concerning current hardware usage or ordering. See Section 2.5 for the contact list.

14. Miscellaneous Ordering

14.1 Label Ordering

Bar code serial number labels are required for new gross addition WO's where the equipment placed does not have:

- A standard 8-character GTE bar code serial number label.

  OR

- An acceptable 12-character manufacturer's serial number label (see Sections 8.1 and 8.2).

In addition, virtual colocated equipment requires a **red** 8-character GTE bar code serial number label. The serial number of these labels begin with the letters VCL.

14.1 Label Ordering, continued

Although different number series are available for serial number labels, all GTE bar code serial number labels are interchangeable between GTE Regions. Place all requests for standard GTE bar code serial number labels through the Service Express System. The following list provides the Item ID and Part number by Region.

Region	Item ID	Part Number
California	90016181	EAB-1 BOCA
Florida	90007281	EAB-1 BOSO
Hawaii	90016183	EAB IBOHI
Midwest	90016179	EAB-1 BONO
North	90016179	EAB-1 BONO
Northeast	90016179	EAB-1 BONO
Northwest	90016182	EAB-1 BONW
South	90007281	EAB-1 BOSO
Texas/New Mexico	90016180	EAB-1 BOCE
Virginia	90007281	EAB-1 BOSO

Red GTE bar code serial number labels for placement on virtual colocated equipment are ordered by calling the Headquarters COE Construction Support Department at 972-718-7463.

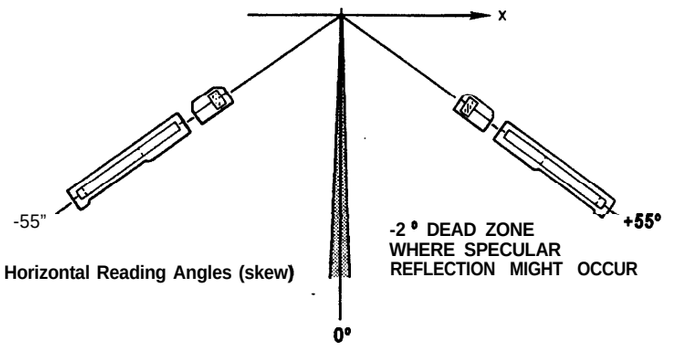
If caution signs or equipment location labels (bay and shelf) are required, contact the local COEC Department or the Region COEP group for assistance.

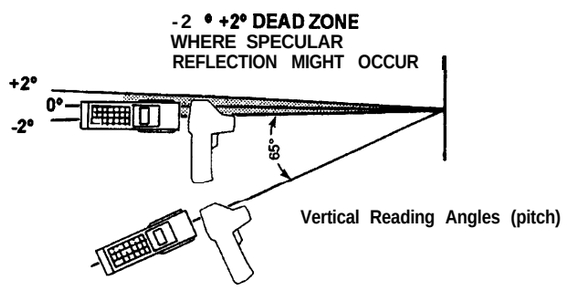
Contractors/Vendors should contact their project coordinator (COEI/OPCEN) for standard GTE bar code serial number labels.

14.2 Miscellaneous Items

The following list provides associated additional miscellaneous items that may be ordered.

Item ID...	Part #...	Description...
90016386	19430	Box, Anti-Static (11-11/16" X 4-1/2" x 1-1/2")4-l/2")
90016387	19431	Box, Anti-Static (13-5116" X 7-7/8" X 1 -1/2")
324618	22146	Wrist Strap, adjustable w/5' cord.





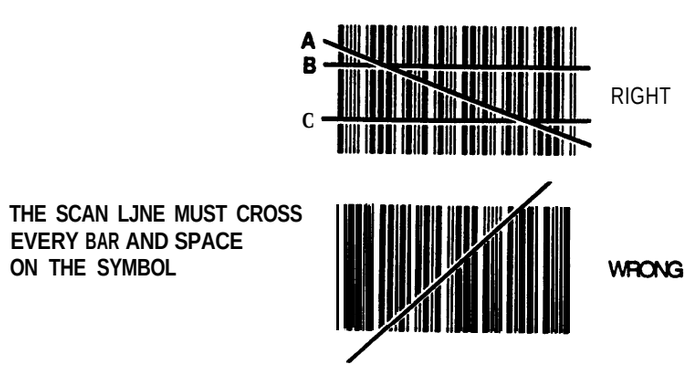
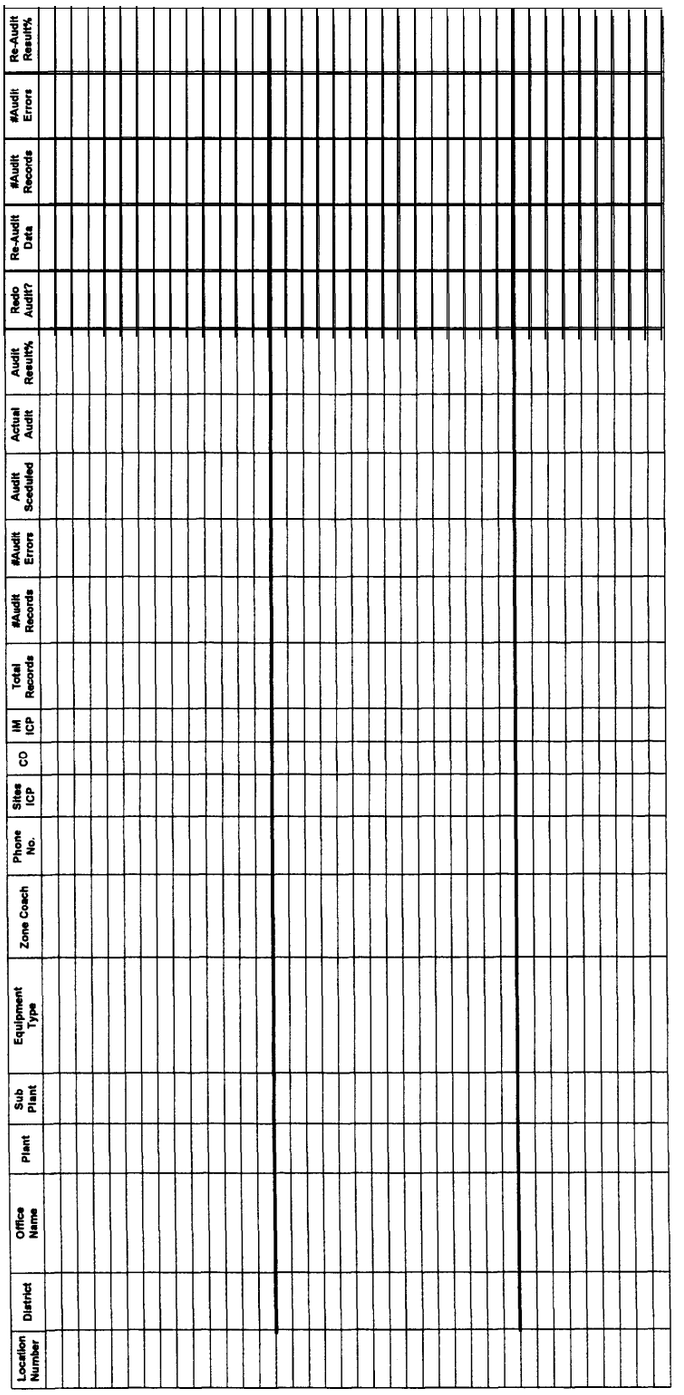


Exhibit 1 - Proper Scan Angles

SITES/IM CO/ICP
FOR 1998 ICP ACCURACY LEVELS



Location Number	District	Office Name	Plant	Sub Plant	Equipment Type	Zone Coach	Phone No.	Sites ICP	CO	IM ICP	Total Records	#Audit Records	#Audit Errors	Audit Scedule	Actual Audit	Audit Result%	Redo Audit?	Re-Audit Data	#Audit Records	#Audit Errors	Re-Audit Result%

