Task Oriented Practice
(TOP)

1D/2D TYPE COIN TELEPHONE SETS

(DTF ONLY)

INSTALLATION, CONVERSION, MAINTENANCE, AND CONNECTIONS

NOTE
Before using TOP for the first time, complete the TOP-USER Plant Training Course—PTC No. 278.

A short version of PTC No. 278 is in the back of this volume.

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

Printed in U.S.A.
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* REVISED OR ADDED ITEM
* CANCELED ITEM

CHECKLIST – 1D/2D-TYPE COIN TELEPHONE SET
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<th>ROUTINE TASKS</th>
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# Acceptance Task List

- **None Required**

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**Acceptance Task List — 1D/2D-Type Coin Telephone Set**

**Issue 2** | **Aug 1980**
---|---
**506-410-402** | **ATL**
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<td>Install 1D1, 1D2 Coin Telephone Set in Dial-Tone-First Mode and Test</td>
<td>COP-051</td>
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<tr>
<td>Install 2D1, 2D2 Coin Telephone Set in Dial-Tone-First Mode and Test</td>
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<tr>
<td>Convert 1C-, 2C-Type Set in Dial-Tone-First Mode to 1D-, 2D-Type Set Dial-Tone-First Mode and Test</td>
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<td>Convert 1C-, 2C-Type Set in Coin-First Mode to 1D-, 2D-Type Set Dial-Tone-First Mode and Test</td>
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<td>Convert 1A-, 2A-Type Set in Coin-First Mode to 1D-, 2D-Type Set Dial-Tone-First Mode and Test</td>
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<td>Convert 1E1 Dial Postpay to 1D-Type Dial-Tone-First and Test</td>
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<td>Convert 1E3 Manual Postpay to 1D-Type in Dial-Tone-First and Test</td>
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<td>Install Drop Wire (if required)</td>
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<td>2</td>
<td>Install Protection and Ground (if required)</td>
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<td>3</td>
<td>Install Inside Wire (if required)</td>
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<td>4</td>
<td>Install Backboard (if required)</td>
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<td>5</td>
<td>Install Shelf (if required)</td>
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<td>6</td>
<td>Install Security Devices (if required)</td>
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<td>7</td>
<td>Install Extension Station (if required)</td>
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<td>8</td>
<td>Install Auxiliary or Extension Ringer (if required)</td>
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<td>9</td>
<td>Check Location and Mounting Facilities</td>
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<td>10</td>
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<td>11</td>
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<td>12</td>
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<td>13</td>
<td>Attach Housing to Mounting Surface</td>
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<td>14</td>
<td>Verify or Set Initial Rate</td>
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<td>15</td>
<td>Install 32A Coin Chassis</td>
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<td>16</td>
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<td>17</td>
<td>Install KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
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<td>18</td>
<td>Measure Loop Resistance</td>
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<td>Remove KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
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NOTE: Generally for new installations, Items 1 through 8 must be performed. Additional information regarding these tasks is provided in TAD-100.
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INSTALL 2D1, 2D2 COIN TELEPHONE SET
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<td>Make Coin Release Lever and Call Back Tests</td>
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<td>14</td>
<td>Verify Ground Resistance</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Perform Operational Tests</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Remove KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Install Coin Cover Unit or Close Door and Faceplate Assembly</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Make Coin Release Lever and Call Back Tests</td>
<td></td>
</tr>
</tbody>
</table>

CONVERT 1C-, 2C-TYPE SET IN DIAL-TONE-FIRST MODE TO 1D, 2D-TYPE SET DIAL-TONE-FIRST MODE
<table>
<thead>
<tr>
<th>ITEM</th>
<th>SUBTASKS</th>
<th>PROCEDURE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify Proper Protection and Ground</td>
<td>DLP-537</td>
</tr>
<tr>
<td>2</td>
<td>Remove Coin Cover Unit or Open Door and Faceplate Assembly</td>
<td>DLP-501</td>
</tr>
<tr>
<td>3</td>
<td>Remove Coin Chute</td>
<td>DLP-502</td>
</tr>
<tr>
<td>4</td>
<td>Remove Totalizer From Coin Chute</td>
<td>DLP-521</td>
</tr>
<tr>
<td>5</td>
<td>Install 47A (MD) or 47A2 Signal on Coin Chute</td>
<td>DLP-522</td>
</tr>
<tr>
<td>6</td>
<td>Remove Coin Chassis</td>
<td>DLP-503</td>
</tr>
<tr>
<td>7</td>
<td>Verify or Set Initial Rate on 32A Coin Chassis</td>
<td>DLP-505</td>
</tr>
<tr>
<td>8</td>
<td>Install 32A Coin Chassis</td>
<td>DLP-506</td>
</tr>
<tr>
<td>9</td>
<td>Install Coin Chute</td>
<td>DLP-507</td>
</tr>
<tr>
<td>10</td>
<td>Verify or Set Initial Rate on 32A Coin Chassis</td>
<td>DLP-525</td>
</tr>
<tr>
<td>11</td>
<td>Make Wiring Changes on TB2</td>
<td>DLP-523</td>
</tr>
<tr>
<td>12</td>
<td>Install KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
<td>DLP-508</td>
</tr>
<tr>
<td>13</td>
<td>Verify Loop Resistance</td>
<td>DLP-509</td>
</tr>
<tr>
<td>14</td>
<td>Verify Ground Resistance</td>
<td>DLP-510</td>
</tr>
<tr>
<td>15</td>
<td>Perform Operational Tests</td>
<td>DLP-511</td>
</tr>
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<td>Remove KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
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<td>17</td>
<td>Replace Information Plate (if provided)</td>
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</tr>
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<td>18</td>
<td>Install Coin Cover Unit or Close Door and Faceplate Assembly</td>
<td>DLP-512</td>
</tr>
<tr>
<td>19</td>
<td>Replace Instruction Cards</td>
<td>DLP-524</td>
</tr>
<tr>
<td>20</td>
<td>Make Coin Release Lever and Call Back Tests</td>
<td>DLP-519</td>
</tr>
</tbody>
</table>

CONVERT 1C-, 2C-TYPE SET IN COIN-FIRST MODE TO 1D-, 2D-TYPE SET DIAL-TONE-FIRST MODE
<table>
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<tr>
<th>ITEM</th>
<th>SUBTASKS</th>
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<tbody>
<tr>
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<td>3</td>
<td>Remove Coin Chute</td>
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<tr>
<td>4</td>
<td>Remove Totalizer From Coin Chute</td>
</tr>
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<td>Install 47A (MD) or 47A2 Signal on Coin Chute</td>
</tr>
<tr>
<td>6</td>
<td>Remove Coin Chassis</td>
</tr>
<tr>
<td>7</td>
<td>Verify Compatibility of Coin Relay</td>
</tr>
<tr>
<td>8</td>
<td>Verify or Set Initial Rate on 32A Coin Chassis</td>
</tr>
<tr>
<td>9</td>
<td>Install 32A Coin Chassis</td>
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<td>10</td>
<td>Install Coin Chute</td>
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<td>11</td>
<td>Verify Compatibility of Coin Dial Unit</td>
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<td>12</td>
<td>Make Wiring Changes on TB2</td>
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<td>Install KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
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<td>14</td>
<td>Verify Loop Resistance</td>
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<td>15</td>
<td>Verify Ground Resistance</td>
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<td>16</td>
<td>Perform Operational Test</td>
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<td>Remove KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
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<td>Replace Instruction Cards</td>
</tr>
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<td>20</td>
<td>Perform Coin Release Lever and Call Back Tests</td>
</tr>
</tbody>
</table>

CONVERT 1A-, 2A-TYPE SET IN COIN-FIRST MODE TO 1D-, 2D-TYPE SET DIAL-TONE-FIRST MODE
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<thead>
<tr>
<th>ITEM</th>
<th>SUBTASKS</th>
<th>PROCEDURE NUMBER</th>
</tr>
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<tr>
<td>1</td>
<td>Verify Proper Protection and Ground</td>
<td>DLP-537</td>
</tr>
<tr>
<td>2</td>
<td>Remove Coin Cover Unit</td>
<td>DLP-501</td>
</tr>
<tr>
<td>3</td>
<td>Remove Coin Chute</td>
<td>DLP-502</td>
</tr>
<tr>
<td>4</td>
<td>Remove Totalizer From Coin Chute</td>
<td>DLP-521</td>
</tr>
<tr>
<td>5</td>
<td>Install 47A (MD) or 47A2 Signal on Coin Chute</td>
<td>DLP-522</td>
</tr>
<tr>
<td>6</td>
<td>Remove Coin Chassis</td>
<td>DLP-503</td>
</tr>
<tr>
<td>7</td>
<td>Replace 50A, 50B, or 51A Hopper Assembly With 1AA Coin Relay</td>
<td>DLP-534</td>
</tr>
<tr>
<td>8</td>
<td>Verify or Set Initial Rate on 32A Coin Chassis</td>
<td>DLP-505</td>
</tr>
<tr>
<td>9</td>
<td>Install 32A Coin Chassis</td>
<td>DLP-506</td>
</tr>
<tr>
<td>10</td>
<td>Install Coin Chute</td>
<td>DLP-507</td>
</tr>
<tr>
<td>11</td>
<td>Verify Compatibility of Coin Dial Unit</td>
<td>DLP-525</td>
</tr>
<tr>
<td>12</td>
<td>Make Wiring Changes on TB2</td>
<td>DLP-523</td>
</tr>
<tr>
<td>13</td>
<td>Install KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
<td>DLP-508</td>
</tr>
<tr>
<td>14</td>
<td>Verify Loop Resistance</td>
<td>DLP-509</td>
</tr>
<tr>
<td>15</td>
<td>Verify Ground Resistance</td>
<td>DLP-510</td>
</tr>
<tr>
<td>16</td>
<td>Perform Operational Tests</td>
<td>DLP-511</td>
</tr>
<tr>
<td>17</td>
<td>Remove KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
<td>—</td>
</tr>
<tr>
<td>18</td>
<td>Replace Information Plate (if provided)</td>
<td>—</td>
</tr>
<tr>
<td>19</td>
<td>Install Coin Cover Unit</td>
<td>DLP-512</td>
</tr>
<tr>
<td>20</td>
<td>Replace Instruction Cards</td>
<td>DLP-524</td>
</tr>
<tr>
<td>21</td>
<td>Perform Coin Release Lever and Call Back Tests</td>
<td>DLP-519</td>
</tr>
</tbody>
</table>

CONVERT 1E1 SET IN DIAL POSTPAY MODE TO 1D1 SET
DIAL-TONE-FIRST MODE

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<table>
<thead>
<tr>
<th>ITEM</th>
<th>SUBTASKS</th>
<th>PROCEDURE NUMBER</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify Proper Protection and Ground</td>
<td>DLP-537</td>
</tr>
<tr>
<td>2</td>
<td>Remove Coin Cover Unit</td>
<td>DLP-501</td>
</tr>
<tr>
<td>3</td>
<td>Remove Coin Chute</td>
<td>DLP-502</td>
</tr>
<tr>
<td>4</td>
<td>Remove Totalizer From Coin Chute</td>
<td>DLP-521</td>
</tr>
<tr>
<td>5</td>
<td>Install 47A (MD) or 47A2 Signal on Coin Chute</td>
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</tr>
<tr>
<td>6</td>
<td>Remove Coin Chassis</td>
<td>DLP-503</td>
</tr>
<tr>
<td>7</td>
<td>Replace 50A, 50B, or 51A Hopper Assembly With 1AA Coin Relay</td>
<td>DLP-534</td>
</tr>
<tr>
<td>8</td>
<td>Verify or Set Initial Rate on 32A Coin Chassis</td>
<td>DLP-505</td>
</tr>
<tr>
<td>9</td>
<td>Install 32A Coin Chassis</td>
<td>DLP-506</td>
</tr>
<tr>
<td>10</td>
<td>Install Coin Chute</td>
<td>DLP-507</td>
</tr>
<tr>
<td>11</td>
<td>Obtain New Coin Cover Unit (70A3 Rotary or 71A3 TOUCH-TONE Dial)</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>Verify Wiring on TB2</td>
<td>DLP-523</td>
</tr>
<tr>
<td>13</td>
<td>Install KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
<td>DLP-508</td>
</tr>
<tr>
<td>14</td>
<td>Verify Loop Resistance</td>
<td>DLP-509</td>
</tr>
<tr>
<td>15</td>
<td>Verify Ground Resistance</td>
<td>DLP-510</td>
</tr>
<tr>
<td>16</td>
<td>Perform Operational Tests</td>
<td>DLP-511</td>
</tr>
<tr>
<td>17</td>
<td>Remove KS-20950, List 2 Cover Parking Tool or P11C Patch Cord</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>Verify Correct Information Plate</td>
<td>-</td>
</tr>
<tr>
<td>19</td>
<td>Install Number Card and Coin Cover Unit on 1D1 (Rotary Dial) Coin Telephone Set, if applicable</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1. Install Coin Cover Unit</td>
<td>DLP-512</td>
</tr>
<tr>
<td></td>
<td>2. Remove Dial Fingerwheel</td>
<td>DLP-513</td>
</tr>
<tr>
<td></td>
<td>3. Install Number Card</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4. Install Dial Fingerwheel</td>
<td>DLP-514</td>
</tr>
</tbody>
</table>

