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<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYSTEM OVERVIEW</strong></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>1-1</td>
</tr>
<tr>
<td>System Capacities</td>
<td>1-2</td>
</tr>
<tr>
<td>Feature Availability</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>STATION EQUIPMENT</strong></td>
<td></td>
</tr>
<tr>
<td>Station Availability</td>
<td>2-1</td>
</tr>
<tr>
<td>Electronic Telephones</td>
<td>2-2</td>
</tr>
<tr>
<td>Digital Telephones</td>
<td>2-8</td>
</tr>
<tr>
<td>Data Interface Units</td>
<td>2-12</td>
</tr>
<tr>
<td>Door Phone/Monitor Station</td>
<td>2-14</td>
</tr>
<tr>
<td>Standard Single Line Telephone</td>
<td>2-16</td>
</tr>
<tr>
<td>Voice Mail Ports and Other Devices</td>
<td>2-18</td>
</tr>
<tr>
<td>Electronic DSS Console</td>
<td>2-19</td>
</tr>
<tr>
<td>Digital DSS Console</td>
<td>2-23</td>
</tr>
<tr>
<td><strong>SYSTEM FEATURES</strong></td>
<td></td>
</tr>
<tr>
<td>1A2 Key System Interface</td>
<td>3-1</td>
</tr>
<tr>
<td>Account Codes</td>
<td>3-2</td>
</tr>
<tr>
<td>Alarm Sensor</td>
<td>3-4</td>
</tr>
<tr>
<td>Alternate Point Answer</td>
<td>3-5</td>
</tr>
<tr>
<td>Amplified Conference</td>
<td>3-6</td>
</tr>
<tr>
<td>Automated Attendant</td>
<td>3-7</td>
</tr>
<tr>
<td>Automatic Hold/Automatic Release (Hold/Split)</td>
<td>3-8</td>
</tr>
<tr>
<td>Automatic Hold Recall</td>
<td>3-9</td>
</tr>
<tr>
<td>Automatic Release from Hold</td>
<td>3-10</td>
</tr>
<tr>
<td>Automatic Station Relocation</td>
<td>3-11</td>
</tr>
<tr>
<td>Auxiliary Device Interface</td>
<td>3-13</td>
</tr>
<tr>
<td>Background Music with Station Control</td>
<td>3-14</td>
</tr>
<tr>
<td>Busy Station Ringing</td>
<td>3-15</td>
</tr>
<tr>
<td>Centrex/PBX Compatibility</td>
<td>3-16</td>
</tr>
<tr>
<td>Centrex Ringing Repeat</td>
<td>3-17</td>
</tr>
<tr>
<td>CO Line Call Pickup Groups</td>
<td>3-18</td>
</tr>
<tr>
<td>CO Line Groups</td>
<td>3-19</td>
</tr>
<tr>
<td>CO Line Queuing</td>
<td>3-20</td>
</tr>
<tr>
<td>Conferencing</td>
<td>3-21</td>
</tr>
<tr>
<td>Credit Card Calling (&quot;0 +&quot; Dialing)</td>
<td>3-23</td>
</tr>
<tr>
<td>Data Switching</td>
<td>3-24</td>
</tr>
<tr>
<td>Delayed Ringing</td>
<td>3-25</td>
</tr>
<tr>
<td>Direct Inward System Access (DISA)</td>
<td>3-26</td>
</tr>
<tr>
<td>Distinctive CO Line/Intercom Ringing</td>
<td>3-27</td>
</tr>
<tr>
<td>Door Lock Control</td>
<td>3-28</td>
</tr>
<tr>
<td>Door Phones</td>
<td>3-29</td>
</tr>
<tr>
<td>DSS Console</td>
<td>3-30</td>
</tr>
<tr>
<td>DTMF and Dial Pulse CO Line Compatible</td>
<td>3-31</td>
</tr>
<tr>
<td>DTMF Signal Time Continuous</td>
<td>3-32</td>
</tr>
<tr>
<td>DTMF Signal Time Setting</td>
<td>3-33</td>
</tr>
<tr>
<td>Dual FCC Registration</td>
<td>3-34</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>PAGE</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>SYSTEM FEATURES (cont.)</td>
<td></td>
</tr>
<tr>
<td>Flexible Line Ringing Assignment</td>
<td>3-39</td>
</tr>
<tr>
<td>Flexible Slot Assignment</td>
<td>3-40</td>
</tr>
<tr>
<td>Least Cost Routing</td>
<td>3-41</td>
</tr>
<tr>
<td>Live System Programming</td>
<td>3-42</td>
</tr>
<tr>
<td>Memory Protection</td>
<td>3-43</td>
</tr>
<tr>
<td>Message Waiting</td>
<td>3-44</td>
</tr>
<tr>
<td>Multiple Simultaneous Handsfree Intercom Paths</td>
<td>3-45</td>
</tr>
<tr>
<td>Music-on-Hold Interface</td>
<td>3-46</td>
</tr>
<tr>
<td>Music-on-Hold Source</td>
<td>3-47</td>
</tr>
<tr>
<td>Night Ringing Answer Code</td>
<td>3-48</td>
</tr>
<tr>
<td>Night Ringing over External Page</td>
<td>3-49</td>
</tr>
<tr>
<td>Night Ringing over Selected Page Zones</td>
<td>3-50</td>
</tr>
<tr>
<td>Night Transfer (Day/Night Modes)</td>
<td>3-51</td>
</tr>
<tr>
<td>Non-blocking Dialing</td>
<td>3-52</td>
</tr>
<tr>
<td>Off-premises Line</td>
<td>3-53</td>
</tr>
<tr>
<td>Off-premises Station</td>
<td>3-54</td>
</tr>
<tr>
<td>Outgoing Call Restriction</td>
<td>3-55</td>
</tr>
<tr>
<td>Paging—All Call Voice Page</td>
<td>3-56</td>
</tr>
<tr>
<td>Paging—External Page Interface</td>
<td>3-57</td>
</tr>
<tr>
<td>Paging—External Zone Paging</td>
<td>3-58</td>
</tr>
<tr>
<td>Paging—Group Paging</td>
<td>3-59</td>
</tr>
<tr>
<td>Pooled CO Lines</td>
<td>3-60</td>
</tr>
<tr>
<td>Power Failure Transfer</td>
<td>3-61</td>
</tr>
<tr>
<td>Privacy/Non-privacy Option</td>
<td>3-62</td>
</tr>
<tr>
<td>Relay Service for External Page or Door Lock</td>
<td>3-63</td>
</tr>
<tr>
<td>Relay Service for Night/Hold</td>
<td>3-64</td>
</tr>
<tr>
<td>Remote Administration/Maintenance</td>
<td>3-65</td>
</tr>
<tr>
<td>Station Hunting</td>
<td>3-66</td>
</tr>
<tr>
<td>Station Message Detail Recording (SMDR)</td>
<td>3-67</td>
</tr>
<tr>
<td>System Battery Backup Interface</td>
<td>3-69</td>
</tr>
<tr>
<td>System Programming Through Station</td>
<td>3-70</td>
</tr>
<tr>
<td>System Speed Dial</td>
<td>3-71</td>
</tr>
<tr>
<td>Tandem CO Line Connection (Trunk-to-Trunk)</td>
<td>3-73</td>
</tr>
<tr>
<td>Tenant Service</td>
<td>3-74</td>
</tr>
<tr>
<td>TIE Lines</td>
<td>3-75</td>
</tr>
<tr>
<td>Toll Restriction</td>
<td>3-76</td>
</tr>
<tr>
<td>Toll Restriction Override Codes</td>
<td>3-78</td>
</tr>
<tr>
<td>Toll Restriction Override by System Speed Dial</td>
<td>3-79</td>
</tr>
<tr>
<td>Transfer Privacy</td>
<td>3-80</td>
</tr>
<tr>
<td>Traveling Class of Service</td>
<td>3-81</td>
</tr>
<tr>
<td>Voice Mail Interface</td>
<td>3-82</td>
</tr>
<tr>
<td>Voice or Tone Signaling</td>
<td>3-83</td>
</tr>
<tr>
<td>Wall or Table Mounting</td>
<td>3-84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATION FEATURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Busy Redial</td>
<td>4-1</td>
</tr>
<tr>
<td>Automatic Callback (Intercom)</td>
<td>4-2</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>PAGE</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Call Forward</td>
<td>4-6</td>
</tr>
<tr>
<td>Call Park</td>
<td>4-8</td>
</tr>
<tr>
<td>Call Pickup</td>
<td>4-9</td>
</tr>
<tr>
<td>Call Transfer with Camp-on</td>
<td>4-10</td>
</tr>
<tr>
<td>Centrex/PBX Feature Buttons</td>
<td>4-11</td>
</tr>
<tr>
<td>Direct Station Selection (DSS) Buttons</td>
<td>4-12</td>
</tr>
<tr>
<td>Distinctive LED Indicators</td>
<td>4-13</td>
</tr>
<tr>
<td>Distinctive Station Ringing</td>
<td>4-14</td>
</tr>
<tr>
<td>Do Not Disturb</td>
<td>4-15</td>
</tr>
<tr>
<td>Do Not Disturb Override (Break-in)</td>
<td>4-16</td>
</tr>
<tr>
<td>DP DTMF Mode Change (Tone Button)</td>
<td>4-17</td>
</tr>
<tr>
<td>Exclusive Hold</td>
<td>4-18</td>
</tr>
<tr>
<td>Executive Override (Break-in)</td>
<td>4-19</td>
</tr>
<tr>
<td>Flash Button</td>
<td>4-20</td>
</tr>
<tr>
<td>Handsfree Answerback on Intercom</td>
<td>4-21</td>
</tr>
<tr>
<td>Hearing Aid Compatible</td>
<td>4-22</td>
</tr>
<tr>
<td>LCD—Alphanumeric Messaging</td>
<td>4-23</td>
</tr>
<tr>
<td>LCD—Busy Station Messaging</td>
<td>4-24</td>
</tr>
<tr>
<td>LCD—Called Station Messaging</td>
<td>4-25</td>
</tr>
<tr>
<td>LCD—Calling Station Messaging</td>
<td>4-26</td>
</tr>
<tr>
<td>LCD—Remote/Group Station Messaging</td>
<td>4-27</td>
</tr>
<tr>
<td>LCD—Automatic Callback Number Display</td>
<td>4-28</td>
</tr>
<tr>
<td>LCD—Busy Lamp Field (BLF) Indication</td>
<td>4-29</td>
</tr>
<tr>
<td>LCD—Call Duration Display</td>
<td>4-31</td>
</tr>
<tr>
<td>LCD—Call Forward Source/Destination Display</td>
<td>4-32</td>
</tr>
<tr>
<td>LCD—Calling/Called Number Display</td>
<td>4-33</td>
</tr>
<tr>
<td>LCD—Clock/Calendar Display</td>
<td>4-34</td>
</tr>
<tr>
<td>LCD—CO Line Identification</td>
<td>4-35</td>
</tr>
<tr>
<td>LCD—Dialed Number Display</td>
<td>4-36</td>
</tr>
<tr>
<td>LCD—Feature Promoting with Soft Key Operation</td>
<td>4-37</td>
</tr>
<tr>
<td>LCD—Intercom Name/Number Display</td>
<td>4-38</td>
</tr>
<tr>
<td>LCD—Message Waiting Station Display</td>
<td>4-39</td>
</tr>
<tr>
<td>LCD—Recalling Station Identification</td>
<td>4-40</td>
</tr>
<tr>
<td>LCD—Speed Dial Memo Directory Dialing</td>
<td>4-41</td>
</tr>
<tr>
<td>LCD—Station Identification</td>
<td>4-42</td>
</tr>
<tr>
<td>LCD—Timed Reminders</td>
<td>4-43</td>
</tr>
<tr>
<td>Message Waiting/Flash</td>
<td>4-44</td>
</tr>
<tr>
<td>Microphone Control Button</td>
<td>4-45</td>
</tr>
<tr>
<td>Modular Handset and Line Cords</td>
<td>4-46</td>
</tr>
<tr>
<td>Modular Headset</td>
<td>4-47</td>
</tr>
<tr>
<td>Off-hook Call Announce</td>
<td>4-48</td>
</tr>
<tr>
<td>On-hook Dialing</td>
<td>4-49</td>
</tr>
<tr>
<td>Pooled CO Line Buttons</td>
<td>4-50</td>
</tr>
<tr>
<td>Privacy Button</td>
<td>4-51</td>
</tr>
<tr>
<td>Privacy Release Button</td>
<td>4-52</td>
</tr>
<tr>
<td>Privacy Override</td>
<td>4-53</td>
</tr>
<tr>
<td>Private CO Lines</td>
<td>4-54</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