Exhibit 2 - Audit Tracking Spreadsheet

CO AUDIT CHECK LIST

	Pass	Fail
1. Practices/Procedures		
a. COE Bar Code Methods and Procedures (007-220-001)	___	___
b. COE Bar Code Equipment Movement (007-220-002)	___	___
c. Daily Tracking Input Instructions	___	___
d. COE Bar Code Training Course (50001)	___	___
e. Iceland Manual	___	___
f. Local Written Procedures	___	___
2. Equipment/Materials/Software		
a. Trakker, Comm Dock, battery charger and B1 line	___	___
b. Trakker program load - Current Version	___	___
c. Supply of labels, spare card boxes and static bags	___	___
d. Iceland program load - Current Version	___	___
3. ICP Storage Cabinets		
a. Cabinet labeling	___	___
b. Grounding, as required	___	___
4. Visual Inspection		
a. Records in scanner remaining to be uploaded	___	___
b. Docking station/modem operational	___	___
c. Cards either in ICP, mail pick-up, or ERS desk	___	___
d. Unauthorized storage in ICP	___	___
e. Cards left tipped in relay racks or carrier racks	___	___
5. Preliminary Report With Action Items		
a. Leave preliminary Report with action items with CO Coach		
b. It is the responsibility of Region Operations to ensure all action items are completed on schedule.		

Exhibit 3 - CO/ICP Audit Check List

COE Bar Code Equipment Movement Tracking Procedures

Contents

(continued)

Contents, continued

(continued)

Contents, continued

1. General

1.1 Purpose

This practice provides standard procedural guidelines for Central Office Equipment (COE) bar coding.

1.2 Filing Instructions and Supersedures

Discard all previous issues and associated addenda of this practice and file this issue numerically in your GTE Telephone Operations practices set.

This practice supersedes and cancels:

- All policies, procedures, general instructions, letters, and memoranda which address this subject.
- Any document which provides information contrary to the information contained in this practice.

1.3 Reason for Reissuing

This practice has been reissued to incorporate multiple changes in the content. Read this entire practice to ensure your familiarity with the new information.

1.4 Responsibility

This practice was written by the Infrastructure Provisioning Systems Support Staff in GTE Network Services and published by the GTE Network Services Enterprise Services Department. For more information about this practice, contact the Headquarters Infrastructure Provisioning Systems Support Department.

1.5 Disclaimer

This practice was prepared solely for the use of GTE Network Services. It must be used only by its employees, customers, and end users when installing, operating, maintaining, and repairing GTE Network Services equipment, facilities, and services. Any other use of this practice is forbidden. The information contained in this practice may not be applicable in all circumstances and is subject to change without notice. By using this practice, the user agrees that GTE Network Services will have no liability (to the extent permitted by applicable law) for any consequential, incidental, special, or punitive damages that may result.

2. Overview

2.1 Use

The bar coding procedures contained in this practice are used in, but not limited to, managing the following projects:

- New Central Offices (COs).
- Equipment retirements.
- Equipment additions.
- Transmission projects, including pair gain.
- Lightwave networks.
- Switching system rearrangements.
- Equipment transfers.
- Equipment movement within a CO.

2.2 Objectives

A thorough understanding in the use of the bar code equipment and programs is required to effectively execute the CO bar code application. The integrity of the Central Office Equipment Property (COEP)/Central Office Equipment Model (COEMOD) database for inventory control depends largely upon the quality and thoroughness of bar coding.

2.3 Definitions

The following chart defines the acronyms and terms used in this practice.

Acronym or Term	Definition
ADJ	Adjust
ASAP	As Soon As Possible
Batt	Battery
BCKLIGHT	Backlight
BkUp	Back Up
BSN	Bar Code Serial Number
Cap	Capacity
Char	Character
CMPY	Company
CNAS	Circuit Network Administration System (See TBS)
CO	Central Office
COE	Central Office Equipment
COEC	Central Office Equipment Construction
COEM	Central Office Equipment Maintenance
COEMOD	Central Office Equipment Model

(continued)

2.3 Definitions, continued

Acronym or Term	Definition
COEP	Central Office Equipment Property
COMM	Communications
CONFIG	Configuration
CZT	Customer Zone Technician
DLC	Digital Loop Carrier
DN	Down
ERO	Equipment Repair Order
ERS	Electronic Repair Service
HI	High
1#	Issue Number
ICP	Inventory Control Point
ID	Identification
Info	Information
Mux	Multiplexer
NiCad	Nickel Cadmium
OPER	Operator
P#	Part Number
Pit	Plant
PWC	Printed Wring Card
RAM	Random Access Memory
RCV	Receive
ROM	Read Only Memory
Rqd	Required
RSU	Remote Switching Unit
RTMNTS	Retirements
Shlf	Shelf
Sit	Slot

(continued)

2.3 Definitions, continued

Acronym or Term	Definition
SPlt	SubPlant
SVR	System Version Release
TBS	Telephone Business Solutions (Formerly CNAS)
TRANSFR	Transfer
TRNSFRS	Transfers
VOL	Volume
WO	Work Order

2.4 References

The following chart provides sources of supplementary information relating to this practice. The documents could be required for performing certain tasks.

See...	For Information About...
Practice 007-005-C 15	Handling Static-Sensitive Materials
Practice 007-220-001	COE Bar Code Methods and Procedures
Practice 007-220-003	COE Bar Code Laptop Program Procedures (DOS)
Practice 122-205-001	Battery Removal And Disposal
Course 50001	COE Bar Coding Ongoing Self Paced Training
Version 1 .O	Spare Card remote User's Manual, ICELAND

2.5 Contact List

The following chart provides the telephone numbers for the Bar Code Help Desks.

Region...	Telephone Number...
California Region	760-245-0625
Florida Region	813483-2494
Hawaii Region	808-546-3579
Midwest Region	6 14-383-0666
North Region	614-383-0666
Northeast Region	614-383-0666

(continued)

2.5 Contact List, continued

Region...	Telephone Number...
Northwest Region	4252616367
South Region	919-317-5884
Texas/New Mexico Region	972-7 17-2296
Virginia Region	919-317-5884

NOTE: The Help Desk contact number can be displayed by pressing <Ha then <enter> on any menu.

3. Safety

3.1 Personnal Safety

WARNING: DO NOT STARE DIRECTLY INTO THE LASER BEAM. PROLONGED EXPOSURE COULD CAUSE EYE DAMAGE.

The lasers used to scan the bar codes do not cause damage to equipment. However, do not aim the laser beam toward the eye.

3.2 Equipment Safety

Wear an antistatic wrist strap when placing bar code labels on PWCs, equipment shelves, or frames. Refer to GTE Telephone Operations Practice 007-005-015 for additional information on handling static-sensitive materials.

Do not drop or handle roughly any reader or scanner equipment. The reader, in its carrying case, can withstand a 4-foot drop. Out of its carrying case it can withstand only a 1 -foot drop. The optical elements of the 9445 Trakker® (Item ID 318588) and the 1518BA Laser Gun@ (Item ID 464542) are fragile; do not drop the unit from any level.

4. Laser Scanner Operation

4.1 Successful Scanning

There are two types of laser scanners available. The 9445 Trakker has a built-in laser scanner. The 1518BA gun-type laser scanner is attached via a coiled cable to the M402 Trakker® (Item ID 464539 or464540) or to the 9445 Trakker.

To perform a scan, follow these guidelines:

- Keep the distance from the 9445 Trakker to the bar code within approximately 3 inches and within approximately 4 inches for the 1518BA gun laser.
- Hold the Trakker/scanner at angles to the plane of the bar code both vertically and horizontally. Generally, a 25 to 35 degree angle with respect to both the horizontal (skew) and vertical (pitch) works well.
- Press the buttons on the side of the 9445 or pull the trigger on the 1518BA to activate the laser beam.
- Position the beam so that it crosses every bar and space in the bar code.
- The Trakker signals a successful read by a single beep.