CONVERT 1E3 SET IN MANUAL POSTPAY MODE TO 1D1 OR 1D2 SET DIAL-TONE-FIRST MODE
<table>
<thead>
<tr>
<th>ITEM</th>
<th>SUBTASKS</th>
<th>PROEDURE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Install Number Card and Coin Cover Unit on 1D2 (TOUCH-TONE® Dial) Coin Telephone Set, if applicable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Detach Coin Dial Unit</td>
<td>DLP-515</td>
</tr>
<tr>
<td></td>
<td>2. Install Number Card</td>
<td>DLP-516</td>
</tr>
<tr>
<td></td>
<td>3. Secure Coin Dial Unit</td>
<td>DLP-517</td>
</tr>
<tr>
<td></td>
<td>4. Install Coin Cover Unit</td>
<td>DLP-512</td>
</tr>
<tr>
<td>21</td>
<td>Install Instruction Cards</td>
<td>DLP-518</td>
</tr>
<tr>
<td>22</td>
<td>Perform Coin Release Lever and Call Back Tests</td>
<td>DLP-519</td>
</tr>
</tbody>
</table>

**CONVERT 1E3 SET IN MANUAL POSTPAY MODE TO 1D1 OR 1D2 SET DIAL-TONE-FIRST MODE**
<table>
<thead>
<tr>
<th>TROUBLE INDICATED</th>
<th>MAY ALSO BE REPORTED AS</th>
<th>PROCEDURE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAINTENANCE PHILOSOPHY</td>
<td></td>
<td>TAD-100</td>
</tr>
<tr>
<td>TROUBLE REPORTS - VISUAL INSPECTION ITEMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction Cards Multilated or Missing</td>
<td></td>
<td>DLP-524</td>
</tr>
<tr>
<td>Fingerwheel and/or Number Card Inoperative (Rotary Dial)</td>
<td>Fingerwheel Bent, Number Card Missing or Multilated</td>
<td>DLP-527</td>
</tr>
<tr>
<td>Number Card and/or Window (TOUCH-TONE® Dial) Mutilated</td>
<td></td>
<td>DLP-535</td>
</tr>
<tr>
<td>Rotary or TOUCH-TONE Dial Inoperative</td>
<td></td>
<td>DLP-531</td>
</tr>
<tr>
<td>Handset Broken or Missing</td>
<td>Handset Cord Broken</td>
<td>DLP-530</td>
</tr>
<tr>
<td>Switchhook (Coin Dial Unit) Broken</td>
<td></td>
<td>DLP-528</td>
</tr>
<tr>
<td>Coin Release Lever Bent or Broken</td>
<td></td>
<td>DLP-532</td>
</tr>
<tr>
<td>Coin Return Assembly Mutilated or Missing</td>
<td></td>
<td>DLP-533</td>
</tr>
<tr>
<td>Coin Cover Unit Mutilated</td>
<td></td>
<td>DLP-536</td>
</tr>
<tr>
<td>TROUBLE REPORTS - NORMAL OPERATIONAL FAILURES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone Set Does Not Function Properly</td>
<td>No Dial Tone, Doesn’t Return Coins, etc.</td>
<td>DLP-529</td>
</tr>
<tr>
<td>TROUBLE REPORTS - STATION HAS COIN TROUBLE HISTORY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coins Collected or Returned in Error</td>
<td></td>
<td>TAP-111</td>
</tr>
</tbody>
</table>
There are many configurations and types of locations in which coin telephone service is provided. Accordingly, a general approach to maintenance of these facilities is advocated in this document, but which may be modified in accordance with local approved telephone company procedures. Because of this diversity of equipment, location, and facilities, it may be necessary to refer to other procedures and documentation to verify that operations contained herein are complete. Refer to TABLE A which lists basic operations not covered in this TOP, with a secondary source of information.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>OPERATION</th>
<th>INFORMATION PROVIDED IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Install Drop Wire</td>
<td>Appropriate section in Division 460</td>
</tr>
<tr>
<td>2</td>
<td>Install Protection and Ground</td>
<td>Section 506-100-100 and Section 460-100-400</td>
</tr>
<tr>
<td>3</td>
<td>Install Inside Wire</td>
<td>Section 461-200-210</td>
</tr>
<tr>
<td>4</td>
<td>Install Backboard</td>
<td>Section 506-100-101</td>
</tr>
<tr>
<td>5</td>
<td>Install Shelf</td>
<td>Appropriate section in Division 508</td>
</tr>
<tr>
<td>6</td>
<td>Install Security Devices</td>
<td>Section 506-101-400</td>
</tr>
<tr>
<td>7</td>
<td>Install Extension Station</td>
<td>Section 506-100-108</td>
</tr>
<tr>
<td>8</td>
<td>Install Auxiliary or Extension Ringer</td>
<td>Section 506-410-400</td>
</tr>
</tbody>
</table>

After any component replacement, the coin telephone set shall be tested as a standard maintenance method per DLP-529.

It is possible that normal operational testing may not detect certain marginal operating conditions, particularly in the area of coin collection and coin return. For this reason, certain tests are specified based on history for a particular set. When a set has a history of improper coin operations, three additional tests are provided TAP-111.

MAINTENANCE PHILOSOPHY – 1D/2D-TYPE COIN TELEPHONE SET
[1] Disconnect CO tip and ring from TBI

[2] Connect KS-21250 test set per TABLE A

[3] With handset on-hook, turn test set POWER ON switch to on position

[4] Is test set KS-21250, List 1 or List 2

[5] Operate REFUND/TIME button on test set

KS-21250, List 1

KS-21250, List 2

[6] Turn COIN RELAY BATTERY switch to on position

[7] Ensure that CR-TIME/CC switch is in CR-time position

[8] Operate the COIN RELAY OPERATE button on test set, after neon lamp glows

TABLE A

<table>
<thead>
<tr>
<th>TEST SET LEAD COLOR</th>
<th>CONNECT TO TB1 OF TEL SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>R</td>
</tr>
<tr>
<td>Green</td>
<td>T</td>
</tr>
<tr>
<td>Yellow</td>
<td>G</td>
</tr>
</tbody>
</table>
10. Clear coin chute [DLP-546]

[9] Do coins return

No

Yes

[11] Turn test set POWER ON switch to off position

[10] Is test set KS-21250, List 1 or List 2

KS-21250, List 2

[12] Turn COIN RELAY BATTERY switch on test set to off position

[14] Disconnect test set and connect CO tip and ring to TB 1


[13] Refer nonstation trouble to test desk

[16] CLEAR COIN RETURN TROUBLE

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[17] Was coin chute blocked

Yes

No

[22] Disconnect test set and connect CO tip and ring to TB1

[18] Turn test set POWER ON switch to off position

[19] Is test set KS-21250, List 1 or List 2

[20] Turn test set COIN RELAY BATTERY switch to off position

[21] Disconnect test set and connect CO tip and ring to TB1

[23] Disconnect (Y) and (BK) leads from coin relay

[24] Connect test set (G) and (Y) leads to 3 and G of coin relay

[25] Is test set KS-21250, List 1 or List 2

[26] Operate REFUND/TIME button on test set

[27] Operate the COIN RELAY OPERATE button on test set

Page 4

CLEAR COIN RETURN TROUBLE
CLEAR COIN RETURN TROUBLE
[42] Go off-hook, obtain dial tone, and deposit quarter

[43] Go on-hook

[44] Does quarter return

[45] Replace coin dial unit [DLP-528]
[1] Replace dial [DLP-531]

[2] Deposit nickel less than initial rate

[3] Dial number that requires initial rate


Yes

[5] Hang up and retrieve coins

No

[6] Hang up (coins return)

[7] Remove coin chassis [DLP-503]

[8] Install new coin chassis [DLP-506]

CLEAR CAN'T BREAK DIAL TONE TROUBLE
[1] Go on-hook

[2] Remove coin chassis [DLP-503]

[3] Verify correct initial rate setting [DLP-505]

[4] Install coin chassis [DLP-506]

[5] Deposit nickel less than initial rate

[6] Dial number that requires initial rate deposit

[7] Does recording state that insufficient deposit was made

Yes

[13] Hand up and retrieve coins

No

[8] Go on-hook

[9] Replace 47A (MD) or 47A2 signal [DLP-547]

[10] Deposit nickel less than initial rate

[11] Dial number that requires initial rate deposit

[12] Does recording state that insufficient deposit was made

No

Page 2

CLEAR INSUFFICIENT DEPOSIT RECORDING TROUBLE
CLEAR INSUFFICIENT DEPOSIT RECORDING TROUBLE

[14] Go on-hook

[15] Remove coin chassis [DLP-503]

[16] Install new coin chassis [DLP-506]

[17] Deposit nickel less than initial rate

[18] Dial number that requires initial rate deposit

[19] Does recording state that insufficient deposit was made

Yes → [20] Hang up and retrieve coins

No → [21] Hang up and retrieve coins

[22] Refer nonstation trouble to test desk
[1] Go off-hook

---

Dial tone present

[3] Do coins return

---

[2] Go on-hook

---

[4] Remove coin chassis [DLP-503]

---

[5] Install new coin chassis [DLP-506]

---


---

Dial tone present

---

[7] Go on-hook

---

[9] Refer nonstation trouble to test desk

---

[8] Do coins return

---

CLEAR INSUFFICIENT DEPOSIT COIN RETURN TROUBLE
Go on-hook

Remove coin chassis [DLP-503]

Verify correct initial rate setting [DLP-505]

Install coin chassis [DLP-506]

Go off-hook and deposit initial rate

Dial number that requires initial rate deposit

Go on-hook

Coins return

Replace 47A (MD) or 47A2 signal [DLP-547]

Go off-hook and deposit initial rate

Dial number that requires initial rate deposit

Is ringing tone heard

Yes

Go on-hook and retrieve coins

No

Is ringing tone heard

Yes

Go on-hook and retrieve coins

No

Page 2
CLEAR RINGING TONE TROUBLE

[15] Remove coin chassis [DLP-503]
[16] Install new coin chassis [DLP-506]
[17] Go off-hook and deposit initial rate
[18] Dial number that requires initial rate deposit

[19] Is ringing tone heard
  Yes
  [20] Go on-hook and retrieve coins
  No

[19] Nonstation trouble, refer to test desk
[21] Go on-hook (coins return)
[22] Measure ground resistance [DLP-510] and return to Step 17

[23] Nonstation trouble, refer to test desk
1. Clear coin chute [DLP-546]
2. Deposit penny
3. Operate coin release mechanism
4. Does penny return
   - Yes
   - No
5. Remove coin chute [DLP-502]
6. Loosen two captive mounting screws and remove 47A (MD) or 47A2 signal from coin chute [DLP-549]
7. Install 47A (MD) OR 47A2 signal on new 20A coin chute [DLP-522]
8. Install coin chute [DLP-507]
[9] Deposit penny

[10] Operate coin release mechanism


[12] Refer to local procedures
1. Request operator to refund deposit

2. Replace 47A (MD) or 47A2 signal [DLP-547]

3. Call operator

4. Deposit nickel, dime, and quarter

5. Can operator identify coin tone signals

6. Request operator to refund deposit

7. Remove coin chassis [DLP-503]

8. Install new coin chassis [DLP-506]

9. Call operator

10. Deposit nickel, dime, and quarter

CLEAR COIN TONE SIGNAL TROUBLE
CLEAR COIN TONE SIGNAL TROUBLE

11. Can operator identify coin tone signals
   - Yes: 18. Request operator to refund deposit
   - No: 12. Request operator to refund deposit

12. Request operator to refund deposit

13. Replace coin dial unit [DLP-528]

14. Call operator

15. Deposit nickel, dime, and quarter

16. Can operator identify coin tone signals
   - Yes: 17. Request operator to refund deposit and refer trouble to test desk
   - No: 11. Can operator identify coin tone signals
[1] Disconnect station wire from T and R at TB1 in coin set

[2] Connect test set to T and R at TB1


[4] Is dial tone present?
   Yes
   [5] Disconnect test set
   [6] Reconnect station wire to T and R
   [7] Check all wiring on TB2 per TABLE A or B, Page 5 and go off-hook

[8] Page 2

Page 4

CLEAR DIAL TONE TROUBLE
CLEAR DIAL TONE TROUBLE

[8] Disconnect test set

[9] Disconnect IW wire from 123A1A or 123E1A protector

[10] Connect hand test set across line at protector


[12] Is dial tone present

No → Page 3

Yes

[13] Disconnect test set

[14] Correct and verify wiring between protector and TBI

[15] Reconnect IW and station wires at protector and TBI

[17] Is dial tone present in test set?