## STATION FEATURES (cont.)
- Repeat Last Number Dialed ................................................................. 4-58
- Ringing Line Preference ...................................................................... 4-59
- Saved Number Redial ......................................................................... 4-60
- Speed Dial Buttons ............................................................................ 4-61
- Station Speed Dial ............................................................................. 4-62
- Timed Reminder ................................................................................ 4-63
- Toll Restriction Override Code Revision ........................................... 4-64
- User Programmable Feature Buttons ................................................ 4-65

## ACD/MIS FEATURES

### Description
- ACD System Features ........................................................................ 5-1
- Overview ........................................................................................ 5-3
- After Call Work Time ........................................................................ 5-3
- After Shift Service ............................................................................ 5-3
- Call Distribution ................................................................................ 5-3
- Data Collection and Reporting ........................................................... 5-3
- Delay Announcements and Music ....................................................... 5-4
- Inbound Call Routing ......................................................................... 5-4
- Overflow to Another ACD Group ....................................................... 5-4
- Queuing ........................................................................................... 5-4

### ACD Agent Feature
- ACD Call Status Display .................................................................. 5-5
- Overview ........................................................................................ 5-5
- Assistance ...................................................................................... 5-5
- Auto-answer and Zip Tone ................................................................. 5-5
- Intra-group Call Pickup ...................................................................... 5-5
- Login/Loginout ................................................................................ 5-5
- Remote Login/Loginout .................................................................... 5-5
- Ring State Preselection ..................................................................... 5-5
- Unavailable ..................................................................................... 5-5
- Work Unit (Stroke Count, Call Record Identifier) .............................. 5-6

### ACD Supervisor Feature
- Overview ........................................................................................ 5-7
- Agent Assistance ............................................................................. 5-7
- Agent Monitoring ............................................................................ 5-7
- Alarm Indication .............................................................................. 5-7
- MIS Access ..................................................................................... 5-7

### MIS Displays
- Overview ........................................................................................ 5-8
- Agent Statistics ............................................................................... 5-8
- Agent Status ................................................................................... 5-8
- Group Traffic Monitor ....................................................................... 5-8
# Table of Contents

## ACD/MIS Features (cont.)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS Reports</td>
<td>5-9</td>
</tr>
<tr>
<td>Overview</td>
<td>5-9</td>
</tr>
<tr>
<td>Agent Performance</td>
<td>5-9</td>
</tr>
<tr>
<td>Agent Statistics</td>
<td>5-9</td>
</tr>
<tr>
<td>Delayed Call</td>
<td>5-9</td>
</tr>
<tr>
<td>Group Overflow</td>
<td>5-10</td>
</tr>
<tr>
<td>Incoming Call Duration</td>
<td>5-10</td>
</tr>
<tr>
<td>Lost Call</td>
<td>5-10</td>
</tr>
<tr>
<td>Supervisor Group</td>
<td>5-10</td>
</tr>
<tr>
<td>System Status</td>
<td>5-10</td>
</tr>
<tr>
<td>Work Unit (Stroke Count, Call Record Identifier)</td>
<td>5-11</td>
</tr>
</tbody>
</table>

## Index

Index-1

## Figure List

<table>
<thead>
<tr>
<th>Figure</th>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Electronic Telephone Diagram</td>
<td>2-2</td>
</tr>
<tr>
<td>2-2</td>
<td>Digital Telephone Diagram</td>
<td>2-8</td>
</tr>
<tr>
<td>2-3</td>
<td>Integrated DIU</td>
<td>2-12</td>
</tr>
<tr>
<td>2-4</td>
<td>Stand-alone DIU</td>
<td>2-13</td>
</tr>
<tr>
<td>2-5</td>
<td>Door Phone</td>
<td>2-14</td>
</tr>
<tr>
<td>2-6</td>
<td>Electronic DSS Console</td>
<td>2-20</td>
</tr>
<tr>
<td>3-1</td>
<td>SMDR Output—Outgoing Call</td>
<td>3-67</td>
</tr>
<tr>
<td>3-2</td>
<td>SMDR Output—Incoming Call</td>
<td>3-68</td>
</tr>
</tbody>
</table>

## Table List

<table>
<thead>
<tr>
<th>Table</th>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>STRATA System Capacities</td>
<td>1-2</td>
</tr>
<tr>
<td>1-2</td>
<td>STRATA Features</td>
<td>1-3</td>
</tr>
<tr>
<td>2-1</td>
<td>STRATA Station Availability Chart</td>
<td>2-1</td>
</tr>
</tbody>
</table>
STRATA

System Overview
DESCRIPTION

The STRATA family of telephone systems consists of the STRATA S<sub>e</sub> and the STRATA DK series.

NOTE: This manual applies to Release 2 of STRATA S<sub>e</sub>, DK16, and Release 4 of STRATA DK 24/56/96.

STRATA S<sub>e</sub>  
The STRATA S<sub>e</sub> is an advanced electronic key telephone systems designed to function in a variety of situations. It is electrically compatible with the public telephone network and can also be applied in "behind PBX" or "behind Centrex" environments.

STRATA S<sub>e</sub> has a maximum capacity of three incoming lines and eight stations.