  NOTE: **Failure to achieve a successful read results in a laser beam time-out.**

  A successful read, but of an inappropriate bar code for the data expected, results in three louder beeps. Check the Trakker screen for the current cursor position (what bar code should be scanned).
- Move the beam slowly toward the label, if the laser beam is not on the label, stopping when the center of the label is reached.

Exhibit 1 shows the acceptable angles at which the laser scanners should be held and the appropriate position(s) of the beam with respect to the bar code label.

NOTE: If the 9445 Trakker is held horizontally (flat, not on its side), the laser beam projects a vertical light beam. Turn the Trakker sideways to project a horizontal beam.

The 1518BA gun projects a horizontal beam when held in the normal position. Turn it sideways to project a vertical beam.

5. Program Information

5.1 Checking Program Version

A Trakker must have the correct software version. The current release level is 6.1.x. To determine the version of the program resident on a Trakker:

- At the *Main Menu*, press **<Q>** and ***<enter>***.

If the version number displayed on the screen is lower than 5.00, or if the screen does not provide a version number, contact the appropriate Regional Bar Code Help Desk as soon as possible for information about hardware/software compatibility.

5.2 Downloading A New Program

If a Trakker does not currently have a program in memory, or the version of the program is older than 5.00, perform a **raw** download. This is accomplished by properly setting up the Trakker to dial up the host computer (PC Bar Code machine) to download the current Trakker program. After downloading, the program automatically compiles and is ready for data collection use. Refer to Section 11 for more information on this process. Exhibit 2 contains required Trakker setup bar codes. If difficulty is experienced with this process, contact the appropriate Regional Bar Code Help Desk for assistance.

If a Trakker contains a program version 5.00 or newer (higher) but not the current release, follow the program download instructions in Section 11 or on the Trakker screen when connected to the host computer.

5.3 Program Version Numbering Scheme

Trakker program versions observe the following numbering scheme:

- Whole digit version changes (e.g., 4 to 5) are associated with major enhancements made to the program and Trakker screens. Major enhancements require a change to the bar code practices and documentation.
- Tenths digit version changes (e.g., 5.0 to 5.1) are made when enhancements, other than those deemed major, are made to the program or Trakker screens and require a change to the Bar Code practices.
- Hundredths digit version changes (e.g., 5.01 to 5.02) are associated with maintenance fixes and minor enhancements to the program or Trakker screens and do not require a change to the Bar Code practices.

6. Program Overview

6.1 Program Overview

The Equipment Movement Tracking program provides the user with the tools necessary to gather and store the information required by COEP/COEMOD whenever equipment is received, moved, retired, or audited.

NOTE: The menu system and collection screens are designed primarily from a transaction (equipment movement or activity) perspective.

A pathway from the *Main Menu* to the data collection screen(s) exists for each specific transaction type. Navigation through the menu system is based solely upon the type of transaction to be collected or reviewed.

This section discusses transaction types and data collection scenarios. Program flow charts (which show each pathway) are discussed in Section 7. These flow charts are intended to provide an overview of the program design and flow.

Section 8 describes the Trakker setup before and during use of the data collection screens.

Section 9 provides general keyboard usage and screen navigation techniques that are common to all the collection screens.

Section 10 provides screen information specific to the various transaction types.

Section 11 describes communications between the Trakker and the host platform.

6.2 Transaction Types

The following chart lists the transaction types that might be created with this program. The single digit transaction code is used by COEP/COEMOD during processing to determine how to apply the information in the transaction to the appropriate record in the COEP database.

Transaction Code	Description of Transaction
A	Whole office **A**udit
B	Whole **B**ay Audit
C	**C**hange bar code serial number
c	**c**hange part number and/or issue
E	**E**nd work order
G	**G**ross work order addition
I	Swap **I**n
M	**M**ove (internal)
O	Swap **O**ut
R	Back from **R**epair
S	**S**pot Audit

(continued)

6.2 Transaction Types, continued

Transaction Code	Description of Transaction
T	Transfer
X	Retirement
Z	To Repair

6.3 Data Collection Scenarios

The following charts list the appropriate Transaction Types for various WO and non-WO related activities. The corresponding practice section numbers are also shown in the charts.

6.3.1 Work Order (WO) Related

WO Related Activity	Transaction Type	Practice Section #
Install (Establish) equipment with a WO	G	10.4.1
Retire equipment with a WO	X	10.4.3
End WO (Notify COEP that all bar coding for Work Order is completed)	E	10.4.4
Transfer equipment between plant codes - Receiving Office (C-To-C Work Order)	T	10.4.2
Move equipment with a WO - Receiving Office (Transfers between subplants within same plant code)	M	10.2.2
Internal Moves with a WO - Receiving Office (Move Equipment Within Same Office)	M	10.2.2

(continued)

6.3.1 Work Order (WO) Related, continued

WO Related Activity	Transaction Type	Practice Section #
Modify existing equipment with a SVR-type WO (Upgrade Involves a Part # or an Issue # Change)	c	10.3.1
Replace (Change) equipment with a SVR-type WO (Replacement Involves a One-For-One Swap of cards - Replacement card is in hand)	C	10.3.2
Replace (Swap) equipment with a SVR-type WO (Replacement Does Not Involve a One-For-One Swap of Cards)		
• Swap Outs	O	10.6.1
• Swap Ins	I	10.6.2

6.3.2 Non-WO Related

Non-WO Related Activity	Transaction Type	Practice Section #
Move equipment without a WO - Receiving Office	M	10.2.2
Move equipment between SubPlant Codes - Receiving Office	M	10.2.2
Internal Move within the Same Office	M	10.2.2
Loan of Equipment between Plant Codes - Receiving Office	T	10.4.2
Transfer equipment without a WO - Receiving Office	T	10.4.2
Add equipment missed (not bar coded) on Initial Inventory	G	10.4.1
Add equipment missed (not bar coded) since Initial Inventory	G	10.4.1

(continued)

6.3.2 Non-WO Related, continued

Non-WO Related Activity	Transaction Type	Practice Section #
Send equipment to the Equipment Repair Center	Z	10.5.1
Receive equipment from the Equipment Repair Center	R	10.5.2
Send equipment to the Equipment Repair Center (from a customer premise site without its own SubPlant - enter 777 for SubPlant)	Z	10.5.1
Receive equipment from the Equipment Repair Center (for a customer premise site without its own SubPlant - enter 777 for SubPlant)	R	10.5.2
Verify equipment suspected of having been moved	M	10.2.2
Spot Audit - Sample Inventory	S	10.7.1
Whole Bay Audit - Audit an entire bay (SITES Routines)	B	10.7.2
Whole Office Audit - Audit an entire office	A	10.7.3
Replacing a damaged bar code serial number label (If old serial number label is no longer scannable, record the transaction and place new bar code serial number label over old one.)	C	10.3.2
Move equipment to a customer premise site (for a customer premise site without its own SubPlant - enter 777 for SubPlant)	M	10.2.2

(continued)

6.3.2 Non-WO Related, continued

Non-WO Related Activity	Transaction Type	Practice Section #
Receive equipment from Central Stock (for Special Services Order, use the blanket WO number listed in Exhibit 14.)	G	10.4.1
Send equipment to Central Stock - Special Service Disconnect (for Special Services Disconnect Order, use the blanket WO number listed in Exhibit 14.)	X	10.4.3
Send equipment to Central Stock - surplus cards (for incorrect or surplus cards that have been received and bar coded into the office, send them to GTE Supply via the appropriate blanket WO number listed in Exhibit 14.)	X	10.4.3
Send equipment to Central Stock (for incorrect or surplus cards that have been received but not installed or bar coded into the office, return them to GTE Supply for credit via the placing blanket WO with a note on the Transfer Form that says: NOTE: Cards never installed, returned for credit.	(Not a Trakker Function)	

7. Program Flow Charts

7.1 General Information

Several pages of flowcharts are included as Exhibits 3 through 13. They are intended to furnish an overview of the Trakker program and should be viewed as the primary source of information with respect to understanding how the program flows and how to navigate to the intended screen or activity. Information as to why a particular screen or series of screens is used is described in the previous sections. Screen level detail is described in Sections 9, 10, and 11.