- No: [18] Nonstation tone trouble, refer to test desk.


[21] Reconnect drop, station, and IW wires.

\textbf{CLEAR DIAL TONE TROUBLE}
[22] Is dial tone present

No → [23] Disconnect one (W) handset receiver lead from TB2 and go off-hook

[24] Using hand test set in MONITOR position check for dial tone across receiver terminals at TB2

[25] Is dial tone present

Yes → [29] Install new coin chassis [DLP-506]

No → [27] Is dial tone present in phone handset

[26] Replace coin dial unit [DLP-508]

Yes → [30] Is dial tone present in phone handset

No → [31] Replace handset [DLP-530]

Yes → [31] Replace handset [DLP-530]
### TABLE A
**ROTARY DIAL TELEPHONE SET CONNECTIONS**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>BL or G</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Handset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BK</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

**Switchhook**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

**Terminal 14 appears on new 60A coin dial units only**  
†(R) switchhook lead does not appear on 819042748 (P-90D274) dial and housing assemblies

### TABLE B
**"TOUCH-TONE" DIAL TELEPHONE SET CONNECTIONS**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>70A (MD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70B Dial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>R-G</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>BK</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>O-BK</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>O-W</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>S-W</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

**Handset**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BK</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

**Terminal 14 appears on new 61A coin dial units only**

---

**CLEAR DIAL TONE TROUBLE**
[1] Request operator to return coins

[2] Do coins return
   Yes → [3] Dismiss operator
   No → [4] Dismiss operator

[5] Refer nonstation trouble to test desk
[1] Set ringer volume control to maximum position

[2] Verify that leads are dressed properly and not touching bell

[3] Request operator to ring back


[5] Does ringer operate at maximum volume

[6] Answer and dismiss operator

[7] Replace ringer [DLP-548]

[8] Call operator and request ring back

[9] Go on-hook

[10] Does ringer operate at maximum volume

Page 2, Step 17

Yes

No

Page 2

CLEAR RINGER TROUBLE
[12] Remove coin chassis
   [DLP-503]
[13] Install new coin chassis
   [DLP-506]
[14] Call operator and request ring back
[15] Go on-hook

[16] Does ringer operate at maximum volume
   Yes → [17] Answer and dismiss operator
   No → [18] Answer and dismiss operator

[19] Refer nonstation trouble to test desk
[1] Perform trap and vane release test [DLP-539]

[2] Perform coin relay bias margin test [DLP-540]

[3] Perform coin release lever and call back test [DLP-519]
CHECK LOCATION AND MOUNTING FACILITIES

NOTE 1
Considerations for locating
A. Protection of drop and/or inside wires.
B. Visibility, accessibility, and possible accident hazards in selecting locations.
C. Mounting surfaces — coin telephone set should not be located on finishes that would be expensive to repair if set is removed.
D. Inductive effects — set and associated wiring must be at least 6 inches from neon fixtures, transformers, or other interference-causing equipment.

CAUTION 1
A tilt greater than 1-1/2 degrees in any direction can cause coin chute malfunction

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PAGE 1 of 3  500
TABLE A

METHOD OF DETERMINING A VERTICAL SURFACE

<table>
<thead>
<tr>
<th>SPIRIT LEVEL LENGTH</th>
<th>MAXIMUM ALLOWABLE DISTANCE OUT OF PLUMB</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 inches</td>
<td>15/32-inch</td>
</tr>
<tr>
<td>24 inches</td>
<td>5/8-inch</td>
</tr>
<tr>
<td>30 inches</td>
<td>25/32-inch</td>
</tr>
<tr>
<td>36 inches</td>
<td>15/16-inch</td>
</tr>
</tbody>
</table>

FIG. 1

CHECK LOCATION AND MOUNTING FACILITIES
[8] Place KS-22473 leveling device vertically against mounting surface and check the degrees out of plumb of mounting surface. See FIG. 2.

[9] Verify that the number of degrees is not more than 1-1/2.

[10] Check left to right mounting axis in same manner.


[12] Realign mounting surface per local procedures.

FIG. 2

CAUTION 2
A tilt greater than 1-1/2 degrees in any direction can cause coin chute malfunction.

CHECK LOCATION AND MOUNTING FACILITIES
[1] Invert handset on switchhook.


[4] Is set ID- or 2D-type.

1D-Type

2D-Type

[5] Pull cover towards you about 3 inches.

[6] Disconnect Pl by grasping plug ring and carefully pull out, in line, as cover is removed.


[8] Disconnect Pl by grasping plug ring and carefully pull out, in line, as door is opened.

REMOVE COIN COVER UNIT (1D-TYPE SET) OR OPEN DOOR AND FACEPLATE ASSEMBLY (2D-TYPE SET)
1. Disconnect P2 by grasping ring or body of plug, and carefully pull out in line.

2. Release coin chute locking lever.

3. Lift spring out of groove in coin chute.

4. Tilt top of coin chute forward and lift out.

REMOVE COIN CHUTE
[1] If required remove coin chute [DLP-502]

[2] Is line connected
  No
  [4] Remove dust cover from coin relay
  Yes
  [3] Disconnect tip, ring, and ground connections from TBI

[5] Is set either 1D- or 2D-type
  No
  [6] Is protector mounted in set
    Yes
    [7] Disconnect protector ground strap from terminal PG on coin chassis
    No
    [8] Disconnect (BK) and (Y) leads from coin relay and carefully pull leads through eyelet on side of coin hopper. See NOTE 1

Page 2

NOTE 1
On the 1E1 telephone set these leads are (G) and (S-R) and are connected to coin hopper
[9] Is extension station connected

[10] Disconnect extension station leads from terminals T, R, and L1 of TBI. See NOTE 2

[11] Is auxiliary or extension ringer capacitor board (840362024) connected

[12] Disconnect capacitor board leads from terminals T and R of TBI

[13] Loosen captive chassis mounting screws

[14] Pull chassis assembly out at bottom and slide down to remove

NOTE 2
Terminal L1 is on network in the 1C- and 2C-type telephone sets
[1] Insert inside wire or drop wire and 12 AWG protector ground wire into wire entrance hole. See FIG. 1, Page 2

[2] Insert four security studs (furnished locally) into back of housing. See FIG. 1 and TABLE A, Page 2

[3] Place housing on mounting surface by guiding security studs into proper holes

[4] Secure housing to mounting surface using seven mounting screws (furnished with set) and 1/4 ID flat washer (provided locally). See FIG. 1 and TABLE A, Page 2
### TABLE A

<table>
<thead>
<tr>
<th>BACKBOARD*, BOOTH, SHELF, MOUNTING, OR KIOSK</th>
<th>SECURITY STUDS (4 REQUIRED)</th>
<th>BACKBOARD*, BOOTH, SHELF, MOUNTING, OR KIOSK</th>
<th>SECURITY STUDS (4 REQUIRED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>178A-03 or -51 Backboard</td>
<td>834080608 (P-40Y060)</td>
<td>KS-19425 Booth</td>
<td>834080608 (P-40Y060)</td>
</tr>
<tr>
<td>KS-21676, L2 Backboard</td>
<td>834080616 (P-40Y061)</td>
<td>KS-19426 Mounting</td>
<td>834080616 (P-40Y061)</td>
</tr>
<tr>
<td>10- and 11-Type Booths</td>
<td>834080608 (P-40Y060)</td>
<td>KS-19580 Booth</td>
<td>834080616 (P-40Y061)</td>
</tr>
<tr>
<td>KS-14611 Booth</td>
<td>834080616 (P-40Y061)</td>
<td>KS-19945 Shelf</td>
<td></td>
</tr>
<tr>
<td>KS-16797 Booth</td>
<td>834080608 (P-40Y060)</td>
<td>KS-19945 Shelf</td>
<td></td>
</tr>
<tr>
<td>KS-19206 Booth</td>
<td>834080616 (P-40Y061)</td>
<td>KS-20194, L5 Shelf</td>
<td></td>
</tr>
<tr>
<td>KS-19267 Shelf</td>
<td>834080616 (P-40Y061)</td>
<td>KS-20255 Kiosk (MD)</td>
<td></td>
</tr>
<tr>
<td>KS-19340 Booth</td>
<td>834080616 (P-40Y061)</td>
<td>KS-20842 Mounting</td>
<td></td>
</tr>
</tbody>
</table>

* Seven 1/4-20 by 5/8-inch hardened RHM screws 812367902 (P-23F790) are furnished with each coin telephone set for mounting to backboard

---

**FIG. 1 — Location of Mounting Screw Holes and Security Studs in 1D-Type Set**

**ATTACH HOUSING TO MOUNTING SURFACE (1D-TYPE SET)**
[1] Is chassis wired for correct initial rate. See NOTE 1

[2] See WARNING 1. Set initial rate by connecting plug-ended leads per FIG. 1 and TABLES A and B, Page 2

NOTE 1
Set is factory-wired for 10 cent initial rate, (R) lead connected to negative field (-VCC). All other leads are connected to the positive field (+VCC)

WARNING 1
The wires can be broken if grasped by the wire instead of plug

FIG. 1 - 32A Coin Chassis
### TABLE A

**INITIAL RATE LEADS**

<table>
<thead>
<tr>
<th>LEAD COLOR</th>
<th>INDICATED RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(BR)</td>
<td>5 cents</td>
</tr>
<tr>
<td>(R)</td>
<td>10 cents</td>
</tr>
<tr>
<td>(Y)</td>
<td>20 cents</td>
</tr>
<tr>
<td>(S)</td>
<td>40 cents</td>
</tr>
<tr>
<td>(W-BL)</td>
<td>80 cents</td>
</tr>
<tr>
<td>(W-BR)</td>
<td>1 dollar - 60 cents</td>
</tr>
</tbody>
</table>

* Leads are plug-ended

### TABLE B

**EXAMPLES OF INITIAL RATE SETTINGS**

<table>
<thead>
<tr>
<th>AMOUNT OF INITIAL RATE (CENTS)</th>
<th>PLUG-ENDED LEADS TERMINATED IN - NEGATIVE AND + POSITIVE FIELDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(BR)</td>
<td>(R)</td>
</tr>
<tr>
<td>5</td>
<td>–</td>
</tr>
<tr>
<td>10</td>
<td>+</td>
</tr>
<tr>
<td>15</td>
<td>–</td>
</tr>
<tr>
<td>20</td>
<td>+</td>
</tr>
<tr>
<td>25</td>
<td>–</td>
</tr>
<tr>
<td>30</td>
<td>+</td>
</tr>
<tr>
<td>35</td>
<td>–</td>
</tr>
<tr>
<td>40</td>
<td>+</td>
</tr>
<tr>
<td>45</td>
<td>–</td>
</tr>
<tr>
<td>50</td>
<td>+</td>
</tr>
</tbody>
</table>

* etc

* If higher initial rates are necessary, plug leads into negative field to equal total amount

VERIFY OR SET INITIAL RATE
1] If required, verify or set initial rate [DLP-505]

2] See NOTE 1. Slide chassis under tab. See [FIG. 1, Page 3]

3] Seat chassis tabs in slot

4] Tighten captive chassis mounting screw

5] Thread (BK) and (Y) leads through eyelet on side of hopper

6] Connect (BK) lead to terminal 3 and (Y) lead to terminal G on coin relay

7] Install dust cover on coin relay

8] Connect tip, ring, and signal ground leads to TBI

9] Is protector mounted in set

10] Connect protector ground strap to PG of chassis. See FIG. 2, Page 4

NOTE 1
Auxiliary ringer is provided when customer complains of insufficient sound level. Extension ringer is provided (at additional cost) for signaling beyond the normal ringer range.
[11] Is extension station provided

Yes

[12] Connect extension station leads to terminals T, R, and L1 of TB1

No

[13] Is auxiliary or extension ringer capacitor board (840362024) provided

Yes

[14] Connect capacitor board assembly to terminals T and R on TB1 using inside wire

[15] Disconnect, insulate, and store (R) and (BK) ringer leads inside set

No

[16] Tag location of station ground inside set according to local regulations

[17] Install coin chute [DLP-507]
FIG. 1 - Housing and Mounting Plate Assembly

INSTALL 32A COIN CHASSIS
FIG. 2 – Protector Wiring When Protector is Inside Set

[2] Place coin chute on locating pins at rear of hopper assembly and back of housing. See FIG. 2, Page 2.


[4] Lock spring in place by pushing coin chute locking lever down.


NOTE 1
Reject chute, return chute and coin return assemblies must line up properly.