STRATA DK  
The STRATA DK series includes four models—STRATA DK16, DK24, DK56, and DK96. All four models are digital key telephone systems that are electrically compatible with the public telephone network and can function in PBX or Centrex environments. Each system can be configured as key or hybrid, with separate Federal Communications Commission registration numbers for each type.

The functional difference between models is primarily one of capacity. STRATA DK16 can be configured for maximum capacity of 20 stations and 8 CO lines. STRATA DK 24 can be configured in possible combinations extending from 32 stations and 8 CO lines to a square system of 16 x 16. STRATA DK56 can be configured in possible combinations extending from 56 stations and 4 CO lines to 24 stations and 20 CO lines. STRATA DK 96 combinations extend from 96 stations and 8 CO lines to 40 stations and 36 CO lines.
**System Capacities**

**SYSTEM OVERVIEW**

**SYSTEM CAPACITIES**  Refer to the following table for an overview of system capacities.

<table>
<thead>
<tr>
<th></th>
<th>S8 _ Rel 2</th>
<th>DK16</th>
<th>DK24</th>
<th>DK56</th>
<th>DK96</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO Lines</td>
<td>2-3</td>
<td>4-8</td>
<td>4-16</td>
<td>4-20</td>
<td>4-36</td>
</tr>
<tr>
<td>Stations</td>
<td>4-8</td>
<td>8-20</td>
<td>8-32</td>
<td>8-56</td>
<td>8-96</td>
</tr>
<tr>
<td>Intercom Paths</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door Phones</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Door Locks</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Auxiliary Devices</td>
<td>4</td>
<td>12</td>
<td>32</td>
<td>56</td>
<td>96</td>
</tr>
<tr>
<td>Electronic Phones</td>
<td>8</td>
<td>8</td>
<td>32</td>
<td>56</td>
<td>96</td>
</tr>
<tr>
<td>Digital Phones</td>
<td>N/A</td>
<td>16</td>
<td>32</td>
<td>56</td>
<td>96</td>
</tr>
<tr>
<td>Standard Phones</td>
<td>4</td>
<td>12</td>
<td>32</td>
<td>56</td>
<td>96</td>
</tr>
<tr>
<td>Personal Message EKTs</td>
<td>4</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
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Table 1-1
STRATA System Capacities
Feature Availability

Refer to the following table for a summary of features and services that are available for various STRATA systems.

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<th>System Features</th>
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Table 1-2
STRATA Features
## Feature Availability

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Table 1-2
STRATA Features (continued)

1-4
### Feature Availability

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**LCD Features**

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**Station Features**

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Table 1-2
STRATA Features (continued)
### Feature Availability

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Table 1-2

STRATA Features (continued)
## Feature Availability

### Station Features (continued)

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<tbody>
<tr>
<td>Off-hook Call Announce</td>
<td>OPT</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>On-hook Dialing</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Pooled Line Buttons</td>
<td>N/A</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Privacy Button</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Privacy Release Button</td>
<td>N/A</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Private CO Lines</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Release Button</td>
<td>N/A</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Remote Retrieval of Held Calls</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Repeat Last Number Dialed</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Ringing Line Preference</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Saved Number Redial</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Speakerphone</td>
<td>OPT</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Station Speed Dial</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Trunk Queuing</td>
<td>STD</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>Two Color LEDs</td>
<td>N/A</td>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>User Programmable Feature Buttons</td>
<td>N/A</td>
<td>STD</td>
<td>STD</td>
</tr>
</tbody>
</table>

### Data Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Strata S3</th>
<th>DK16</th>
<th>DK Rel 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Switching (DIU)</td>
<td>N/A</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Data Button on DKT</td>
<td>N/A</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Data Release Button on DKT</td>
<td>N/A</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Keyboard Dialing of Data Calls</td>
<td>N/A</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Modem Pooling</td>
<td>N/A</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Printer Sharing</td>
<td>N/A</td>
<td>OPT</td>
<td>OPT</td>
</tr>
<tr>
<td>Security Groups</td>
<td>N/A</td>
<td>4-GROUPS</td>
<td>4-GROUPS</td>
</tr>
</tbody>
</table>

Legend:  
STD = Standard Feature  
OPT = Optional Feature  
N/A = Not Available

Table 1-2
STRATA Features (continued)
STRATA
Station Equipment
SUBJECT

Station Availability ........................................................................................................... 2-1
Electronic Telephones ....................................................................................................... 2-2
Digital Telephones ........................................................................................................... 2-8
Data Interface Units ......................................................................................................... 2-12
Door Phone/Monitor Station ......................................................................................... 2-14
Standard Single Line Telephone .................................................................................... 2-16
Voice Mail Ports and Other Devices ............................................................................. 2-18
Electronic DSS Console ................................................................................................. 2-19
Digital DSS Console ....................................................................................................... 2-23

FIGURE LIST

FIGURE

SUBJECT

PAGE

2-1  Electronic Telephone Diagram .................................................................................. 2-2
2-2  Digital Telephone Diagram ...................................................................................... 2-8
2-3  Integrated DIU ........................................................................................................... 2-12
2-4  Stand-alone DIU ....................................................................................................... 2-13
2-5  Door Phone ............................................................................................................... 2-14
2-6  Electronic DSS Console ............................................................................................ 2-20

TABLE LIST

TABLE

SUBJECT

PAGE

2-1  STRATA Station Availability Chart ........................................................................... 2-1
# Station Availability

## STRATA DK

Refer to the following table for a summary of the types of station equipment that are available for various STRATA systems.

<table>
<thead>
<tr>
<th>2000-SERIES DIGITAL TELEPHONES</th>
<th>STRATA DK8</th>
<th>STRATA DK16</th>
<th>RCTU-A</th>
<th>RCTU-B</th>
<th>RCTU-C/D</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-button Digital Telephone with Handsfree Answerback (DKT-2010-H)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>10-button Digital Speakerphone with Liquid Crystal Display (DKT-2010-SD)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>20-button Digital Speakerphone (DKT-2020-S)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>20-button Digital Speakerphone with Liquid Crystal Display (DKT-2020-SD)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### ANSWER POSITION

<table>
<thead>
<tr>
<th>Attendant Console</th>
<th>N/A</th>
<th>N/A</th>
<th>N/A</th>
<th>✓</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-button Add-on Module (DADM2020)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>60-button Digital DSS Console (DDSS-2060)</td>
<td>N/A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### PERIPHERALS

<table>
<thead>
<tr>
<th>Data Interface Unit Integrated (PDIU-DI2)</th>
<th>✓</th>
<th>✓</th>
<th>✓</th>
<th>✓</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Interface Unit Stand-alone (PDIU-DS)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Door Phone/Monitor Station (MDFB)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Standard Single Line Telephone</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ = Equipment can be used on this system.  
N/A = Equipment is not available on this system.

Table 2-1  
STRATA Station Availability Chart
Digital Telephones

DESCRIPTION

The 2000-series digital telephone is pictured below. Digital telephones can be used on DK8, DK16, or DK280 systems. They are connected to the DK system with a single pair modular line cord. When equipped with an integrated data interface unit, digital telephones can transmit and receive simultaneous voice and data.

There are four models of the 2000-series digital telephone.

10-button Telephone with Handsfree Answerback

This telephone is equipped with a unit that allows handsfree answerback on intercom calls only.

10-button Speakerphone with Liquid Crystal Display (LCD)

This telephone has a full speakerphone and a 32-character alphanumeric Liquid Crystal Display (LCD). All display functions occur automatically as call processing proceeds. A description of the features of the LCD telephone is found in the Station Features section of this manual.

20-button Speakerphone

This telephone has a full speakerphone, allowing two-way handsfree conversation on both intercom and outside line calls.
Digital Telephones

20-button Speakerphone with LCD Display

This telephone has a full speakerphone and a 32-character alphanumeric Liquid Crystal Display. All display functions occur automatically as call processing proceeds. A description of the features of the LCD telephone is found in the Station Features section of this manual.

PHYSICAL CHARACTERISTICS

Dialing Pad

The push button dialing pad on the 2000-series Digital telephones is large and easy to use. The ideal size not only provides easier operation but minimizes dialing errors. The push button keys generate electronic signals that are neither DTMF nor rotary. Signals sent by the phone to the KSU are translated by the system into DTMF or rotary dial signals as required by the serving Central Office.

LEDs

Each of the line/feature keys on a digital phone has an associated two-color LED. If a key is assigned to a CO/Centrex/PBX line, the LED provides an indication of the status of that line. Green indicates the line or intercom buttons you are using, and red indicates use by someone else. (See the Station User Guide for a detailed explanation of LED signals.)

If a key is assigned to a feature, the LED indicates the status of the feature. For example, the LED associated with the “Do-Not-Disturb” key lights when the DND feature has been activated on the station.

LEDs are also associated with three of the six dedicated feature keys. On the “Msg” key, a lighted LED indicates that a message is waiting for the station. The “Spkr” LED indicates the on/off status of the speaker or background music. The “Mic” LED indicates the on/off status of the station’s microphone.