8. Program Setup

8.1 Setup Overview

There are three types of setup functions available within the program:

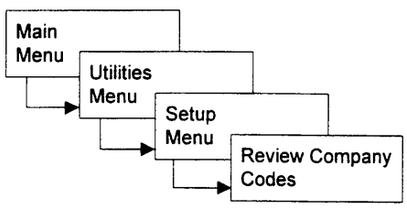
- Program level defaults.
  - Company code review.
  - Operator ID default.
- Trakker system settings.
  - Speaker volume adjustment.
  - Backlight time-out adjustment.
  - Configuration scan capability.
- Database clearing.
  - Erase user input bar code data.

This section provides guidance for the use of the screens involved in performing the functions listed above.

NOTE: Moving between and within all screens follows the conventions described in Sections 9 and 10.

8.2 Review Company Codes

When a new program is downloaded into the Trakker, a table of valid company codes is included automatically. Once the default region (state) has been selected, the valid company codes are reviewed through the *Setup Menu*.

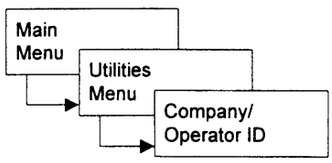



```
COMPANY CODES
FOR REGION: XX
        9XX YY_
ENTER = Continue
```

Press ***<enter>*** to scroll through the codes. The screen shows the current Region setting, with all valid company codes (with their respective states) for that Region. When all codes have been displayed, the *Setup Menu* reappears.

8.3 Company Code/Operator ID Setup

The Company Code/Operator ID screen can be accessed from the *Utilities Menu*.



Its purpose is the confirmation or update of the company code and/or operator ID defaults. The values shown or typed on these screens are placed into each daily transaction or audit record created. The screen is also presented when selecting a transaction type from a menu before allowing the creation of new records or the review of existing records. This provides an opportunity to ensure that the company code and operator ID are always current. The operator ID is three characters in length with the first character indicating the user's work group (i.e., C = COE installation - Construction) and the last two characters are the user's initials (first and last name). Note that the user's initials and work group identification are input on different screens and appended to form the three character operator ID.

```
Choose State: _
Key 2 Char or
Scroll  F2 = UP  F3 = DN
ENTER = Accept F4 = BkUp
```

Enter a valid two character state code. If unknown, scroll through the list of all states in which GTE conducts business. After a state is selected, the following screen displays:

```
Company Code: _
Valid 'XX' Codes:
9YY 9ZZ
F1 = New State F4 = BkUp
```

A list of all the company codes for the entered state is displayed.

Make a selection from the list and press ***<enter>***. The following screen will display:

```
Region: XX  Cmpy: 9YY
Your Oper ID:__
(First and Last Init)
ENTER = Accept F4 = BkUp
```

8.3 Company Code/Operator ID Setup, continued

Enter your initials (first and last name) and press ***<enter>***. The following screen will display:

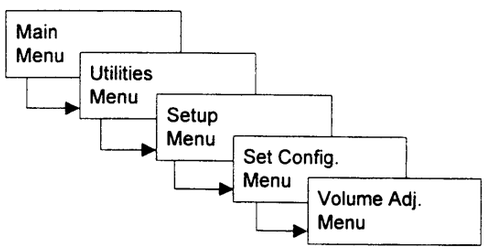
```
1. MAINTENANCE
2. CONSTRUCTION
3. VENDOR
Select:_    F4 = BkUp
```

Make a number selection from the list and press ***<enter>***. The first letter of the User's work group will be substituted for the number selected and appended to the beginning of the operator's initials. These three characters are placed into each record created by the Trakker.

Upon completion, the *Utilities Menu* reappears.

8.4 Volume Adjustment

The speaker on the Trakker can be adjusted to low, medium, or high levels. The *Volume Adjust Menu* is reached through the *Set Configuration Menu*.




```
1. LOW VOL
2. MED VOL
3. HIGH VOL
Select: _          X = EXIT
```

Select a level to be applied. Press ***<enter>***.

8.5 Backlight Adjustment

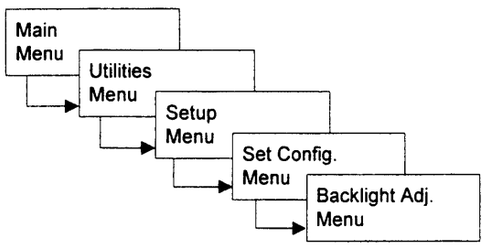
The Trakker backlight is activated by pressing ***<alt>,<C>*** (see Section 9.1 for the keystroke conventions used in this practice). By default, it stays on only 30 seconds. That default can be changed to a value between 01 and 59. If the numbers 60 through 99 are keyed, the default is set to the maximum (59). Thereafter, each time the backlight is activated, it remains on the specified amount of time.

The backlight time-out can be deactivated by choosing **Stay On**. Once activated, the backlight stays on as long as the Trakker is on.

NOTE: This feature cannot be used to bypass the basic Trakker time-out feature. If the Trakker times out or is turned off, the backlight also goes off.

8.5 Backlight Adjustment, continued

Please note that the backlight must always be turned on by pressing ***<alt>,<C>***. It never comes on by itself, even if the time-out is set to **Stay On**. The *Backlight Adjustment Menu* is reached from the *Set Configuration Menu*.




```
(ALT C For Bcklight)
1. STAY ON
2. SET TIMEOUT
Select: _          X = EXIT
```

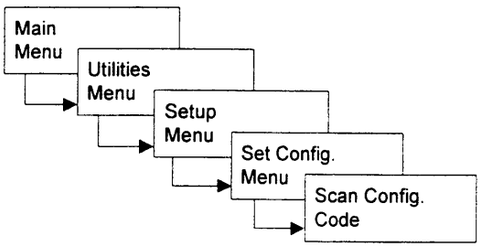
Make a selection from the list, then press ***<enter>***. The following screen appears if the backlight timeout is being set.

```
(ALT C For Bcklight)
Enter Timeout: __
(Seconds)
Press Enter to Exit
```

Input a number between 01 and 59 and press ***<enter>***.

8.6 Configuration Scans

In a troubleshooting situation, it might be necessary to feed configuration information directly to the Trakker system. Access to the system is provided through the following screen. Note that this is not a process users are normally required to do on their own; normally Bar Code Help Desk personnel are involved in assisting the user.

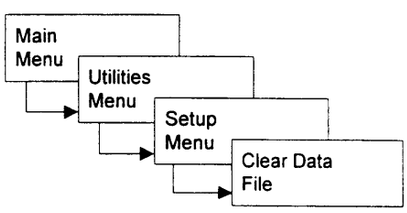



```
Scan Config Code
Then/Or
Press Enter to Exit _
```

Scan the code as directed, press ***<enter>*** to activate.

8.7 Clear Database

If for some reason the data file is not cleared after a successful upload session, it must be cleared later. This option allows the file to be erased without uploading it again. Please ensure that the records have been uploaded before clearing (unless all records have been entered for training or demonstration purposes). Refer to Exhibit 3 for help in reaching this screen:




```
!!WARNING!!
XXX Record(s)
NOT Uploaded!
Clear Data? (Y/N) _
```

CAUTION: Use extreme caution when erasing data unless all records have been successfully uploaded to the Host.

9. Program Conventions

9.1 General

On the data collection screens, only two modes of operation are possible - data collection or data edit. Data collection means that new transactions are being created and stored, one at a time. Data edit means that previously stored transactions can be reviewed, edited, or deleted. Because the screens for each transaction type can differ significantly from one another (different data fields required), data edit mode is limited to viewing one type of transaction at a time.