WARNING 1
If the quarter divider is not positioned properly, it will be damaged when the upper plate assembly is closed. See FIG. 1.

INSTALL COIN CHUTE
INSTALL COIN CHUTE
[1] If required remove coin cover unit or open door and faceplate assembly. [DLP-501]

[2] Is set 1D-or 2D-type

[3] Connect P11C patch cord between P1 of door and J1 of coin chassis

[4] Is KS-20950, List 2 cover parking tool available

[5] Is adequate room available to use parking tool

[6] Install parking tool on coin cover unit. See FIG. 1, Page 2

[7] Hang coin cover unit on back housing

[8] Connect P1 of cover unit to J1 of coin chassis

[9] Place coin cover unit on a firm level surface

[10] Connect P11C patch cord between P1 of cover unit and J1 of coin chassis

20950, LIST 2 COVER PARKING TOOL
FIG. 1 - 1D-Type Coin Telephone Set With Parking Tool Installed

INSTALL KS-20950, LIST 2 COVER PARKING TOOL OR P11C PATCH CORD
[1] Is this an initial installation

Yes → [3] Call test desk and request loop resistance measurement

No → [2] Is resistance value recorded on line card and in telephone set

Yes → [6] Refer to local procedures to correct problem

No → [4] Place strap between tip and ring when directed by test desk. See FIG. 1, Page 2 and NOTE 1

[5] Does measurement meet requirements

Yes → [7] Remove strap from tip and ring

No → [8] Record loop resistance and date on line card and in telephone set

NOTE 1
Hopper trigger must not be operated
FIG. 1 - Loop Resistance Measurement

MEASURE LOOP RESISTANCE
[1] Is this an initial installation

[2] Is ground measurement recorded on line card and in telephone set

[3] Are there repeated trouble reports that coins don't return

[4] Call test desk and request ground resistance measurement

[5] Place strap between tip and ground when directed by test desk. See FIG. 1, Page 2

[6] Does test desk measure acceptable ground

[7] Provide acceptable station ground [DLP-537]

[8] Remove strap from tip and ground

[9] Record ground resistance and date on line card and in telephone set

MEASURE GROUND RESISTANCE
FIG. 1 – Ground Resistance Measurement

MEASURE GROUND RESISTANCE
1. Go off-hook. See NOTES 1 and 2

2. Is dial tone heard

3. Flash switchhook

4. Does dial tone break

5. Replace coin dial unit [DLP-528] and return to Step 1

6. Deposit nickel, dime, and quarter

7. Are all coins retained

8. Clear coin chute [DLP-546] and return to Step 1

NOTES
1. The serving central office must be wired for dial-tone-first and the line circuit associated with the station under test properly wired for loop start prior to performing the following test
2. Any time you leave this DLP to clear trouble you should always return to Step 1 and test again

PERFORM OPERATIONAL TEST
[9] Depress switchhook

[10] Do all coins return

Yes

[11] Deposit nickel less than initial rate, dial number that requires initial rate

[12] Does dial tone break

No

TAP-102

Yes

[13] Listen for message

[14] Does the recording state that insufficient deposit was made

No

TAP-103

Yes

Page 3

TAP-101

TAP-103

PERFORM OPERATIONAL TEST
[15] Depress switchhook

[16] Does coin(s) return

No → TAP-104

Yes → [17] Deposit initial rate, (one coin must be nickel) dial number that requires initial rate. Ensure that called number will not be answered

[18] Is ringing tone or insufficient deposit recording heard

Insufficient deposit recording heard → TAP-105

Ringing tone heard → [19] Go on-hook (coins return)

[20] Deposit penny and operate coin release mechanism

[21] Does penny return

Yes → [22] Is automated coin toll service (ACTS) available

No → TAP-106
[23] Call operator. Deposit nickel, dime, and quarter

[24] Can operator identify coin tone signals
   Yes
   [25] Request operator to return coins
       Yes
       [27] Request operator to ring back, hang up
           No
           TAP-107
           [26] Do coins return
               Yes
               [28] Does ringer operate at maximum volume
                   Yes
                   Page 8, Step 59
                   No
                   TAP-109
                   [29] Does ringer operate at maximum volume
                       No
                       TAP-110

PERFORM OPERATIONAL TEST
Lift handset
dial local ACTS
test line number
(NOTE 3)

Is announcement
"Coin Test" and
"Deposit Nickel
Please" heard?

Yes → Deposit
nickel

No → Nonstation
trouble, refer
to test desk

Does test line correctly
identify nickel?

Yes → Page 6

No → Nonstation
trouble, refer
to test desk

Replace 47A(MD) or 47A2
signal.
[DLP-547] and
return to Step 1,
Page 1

Remove 32A coin
chassis
[DLP-503]

Install new 32A coin chassis
[DLP-506] and
return to Step 1,
Page 1

NOTE 3
If coin test line
is busy recorder
tone (120 IPM)
will be heard
PERFORM OPERATIONAL TEST

[38] Listen for next announcement

[39] Is "Deposit Dime Please" heard

Yes → [41] Deposit dime

No → [40] Nonstation trouble. Refer to test desk

[42] Does test line correctly identify dime

Yes → Page 7

No → [46] Nonstation trouble. Refer to test desk

[43] Replace 47A(MD) or 47A2 signal [DLP-547] and return to Step 1, Page 1

[44] Remove 32A coin chassis [DLP-503]

[45] Install new 32A coin chassis [DLP-506] and return to Step 1, Page 1
[47] Listen for next announcement

[48] Is "Deposit Quarter Please" heard
  Yes → [50] Deposit quarter
  No → [49] Nonstation trouble, refer to test desk

[51] Does test line correctly identify quarter (NOTE 4)
  Yes → Page 8
  No → [52] Replace 47A(MD) or 47A2 signal [DLP-547] and return to Step 1, Page 1
  No → [55] Nonstation trouble, refer to test desk

[53] Remove 32A coin chassis [DLP-503]
[54] Install new 32A coin chassis [DLP-506] and return to Step 1, Page 1

NOTE 4
Additional coins can be deposited in any sequence; however, a two minute overall time limit is placed on each test call. If this is exceeded, an announcement "Test Has Ended" will be heard, a coin return signal will be generated, and the connections broken.
PERFORM OPERATIONAL TEST
[65] Go off-hook (dial tone heard)

[66] Dial code number for dial speed test (dial tone heard)

[67] Dial 0 and listen for audible signal indicated in TABLE A

[68] Is dial speed satisfactory

[69] Replace dial [DLP-531] and return to Step 1, Page 1

---

**TABLE A**

<table>
<thead>
<tr>
<th>AUDIBLE SIGNAL HEARD</th>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audible ringback</td>
<td>Dial speed satisfactory</td>
</tr>
<tr>
<td>Rapidly interrupted dial tone</td>
<td>Dial speed fast</td>
</tr>
<tr>
<td>Slowly interrupted dial tone</td>
<td>Dial speed slow</td>
</tr>
</tbody>
</table>
INSTALL COIN COVER UNIT (1D-TYPE) OR CLOSE DOOR AND FACEPLATE ASSEMBLY (2D-TYPE)

[1] Is set 1D- or 2D-type

[2] Connect P1 to J1

[3] Slide cover into place

[4] With door open about 3 inches, plug P1 into J1

[5] Close door

[6] Engage locking mechanism with 719A tool by turning tool 1/8 turn clockwise

[7] Lock 29A lock
[1] See WARNING 1. Use an allen wrench or KS-21107, List 1 releaser, turn setscrew clockwise until stop is reached. See FIG. 1 and NOTE 1

[2] Turn fingerwheel in a clockwise direction until operator hole is in the 9 position, and lift off

NOTE 1
Dial fingerwheel is secured with a No. 4-40 setscrew

WARNING 1
When turning setscrew, 8WA dial must be in the fully run down position to prevent losing the setscrew

FIG. 1 - Remove Fingerwheel on 8U (MD), 8W(MD), or 8WA Dial

REMOVE DIAL FINGERWHEEL
[1] Ensure that setcrew is all the way in, clockwise.

[2] Place fingerwheel on dial with operator hole over the 9 position.


[4] Use an Allen wrench or KS-21107, List 1 releaser, turn setscrew counterclockwise until stop is reached. See FIG. 1.

FIG. 1 - Installing Fingerwheel on 8U(MD), 8W(MD), or 8WA Dial.
[1] Take handset off switchhook

[2] Remove four self-locking mounting screws. See FIG. 1

[3] See WARNING 1. Pull coin dial unit away from cover or door and carefully pull handset cord through hole in faceplate. See FIG. 1

FIG. 1 - Coin Cover Unit

WARNING 1
Armored handset cord is attached to coin dial unit

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DETACH COIN DIAL UNIT (1D2 OR 2D2 SET)
[1] Insert window in faceplate from rear. See NOTES 1, 2 and FIG. 1

[2] Insert number card in window. See FIG. 2, Page 2

[3] Secure window and number card using card holder bracket and two thread forming nuts. See FIG. 3, Page 2

NOTES
1. Number card furnished locally
2. Card holder bracket, window, and (2) nuts are packaged separately and shipped from the factory in the cash compartment

FIG. 1 — Number Card and Associated Hardware (TOUCH-TONE Set)

INSTALL NUMBER CARD IN 1D2 OR 2D2 COIN TELEPHONE SET
INSTALL NUMBER CARD IN 1D2 OR 2D2 COIN TELEPHONE SET

FIG. 2 - Window and Number Card Installed in Faceplate (TOUCH-TONE Set)

FIG. 3 - Card Holder Bracket Installed (TOUCH-TONE Set)
[1] Make sure that four handset cradle mounting screws are tight.


**NOTE 1**
Coin dial unit mounting screws must be tight to prevent unit from becoming loose due to vibration.

**WARNING 1**
Armored handset cord is attached to coin dial unit.
[1] Is set 1D- or 2D-type

2D-type

1D-type

[2] Loosen card locking setscrew in faceplate by turning counterclockwise using No. 4 (.050) Allen wrench or KS-21107, List 1 releaser. See NOTE 1 and FIG. 1, Page 2

[3] Push card up with fingers and snap into place. See FIG. 2, Page 2

[4] Ensure that card is seated properly in slot

[5] Tighten card locking setscrew in faceplate by turning clockwise

[6] Using No. 4 (.050) Allen wrench or KS-21107, List 1 releaser turn the cam until low side is adjacent to card opening. See NOTE 1

[7] Push card up with fingers and snap in place. See NOTE 2 and FIG. 2, Page 2; FIG. 3, Page 3

[8] Ensure that card is seated properly in slot

[9] Secure card by turning cam 180 degrees either clockwise or counterclockwise

NOTES
1. Customer instruction cards furnished locally
2. On early production 2-type sets instruction cards are installed by pushing down

INSTALL INSTRUCTION CARDS (1D– OR 2D–TYPE SET)
FIG. 1 - Loosening or Securing Instruction Cards (Current Production Sets)

FIG. 2 - Installing Instruction Cards (All 1-Type and Current Production 2-Type)
FIG. 3 - Installing Instruction Cards
In Early Production 2-Type Set
[1] Operate coin release lever and verify that entrance stop does not bind

[2] Deposit penny and operate coin release lever

[3] Does penny return

[4] Verify proper operation of coin return linkage and return to Step 1

[5] Call operator and request operator to call back, hang up

[6] Does ringer operate

[7] Verify number assignment

[8] Refer nonstation trouble to test desk

[9] Answer and dismiss operator
ATTACH HOUSING TO MOUNTING SURFACE (2D-TYPE SET)

1. Is set to be recessed or surface mounted
   - Recessed mounted
     - Surface mounted

2. Insert four security studs (furnished locally) into back of housing. See TABLE A, Page 2 and FIG. 1, Page 3.
3. Install inside wire or drop and protector ground wire through entrance hole in housing.
4. Place housing on mounting surface by guiding security studs into proper holes.
5. Secure housing to mounting surface using 13 mounting screws furnished with set. See TABLE A, Page 2 and FIG. 1, Page 3.
6. If required, mount cover using FIG. 2, Page 3 and TABLE A, Page 2.
7. Ensure that wall thickness will accept depth of set. See FIG. 3, Page 3 and TABLE B, Page 2.
9. Insert inside wire or drop and protector ground wire through entrance hole in housing.
10. Secure housing to wall supporting structure per local procedures. See TABLE A, Page 2 and FIG. 1, Page 3.
11. Ensure that lip of the faceplate overlaps wall around the hole.
### TABLE A