Volume Controls

Two electronic volume control buttons are conveniently located below the dialing pad on the 2000-series digital telephone. These keys adjust all volume functions of the telephone including the ring, speaker, handset, and muted tone burst levels.

Modular Handset and Line Cords

A digital telephone is equipped with a modular handset and line cord, and is connected to the system via 1-pair wiring.

Optional Hardware

A digital telephone can be upgraded with the integrated data interface unit (PDIU-DI2), which enables it to transmit and receive simultaneous voice and data. The PDIU-DI2 replaces the standard base of the digital telephone, with a unit of the same size and shape.

To receive Off-Hook Call Announce, a digital telephone must be equipped with a DVSU upgrade assembly, which is installed in the base of the telephone. No special equipment is required for digital telephones to originate Off-Hook Call Announce. (See “Off Hook Call Announce” in the Station Features section of this manual for further details.)

To have a loud ringing bell and/or a modular headset, a digital telephone must be equipped with the Headset Control Unit (HHEU2) upgrade assembly. The HHEU2 mounts inside the telephone, providing a headset.
Digital Telephones

jack and an interface to an external speaker amplifier (HESB) for a loud ringing bell. A HESC-65A cable is required to connect the telephone (HHEU2) to the external speaker (HESB).

A digital telephone that has been upgraded with a data interface unit (PDIU-DI2) cannot be wall mounted or upgraded with the DVSU for Off-Hook Call Announce. The data interface unit can coexist with the HHEU2 for a headset or a loud bell, which was not possible with the previous DKT-1000 digital telephone.

<table>
<thead>
<tr>
<th>Color</th>
<th>All digital telephones come in a stylish charcoal gray or ash white color with a non-glare, matte finish.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from KSU</td>
<td>A digital telephone set can be up to 1000 feet from the KSU. This may vary according to the type of wiring used. A local external power supply may be used to ensure 1000 feet with options.</td>
</tr>
<tr>
<td>Mounting</td>
<td>A digital telephone can be wall mounted, unless the set has been upgraded with a data interface unit.</td>
</tr>
<tr>
<td>Hearing Aid Compatible</td>
<td>All digital telephones are hearing aid compatible.</td>
</tr>
<tr>
<td>Memo Tray</td>
<td>A memo tray slides out from the bottom front of the telephone, and can hold an easy to read directory sheet.</td>
</tr>
</tbody>
</table>
## Digital Telephones

### STRATA DK STATION EQUIPMENT

#### BUTTON ASSIGNMENTS

**FIXED BUTTONS**

All digital telephones are equipped with six permanently dedicated feature buttons, called fixed buttons. These six buttons are used for the following functions:

- **Spkr** (Speaker On/Off button with LED indicator)
  - Turns the speaker on and off. In on-hook dialing, can pick up line or hang up.

- **Mic** (Microphone button with LED indicator)
  - Cuts off the microphone during speakerphone operation for private office conversation.

- **Cnf/Trn** (Conference and transfer button)
  - Used to set up conference calls and to transfer calls.

- **Hold** (Hold button)
  - Places an outside or intercom call on hold.

- **Msg** (Message waiting button with LED indicator)
  - The LED lights to indicate a message waiting. Push button to retrieve message.

- **Redial** (Last Number Redial button)
  - Redials the last number dialed from the station.

**FLEXIBLE BUTTONS**

The digital telephones also have either 10 or 20 line/feature buttons. One of these buttons is usually assigned to the intercom function. The other 9 or 19 buttons can be assigned to a CO/PBX line or used as feature buttons.

**CO/PBX line keys**

All 10 buttons on a 10-button set or 20 buttons on a 20-button set can be assigned as CO/PBX keys. If the set is programmed for Automatic Off-Hook Selection to intercom, all keys could be used.

Any of these buttons can be assigned as a pooled line button. A pooled line button allows a group of CO lines to “appear” under one button. Up to four pooled line buttons per CO line group can be assigned at each telephone. (See “Pooled Line Buttons” in the Station Features section of this manual.)

**Feature Activation Buttons**

All 10 buttons on a 10-button set or 20 buttons on a 20-button set can be assigned as feature buttons. Digital telephones can have the following features assigned to buttons on Strata DK systems:

- Account Code
- Alarm
- All Call Voice Page
- Alphanumeric Messaging
- Automatic Busy Redial
Digital Telephones

STATION EQUIPMENT

- Automatic Callback
- Background Music (on/off)
- Call Forward All Calls
- Call Forward Busy
- Call Forward Busy/No Answer
- Call Forward External (DK280)
- Call Forward Fixed
- Call Forward No Answer
- Call Pickup (Directed)
- Call Pickup (Group)
- Call Pickup 1 ~ 4 (Tenant 1 ~ 4)
- Data
- Data Release
- Do-Not-Disturb
- Door Unlock 1 ~ 5
- Direct Station Selection
- DTMF/Rotary Signal Selector (Tone Key)
- “Locked” Automatic Dialing
  (assigned to system auto-dial location and used for Centrex, CO, or PBX access codes)
- Flash
- LCD Messaging
- Microphone Cutoff
- Modem
- Night Transfer (Tenant 1 ~ 4)
- Pause (1.5, 3, or 10 seconds)
- Pooled Line Groups 1 ~ 16
- Privacy
- Privacy Release
- Release
- Redial Last Number (#)
- Saved Number Redial
- System Speed Dial Codes
- Station Speed Dial Codes
- Speed Dial Select (*)
- User Programmable Feature Buttons

For ease in making key assignments, there are several standard key strip patterns that can be programmed. Changes can then be made for the keys on individual stations which are to be different from the standard keystrip pattern selected for that station.

However, with the Flexible Key Assignment feature, the programmer can define each of the 10 or 20 keys individually instead of choosing a standard keystrip pattern and then altering it.

Any key which is not programmed for a specific feature or CO line will remain as defined in initialization.
Some common applications for digital phones are:

- A customer wants to transmit simultaneous voice and data, internally or externally. See “Data Interface Unit” later in this section for details.
- A customer wants to maximize outdialing efficiency for sales or telemarketing groups by allowing them to use a PC keyboard autodialing program. The digital phone with an integrated data interface unit enables use of such programs without a modem.
- The customer needs handset volume control for personal comfort or to compensate for variations in transmission quality.
- Two-color LED indicators provide improved usage indication for flexible buttons. Green indicates the line or intercom buttons you are using, and red indicates use by someone else.
- A customer wants to have the “latest and greatest” technology and equipment, and believes that having digital telephones will best serve the organization’s future needs.
- The customer wants to maximize use of available buttons. The digital key telephone has fixed keys for message waiting and last number redial, freeing more flexible buttons for other functions.

10-Button Applications include:

1. The 10-button telephone is generally used as the basic station telephone for people who do not require one-button access to many features.

2. If the Pooled Line Button feature is used, 10-button telephones can also be a cost-effective alternative to the 20-button telephone.

20-Button Applications include:

1. The customer has a requirement for several features to be programmed for one-button access. For example, executives may want the convenience of one-button access to the features they use.

2. Some customers may require several features that can be accessed only by a button. In such a case, the 20-button phone may be needed to provide the features. For example, features requiring button access usually require an LED status indicator, and are listed below.

<table>
<thead>
<tr>
<th>10-Button Applications</th>
<th>20-Button Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm*</td>
<td>Alarm*</td>
</tr>
<tr>
<td>Call Forward</td>
<td>Call Forward</td>
</tr>
<tr>
<td>Data Call</td>
<td>Data Call</td>
</tr>
<tr>
<td>Modem</td>
<td>Modem</td>
</tr>
<tr>
<td>DSS Buttons</td>
<td>DSS Buttons</td>
</tr>
<tr>
<td>Do Not Disturb</td>
<td>Do Not Disturb</td>
</tr>
<tr>
<td>Door Unlock*</td>
<td>Door Unlock*</td>
</tr>
<tr>
<td>DP/DTMF Mode Change</td>
<td>DP/DTMF Mode Change</td>
</tr>
<tr>
<td>Message Waiting</td>
<td>Message Waiting</td>
</tr>
<tr>
<td>Night Transfer</td>
<td>Night Transfer</td>
</tr>
</tbody>
</table>

   *Does not have LED indication.
Pause (for speed dial)*  (Speed Dial Pause button)
Pause (long)*  (Speed Dial Lng Pause button)
Privacy  (Privacy on Line button)
Privacy Release  (Privacy Release button)
Station Security  (Microphn Cutoff button)
Saved Number Redial*  (Save Last Number button)

*Does not have LED indication.

3. The customer has a requirement for multiple speed dialing buttons. Travel agents, real estate agents, purchasing managers and others who place several calls daily to the same numbers can benefit from having multiple automatic dialing buttons on which they can program their most frequently called numbers for one-button access.

4. The customer wants more than 9 CO lines to appear on a station. For example, in a company which has 14 CO lines, a 20-button telephone at the attendant station could have appearances for all 14 CO lines.
A data interface unit (DIU) interfaces a data device to a DK8, DK16 or DK280 digital telephone system. It provides an RS232 connection to the data device and a modular jack for wiring to the Key Service Unit (KSU). The function of the DIU is to convert the RS232 signal from the data device to a Toshiba proprietary digital signal for the KSU.