The following chart provides the conventions used in this practice to indicate when a combination of keys are to be pressed.

Indication	Meaning
Key1, Key2	Press 1st key, **release**, press 2nd key
Key1+Key2	Press and **hold** 1st key, press 2nd key, release together

The ***<enter>*** key is used to move forward, field by field, through the data collection screens, both in data collection and data review modes.

Repetitious or constant data is scanned or entered once, and defaults thereafter for greater speed and accuracy.

If the program prompts for information which is not available, press ***<enter>*** to advance to the next prompt. If the Trakker responds with three beeps it means that this information is required. In some instances, ***<Space>, <enter>*** can be used to bypass a prompt for which information is not available. If that does not work, furnish the information.

NOTE: **When furnishing data to the Trakker, it is always more efficient and accurate to scan available bar codes than to enter data through use of the keyboard.**

NOTE: **When scanning data into a field prompt, the cursor automatically advances to the next prompt. It is not necessary to press *<enter>* after a successful scan, as it is when entering data from the keyboard.**

9.2 Field Information

Each field has specific data requirements with respect to minimum and maximum lengths. Some fields also have data **masks** which requires that the keyed or scanned data be in a certain format. An example is the *Work Order* field. Though different from one WO related transaction to another, the *Work Order* field only accepts data formatted in a particular way. This information for each screen is furnished in Section 10.

9.2 Field Information, continued

The following chart contains lengths for each field. An **up to** designation might mean that the field is not required, or can have as few as one character required. The A/N column describes whether the field is alpha, numeric, or either (AN).

Field Name	Field Length	A/N *
Operator ID (Combined)	3	A
Company Code	3	AN
Plant Code	4	AN
SubPlant Code	3	AN
Work Order	7	AN**
Bay	up to 12	AN****
Shelf	up to 5	AN****
Slot	up to 4	AN
Part Number	up to 18	AN
Issue Number	up to 9	AN***
Bar Code Serial Number	8 or 12	AN**
Equip Repair Order	8	AN
Budget Center	4	AN
Swap ID Number	up to 8	AN

* A = Alpha; N = Numeric; AN = both OK.

** Means special requirements apply.

*** If there isn't an issue number, enter a 0 (zero) as the default value. Selected special keys also allowed.

**** Selected special keys are also allowed.

9.3 Function Keys

This section describes the use of the function keys on the Trakker keyboard. Note the following general features with regard to function keys:

- There are eight function keys available (***<F1>*** through ***<F8>***).
- ***<F5>*** through ***<F8>*** are actually ***alt,<F1>*** through ***alt,<F4>***.
- A function key can have different uses in different parts of the program.
- A function key can have different uses in data collection versus data edit modes.
- If data input to a field is to be ***F1***, ***F2***, ***F3***, or ***F4***, then it **must** be followed by a **space** (e.g., ***F1_***) so the program does not treat the entry as a function key. (The underscore following the ***F1*** in the example represents the space key on the Trakker keyboard, not the underscore character).

The following chart shows the function key assignments in data collection mode and in edit mode:

Function Key	In Collection Mode	In Edit Mode
<F1>	Starts edit mode	Backs up one record
<F2>	Not Applicable	Moves forward one record
<F3>	Not Applicable	Exits edit mode
<F4>	Backs up one field*	Backs up one field
<F5>	Enables field edit**	Enables field edit**
<F6>	Not Applicable	Deletes displayed record
<F7>	Not Applicable	Not Applicable
<F8>	Back to last menu	Not Applicable

* If at the first field of transaction, ***<F4>*** moves back to the appropriate menu (**collection mode only**).

** Field edit mode is a time saving method for changing data within a field without rekeying the entire field. This feature is available in both data collection and data edit modes. Pressing ***<F5>*** moves the cursor to the end of the field. Pressing ***<F2>*** moves the cursor to the left, ***<F3>*** moves the cursor to the right, in both cases non-destructively. Once the desired change is keyed, press ***<enter>*** to save the changes and move to the next field. ***<F4>*** can also be used to save the changes and move forward. Both ***<F4>*** and ***<enter>*** deactivate the field edit mode.

10. Data Collection Screens

10.1 Main Menu

The main application menu is shown below. All other activities result from this screen. In addition to the three options shown below, program version information can be viewed by pressing **<Q>** and ***<enter>*** (see Section 5).

```
1. DAILY TRACKING
2. AUDIT
3. UTILITIES
Select: _
```

Three subordinate menus are available from the *Main Menu*:

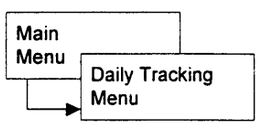
- Daily Tracking.
- Audit.
- Utilities.

The three main menu selections enable the creation of equipment movement transactions (*Daily Tracking*), audit transactions (*Audit*), facilitate setup and maintenance of the Trakker (*Utilities*), and provide the capability for communication with other platforms (*Utilities*). See Section 8 for direction on setup and maintenance, and Section 11 for direction on communications. This section describes equipment movement and auditing.

NOTE: Pressing "0" (zero) on any menu in this program immediately returns you to the main application menu.

10.2 Daily Tracking Menu

Fourteen transaction types can be created with this application (see Section 6.2). All but the three audit transaction types are created from the *Daily Tracking Menu*.




```
1. MOVES      4. REPAIR
2. CHANGES    5. SWAPS
3. WOs
Select: _       X = EXIT
```

There are two possible sets of screens for:

- Moves.
- Part number/issue changes.
- Transfers.
- Retirements.
- Swap outs.

10.2 Daily Tracking Menu, continued

The difference between the two sets has to do with the handling of *Part Number* and *Issue* fields. Which set is presented is determined by the Region's System Administrator. Both sets are shown in the following sections as Option 1 and Option 2.

NOTE: Refer to Section 6 if it is not apparent which transaction type is applicable to a specific work activity.

NOTE: In all cases, the process of creating a transaction follows the general rules and conventions with respect to screen and keyboard use as detailed in Section 9.

10.2.1 Company Code/ Operator ID

After making any of the selections on the *Daily Tracking Menu*, the user is prompted to enter a valid *Company Code* and *Operator ID*.

```
Company Code: __
Valid 'XX' Codes:
9YY 9ZZ
F1 = New State  F4 = BkUp
```

A list of all the company codes for the currently active state is displayed.

Make a selection from the list and press ***<enter>***. The following screen displays:

```
Region: XX  Cmpy: 9YY
Your Oper ID: ___
(First and Last Init)
ENTER = Accept F4 = BkUp
```

Enter your initials (first and last name) and press ***<enter>***. The following screen will display:

```
1. MAINTENANCE
2. CONSTRUCTION
3. VENDOR
Select:_    F4 = BkUp
```

Make a number selection from the list and press ***<enter>***. The first letter of the User's work group will be substituted for the number selected and appended to the beginning of the operator's initials.

10.2.1 Company Code/ Operator ID, continued

If there is data in the Trakker older than 24 hours the following screen displays:

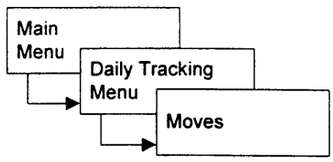
```
SOME DATA IS MORE
THAN 24 HOURS OLD
PLEASE UPLOAD ASAP
Press Enter _
```

Press ***<enter>*** to continue with data collection. Remember to upload the data at the earliest opportunity.