**MOUNTING OF 2D-TYPE SET †**

<table>
<thead>
<tr>
<th>BOOTH, SHELF, OR MOUNTING</th>
<th>SECURITY STUDS (4 REQUIRED)</th>
<th>COVER REQUIRED*</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS-19206 Booth</td>
<td><img src="image1.png" alt="Image" /></td>
<td>127B FIG. 2</td>
</tr>
<tr>
<td>KS-19340 Booth</td>
<td><img src="image2.png" alt="Image" /></td>
<td>127B FIG. 2</td>
</tr>
<tr>
<td>KS-19426 Mounting</td>
<td><img src="image3.png" alt="Image" /></td>
<td>KS-19426, List 34 Top Assembly</td>
</tr>
<tr>
<td>KS-19442 Booth</td>
<td><img src="image4.png" alt="Image" /></td>
<td>127B FIG. 2</td>
</tr>
<tr>
<td>KS-20194 Shelf</td>
<td><img src="image5.png" alt="Image" /></td>
<td></td>
</tr>
</tbody>
</table>

* Three No. 8-32 by 3/16 RHM screw are furnished with cover for installation
† Thirteen 1/4-20 by 5/8-inch hardened RHM screws 812367902 (P-23F790) are furnished with each coin telephone set for mounting to backboard

### TABLE B*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>22-25/64 inches</td>
</tr>
<tr>
<td>Width</td>
<td>16-9/64 inches</td>
</tr>
<tr>
<td>Depth</td>
<td>6 inches</td>
</tr>
</tbody>
</table>

* Bottom edge of cutout should be approximately 34 inches from floor for a standard coin slot height of 54 inches

**ATTACH HOUSING TO MOUNTING SURFACE (2D-TYPE SET)**
FIG. 1 - Location of Mounting Screw Holes and Security Studs In 2D-Type Set

FIG. 2 - 127A and 127B Covers

FIG. 3 - Rear View of Panel Set Showing Dimensions

* THE SWITCHHOOK AND HANDSET EXTEND 2-3/4 INCHES IN FRONT OF THE FACEPLATE

ATTACH HOUSING TO MOUNTING SURFACE (2D-TYPE SET)
[1] See WARNING 1. Unscrew three captive-type screws which attach totalizer to chute

[2] Carefully remove totalizer from chute, see NOTE 1

NOTE 1
Disposition of totalizer is optional

WARNING 1
Totalizer arms are easily damaged

REMOVE TOTALIZER FROM COIN CHUTE
[1] Place signal on chute. Be sure that short guide pins on chute mate with signal bracket holes. See FIG. 1

[2] Tighten two captive mounting screws

INSTALL 47A (MD) OR 47A2 SIGNAL ON COIN CHUTE
TABLE A

ROTARY DIAL TELEPHONE SET CONNECTIONS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>REMOVE FROM TB2</th>
<th>CONNECT TO TB2</th>
<th>WIRE COLOR</th>
<th>REMOVE FROM TB2</th>
<th>CONNECT TO TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dial</td>
<td>BL</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BL or G</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>9</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>9</td>
<td>13</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handset</td>
<td>W</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BK</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strap</td>
<td>S</td>
<td>1 to 4</td>
<td>1 to 4</td>
<td>2 to 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switchhook</td>
<td>BR</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BR</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O</td>
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<td>11</td>
<td>8</td>
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<tr>
<td></td>
<td>S</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S-W</td>
<td>-</td>
<td>-</td>
<td>14†</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>R†</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Terminal 9 on 819042748 (P-90D274) and 840152227 dial and housing assemblies
Terminal 12 on 841317241 and 841317258 dial and housing assemblies
† Terminal 14 appears on new 60A coin dial unit only
‡ (R) Switchhook lead does not appear on 819042748 (P-90D274) dial and housing assembly
<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>REMOVE FROM TB2</th>
<th>CONNECT TO TB2</th>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>REMOVE FROM TB2</th>
<th>CONNECT TO TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>70A(MD)</td>
<td></td>
<td></td>
<td></td>
<td>Switchhook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or 70B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70A(MD)</td>
<td></td>
<td></td>
<td></td>
<td>Switchhook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or 70B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Terminal 9 on 8401555402, 840155394, or 840346977 (manufactured before 8-74) dial and housing assemblies.**

**Terminal 12 on 840347173, 61A, or 840346977 (manufactured after 8-74) dial and housing assemblies.**

† Terminal 14 appears on new 61A coin dial unit only

MAKE WIRING CHANGES ON TB2
[1] Is set 1D- or 2D-type

2D-type

1D-type

[2] Loosen card locking setscrew in faceplate by turning counterclockwise using No. 4 (.050) Allen wrench or KS-21107, List 1 releaser. See FIG. 1, Page 3

[3] Push card up with fingers

[4] Pry bottom out with small screwdriver or equivalent and remove card

[5] Turn CAM 1/2 turn away from card using No. 4 (.050) Allen wrench or KS-21107, List 1 releaser

[6] Push card up with fingers

[7] Pry out card with small screwdriver or equivalent and remove card

REPLACE INSTRUCTION CARDS
[8] Is set 1D- or 2D-type


[10] Ensure that card is seated properly in slot.


[12] See NOTE 1. Push new card up with fingers and snap into place. See NOTE 2 and FIG. 2, Page 3; FIG. 3, Page 4.

[13] Ensure that card is seated properly in slot.

[14] Secure card by turning CAM 180 degrees either clockwise or counterclockwise.

NOTES
2. On early production 2-type sets instruction cards are installed by pushing down.
FIG. 1 - Loosening or Securing Instruction Cards
(Current Production Sets)

FIG. 2 - Installing Instruction Cards (All 1-Type and Current Production 2-Type Sets)

REPLACE INSTRUCTION CARDS
FIG. 3 – Installing Instruction Card In Early Production 2-Type Set
VERIFY COMPATIBILITY OF COIN DIAL UNIT WITH 1D- OR 2D-TYPE SET
VERIFY COMPATIBILITY OF COIN RELAY

1. Is coin relay stamped 1A or 1A*
   - Yes
   - No

2. Observe restoral springs per FIG. 1.
3. Is restoral spring 9/32 inch diameter
   - Yes
   - No

4. Replace P-type coin relay with 1A coin relay [DLP-538]

**FIG. 1 - Coin Relays**
[1] See WARNING 1. Use Allen wrench or K5-21107, List 1 releaser, turn setscrew clockwise until stop is reached. See FIG. 1.

[2] Turn fingerwheel in a clockwise direction until operator hole is in the 9 position, and lift off.

[3] If required replace number card. See NOTE 1

[4] Ensure that setscrew is all the way in clockwise.


[7] Use Allen wrench or KS-21107. List 1 releaser, turn setscrew counterclockwise until stop is reached. See FIG. 1.

FIG. 1 – Replacing (840151872) Fingerwheel on 8U (MD), 8W (MD), or 8WA Dial

NOTE 1
Number card furnished locally

WARNING 1
When turning setcrew, dial must be in the fully run down position to prevent losing the setscrew

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[1] If required, remove coin cover unit (ID-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] Take handset off switchhook

[3] Disconnect (R), (BK), and two (W) handset leads from TB2 on rear of coin dial unit

[4] Loosen stay-hook screw and move handset cord aside. See FIG. 1

[5] Remove screw and coverplate which secure handset cord to dial housing. See FIG. 1

[6] Remove four self-locking coin dial unit mounting screws. See FIG. 1

[7] Remove coin dial unit
[8] Make sure that four handset cradle mounting screws are tight.

[9] See TABLE A. Feed handset cord through opening in new coin dial unit.

[10] Position new coin dial unit and secure using four mounting screws. See NOTE 1.


[12] Install coverplate and stayhook.

[13] Connect handset leads per TABLE B.

[14] If required, make wiring changes per DLP-523.

---

**TABLE A**

<table>
<thead>
<tr>
<th>COIN TEL SET</th>
<th>COIN DIAL UNIT*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1D1</td>
<td>60A3-44, 60A2-44, or 841317241</td>
</tr>
<tr>
<td>1D2</td>
<td>61A3-44, 61A2-44, or 840346977</td>
</tr>
<tr>
<td>2D1 (Brushed Stainless)</td>
<td>60A3-44, 60A2-44 (Chrome), or 841317241</td>
</tr>
<tr>
<td>2D1 (Bronze)</td>
<td>60A3-84, 60A2-84, (Bronze), or 840347173</td>
</tr>
<tr>
<td>2D2 (Brushed Stainless)</td>
<td>61A3-44, 61A2-44, (Chrome), or 840346977</td>
</tr>
<tr>
<td>2D2 (Bronze)</td>
<td>61A3-84, 61A2-84, (Bronze), or 840347173</td>
</tr>
</tbody>
</table>

* 60A3- or 61A3- coin dial units are preferred for replacement.

---

**TABLE B**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>CONNECT TO TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handset (Rotary Set)</td>
<td>W</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BK</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>7</td>
</tr>
<tr>
<td>Handset (TOUCH-TONE Set)</td>
<td>W</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BK</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>8</td>
</tr>
</tbody>
</table>

---

**NOTE 1**

Four coin dial unit mounting screws must be tight to prevent unit from becoming loose due to vibration.

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REPLACE COIN DIAL UNIT
[1] If required, remove coin cover unit (1D-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] If required, install KS-20950, List 2 cover parking tool or P11C patch cord [DLP-508]
PERFORM TROUBLE TEST

[3] Go off-hook. See NOTES 1 and 2

[4] Is dial tone heard
   No → TAP-108
   Yes

[5] Flash switchhook

   No → [7] Replace coin dial unit [DLP-528] and return to Step 3
   Yes

[8] Deposit nickel, dime, and quarter

[9] Are all coins retained
   Yes → Page 3
   No

[10] Clear coin chute [DLP-546] and return to Step 3

NOTES
1. The serving central office must be wired for dial-tone-first and the line circuit associated with the station under test properly wired for loop start prior to performing the following test
2. Any time you leave this DLP to clear trouble you should always return to Step 3 and test again

[12] Do all coins return

[13] Deposit nickel less than initial rate, dial number that requires initial rate

[14] Does dial tone break

[15] Listen for message

[16] Does the recording state that insufficient deposit was made

TAP-101

TAP-102

TAP-103

Page 4

PERFORM TROUBLE TEST
[17] Depress switchhook

[18] Does coin(s) return

Yes

No

TAP-104

[19] Deposit initial rate, (one coin must be nickel) dial number that requires initial rate. Ensure that called number will not be answered

[20] Is ringing tone or insufficient deposit recording heard

Ringing tone heard

Insufficient deposit recording heard

TAP-105

[21] Go on-hook (coins returned)

[22] Deposit penny and operate coin release mechanism

[23] Does penny return

Yes

No

TAP-106

[24] Is automated coin toll service (ACTS) available

Yes

No

Page 6

Page 5

PERFORM TROUBLE TEST
[25] Call operator, deposit nickel, dime, and quarter

[26] Can operator identify coin tone signals

Yes

[27] Request operator to return coins

[28] Do coins return

No

TAP-107

Yes

[29] Request operator to ring back, hang up

[30] Does ringer operate at maximum volume

No

TAP-109

TAP-110

Yes

Page 9, Step 61
[31] Lift handset, dial local ACTS test line number (NOTE 3)

[32] Is announcement "Coin Test" and "Deposit Nickel Please" heard

Yes

[34] Deposit nickel

[35] Does test line correctly identify dime

Yes

Page 7

No

[36] Replace 47A(MD) or 47A2 signal [DLP-547] and return to Step 3, Page 2

No

[37] Remove 32A coin chassis [DLP-503]

No

[39] Nonstation trouble. Refer to test desk

No

[38] Install new 32A coin chassis [DLP-506] and return to Step 3, Page 2

NOTE 3
If coin test line is busy reorder tone (120 IPC) will be heard

PERFORM TROUBLE TEST
[49] Listen for next announcement

[50] Is "Deposit Quarter Please" heard

[51] Nonstation trouble. Refer to test desk

[52] Deposit quarter

[53] Does test line correctly identify quarter (NOTE 4)

[54] Replace 47A (MD) or 47A2 signal [DLP-547] and return to Step 3, Page 2

[55] Remove 32A coin chassis [DLP-503]

[56] Install new 32A coin chassis [DLP-506] and return to Step 3, Page 2

[57] Nonstation trouble. Refer to test desk

NOTE 4
Additional coins can be deposited in any sequence; however, a two minute overall time limit is placed on each test call. If this is exceeded, an announcement "Test Has Ended" will be heard. A coin return signal will be generated, and the connections broken.
PERFORM TROUBLE TEST

[58] Go on-hook (coin returns)

[59] Go off-hook, dial operator, request operator to ring back, hang up

[60] Does ringer operate at maximum volume

[61] Does set have rotary or TOUCH-TONE dial, see NOTE 5

TOUCH-TONE dial

[62] Go off-hook (dial tone heard)

[63] Dial code number for test and ringer circuit (dial tone heard)

[64] Dial numbers 1 through 0 in succession and listen for two beeps to follow

[65] Were two beeps heard

[66] Replace dial [DLP-531] and return to Step 3, Page 2

NOTE 5
If dial test circuits are not available, be guided by local instructions for testing dials

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Go off-hook (dial tone heard)

Dial code number for dial speed test (dial tone heard)

Dial 0 and listen for audible signal indicated in TABLE A

Is dial speed satisfactory?