There are two types of data interface units: integrated and stand-alone. DIUs can pass data up to 19.2 kbps. DIUs are compatible with the most commonly used “AT” commands to allow keyboard dialing of data and voice calls using personal computers or ASCII terminals. “AT” commands will function at up to 9600 bps.

The integrated data interface unit (PDIU-DI2) (see Figure 2-3) replaces the standard base on a digital telephone and allows the telephone to receive and transmit simultaneous voice and data. Voice and data calls can be made independently of each other. Asynchronous data devices, such as personal computers and terminals, can be connected to the standard RS232 connector in the PDIU-DI2, and can transmit and receive over the single twisted wire pair used for the digital telephone. The PDIU-DI2 and the digital telephone share the same wire pair and the same station port.

If a digital telephone is upgraded with the PDIU-DI2 unit, that telephone can also be wall mounted or further upgraded with a headset or a loud ringing bell, but not with the Off-hook Call Announce feature.

Figure 2-2

Integrated DIU

The stand-alone data interface unit (PDIU-DS) (see Figure 2-4) has an RS232 connector and can interface an asynchronous RS232 data device such as a modem, serial printer, or mainframe computer to the STRATA DK KSU. The PDIU-DS allows switched data connections through the KSU for modem pooling, printer sharing, and/or accessing a host or mainframe computer. LEDs on the front panel of the PDIU-DS indicate transmission status. Each PDIU-DS requires one digital station port on a PDKU, RDSU, KCDU, or QCDU and will function on one wire pair.

Figure 2-3
Data Interface Units

APPLICATIONS

Stand-alone DIU

Some common applications for DIUs are:

- Data switching enables a customer to transmit simultaneous voice and data, internally or externally, over the same wire pair, connecting the telephone set to the Key Service Unit (KSU).

- A customer can maximize outdialing efficiency for sales or telemarketing groups by allowing them to use a PC keyboard auto dialing program. The digital phone with an integrated data interface unit enables use of such programs without a modem.

- Modem pooling and printer sharing can be accomplished using stand-alone DIUs.

- Personal computers can exchange information interactively or make file transfers. This can be done either internally or externally over the public telephone network.
Door Phone/Monitor Station

STRATA DK STATION EQUIPMENT

DESCRIPTION

The optional Door Phone/Monitor Station (see Figure 2-5) provides a two-way intercom box. When someone presses the button on the door phone, distinctive ringing occurs at stations which have been programmed to receive door phone ringing. When a station answers, it is automatically connected to the door phone and the parties can converse.

If all stations are busy when the doorphone rings, the station with the lowest port number will be alerted with busy-override tone.

Any station in the system can dial a door phone and converse with a person at the door phone, or simply monitor the area in which the door phone is installed. When a station calls the door phone, no warning tone is given at the door phone and the speech path is immediately opened.

![Figure 2-4
Door Phone](image)

PHYSICAL CHARACTERISTICS

- **Volume Control**: The volume control is located at the back of the door phone box. Volume adjustments can be made with a screwdriver.
- **Color**: Door phones are available in brown only.
- **Distance from KSU**: The door phone/monitor station can be up to 1000 feet (24 AWG wire) from the door phone control box (HDCB or DDCB), which is the external module that supports the operation of the door phones. The control box can be up to 1000 feet (24 AWG wire) from the Key Service Unit (KSU).
- **Mounting**: The door phone/monitor station is designed for wall mounting only.
- **Hardware**: Up to six door phone/monitor stations can be installed on the STRATA DK8 and DK16. Up to 12 can be installed on a STRATA DK280 system.

November 1993 2-11
Door Phone/Monitor Station

equipped with an RCTU-B or RCTU-C/D. Up to 9 door phones can be installed on a DK280 that is equipped with an RCTU-A.

Door phones are supported by the door phone control box external module. Each control box supports up to three door phones, and requires one EKT or DKT station circuit for its operation. Each door phone connects to the control box by single pair telephone wiring.

The Door Phone/Monitor Station is primarily used at entrances to buildings or grounds to increase security and safety. It can also be used as a monitor station. For example, a business located in a rough area of town may install a door phone/monitor station near the exit to the parking lot. Employees working after hours in the building can monitor the area before leaving the building to insure that there is no suspicious activity.

A doctors’ office uses Door Phones to communicate with examination rooms.

The Door Phone can also serve as an inexpensive intercom station in the remote areas of a large facility such as a warehouse.

The Door Phone can also be used with an external amplified speaker (HESB) as a talk back speaker in an area where an EKT is not needed. See “External Amplified Speaker” in the System Features section of this manual for details.
Standard Single Line Telephone

DESCRIPTION

Conventional 2500-type (DTMF) or 500-type (rotary) single line telephones can be installed on STRATA systems. These single line telephones can be on-premises or off-premises.

Up to two single line telephones can be installed on a STRATA DK8, and up to 12 can be installed on a STRATA DK16. A maximum of 24 can be installed on a DK280 with an RCTU-A. A maximum of 72 on a DK280 equipped with an RCTU-B. Up to 232 single line phones can be installed on a DK280 equipped with an RCTU-C/D.

The appearance, colors, and features of these phones depend on the particular brand of phone used.

A single line telephone has dial code access to many of the same features as the digital key telephones.

Automatic Off-Hook selection of a CO line is not available to the single line telephone.

Single line telephones can be used as ACD agent phones, but Toshiba LCD telephones are recommended.

PHYSICAL CHARACTERISTICS

Distance from the KSU

On a STRATA DK8 system, the loop length of the single line set can be up to 300 ohms including the telephone. On a DK16, the loop length using a KSTU can be up to 300 ohms. On a STRATA DK16 and DK280 systems, the loop length using an RSTU can be up to 600 ohms. If the R48S subassembly is also used, loop length can be extended to 1200 ohms.

Mounting

Single line telephones come in both desk and wall models.

Hardware

On a DK8, each standard single line telephone is supported by a circuit on the QSTU. On STRATA DK16 systems, each standard single line telephone is supported by a circuit on the KSTU, RSTU, PSTU, or PESU. On STRATA DK280 systems, each standard single line telephone is supported by a standard single line circuit on an RSTU, PSTU, or RDSU/RSTS. A DTMF receiver is also required (one per system).

APPLICATIONS

There are three primary applications for standard single line telephones.

- On all systems, the less expensive standard single line set can be used for stations which do not require the functionality of a Digital Key Telephone. The DK systems make this a more economical alternative, since single line sets are supported by a circuit board (KSTU, RSTU, or RDSU) and require no external hardware.

- Standard single line sets are used as power failure telephones. CO lines can be switched directly to these phones in the event of a power failure.

- On all STRATA systems, conventional single line sets can be used as Off-premises Stations (OPSs), which allow stations in satellite or remote locations to function as part of the STRATA telephone system. See “Off-premises Station” in the System Features section of this manual for details.
On the STRATA DK systems, several types of station equipment can be supported. These include voice mail ports, automated attendant ports, digital announcers for ACD and built-in Auto Attendant applications, standard single line telephones, modems, answering machines, facsimile machines, dictation machines, and other devices. Two-wire standard devices are supported by either a circuit on a Standard Telephone Interface Unit. If the device requires DTMF translation, a DTMF Receiver Unit, which mounts onto the Common Control Unit, must also be installed. No additional external equipment is required.
Digital DSS Console

DESCRIPTION

The Direct Station Select console (DSS) is a separate unit which can be used with a digital key telephone for a dedicated answering position. The digital DSS console is available in the same attractive charcoal gray or ash white color and matte finish as the other digital telephones. The digital DSS console can be used on Strata DK systems and on Perception systems.

The digital DSS console is equipped with 60 buttons, each with an associated two-color LED. Each button can be flexibly assigned as a CO line appearance, a DSS button for one-touch dialing of a specific station, or a speed dial number. Night Transfer and All Call Voice Page are assigned to specific buttons on the DSS unit. If a button is assigned to a CO/Centrex/PBX line, the LED provides an indication of the status of the line. Green indicates the line or intercom buttons you are using, and red indicates use by someone else. When assigned as a DSS button, the adjacent LED shows busy status as red.

To dial a station, the attendant simply presses the DSS button assigned to that station. It is not necessary to access an intercom line and dial the station number. The connection is made via a DKT station associated with the DSS console.

The STRATA DK16 can support two DSS consoles. The STRATA DK280 with RCTU-A can support three DSS consoles. The DK280 with RCTU-B can support up to four DSS consoles. The DK280 with RCTU-C/D can support up to eight DSS consoles. The DSS consoles are supported in the KSU by the Digital Telephone Interface Unit (PDKU). Each digital DSS console requires only one station port on a PDKU; one PDKU can only support one DSS console. The DK8 does not support DSS consoles.

Digital DSS consoles can be used with any type of DKT station. However, it is helpful to an attendant if a 20-button LCD set is installed with the DSS unit, since the LCD will identify recalling stations, unanswered CO lines, etc. DSS Consoles cannot be assigned to function with attendant consoles.