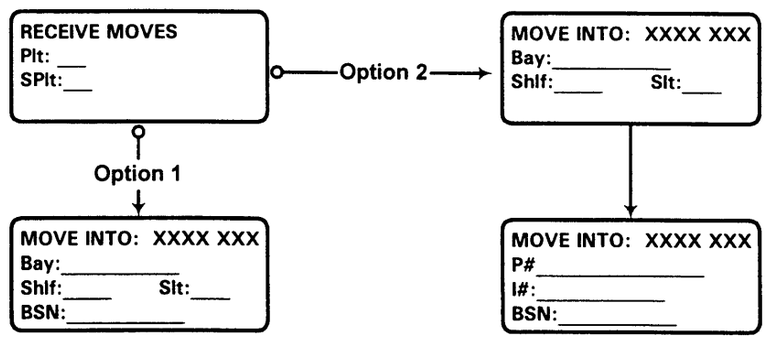
10.2.2 Moves

The *Moves* transaction is selected directly from the *Daily Tracking Menu*. Input equipment that is moved into or within a CO building, remote building, hut, mux, cabinet, etc., without a WO using the moves screens. Scan moved equipment to the bay, shelf, and slot location levels.

In addition, if a few cards are suspected of having been moved in a shelf, the suspect cards may be scanned using the moves screens and then uploaded to COEP. This helps to ensure the integrity of the COEP/COEMOD database.



There are two possible sets of screens for moves. Which set is displayed is determined by the Region's System Administrator. Both sets of screens are shown in this section as Option 1 and Option 2.



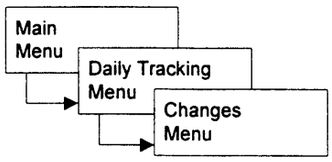
Input the required information and press ***<enter>*** for each prompt.

Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

After the transaction is completed, the cursor returns to the *Slt* field on the second screen.

10.3 Changes Menu

The *Changes Menu* is accessed from the *Daily Tracking Menu*.



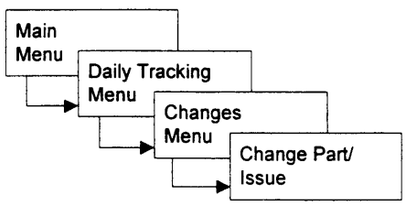

```
1. CHANGE PART/ISSUE
2. CHANGE BSN

Select: _          X = EXIT
```

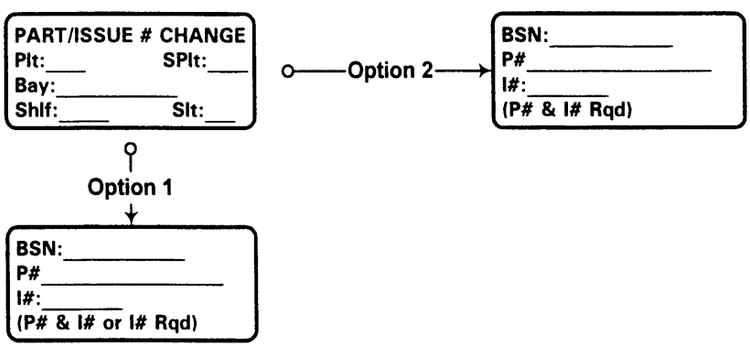
Make a selection and press ***<enter>***.

10.3.1 Change Part or Issue Numbers

The *Change Part/Issue* transaction screens are accessed from the *Changes Menu*. On modification (SVR-type activity) WOs all equipment updated in the field (part number change and/or issue update) must be input using the *Change Part/Issue* screens. Changed equipment must be scanned to the bay, shelf, and slot location levels.



There are two possible sets of screens for *Change Part/Issue*. Which set is displayed is determined by the Region's System Administrator. Both sets of screens are shown in this section as Option 1 and Option 2.



10.3.1 Change Part or Issue Numbers, continued

Input the required information and press **<enter>** for each prompt.

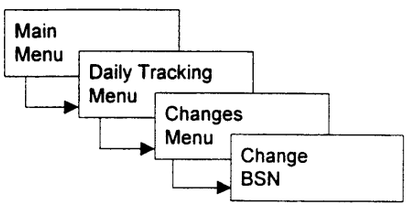
Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

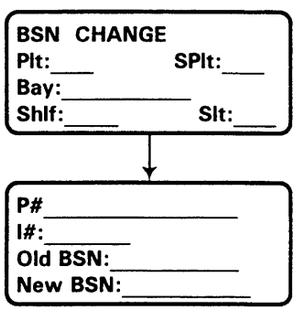
After the completed transaction is stored, the cursor returns to the *Slt* field on the first screen.

10.3.2 Change Bar Code Serial Number (BSN)

The *Change BSN* screen is accessed from the *Changes Menu*. Equipment changed out (replaced) on modification (SVR-type activity) WOs or Class A changes, where equipment is replaced by circuit card rotation, must be scanned to the bay, shelf, and slot level. If the change out involves a one-for-one swap of cards, where the replacement card is in hand, use the *Change BSN* screen.

If the change out does not involve a one-for-one swap of cards (i.e., 5 for 4, 2 for 4, etc.), use the *Swaps* menus (see Section 10.6).





Input the required information and press **<enter>** for each prompt.

Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

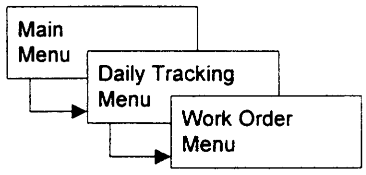
Old BSN is the Bar Code Serial Number from the card being replaced.
New BSN is the Bar Code Serial Number from the new card being installed.

NOTE: The old serial number value and the new serial number value must be different.

After the completed transaction is stored, the cursor returns to the *Slt* field on the first screen.

10.4 Work Order Menu

The *Work Order Menu* is accessed from the *Daily Tracking Menu*.

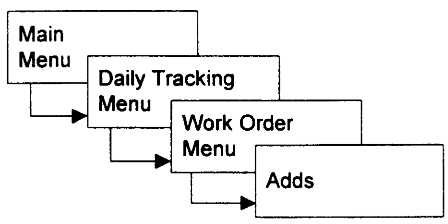



```
1. ADDS      4. END WO
2. TRNSFRS
3. RTMNTS
Select: _      X = EXIT
```

WO numbers are required for all transactions created from these menu selections.

10.4.1 Work Order Additions

The WO *Adds* transaction screens are accessed from the *Work Order Menu*. Equipment being installed on a gross addition WO must be input using the WO - *Adds* screens. Equipment additions require bar coding to the bay, shelf, and slot level.




```
WORK ORDER ADDS TO:
Plt:____   SPlt:___
WO#:______
Bay:___________
```

↓

```
Shlf:____    Slt:____
P#_______________
I#:_______
BSN:__________
```

Input the required information and press ***<enter>*** for each prompt.

Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

10.4.1 Work Order Additions, continued

Standard field requirements apply, with special requirements upon the *Work Order* field. For this transaction, the WO must fit one of the following patterns:

- NACNNAA where N = Numeric, A = Alpha, and C = Alpha or Numeric Character *except* the Letter O;

  OR

- NFNNNNN where N = Numeric and F = Numeric digit 2 or 5 (Hawaii only);

  OR

- NNNN where N = Numeric (South only - Tracking number HI Caps);

  OR

- The words:
  - **REDOINV**

    OR
  - **COMISS**

    OR
  - **RETMISS**

  (See the following information for specific usage).

Always use the legitimate W/O number when adding equipment on a WO.

When equipment is found in a bar coded office without a BSN label (either a GTE or an acceptable manufacturer's 12 character serial number label) applied, the COEP/COEMOD database must be updated to add the missed equipment. Refer to GTE Telephone Operations Practice 007-220-001 for information on the correct placement of BSN labels. The Work Order Additions transaction is used to input this equipment to the database. COEP is alerted to the missed equipment when one of the following is input in the *Work Order* field:

- REDOINV - Alerts COEP that this equipment was probably missed (not bar coded) on the initial inventory.
- COMISS - Alerts COEP that this equipment was probably missed on a job since the initial inventory.
- RETMISS - Used by the Audit Teams to notify COEP that this equipment was missed on/since the initial inventory and that it is being retired.