Replace dial [DLP-531] and return to Step 3, Page 2

**TABLE A**

<table>
<thead>
<tr>
<th>AUDIBLE SIGNAL HEARD</th>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audible ringback</td>
<td>Dial speed satisfactory</td>
</tr>
<tr>
<td>Rapidly interrupted dial tone</td>
<td>Dial speed fast</td>
</tr>
<tr>
<td>Slowly interrupted dial tone</td>
<td>Dial speed slow</td>
</tr>
</tbody>
</table>
[72] Remove KS-20950, List 2 cover parking tool or P11C patch cord

[73] Install coin cover unit (1D-type set) or close door and faceplate assembly (2D-type set) [DLP-512]

[74] Operate coin release lever and verify that entrance stop does not bind

[75] Deposit penny and operate coin release lever

[76] Does penny return

Yes -> Page 12

No -> [77] Verify proper operation of coin return linkage and return to Step 3, Page 2
[78] Call operator and request operator to call back, hang up

[79] Does ringer operate
  Yes -> [80] Verify number assignment
  No -> [81] Refer nonstation trouble to test desk

[80] Verify number assignment
  No -> [78] Call operator
  Yes -> [81] Refer nonstation trouble to test desk

[81] Refer nonstation trouble to test desk
  No -> [78] Call operator
  Yes -> [82] Answer and dismiss operator

[82] Answer and dismiss operator
[1] If required, remove coin cover unit (ID-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] Disconnect handset leads from TB2

[3] Loosen stay-hook screw

[4] Remove BHM screw and coverplate which secure handset cord to dial housing. See FIG. 1, Page 2

[5] Pull armored handset cord through faceplate


[7] Feed cord through coverplate

[8] Secure stay-hook and coverplate to coin dial unit

[9] Secured armored handset cord and coverplate. See FIG. 1, Page 2

[10] Connect handset leads per TABLE B or C, Page 3

REPLACE HANDSET
REPLACE HANDSET

FIG. 1

801816786
BHM SCREW

81154443
COVERPLATE

CORD
STAY-HOOK

HANDSET
CORD
**TABLE A**

<table>
<thead>
<tr>
<th>SET CODE</th>
<th>HANDSET CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1D1/1D2</td>
<td>G3AH-52</td>
</tr>
<tr>
<td>All Sets</td>
<td>or G3AK-52</td>
</tr>
<tr>
<td>2D1/2D2-67</td>
<td>G3AH-03</td>
</tr>
<tr>
<td></td>
<td>or G3AK-03</td>
</tr>
</tbody>
</table>

* Standard handsets shown. A G13D amplifier handset is optional.

---

**TABLE B**

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>ROTARY SET</th>
<th>&quot;TOUCH-TONE&quot; SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>TB2-4</td>
<td>TB2-7</td>
</tr>
<tr>
<td>R</td>
<td>TB2-3</td>
<td>TB2-3</td>
</tr>
<tr>
<td>BK</td>
<td>TB2-6</td>
<td>TB2-6</td>
</tr>
<tr>
<td>W</td>
<td>TB2-7</td>
<td>TB2-8</td>
</tr>
</tbody>
</table>

**TABLE C**

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>ROTARY SET</th>
<th>&quot;TOUCH-TONE&quot; SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>TB2-7</td>
<td>TB2-7</td>
</tr>
<tr>
<td>R</td>
<td>TB2-3</td>
<td>TB2-3</td>
</tr>
<tr>
<td>BK</td>
<td>TB2-6</td>
<td>TB2-6</td>
</tr>
<tr>
<td>G</td>
<td>TB2-4</td>
<td>TB2-8</td>
</tr>
</tbody>
</table>
[1] If required, remove coin cover unit (ID-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] Take handset off switchhook

[3] Remove four mounting screws. See FIG. 1

[4] See WARNING 1. Pull coin dial unit away from cover or door and carefully pull handset cord through hole in faceplate.

WARNING 1

Armored handset cord is attached to coin dial unit

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REPLACE ROTARY OR "TOUCH-TONE" DIAL
[5] Disconnect dial leads per TABLE A, see NOTE 1. 

[6] Loosen two mounting screws on side of dial through access holes in coin dial unit. 

[7] Apply pressure with screwdriver to dial mounting screw through access hole in coin dial unit to free dial locating pins. 

[8] Lift dial off and pull leads through hole in coin dial unit. 

[9] If rotary dial is being installed, remove and discard dust cover. 

[10] Feed leads of new dial through hole in coin dial unit. 

[11] Install new dial making sure that four locating pins are properly seated in mounting brackets. 


**TABLE A**

<table>
<thead>
<tr>
<th>DIAL</th>
<th>WIRE COLOR</th>
<th>TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>8U(MD), 8W(MD), or 8WA Rotary Dial</td>
<td>BL</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>BL or G</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>13</td>
</tr>
<tr>
<td>70A(MD) or 70B TOUCH-TONE Dial</td>
<td>G</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>R</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>R-G</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BK</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>0-BK</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>0-R</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>W-BL</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>0-W</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>13</td>
</tr>
</tbody>
</table>

**NOTE 1**

It is not necessary to disconnect handset when removing dial. 

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**DLP**

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REPLACE ROTARY OR "TOUCH-TONE" DIAL
[1] Remove coin cover unit (1D-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] Remove screw which secures link and lever assembly to coin release lever shaft, FIG. 1

[3] Remove shaft and handle assembly

[4] Insert shaft and handle assembly through faceplate and orient per FIG. 2

[5] Place link and lever assembly over rear of shaft and secure with screw, FIG. 1

REPLACE COIN RELEASE LEVER
[1] Remove coin cover unit (1D-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] Disconnect P2 by grasping body of plug and carefully pull out, in line

[3] Release coin chute locking lever. See FIG. 1, Page 4

[4] Lift spring out of groove in coin chute

[5] Tilt top of coin chute forward and lift out

REPLACE COIN RETURN ASSEMBLY
6. Loosen return chute screw. See FIG. 1, Page 4

7. Lift return chute assembly up and off

8. Remove coin return assembly locking screw. See FIG. 1, Page 4

9. Insert finger in coin return and tilt top forward

10. Lift coin return and pull out and up

11. Tilt top of new coin return assembly toward set

12. Push coin return assembly into set

13. Push in and down on bottom of coin return assembly until flush with front of housing

14. See WARNING 1. Install coin return assembly locking screw and tighten until snug

WARNING 1
The coin return assembly is made of hardened material and overtightening will damage screw

REPLACE COIN RETURN ASSEMBLY
[15] Place return chute assembly over coin return assembly

[16] See WARNING 2. Align and secure by tightening return chute screw. See FIG. 1, Page 4

[17] Place coin chute on locating pins at rear of hopper assembly and back of housing. See FIG. 1, Page 4

[18] Place spring in groove on coin chute. See NOTE 1

[19] Lock spring in place by pushing coin chute locking lever down

[20] Connect P2 to J2

NOTE 1
Reject chute, return chute, and coin return assemblies must line up properly.

WARNING 2
Two tabs on right side of return chute must be seated properly on lip on left side of hopper and key-hole slot on front of return chute (plastic version only) must be completely down behind mounting screw.
REPLACE COIN RETURN ASSEMBLY

FIG. 1 - Housing and Mounting Plate Assembly
[1] Remove vault door and coin receptacle per local procedures

[2] From inside vault, remove two hex socket head cap screws that secure hopper to housing

[3] Lift hopper out of set

[4] Place 1AA coin relay in set in proper location, See NOTE 1

[5] Secure hopper to housing using two 811058098 hex socket head cap screws

[6] Install coin receptacle and vault door per local procedures

REPLACE 50A, 50B, OR 51A HOPPER ASSEMBLY WITH 1AA COIN RELAY

NOTE 1
1AA coin relay consists of 1A coin relay and 811557172 (P-15E717) coin hopper assembly
[1] Remove coin cover unit (1D-type set) or open door and faceplate assembly (2D-type set) [DLP-501]

[2] Take handset off switchhook

[3] Remove four mounting screws. See FIG. 1

[4] See WARNING 1. Pull coin dial unit away from cover or door and carefully pull handset cord through hole in faceplate

---

**WARNING 1**

Armored handset cord is attached to coin dial unit

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[5] Remove two thread forming nuts and remove card holder bracket. See FIG. 2, Page 3

[6] Remove number card from window. See FIG. 3, Page 3

[7] Is window being replaced

[8] Remove window from faceplate. See FIG. 3, Page 3

[9] Insert new window in faceplate from rear

[10] Insert new number card in window. See NOTE 1

[11] Secure window and number card using card holder bracket and two thread forming nuts

REPLACE NUMBER CARD AND/OR WINDOW IN "TOUCH-TONE" DIAL TELEPHONE SET

NOTE 1
Number card ordered separately
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FIG. 2 - Card Holder Bracket Installed (TOUCH-TONE Set)

FIG. 3 - Window and Number Card Installed in Faceplate (TOUCH-TONE Set)

REPLACE NUMBER CARD AND/OR WINDOW IN "TOUCH-TONE" DIAL TELEPHONE SET
[12] Make sure that four handset cradle mounting screws are tight.

[13] Position coin dial unit by carefully pulling armored handset cord through faceplate from front side.

[14] Align and secure coin dial unit using four mounting screws. See FIG. 1, Page 1 and NOTE 2.

NOTE 2
Four coin dial unit mounting screws must be tight to prevent unit from becoming loose due to vibration.

REPLACE NUMBER CARD AND/OR WINDOW IN "TOUCH-TONE" DIAL TELEPHONE SET
[1] Unlock 29A lock

[2] Release locking mechanism by inserting 719A tool and turning tool 1/8 turn counterclockwise

[3] Invert handset on switchhook

[4] Pull cover towards you about 3 inches to gain access to P1

[5] Disconnect P1 by grasping plug ring and carefully pull out, in line, as cover is removed

[6] Verify wiring on TB2 per TABLE A or TABLE B, Page 2

[7] Connect P1 of new coin cover unit to J1 of coin chassis

[8] Slide new cover into place

[9] Engage locking mechanism with 719A tool by turning tool 1/8 turn clockwise

[10] Lock 29A lock

### TABLE A

<table>
<thead>
<tr>
<th>ROTARY DIAL TELEPHONE SET CONNECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Dial</td>
</tr>
<tr>
<td>BL</td>
</tr>
<tr>
<td>BL or G</td>
</tr>
<tr>
<td>W</td>
</tr>
<tr>
<td>W</td>
</tr>
<tr>
<td>Y</td>
</tr>
<tr>
<td>Y</td>
</tr>
<tr>
<td>Handset</td>
</tr>
<tr>
<td>W</td>
</tr>
<tr>
<td>R</td>
</tr>
<tr>
<td>BK</td>
</tr>
<tr>
<td>W</td>
</tr>
<tr>
<td>Strap</td>
</tr>
</tbody>
</table>

* Terminal 14 only appears on new 60A coin dial units
† (R) switchhook lead does not appear on 819042748 (P-90D274) dial and housing assemblies
<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>TB2</th>
<th>COMPONENT</th>
<th>WIRE COLOR</th>
<th>TB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>1</td>
<td></td>
<td>Handset (Contd)</td>
<td>BK</td>
<td>6</td>
</tr>
<tr>
<td>W</td>
<td>4</td>
<td></td>
<td></td>
<td>W</td>
<td>8</td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td></td>
<td></td>
<td>BR</td>
<td>11</td>
</tr>
<tr>
<td>R-G</td>
<td>2</td>
<td></td>
<td></td>
<td>BR</td>
<td>9</td>
</tr>
<tr>
<td>BK</td>
<td>1</td>
<td></td>
<td></td>
<td>O</td>
<td>9</td>
</tr>
<tr>
<td>O-BK</td>
<td>10</td>
<td></td>
<td></td>
<td>O</td>
<td>11</td>
</tr>
<tr>
<td>O-R</td>
<td>5</td>
<td></td>
<td></td>
<td>W</td>
<td>8</td>
</tr>
<tr>
<td>W-BL</td>
<td>7</td>
<td></td>
<td></td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>O-W</td>
<td>10</td>
<td></td>
<td></td>
<td>G</td>
<td>12</td>
</tr>
<tr>
<td>V</td>
<td>13</td>
<td></td>
<td></td>
<td>S</td>
<td>12</td>
</tr>
</tbody>
</table>

| Handset   | W          | 7   |          | S-W        | 14* |
|           | R          | 3   |          | R          | 12  |

* Terminal 14 only appears on new 61A coin dial units
[1] Select protector location. See FIG. 1, NOTES 1, 2, and 3, Page 2

[2] Refer to FIG. 2 and NOTE 4, Page 3, for connections when protector is outside set

[3] Refer to FIG. 3, Page 3; FIG. 4 and 5, Page 4, for connections when protector is inside set

VERIFY PROTECTION AND GROUND CONNECTIONS
C.O.