APPLICATIONS

1. High volume of incoming calls:
   When a business has a high volume of incoming calls to a central answering point, a DSS console speeds call processing and makes it efficient. The DSS gives the attendant instant information on the busy status of all extensions, and enables quick, one-touch dialing of a station.

2. Attendant screening of calls:
   Some businesses may not have a high volume of incoming calls, but do require the attendant to spend more time on each call. For example, some businesses want the attendant to screen all calls and announce the caller to the called party. Screening takes additional time, but the DSS console enables the call to be processed more quickly once it has been screened.
Figure 2-5
Digital DSS Console
3. Tenant Service:
In tenant service, any combination of the four DSS consoles can be used. For example, each tenant could have one main DSS position and one backup DSS position. Or, one tenant could have two DSS consoles while the other had only one.

FEATURES
Here are some examples of commonly used DSS console features:

ALL CALL VOICE PAGE
DESCRIPTION: One specific button on the DSS console can be programmed as the All Call Voice Page button (AC) and allows the attendant to voice page all of the DKT and EKT speakers in the system simultaneously (120 maximum for DK280). If external page is desired with All Call Page, a user programmable button can be set up to provide quick and easy access.

BENEFITS: This feature gives the attendant a way to reach an employee when the employee is not at his or her desk. The customer has some assurance that if the employee is in the building, he or she can be found when necessary.

AUTOMATIC HOLD
DESCRIPTION: A call on a CO/PBX line is automatically placed on hold when the attendant presses a button for a specific station. The attendant does not have to put the call on hold before pressing the DSS button. It is recommended a Release button be programmed to use with Automatic Hold.

BENEFITS: Automatic Hold saves time for the attendant by providing “one button” operation for two functions: 1) putting the caller on hold and 2) dialing the station number. It makes the process of call notification more efficient, and allows the attendant to give better service to callers.

FLEXIBLE DSS BUTTONS
DESCRIPTION: Buttons on the DSS buttons can be programmed as:
- All Call Page Key (Key 59 only)
- Night Transfer 1 or 2 (Key 60 only)
- CO Line Appearance (any of 58 keys)
- DSS Button (any of 58 keys)
- Personal or System Speed Dial Button (any of 58 keys)

BENEFITS: The DSS buttons can be configured to meet the specific needs of each customer.

NIGHT TRANSFER BUTTON
DESCRIPTION: One button on the DSS can be programmed as a Night Transfer (NT1 or NT2) key. This button is used to put the system ringing in “DAY”, “DAY2” or “NIGHT” mode. (See “Night Transfer” in the System Features section for details about ringing modes.) If the system is installed in tenant service, each tenant has independent control of night transfer for its lines. Tenant 1 uses the “NT1” button, and Tenant 2 uses the “NT2” button.

BENEFITS: With Night Transfer, incoming calls can ring at stations other than the console, can ring over an external paging system, or can ring to
an answering machine when the attendant is not available. The customer has assurance that calls can be answered at all times.

**VOICE OR TONE SIGNALING**

DESCRIPTION: The DSS may be programmed for tone or voice first signaling preference, independent of how the system is programmed. As with all stations, the attendant can choose the alternate mode by dialing a “1” following the station number.

BENEFITS: This feature gives flexibility to the system, and allows the attendant to use the more efficient voice signaling, even if the system is programmed for tone signaling.
DESCRIPTION

The Add-On Module is a separate unit which can be used with any 2000-series digital telephone for a dedicated answering position on DK8, DK16, or DK280 systems. It does not take a separate digital station port, but shares the one with the telephone to which it is attached.

The Add-On Module is equipped with 20-buttons, each with an associated red/green LED. Buttons provide direct station selection (DSS) and busy lamp field (BLF) functionality. To dial a station, the attendant simply presses the DSS button assigned to that station. The call will automatically be put on hold and then the connection made with the called station. It is not necessary to access an intercom line and dial the station number. The connection is made via the DKT station associated with the Add-On Module.

When used on DK8 and DK280 systems, buttons on the Add-On Module can also be programmed for CO line appearance or speed dial.

The STRATA DK8 will support up to 8 Add-On Modules. The DK16 will support up to 16 Add-On Modules. The DK280 with RCTU-A will support up to 12 Add-On Modules. The DK280 with RCTU-B will support up to 40, and the DK280 with RCTU-C/D will support up to 120 Add-On Modules. On DK280 systems, either one or two Add-On Modules can be installed on a 2000-series digital telephone. They are available in either charcoal gray or ash white color, with a matte finish and style to match 2000-series digital telephones.

APPLICATIONS

Applications for the Add-On Module are similar to the DSS console, such as central incoming call answering, busy status of all extensions at a glance, one-touch dialing of stations, call screening, speed dial, and CO line appearance.

The Add-On Module functions as a mini DSS console for small systems, and provides a smaller, less expensive alternative to a full functioning 60-button DSS Console.
DESCRIPTION: The DK280 supports up to two Attendant Consoles on an RCTU-B system, and up to four attendant consoles on a RCTU-C/D system. Attendant Consoles are not supported on DK280 systems with RCTU-A, or on DK8 or DK16 systems.

Attendant Consoles provide efficient high-volume incoming call handling. The Strata DK280 Attendant Console provides color CRT or EL display of call identification, calling/called numbers, intercom name indication, call progress messages, BLF information, and soft key prompts. The Answer button provides one-button answering for the attendant position. Incoming Call Identification (ICI) keys provide specialized answering for all categories of calls to the operator. The load sharing feature enables multiple attendant consoles (up to 4) to receive incoming calls on a rotation basis.

A DK280 Attendant Console processes calls faster than a DSS Console because of the following capabilities and operational characteristics that a DSS Console does not provide:

- The Answer key is used to automatically answer any ringing call regardless of type (incoming CO, intercom, transferred, recall, etc.). Multiple ringing calls are automatically queued and answered by the Answer key either on a first-in first-out (FIFO) basis, or according to the priority defined by the user with the Incoming Call Answer Priority feature.
Incoming Call Answer Priority enables the Answer key to queue and answer multiple ringing calls to the console in priority sequence. The program default priority sequence is 1-Transfer Recall, 2-Hold Recall, 3-Transferred Call, 4-Incoming CO Line Call, 5-“O” Operator Call, 6-Intercom Call. The priority sequence is programmable.

Emergency Calls always receive the highest Answer key priority at the Attendant Console. They have priority over the FIFO or priority sequence established in programming. Emergency calls are initiated by station users by dialing a special number.

Incoming Call Identification (ICI) keys provide selective answering of all categories of calls to the operator (intercom, transferred, hold recall, transfer recall, emergency, operator, and incoming CO for all 16 CO line groups). Pressing the ringing ICI key, instead of using the Answer key, enables the operator to specifically answer a certain type of call and override the FIFO or priority order established by the Answer key.

10 Loop keys with two-color LEDs that show CO line status (ring, talk, hold, etc.) and provides a place to hold calls waiting for assistance.

8 Soft keys to provide feature prompting operation of a variety of features.

Call progress messages display information about CO line status, features activated, and station status much the same as the LCD on a DKT.

BLF displays status of 100 stations’ status at a time (one DSS 60 total, two DSSs 120 total), with the ability to display all stations’ status by hundreds group. The BLF displays station numbers rather than port numbers.

Overflow mode (via the Overflow button) causes attendant console calls to be re-routed if they have been in queue longer than the time period set by the Overflow Timer. Overflow calls go to the destination assigned in programming, either a station or another attendant console.

Load Sharing distributes incoming calls to multiple Attendant Consoles (up to 4) on a rotational basis. This is better than ringing all calls to all consoles. Individual operators only get their fair share of calls and answer only those ringing at their console.

Color CRT display of console text information (station number, user name, date, time), BLF status, call progress information (CO line status, features activated, station status), and soft key prompting labels, all at the same time.
In DK280 answer position applications, you can offer flexibility by providing a choice that meets the specific customer requirement. Choose between Add-on Modules, DSS Consoles, or Attendant Consoles to best serve their needs. Complemented by Auto Attendant and Voice Mail, you can offer the most complete solution available today.

Sell an Attendant Console rather than a DSS Console when:

- Very high incoming call traffic.
- Too many stations to appear on a DSS Console and still make it practical to use.
- Multiple operators simultaneously share the call answering function.
- Many calls of different types (incoming, transfers, recalls, etc.) are received by the operator.
- Features are required which the DSS Console does not provide (load sharing, answer priority, emergency calls, overflow, etc.).

Sell a DSS Console rather than an Attendant Console when:

- Incoming call traffic more moderate.
- Operator needs individual button access to all CO Lines.
- Simple BLF display and DSS transfer is a main application.