Any other type of input to the *Work Order* field (for this type of transaction) is rejected by the program.

When the transaction is completed, the cursor returns to the *Slt* position. There is a default value in place which might be accepted by pressing ***<enter>***, or a new value might be keyed. This default value is furnished by the program through automatic incrementing.

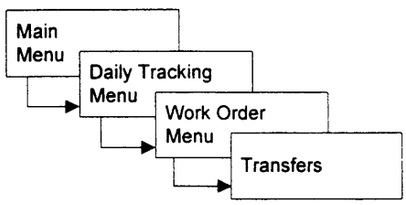
For example, if every third slot is used on the shelf, the program recognizes the pattern after the first few entries. The default value automatically increments by three. It changes this increment whenever a slot value is entered that breaks the pattern. This feature saves considerable time. Of course, if there is no repeating pattern, it is necessary to key the correct slot value for each record.

10.4.1 Work Order Additions, continued

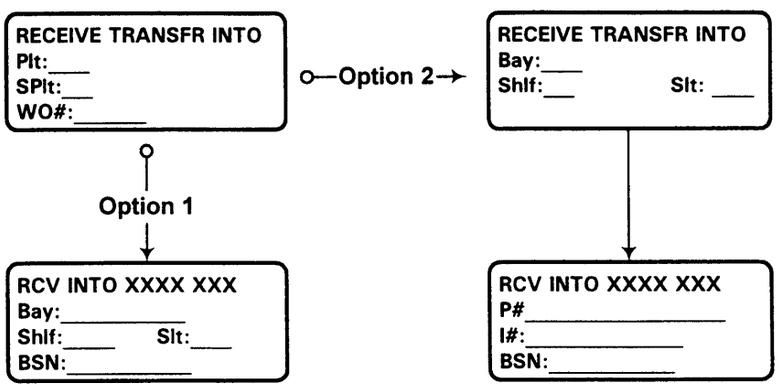
Additional transactions are added until finished, all bearing the same WO number. If transactions are created for different WOs, or if the placement of the equipment is to a different bay or shelf, back up to the appropriate field by pressing ***<F4>*** as directed in Section 9.3 (Function Keys).

10.4.2 Transfers

The *Transfers* transaction screen is accessed from the *Work Order Menu*. Equipment transferred into a CO building, remote building, hut, mux, cabinet, etc., from another plant code with a WO (C to C) is input using the *Work Order Menu - Transfers* screens. Scan transferred equipment to the bay, shelf, and slot location levels.



There are two possible sets of screens for Transfers. Which set is displayed is determined by the Region's System Administrator. Both sets of screens are shown in this section as Option 1 and Option 2.



Input the required information and press ***<enter>*** for each prompt.

Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

10.4.2 Transfers, continued

Standard field requirements apply, with special requirements upon the *Work Order* field. For this transaction, the WO must fit one of the following patterns:

- NACNNAA where N = Numeric, A = Alpha, and C = Alpha or Numeric Character *except* the Letter O;

  OR

- The words:
  - **LOAN**

    OR
  - **TRNSFER**

  (See the following information for specific usage.)

Any other type of input to the *Work Order* field (for this type of transaction) is rejected by the program. Always use the legitimate WO number when transferring equipment on a WO.

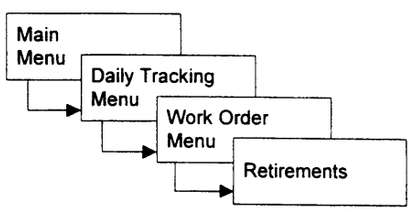
When equipment is transferred without a work order, input one of the following to the *Work Order* field:

- LOAN - Notifies COEP that the equipment has been transferred on a loan basis to this office without a WO.
- TRNSFER - Notifies COEP that the equipment has been transferred to this office without a WO.

When the transaction is completed, the cursor returns to the *Slt* field.

10.4.3 Retirements

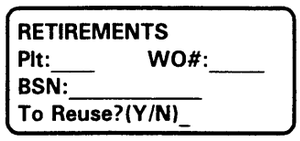
Equipment being retired (removed) with a WO is scanned out of the office using the *Work Order Menu - Retirements* screens. The *Retirements* screens are accessed from the *Work Order Menu*.



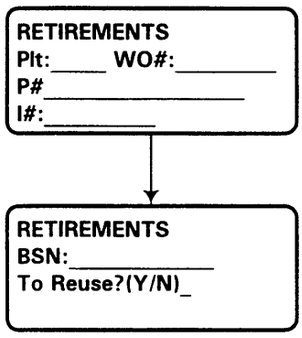
10.4.3 Retirements, continued

There are two possible sets of screens for Retirements. Which set is displayed is determined by the Region's System Administrator. Both sets of screens are shown in this section as Option 1 and Option 2.

Option 1



Option 2



Input the required information and press ***<enter>*** for each prompt.

Standard field requirements apply, with special requirements upon the *Work Order* field. For this transaction, the WO number must be legitimate and fit one of the following patterns:

- NACNNAA where N = Numeric, A = Alpha, and C = Alpha or Numeric Character *except* the Letter O;

  OR

- NFNNNNN where N = Numeric and F = Numeric digit 2 or 5 (Hawaii only).

Any other type of input to the *Work Order* field (for this type of transaction) is rejected by the program.

NOTE: If the To Reuse? prompt is answered N, the equipment is being junked.

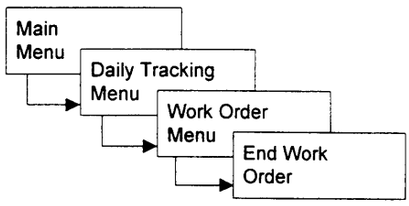
When the transaction is completed, the cursor returns to the *BSN* field for Option 1 and the *P#* field *for Option 2.*

10.4.3 Retirements, continued

Because of reporting requirements, Property Operations records whole or entire office retirements at the new office's in-service date. Therefore, ONLY whole switch removals are NOT to be bar coded out. This applies to host switches and remotes down to the RSU level. However, the retired circuit equipment associated with the switch conversion must still be bar coded out.

10.4.4 End Work Order

The *End Work Order* option notifies COEP that all equipment on this particular WO has been bar coded. For additions, this transaction indicates all equipment has been scanned into the office. Similarly for retirements, all equipment has been scanned out of the office. The *End Work Order* screen is accessed from the *Work Order Menu*.



BAR CODING COMPLETE
For Work Order
Plt:____ WO#:_____

Input the required information and press ***<enter>*** for each prompt.

For this transaction, the *Work Order* number must be legitimate and fit one of the following patterns:

- NACNNAA where N = Numeric, A = Alpha, and C = Alpha or Numeric Character *except* the Letter O;

  OR

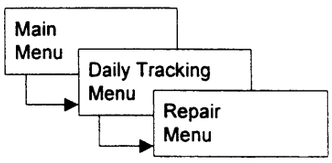
- NFNNNNN where N = Numeric and F = Numeric digit 2 or 5 (Hawaii only).

The program rejects any other type of input to the *Work Order* field (for this type of transaction).

After the transaction is stored, the cursor returns to the *Plt* field.

10.5 Repair Menu

The *Repair Menu* is accessed from the *Daily Tracking Menu*.

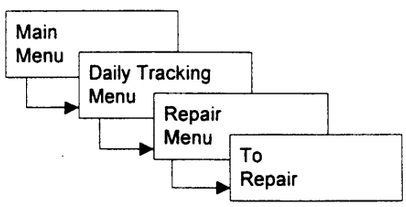



```
1. TO REPAIR
2. FROM REPAIR

Select: _          X = EXIT
```

10.5.1 To Repair

Scan equipment sent in for repair out of the office using the *To Repair* screens. Upon upload to COEP/COEMOD, the data is sent to ERS where it is processed and a replacement card sent on its way back to the CO or ICP location without waiting for the defective card to arrive at the ERS Center. The *To Repair* transaction screens are accessed from the *Repair Menu*.




```
TO REPAIR FROM:
Plt:____
SPlt:___
Budget Center:____
```

```
P#_____________
I#:_______
BSN:_____________
ERO#:_______
```

Input the required information and press ***<enter>*** for each prompt.