U.G. CABLE

(A)

BOOTH STATION PROTECTION RECOMMENDED FOR ALL STATION INSTALLATIONS; HOWEVER, IF POWER IS SUPPLIED TO BUILDING OR BOOTH BY AERIAL SERVICE, STATION PROTECTOR MUST BE INSTALLED, AS IN (B) OR (C). SEE NOTES 1, 2, AND 3.

(B) U.G. CABLE

DROP OR BRIDLE

OUTSIDE PLANT SUBJECT TO POWER OR LIGHTNING. PROTECTOR AT POINT OF ENTRANCE TO BUILDING. ENSURE THAT SET IS TIED TO GROUND TERMINAL ON PROTECTOR WITH NO. 12 AWG WIRE.

*CROSS CONNECT BOX

(C) U.G. CABLE

OUTSIDE PLANT SUBJECT TO POWER OR LIGHTNING. PROTECTOR AT STATION IN BOOTH, PEDESTAL OR LAST CHOICE IN SET. (NOTE 1)

(D) U.G. CABLE

OUTSIDE PLANT SUBJECT TO POWER OR LIGHTNING. STATION PROTECTOR MUST BE INSTALLED, AS IN (C).

(E) U.G. CABLE

OUTSIDE PLANT SUBJECT TO POWER OR LIGHTNING. STATION PROTECTOR MUST BE AT POINT OF ENTRY TO BUILDING. ENSURE THAT SET IS TIED TO GROUND TERMINAL ON PROTECTOR WITH NO. 12 AWG WIRE.

F) BURIED CABLE OR WIRE

M.H.

NOTES:

1. THE PREFERRED LOCATION FOR A PROTECTOR IS AT THE POINT OF ENTRY INTO A BUILDING OR BOOTH. A PROTECTOR SHOULD BE INSTALLED IN A SET ONLY AS THE LAST RESORT. FOR ADDITIONAL INFORMATION ON STATION PROTECTOR AND SIGNALING PROTECTOR AND SIGNALING GROUNDS, SEE SECTIONS 400-100-400, 506-100-100, AND 508-100-100

2. HOUSING OF ALL OUTSIDE STATIONS MUST BE GROUNDED. IF SET IF NOT MOUNTED IN A GROUNDED ENCLOSURE, RUN A NO. 12 AWG WIRE FROM STATION TO NEAREST APPROVED GROUND

3. CARBON BLOCKS THAT BREAK DOWN PREMATURELY CAN CAUSE FAILURES OF COIN COLLECT OR REFUND. CARBON BLOCKS SHOULD BE REPLACED BY GAS TUBE PROTECTORS (123E1A) OR 118A PROTECTOR UNITS IN 129-TYPE PROTECTOR BASE.

FIG. 1 - Protection Requirements

VERIFY PROTECTION AND GROUND CONNECTIONS
VERIFY PROTECTION AND GROUND CONNECTIONS

NOTE 4
When wiring protector outside of set the maximum length of the (Y) 22 or 24 AWG IW signal ground is 125 feet
VERIFY PROTECTION AND GROUND CONNECTIONS

FIG. 4 - Protector Mounted in 1D-Type Set

FIG. 5 - Protector Mounted in 2D-Type Set
[1] Remove coin chute
[DLP-502]

[2] Remove dust cover from coin relay

[3] Disconnect (BK) and (Y) leads from relay

[4] Remove two relay mounting screws at top-front of relay. See FIG. 1, Page 2

[5] Remove two slotted hex head screws from side of relay. See FIG. 1, Page 2

[6] Check that hopper trigger is in the nonoperated (horizontal) position

[7] Pull relay off being careful not to damage hopper trigger, See NOTE 1

REPLACE COIN RELAY


[10] Press down slightly on ear of left side of selector card and manually move armature forward to its operated position. Hold armature in this position.


[12] See NOTE 3. Install and tighten evenly two mounting screws on top of coin relay and two slotted hex head mounting screws in each side of relay.


[14] Reconnect (Y) lead to terminal G and (BK) lead to terminal 3.

NOTES
2. If trigger support bracket is so distorted that mounting holes do not engage hopper bosses, relay should not be installed.
3. Two top mounting screws must be tightened first so that bosses will be properly seated.

WARNING 1
Stem of vane should not be forced into opening in cam without proper alignment. Cam can be broken very easily.
[15] Install dust cover on coin relay

[16] Install coin chute [DLP-507]

FIG. 2 - Coin Hopper and Rear View of Coin Relay

REPLACE COIN RELAY
[1] If required remove coin cover unit or open door and faceplate assembly [DLP-501]


[3] Remove coin relay dust cover

[4] See WARNING 1. Tilt selector card by pressing down on left ear and manually operate coin relay armature to maximum travel. See NOTE 1

[5] With armature fully operated, insert KS-14995, List 3 tool into hopper to operate trap to maximum travel. See FIG. 1, Page 2

NOTE 1
Coin vane moves to collect (left) position; coin trap moves downward

WARNING 1
If selector card is not tilted, jamming will occur between selector card and cam engaging surfaces

PERFORM TRAP AND VANE RELEASE TEST
[6] Release armature and slowly withdraw tool

[7] Does armature, trap, and vane return to nonoperated position

[9] Insert KS-14995, List 3 tool into hopper and apply firm downward pressure (approximately 1/2 pound) with tool on coin trap in hopper throat. Do not force down enough to damage parts

[10] Is there any perceptible movement of the coin relay armature

[11] Install a new trap lever spring [DLP-545] and return to Step 4, Page 1

No

Page 3

FIG. 1 – Trap and Vane Release Test


[15] Does armature, trap and vane return to nonoperated position

Yes

[17] Install coin relay dust cover.

No

[16] Refer to TABLE A and clear trouble. Return to Step 4, Page 1.

[18] Install coin chute [DLP-507]

NOTE 2
Coin vane moves to refund (right) position, coin trap moves downward.

WARNING 2
If selector tab is not tilted, jamming will occur between selector card and cam engaging surfaces.

PERFORM TRAP AND VANE RELEASE TEST

---

**TABLE A**

<table>
<thead>
<tr>
<th>FAILURE</th>
<th>POSSIBLE CAUSE</th>
<th>REMEDIAL ACTION</th>
<th>PROCEDURE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armature, trap, or vane does not return to normal</td>
<td>Coin relay binding</td>
<td>1. Loose mounting screws, realign relay. Tighten screws</td>
<td>DLP-538</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Replace coin relay</td>
<td></td>
</tr>
<tr>
<td>Vane does not restore properly</td>
<td>Vane binds or vane broken</td>
<td>1. Remove coin relay from hopper</td>
<td>DLP-541</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Free vane or replace vane</td>
<td>DLP-542</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Install coin relay</td>
<td>DLP-544</td>
</tr>
<tr>
<td>Trap does not operate, restore, or lock properly</td>
<td>Trap broken</td>
<td>1. Remove coin relay from hopper</td>
<td>DLP-541</td>
</tr>
<tr>
<td></td>
<td>Trap lever spring bent or broken</td>
<td>2. Replace defective apparatus</td>
<td>DLP-543</td>
</tr>
<tr>
<td></td>
<td>Trap lever broken</td>
<td>3. Install coin relay</td>
<td>DLP-544</td>
</tr>
<tr>
<td></td>
<td>Trap pin bent or broken</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

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PERFORM COIN RELAY BIAS MARGIN TEST

[1] Remove coin relay dust cover

[2] Install parking tool or patch cord [DLP-508]

[3] Go off-hook and obtain dial tone

[4] Call test desk and request bias margin test. See NOTE 1

[5] Slip 146B bias margin gauge over left pole-piece extension arm from left side of coin relay. See FIG. 1, Page 2

[6] Request deskperson to apply central office collect (or return) voltage as indicated in the lower left corner of gauge

[7] Does coin relay operate to collect (or return) coins as indicated in lower left corner of gauge

[8] Replace coin relay [DLP-538] and return to Step 3

NOTE 1
Where available central office coin test line must be used

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FIG. 1 – Bias Margin Gauge In Position
For Collect Test

PERFORM COIN RELAY BIAS MARGIN TEST
[9] Reverse 146B bias margin gauge by turning it around on the same pole-piece extension arm.

[10] Request deskperson to apply central office collect (or return) voltage as indicated in the lower left corner of gauge.

[11] Does coin relay operate to collect (or return) coins as indicated in lower left corner of gauge?


[14] Remove parking tool or patch cord.

[15] Install coin cover unit or close door and faceplate assembly [DLP-512].
(1) Disconnect (BK) and (Y) leads from relay

(2) Remove two relay mounting screws at top-front of relay, see FIG. 1

(3) Remove two slotted hex head screws from side of relay

(4) Check that hopper trigger is in nonoperated (horizontal) position

(5) Pull relay off, being careful not to damage hopper trigger

FIG. 1 - Housing and Mounting Plate Assembly

REMOVE COIN RELAY FROM HOPPER
[1] Move vane to right, FIG. 1, Page 2

[2] Move vertical portion of trap pin over boss on front of hopper and slide pin to right

[3] Turn coin trap sideways and remove through opening

[4] Remove old vane

[5] Break handle off new vane, FIG. 2, Page 2. Handle serves as hinge pin

[6] Position vane in hopper through left side opening, FIG. 3, Page 4

[7] Grasp vane with lone nose pliers, FIG. 4, Page 4

[8] Insert pin through hopper housing, FIG. 4, Page 4

[9] Slide pin through vane notches until it snaps in place

REPLACE VANE
FIG. 1 – Coin Trap and Trap Lever Assembly

FIG. 2 – 840360572 Replaceable Coin Vane
[10] Ensure that vane moves freely


[12] Place trap lever on trap pin

[13] Insert coin trap in hopper and engage trap pin in trap, FIG. 6, Page 5

[14] Install trap lever spring [DLP-545]

REPLACE VANE
FIG. 5 - Placing Trap-Lever Pin in Hopper

FIG. 6 - Placing Coin Trap in Hopper
[1] Move vane to right. See FIG. 1, Page 2

[2] Move vertical portion of trap pin over boss on front of hopper and slide pin to right

[3] Turn coin trap sideways and remove through opening

[4] Partially insert trap pin into hole in hopper. See FIG. 2, Page 2

[5] Place trap lever on trap pin

[6] Insert coin trap in hopper and engage trap pin in trap. See FIG. 3, Page 2

[7] Install trap lever spring [DLP-545]
FIG. 1 – Coin Trap and Trap Lever Assembly

FIG. 2 – Placing Trap Lever Pin in Hopper

FIG. 3 – Placing Coin Trap in Hopper

REPLACE COIN TRAP AND ASSOCIATED COMPONENTS
[1] Move coin vane to left (collect) position. See FIG. 1, Page 2.


[3] Press down slightly on ear of left side of selector card and manually move armature forward to its operated position. Hold armature in this position.

[4] See WARNING 1. Move coin relay forward until square stem on vane enters hole in CAM and mounting screw holes line up.

[5] Place and tighten evenly two mounting screws at top of coin relay and two slotted hex head mounting screws on each side.


[7] Connect (Y) lead to terminal G and (BK) lead to terminal 3.

NOTE 1
If trigger support bracket is so distorted that mounting holes do not engage hopper bosses, relay should not be installed.

WARNING 1
If stem of vane is forced into opening in cam without proper alignment, cam can be broken.

INSTALL COIN RELAY ON HOPPER
FIG. 1 - Coin Hopper and Rear View of Coin Relay

INSTALL COIN RELAY ON HOPPER
[1] Remove coin relay from hopper, if required, [DLP-541]

[2] If present remove phosphor bronze trap lever spring.

[3] See WARNING 1 and FIG. 1, move trap pin to the right so that left end of pin is flush with hopper guide. See FIG. 2, Step 1, Page 2.

[4] Holding notched left leg of new spring at an angle away from hopper, slide the right notched leg of the spring under trap pin. See FIG. 2, Step 2, Page 2.

[5] Swing loose end of spring across face of trap lever and position notch of left leg in alignment with end of trap pin. See FIG. 2, Step 3, Page 2.

[6] Push trap pin to the left, over and through the left leg notch of new spring, until trap pin detents. See FIG. 2, Step 4, Page 2.

[7] Install coin relay on hopper [DLP-544]

FIG. 1 – 840157333 Trap Lever Spring

WARNING 1
The trap lever springs may become deformed or twisted when several are intermixed together. This situation can be corrected by grasping each leg of a loose spring with one's fingers and countertwisting them until both legs are aligned properly.