Sell an Add-on Module rather than a DSS Console when:

- 20 or 40 DSS/BLF buttons are sufficient.
- Smaller departmental answer positions.
- A DKT needs more buttons for general feature use.
- Don’t want to use additional station ports (Add-on Modules share the station port of the attached DKT).
STRATA

System Features
## FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A2 Key System Interface</td>
<td>3-1</td>
</tr>
<tr>
<td>Account Codes</td>
<td>3-2</td>
</tr>
<tr>
<td>Alarm Sensor</td>
<td>3-4</td>
</tr>
<tr>
<td>Alternate Point Answer</td>
<td>3-5</td>
</tr>
<tr>
<td>Amplified Conference</td>
<td>3-6</td>
</tr>
<tr>
<td>Automated Attendant</td>
<td>3-7</td>
</tr>
<tr>
<td>Automatic Hold/Automatic Release (Hold/Split)</td>
<td>3-8</td>
</tr>
<tr>
<td>Automatic Hold Recall</td>
<td>3-9</td>
</tr>
<tr>
<td>Automatic Release from Hold</td>
<td>3-10</td>
</tr>
<tr>
<td>Automatic Station Relocation</td>
<td>3-11</td>
</tr>
<tr>
<td>Auxiliary Device Interface</td>
<td>3-13</td>
</tr>
<tr>
<td>Background Music with Station Control</td>
<td>3-14</td>
</tr>
<tr>
<td>Busy Station Ringing</td>
<td>3-15</td>
</tr>
<tr>
<td>Centrex/PBX Compatibility</td>
<td>3-16</td>
</tr>
<tr>
<td>Centrex Ringing Repeat</td>
<td>3-17</td>
</tr>
<tr>
<td>CO Line Call Pickup Groups</td>
<td>3-18</td>
</tr>
<tr>
<td>CO Line Groups</td>
<td>3-19</td>
</tr>
<tr>
<td>CO Line Queuing</td>
<td>3-20</td>
</tr>
<tr>
<td>Conferencing</td>
<td>3-21</td>
</tr>
<tr>
<td>Credit Card Calling (&quot;0 1&quot; Dialing)</td>
<td>3-23</td>
</tr>
<tr>
<td>Data Switching</td>
<td>3-24</td>
</tr>
<tr>
<td>Delayed Ringing</td>
<td>3-25</td>
</tr>
<tr>
<td>Direct Inward System Access (DISA)</td>
<td>3-26</td>
</tr>
<tr>
<td>Distinctive CO Line/Intercom Ringing</td>
<td>3-27</td>
</tr>
<tr>
<td>Door Lock Control</td>
<td>3-28</td>
</tr>
<tr>
<td>Door Phones</td>
<td>3-29</td>
</tr>
<tr>
<td>DSS Console</td>
<td>3-30</td>
</tr>
<tr>
<td>DTMF and Dial Pulse CO Line Compatible</td>
<td>3-31</td>
</tr>
<tr>
<td>DTMF Signal Time Continuous</td>
<td>3-32</td>
</tr>
<tr>
<td>DTMF Signal Time Setting</td>
<td>3-33</td>
</tr>
<tr>
<td>Dual FCC Registration</td>
<td>3-34</td>
</tr>
<tr>
<td>External Amplified Speaker</td>
<td>3-35</td>
</tr>
<tr>
<td>Flexible Button Assignment</td>
<td>3-36</td>
</tr>
<tr>
<td>Flexible Intercom Numbering</td>
<td>3-38</td>
</tr>
<tr>
<td>Flexible Line Ringing Assignment</td>
<td>3-39</td>
</tr>
<tr>
<td>Flexible Slot Assignment</td>
<td>3-40</td>
</tr>
<tr>
<td>Least Cost Routing</td>
<td>3-41</td>
</tr>
<tr>
<td>Live System Programming</td>
<td>3-42</td>
</tr>
<tr>
<td>Memory Protection</td>
<td>3-43</td>
</tr>
<tr>
<td>Message Waiting</td>
<td>3-44</td>
</tr>
<tr>
<td>Multiple Simultaneous Handsfree Intercom Paths</td>
<td>3-45</td>
</tr>
<tr>
<td>Music-on-Hold Interface</td>
<td>3-46</td>
</tr>
<tr>
<td>Music-on-Hold Source</td>
<td>3-47</td>
</tr>
<tr>
<td>Night Ringing Answer Code</td>
<td>3-48</td>
</tr>
<tr>
<td>Night Ringing over External Page</td>
<td>3-49</td>
</tr>
<tr>
<td>Night Ringing over Selected Page Zones</td>
<td>3-50</td>
</tr>
<tr>
<td>Night Transfer (Day/Night Modes)</td>
<td>3-51</td>
</tr>
<tr>
<td>Non-blocking Dialing</td>
<td>3-52</td>
</tr>
</tbody>
</table>
FEATURES

Paging—All Call Voice Page ............................................ 3-56
Paging—External Page Interface ........................................ 3-57
Paging—External Zone Paging ......................................... 3-58
Paging—Group Paging ..................................................... 3-59
Pooled CO Lines ............................................................. 3-60
Power Failure Transfer .................................................... 3-61
Privacy/Non-privacy Option ............................................ 3-62
Relay Service for External Page or Door Lock .................... 3-63
Relay Service for Night/Hold ......................................... 3-64
Remote Administration/Maintenance ............................... 3-65
Station Hunting ............................................................. 3-66
Station Message Detail Recording (SMDR) ....................... 3-67
System Battery Backup Interface .................................... 3-69
System Programming Through Station ............................ 3-70
System Speed Dial ......................................................... 3-71
Tandem CO Line Connection (Trunk-to-Trunk) ................... 3-73
Tenant Service ............................................................. 3-74
TIE Lines ........................................................................ 3-75
Toll Restriction ............................................................. 3-76
Toll Restriction Override Codes ....................................... 3-78
Toll Restriction Override by System Speed Dial .................. 3-79
Transfer Privacy .......................................................... 3-80
Traveling Class of Service .............................................. 3-81
Voice Mail Interface ..................................................... 3-82
Voice or Tone Signaling ................................................ 3-83
Wall or Table Mounting ................................................ 3-84

FIGURE LIST

FIGURE  SUBJECT  PAGE
3-1  SMDR Output—Outgoing Call ........................................ 3-67
3-2  SMDR Output—Incoming Call ....................................... 3-68
1A2 Key System Interface

SYSTEM AVAILABILITY
Optional on S₁₀. Not available on STRATA DK systems.

DESCRIPTION
The 1A2 Key System Interface (HCNB) allows CO lines to appear both on 1A2 key telephones and on Electronic Key Telephones in the STRATA S₁₀ system. When a call is in process on a CO line that has been “bridged” in this way, it can be monitored or held at both the 1A2 station and the EKT station. The LED for that line on the EKT station and the lamp for that line on the 1A2 telephone will both flash or light according to the status of the line—in use, on hold, and so on.

With the 1A2 Key System Interface, the STRATA S₁₀ system will provide A-lead control, lamp signal detection and dial outpulsing to an existing mechanical key system, such as a 1A2 system. Each 1A2 Key System Interface will allow up to three CO lines to be bridged.

BENEFITS
1A2 Key System components can be used with a STRATA S₁₀ system. A customer who is replacing a mechanical key system can keep part of a 1A2 system for use by employees who prefer to use the familiar system and do not need the functionality of the STRATA S₁₀. Keeping part of the 1A2 system might also save money for the customer.
<table>
<thead>
<tr>
<th>FEATURES</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private CO Lines</td>
<td>4-54</td>
</tr>
<tr>
<td>Push-button Dialing</td>
<td>4-55</td>
</tr>
<tr>
<td>Release Button</td>
<td>4-56</td>
</tr>
<tr>
<td>Remote Retrieval of Held Calls</td>
<td>4-57</td>
</tr>
<tr>
<td>Repeat Last Number Dialed</td>
<td>4-58</td>
</tr>
<tr>
<td>Ringing Line Preference</td>
<td>4-59</td>
</tr>
<tr>
<td>Saved Number Redial</td>
<td>4-60</td>
</tr>
<tr>
<td>Speed Dial Buttons</td>
<td>4-61</td>
</tr>
<tr>
<td>Station Speed Dial</td>
<td>4-62</td>
</tr>
<tr>
<td>Timed Reminder</td>
<td>4-63</td>
</tr>
<tr>
<td>Toll Restriction Override Code Revision</td>
<td>4-64</td>
</tr>
<tr>
<td>User Programmable Feature Buttons</td>
<td>4-65</td>
</tr>
</tbody>
</table>
Account Codes

SYSTEM FEATURES

SYSTEM AVAILABILITY
Forced and Voluntary Account Codes is a standard feature, programmable by station and/or CO line on all STRATA systems. On the S6, the feature is not available on off-premises stations or stations supported by an HIOB. On DK systems, the feature is available on off-premises stations.

Verifiable (forced or voluntary) Account Codes is a standard feature on DK16 and DK24/56/96 Release 4 systems not available on STRATA S6.

DESCRIPTION
A user can enter an account code from 4 to 15 digits in length from a station telephone dialpad for any call. The account code will be printed on the SMDR printout with other call details so that the customer can identify all calls associated with a specific account code. Account codes are often used for cost allocation.