10.5.1 To Repair, continued

Standard field requirements apply.

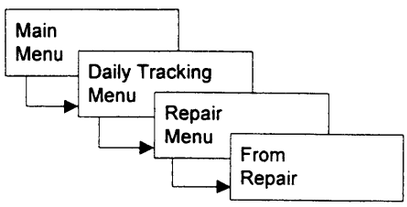
The Budget Center is the Budget Center code for the user's work group.

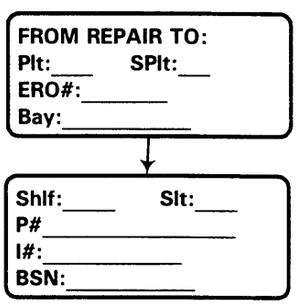
The Electronic Repair Order Number is an eight-character authorization number found on the ERO tag that ERS uses to track the card through the repair center. This is ERS's WO number.

When the transaction is completed, the cursor returns to the *P#* field on the second screen.

10.5.2 Return From Repair

All equipment returned from repair requires bar coding to the bay, shelf, and slot level using the *From Repair* screens. The *From Repair* screens are accessed from the *Repair Menu*.





Input the required information and press ***<enter>*** for each prompt.

Standard field requirements apply. Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

10.5.2 Return From Repair, continued

The Electronic Repair Order Number is the eight-character authorization number that corresponds to the ERO number for the card that was sent in for repair. This number is the same as Electronic Repair Services W/O # shown on their Packing List. The ERO number is also found on ERS's Ship Label which is affixed to each individual package beside the words: **WORK ORDER:**.

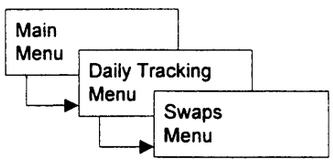
When the transaction is completed, the cursor returns to the *ERO#* field on the first screen.

10.6 Swaps Menu

Equipment replaced (swapped out) on modification (SVR-type activity) WOs or Class A changes, where the equipment is replaced by circuit pack rotation, requires bar coding. When the equipment being swapped does not involve a one-for-one swap of cards (i.e., 5 for 4, 2 for 4, etc.), use the *Swaps* screens (*Swap Outs* and *Swap Ins*) described in Sections 10.6.1 and 10.6.2.

If the change out involves a one-for-one swap of cards, where the replacement card is in hand, use the CHANGE BSN screens (see Section 10.3.2).

The *Swaps Menu* is accessed from the *Daily Tracking Menu*.

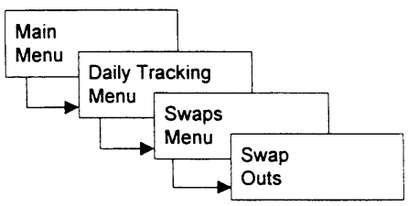



```
1. SWAP OUTS
2. SWAP INS

Select: _          X = EXIT
```

10.6.1 Swap Outs

Equipment replaced (swapped out) requires bar coding using the *Swap Outs* screen. The *Swap Outs* screen is accessed from the *Swaps Menu*.



10.6.1 Swap Outs, continued

There are two possible sets of screens for Swap Outs. Which set is displayed is determined by the Region's System Administrator. Both sets of screens are shown in this section as Option 1 and Option 2.

Option 1

```
MASS SWAP OUTS
Plt: _____
BSN: _____________
SWAP ID#: _____________
```

Option 2

```
MASS SWAP OUTS
Plt: _____
P# _____________
I#: _____________
```

↓

```
MASS SWAP OUTS
BSN: _____________
SWAP ID#: _____________
```

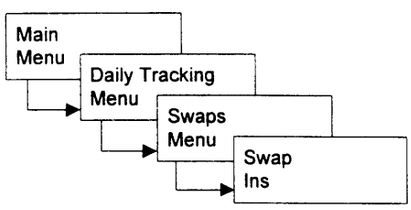
Input the required information and press ***<enter>*** for each prompt.

Standard field requirements apply. The Swap ID number is any unique number up to eight characters in length used to identify a group of Swap Outs and Swap Ins for a particular office. Do not duplicate Swap ID numbers within the Plant - SubPlant.

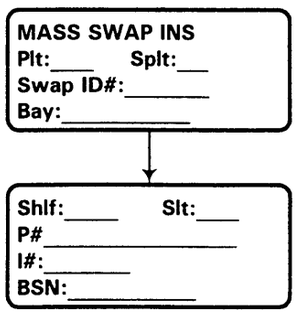
When the transaction is completed the cursor returns to the *BSN* field.

10.6.2 Swap Ins

Replacement equipment swapped in must be scanned to the bay, shelf, and slot location levels. The *Swap Ins* transaction screens are accessed from the *Swaps Menu*.



10.6.2 Swap Ins, continued



Input the required information and press ***<enter>*** for each prompt.

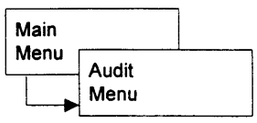
Standard field requirements apply. Shelf and slot information is required unless there isn't a shelf and slot (i.e., ICP cabinet). A slot cannot exist without a shelf.

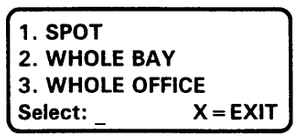
The Swap ID number is a control number up to eight characters in length used to identify a group of Swap Outs and Swap Ins for a particular office. Do not duplicate Swap ID numbers within the Plant - SubPlant.

When the transaction is completed, the cursor returns to the *Slt* field.

10.7 Audit Menu

The *Audit Menu* is accessed from the *Main Menu*.





The purpose of equipment audits is threefold. First, an audit verifies bar coding compliance (customer operations, COEC, Network reliability, etc.).Second, an audit verifies the accuracy of the COEP/COEMOD database and third, but equally important, an audit updates the database with any changes that are found. Therefore, equipment audits are an important step in ensuring that the database is maintained at a high level of accuracy.

Because audit file processing requires manual COEP intervention, the COEP group should be contacted (see contact list in Section 2.5) prior to initiating any audits and advised of the location and date of the audit.

All three audit transaction types share the same basic input screens. Differences are explained in the following sections.

10.7 Audit Menu, continued

NOTE: The proper selection of audit type is critical because of the extreme differences in the way the three types are processed by COEP/ COEMOD.

After making a selection from the *Audit Menu*, the user is prompted for the current *Company Code* and *Operator ID*.

```
Company Code: __
Valid 'XX' Codes:
9YY 9ZZ
F1 = New State   F4 = BkUp
```

A list of all the company codes for the currently active state is displayed.

Make a selection from the list and press ***<enter>***. The following screen displays:

```
Region: XX  Cmpy: 9YY
Your Oper ID: ___
(First and Last Init)
ENTER = Accept F4 = BkUp
```

Enter your initials (first and last name) and press ***<enter>***. The following screen will display:

```
1. MAINTENANCE
2. CONSTRUCTION
3. VENDOR
Select:_    F4 = BkUp
```

Make a number selection from the list and press ***<enter>***. The first letter of the User's work group will be substituted for the number selected and appended to the beginning of the operator's initials.

NOTE: *<F7>* can be pressed at any prompt (while in the *Audit* transaction screens) to set that prompt as the one to which the cursor returns after storing a completed transaction. The *Slt* prompt is always the default when first entering the Audit transactions.

10.7.1 Spot Audit

A Spot Audit consists of scanning a number of cards in an office and then uploading the data to COEP/COEMOD. A Spot Audit ranges from scanning a few cards that are suspected of having been moved, up to a random sampling of the entire office. The COEP program verifies the data and makes any changes in the database that are necessary.