INSTALL 840157333 TRAP LEVER SPRING
FIG. 2 — Installing Trap Lever Spring (Typical)

INSTALL 840157333 TRAP LEVER SPRING
[1] Operate coin release lever

[2] Is trouble cleared

Yes

[3] Remove coin cover unit (1D-type set) or open door and faceplate assembly (2D-type set) [DLP-501]


[5] See WARNING 1. Invert chute and swing upper plate assembly open and shake. See FIG. 1, Page 2

[6] See WARNING 2. Use an orange stick to clean off any foreign material adhering to chute magnets, or if possible remove stuck coins

[7] Is trouble cleared

Yes

No

Page 3

WARNINGS
1. If the quarter divider is not positioned properly, it will become damaged when the upper plate assembly is closed, the divider can be bent
2. The use of a screwdriver may damage chute. Chute assembly screws should not be loosened
FIG. 1 - Chute
[8] Remove 47A (MD) or 47A2 signal from chute [DLP-549]


Page 4

FIG. 2 - Using a 787A Dime Clearout Tool in Chute

WARNING 3

If the quarter divider is not positioned properly, it will become damaged when upper plate assembly is closed. The divider can be bent.

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CLEAR COIN CHUTE
[10] Are two dimes completely overlapped or partially overlapped [NOTE 1 and FIG. 3, Page 5]

Completely overlapped


[16] Hook face of top dime with 787A tool per Method I, FIG. 4, Page 6 and pull out

Partially overlapped

[12] Did both dimes move together

No

[13] Shake chute to allow lower dimes to fall out

Yes

[14] Insert 787A tool through the channel from below, Method III. FIG. 4, Page 6

[15] Push one dime up so that they are only partially overlapped

NOTE 1
Several conditions can be encountered with dime jams. Most jams involve only two or three dimes but others may involve as many as six dimes blocked at both ends with the top two overlapped

WARNING 4
Two overlapped dimes should not be pulled past lower dime divider leg with tool hooked on dimes edge

CLEAR COIN CHUTE
[17] Install 47A (MD) or 47A2 signal on chute [DLP-522]

[18] Install coin chute [DLP-507]

FIG. 3 - Lower Portion of Coin Chute With Six Dimes Jammed

CLEAR COIN CHUTE
FIG. 4 - Method for Removing Jammed Dimes from Chute
[1] Remove coin chute [DLP-502]

[2] Loosen two captive mounting screws. See FIG. 1, Page 2

[3] Remove signal from coin chute

[4] Place signal on coin chute making sure that sensors enter slot in chute. Be sure that short guide pins on chute mate with signal bracket holes

[5] Tighten two captive mounting screws

[6] Install coin chute [DLP-507]

REPLACE 47A (MD) OR 47A2 SIGNAL
REPLACE 47A (MD) OR 47A2 SIGNAL
[1] Remove coin chute [DLP-502]

[2] Remove coin chassis [DLP-503]

[3] Disconnect ringer leads from chassis

[4] Loosen two ringer mounting screws

[5] Lift ringer off chassis

Ringer removed

Page 2
[6] Mount ringer on chassis making sure that locating pin on bottom of ringer is in grommet on chassis.


[8] Connect ringer leads per TABLE A.

[9] Install coin chute [DLP-506]

[10] Install coin chute [DLP-507]

**TABLE A**

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>CONNECT TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Term. 15</td>
</tr>
<tr>
<td>S-R</td>
<td></td>
</tr>
<tr>
<td>BK</td>
<td>Term. 16</td>
</tr>
<tr>
<td>R</td>
<td>TB1-R</td>
</tr>
</tbody>
</table>

**REPLACE RINGER**
[1] Loosen two captive mounting screws. See FIG. 1

[2] Remove signal from chute

REMOVE 47A (MD) OR 47A2 SIGNAL FROM COIN CHUTE

FIG. 1
This is a

TASK ORIENTED PRACTICE...... or TOP

The next few pages will tell you how to use this document.

WARNING
Always be safety conscious on and off the job.

[4] Is there

[6] Adjust R16 until meter .....
HOW TO USE THIS "TOP".

This book is called a Task Oriented Practice or a "TOP." It is a type of programmed document - one which gives you step-by-step instructions of how to do a job (or task). A TOP can be a big help in your everyday work, but you must know how to use it correctly. Take a few minutes, say 15 or 20, and study these few pages until you feel you understand how to use a TOP. Taking this time now will very likely save you time and effort later on.

An important thing to remember about TOP is that it contains all the needed instructions to complete a job. If you are doing the job for the first time, you will be directed through each action without having to guess or remember where to find the necessary information. If you are experienced on a particular job, TOP can provide just that information which you may have forgotten.

Almost all of your jobs can be classified into one of four types - Routine, Acceptance, Company Order, or Trouble Clearing. This is how TOP defines these four work types:

Routine

that work you do as part of a Controlled Maintenance Plan like scheduled cleaning or scheduled tests. Routine work may also include those things you do as a "routine" part of your job like requesting a TTY printout or turning on equipment in the mornings and off in the evenings.

Acceptance

that work you do to verify that equipment is installed properly. Normally this is a test or inspection you perform when Western Electric has completed a new installation or addition. It could also be a test you perform when another group from your Company has completed an installation or addition of equipment. Acceptance work, however, is always related to testing or checking newly installed equipment.

Company Order

that work you do in response to one of several different "orders" which may be given to you. Some of the orders you may be familiar with are Circuit Orders, Service Orders, Traffic Orders, Recent Change Orders, etc. Normally, company order type work is something done to install, establish, change, or discontinue some service offered by the telephone company.

Trouble Clearing

is simply what it says - that work you do to clear and repair troubles in the system. Trouble clearing may be done in answering a customer complaint, responding to some office alarm, an abnormal TTY printout, etc.

Try to fix these four work types firmly in your mind. As you will see, you must classify each job you get in one of these four types before you will be able to look up the instructions in the TOP.

Now glance briefly at the front cover; there are several things which will be useful there. In the upper-right corner is the 9-digit volume number. Near the center is the volume title which tells you something about the contents - such things as the system (or subsystem) name and perhaps the type of jobs included in the volume. Next is a four-line index located in the lower-left corner. This index provides the location of four "lists" which are simply a listing of all the jobs in each of the four job types. If a nine-digit (XXX-XXX-XXX) number appears on
the front cover index, that particular list is located in another volume of the TOP. A three-digit number on the line means that the list is in this volume, and the list can be located by searching the lower-right corner of each page for the referenced number.

These numbers will always be arranged in numerical order; however, all numbers in the sequence will not be used.

Some TOP volumes may cover only a small part of a system, so on the inside of each front cover you will find a documentation plan. This plan will give a bird's-eye view of all the volumes in the TOP and can help you quickly determine the correct volume.

Locate one of the TOP volumes which contains a Company Order List, and note from the front cover that this list is numbered "050." Turn to that number in the TOP.

This Company Order List (COL) is simply a listing of all the Circuit Order jobs, Service Order jobs, etc, that may be done on this system. Once you know the job you have to do, use the lists as an index to find the number of the "procedure" which tells you what to do to complete that job.

Now pick one of these jobs from the list which references to a COP (Company Order Procedure), and using the referenced number, locate that procedure in the TOP. Look over this procedure and note that it gives all the items which must be done to complete the job.

The items are numbered and must be completed in that order; however, you may see some lettered (A, B, C...) items in the procedure. These letters are assigned to options or other items which may be done differently because of equipment variations, etc. Look over the following example to get a better idea of what is meant by the numbers (1, 2, 3...) and letters (A, B, C...) which may be used in the procedure.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SUBTASKS</th>
<th>PROCEDURE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do the first thing first</td>
<td>DLP-XXX</td>
</tr>
<tr>
<td>2</td>
<td>Do the second item next</td>
<td>DLP-XXX</td>
</tr>
<tr>
<td>3</td>
<td>Do the following optional items as required by the Company Order or as is required by the system you are working on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. An optional item</td>
<td>DLP-XXX</td>
</tr>
<tr>
<td></td>
<td>B. Another optional item</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>C. Another optional item which must be done in the sequence below</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. First part of Option &quot;C&quot;</td>
<td>DLP-XXX</td>
</tr>
<tr>
<td></td>
<td>2. Last part of Option &quot;C&quot;</td>
<td>DLP-XXX</td>
</tr>
<tr>
<td>4</td>
<td>Do the next part of the job</td>
<td>DLP-XXX</td>
</tr>
<tr>
<td>5</td>
<td>Do the last part of the job</td>
<td>DLP-XXX</td>
</tr>
</tbody>
</table>

Remember that this procedure tells you what to do in order to complete the total job. If you know how to do an item in the procedure, you should go ahead and complete it. If you need further information on how to do part of the job, then you should turn to the referenced DLP or Detail Level Procedure. When you complete all the steps in the DLP, then you must turn back to the COP or Company Order Procedure to find the next item to be done.
TOP is designed so that you will have to read only what is necessary to get your job done. At any time when you know how to perform all the steps in an item, it is not necessary to look further for the "how to" information — simply complete the item and go on to the next one. This idea, in TOP, is known as "bypassing."

Here are some of the things designed into TOP to help you "bypass" information you may already know:

**Summary Statement**

A summary statement is used with a DLP (or the flowcharted procedures). It tells you briefly what the procedure does and what type measurement or result can be observed. After reading the summary, you may be able to complete the procedure without reading further. Some shorter DLPs, of course, do not have summary statements.

**Result Statement**

A result statement may be used in a flowcharted procedure along with the "AND" symbol. Here is an example of the "AND" symbol and a result statement:

1. Notify system controller that standby power unit is to be taken off-line
2. At Control Panel, rotate switch ACO to OFF-NORM position
3. Depress OFF-LINE switch

The support procedure (DLP-591) would provide information about how to operate the TMS-1A. Of course, if you are familiar with the TMS-1A, there is no reason to look up DLP-591.

So far, the Company Order type jobs have been the main topic; however, you will find that the Routine and Acceptance categories are used in the same manner. You may come across a couple of new abbreviations in those categories, namely, Acceptance Task Procedure (ATP) and Routine Task Procedure (RTP). These categories are used in the same way that the Company Order Procedure (COP) is used in the Company Order work.
While using TOP, you probably will run across a reference similar to this:

```
  Yes

No

TAP-XXX
```

This reference to TAP-XXX indicates that the equipment is not operating correctly and the TAP ( Trouble Analysis Procedure ) should be used to help you find and repair the trouble.

This idea can be carried further. In some cases, a decision block may have more than one abnormal output. This simply means that you should try more than one solution to the problem. See the example below.

```
[5] Does meter indicate more than 11.1 dB

Yes

No

When the meter reading is found to be incorrect, the first action is to adjust the A22 repeater

No

If the problem still exists, TAP-123 should be used to clear the trouble

TAP-123

```

Trouble clearing information in TOP is basically used the same way as the other types. When a trouble report or equipment alarm requires you to troubleshoot a system, the Trouble Indicator List (TIL) is the place to start. This (TIL) is a listing of trouble symptoms or alarms with a reference to a Trouble Analysis Procedure (TAP). The TAP is an aid in analyzing and locating the cause of the trouble. The TAP may reference to other information such as a Trouble Analysis Data (TAD) or an Isolation Diagram (ISD) as an aid in the trouble clearing process.

Any job must always be done safely and it is no different with TOP. Here are three items which you should look for in TOP:

- **DANGER**
  - means there is a possibility of personal injury

- **CAUTION**
  - means there is a possibility of service interruption

- **WARNING**
  - means there is a possibility of equipment damage

The last page of this introductory section is a diagram which shows all the elements used to make up a TOP and basically how they are organized to make a complete document. The diagram may, at first, seem to be complex; but remember, TOP is a programmed document and it always tells you where to find the next bit of information required to do the job. The diagram, however, may be useful later if you need to know the words which DLP, TAP, etc, represent or simply a memory jogger about TOP in general.

While using any TOP, if you find errors, or if a procedure is inadequate or missing, your comments are greatly needed. They may be forwarded by using the standard form E3973 which is available through your Company. Thank you for helping us prepare better documentation.
TROUBLE ANALYSIS PROCEDURE

WHERE to find the information

WHAT has to be done to complete the job

HOW to complete the job

ROUTINE

ACCEPTANCE

COMPANY ORDER

TROUBLE CLEARING

ROUTINE TASK LIST

ACCEPTANCE TASK LIST

COMPANY ORDER LIST

TROUBLE INDICATOR LIST

ROUTINE TASK PROCEDURE

ACCEPTANCE TASK PROCEDURE

COMPANY ORDER PROCEDURE

TROUBLE ANALYSIS PROCEDURE

DETAIL LEVEL PROCEDURES

ISOLATION DIAGRAM

TROUBLE ANALYSIS DATA