Account codes can be required (forced) on a CO line-by-CO line basis. Stations can also be forced to enter an account code before dialing a call. For stations that have the Forced Account Code feature, users must enter an account code whenever they use CO lines that require account codes.

Stations that do not have the Forced Account Code feature do not have to enter codes, regardless of the status of the CO line in use. Stations can voluntarily enter account codes on any incoming or outgoing call over any CO line. While account codes can also be entered on incoming calls, the entry cannot be forced on these calls.

DK24/56/96 Release 4 systems can also have up to 300 verifiable account codes, which can be forced and/or voluntary. Therefore, stations and CO lines on these systems can have one of four possible account code features:
- Forced account codes.
- Voluntary account codes.
- Forced verifiable account codes.
- Voluntary verifiable account codes.

If verifiable account codes are forced, the DK system must verify the code entered by the user before it will allow the call.

Verifiable account codes can be set up in two ways:
- All digits in the code can be verified. With this method, 300 specific account codes can be verified. For example, if a 4-digit code is used, the system can verify 300 specific 4-digit numbers. If a 9-digit code is used, the system can verify 300 specific 9-digit numbers.
- The first “portion” of the code can be verified. This allows 300 specific verifiable “prefixes,” which can then allow thousands of “partially” verifiable account codes. For example, with a 5-digit code, there could be 300 verifiable 3-digit prefixes.
Account Codes

STRATA SYSTEM FEATURES

100 _, which verifies 10000, 10001, 10002, ..., 10099 (100 codes)
101 _, which verifies 10100, 10101, 10102, ..., 10199 (100 codes)
102 _, which verifies 10200, 10201, 10202, ..., 10299 (100 codes)
...
299 _, which verifies 29900, 29901, 29902, ..., 29999 (100 codes)

Each of the 300 verifiable prefixes partially verifies 100 codes, for a total of 30,000 partially verifiable codes.

A verifiable account code can have a toll restriction class of service. When an account code is entered at a station, the system will check the toll restriction class of service associated with that account code, and will then determine if the call is allowed.

On DK16 and DK24/56/96 Release 4 systems, an Account Code button can be programmed on an electronic or digital key telephone to facilitate voluntary account code entry.

BENEFITS

Account codes help a business control costs and ensure accurate billing to departments, clients, projects, or individual employees.
## Alarm Sensor

**SYSTEM FEATURES**

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional on all STRATA systems.</td>
<td>The alarm sensor is configured with a customer-supplied alarm. When the sensor detects that the alarm relay is activated, it causes all electronic key telephones to sound a startling tone. Any station programmed with an Alarm (ALRM) button can reset the alarm on a DK system. With SK systems, only Station 10 can be programmed with an Alarm button.</td>
<td>The customer has the convenience of being able to control an alarm from electronic key telephone sets.</td>
</tr>
</tbody>
</table>

The PIOU or PIOUS option interface unit must be installed on a DK system to provide the Alarm Sensor feature. On SK systems, the HDCB Door Phone Control Box is required.
Alternate Point Answer

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Alternate Point Answer allows certain station(s) in the system to answer a CO line call that has been transferred to another station. The line on which the call has been transferred must appear on the station using Alternate Point Answer.

BENEFITS
For business situations in which employees have high mobility, Alternate Point Answer promotes efficiency in call handling and better service to callers. It can also minimize the distraction caused by unanswered ringing phones.
Amplified Conference

SYSTEM FEATURES STRATA

SYSTEM AVAILABILITY
Amplified conference is available on STRATA S-C, DK16, and all DK24:56:96 Release 4 systems, using a customer-supplied automatic gain switched, 2-way line amplifier. One amplifier can be connected on the S-C. Up to two amplifiers can be connected on the DK16, and up to four amplifiers can be connected on DK24:56:96 Release 4 systems.

DESCRIPTION
One or more customer-provided amplifiers can be connected to proprietary station ports in the system. The amplifier(s) will automatically be activated whenever a user conferences two CO lines together.

On the S-C, the amplifier will compensate for loss in volume through the public telephone and system network.

With DK systems, there is negligible loss through the system, and the amplifier compensates for loss in volume over the public network.

Any two-way line amplifier that is FCC-registered with Automatic Gain Control (AGC) should be compatible. Model VFR 5050 has been successfully used.

The amplifier will amplify the signal between any two outside CO lines as well as between the second CO line selected. If Tandem or DISA CO line connections are allowed in the system, the CO line-to-CO line connection will be amplified.

Amplified connections are available on a first-come first-served basis. On the S-C, amplified conference is not available to a standard telephone or to any station or device supported by an HOXB or HIOB. On DK systems, amplified conference is available to a standard telephone.

Each amplifier requires two EKT station ports, and reduces the station capacity by two. On DK systems, the two ports supporting the amplifier must be designated ports on a PDKU or PEKU card. One PDKU/PEKU will support one external amplifier.

BENEFITS
External parties on a conference call will be able to hear each other with increased loudness. Conference calls will be shorter and more efficient, since time will not be wasted repeating inaudible parts of the conversation. Shorter calls are cheaper calls. When conferees can hear clearly, they will get accurate information.
Automated Attendant

**SYSTEM AVAILABILITY**

**DESCRIPTION**

Standard on Strata DK16 and DK24/56/96 Release 4 systems.

Auto Attendant operates like a round-the-clock operator that quickly and efficiently directs incoming CO line calls to their proper destinations. CO lines programmed with Auto Attendant are answered by a digital announcer that greets callers and then provides them with a menu of dialing options.

Callers who are directed to a busy or unanswered destination can either be routed to a secondary announcement, which informs the callers that the destination is unavailable and repeats the menu, or can be routed back to the initial, primary announcement. If the call is routed back to an unavailable digital announcer, the call will then simultaneously ring an overflow station and camp on to the destination station (if it was busy). If unanswered, the re-routed call will just ring the overflow station.

In addition to quickly and efficiently directing calls, the Auto Attendant assures that calls are answered even when lines are busy. When the Auto Attendant is busy, incoming callers will receive ring back tone and queue onto the Auto Attendant. When the Auto Attendant becomes available, all of the calls in queue will be switched to the Auto Attendant simultaneously and receive the same greeting.

Customers can have up to four Auto Attendants. One Auto Attendant can accommodate light to normal incoming call traffic, while up to four can satisfy the demands of heavy traffic applications. Each Auto Attendant can have either a primary announcement only, or both a primary and secondary announcement, for a system maximum of eight announcements. Each announcement is stored on a customer-supplied digital announcer.

The Auto Attendant feature is extremely flexible. The dialing menu can have as many as 10 options, which can direct calls to specific stations, hunt groups, and ACD groups. CO lines that are assigned as Auto Attendant lines in any of the three system modes (day, day 1, night) can be assigned to ring stations or night bell when the system is switched to another mode.

Installing Auto Attendant is easy. The customer only needs to provide the digital announcer(s), which easily connect to standard telephone ports.

**BENEFITS**

With Auto Attendant, live operator(s) are not needed to answer and route incoming calls. This frees employees to perform other tasks.

24-hour coverage means no need to worry about lunch and break coverage, and provides after hours coverage. Also, overflow call coverage during peak traffic periods is handled automatically.

Auto Attendant can process a larger volume of calls, more quickly and efficiently, than a live operator. This provides incoming callers better overall service.
**Automatic Hold/Auto Release (Hold Split)**

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY**

Standard on Strata DK16 and DK24/56/96 Release 4 systems.

**DESCRIPTION**

The system can be set in system wide programming for either Auto Hold or Auto Release of an existing call when another incoming call is answered.

Auto Hold automatically places an existing call on hold when another incoming call is answered.

Auto Release automatically releases an existing call when another incoming call is answered.

Both Auto Hold and Auto Release can be overridden by pressing the Release or Hold button, respectively, before answering another incoming call.

**BENEFITS**

The customer can choose whichever is most efficient for their business. Auto Hold saves time in call splitting applications in which users want to switch back and forth between two calls. Auto Release saves time in heavy call answering applications in which users want to disconnect from a call they are finishing with and answer the next call simultaneously.
Automatic Hold Recall

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
When a station user puts a call on hold, the call will automatically ring back to that station after a programmable period of time. Hold recall time is normally set at 32 seconds, but can be programmed from 16 to 160 seconds.

BENEFITS
As a programmable option, hold recall can be disabled altogether or can be programmed for different recall times on a station-by-station basis, according to the specific need of that station user.

Automatic Hold Recall insures that station users will be reminded to pick up a call that has been put on hold. Courteous customer service dictates that the caller should be acknowledged periodically and informed about the cause of any delay. This feature can help a company project a professional, efficient, and courteous image.
Automatic Release from Hold

SYSTEM FEATURES

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
The STRATA system will automatically release a held CO line if a disconnect signal is received from the central office. This feature can be enabled on a CO line-by-CO line basis.

BENEFITS
The customer will have full use of all CO lines at all times. A CO line will not be tied up if a station user puts it on hold and the caller hangs up before the station user returns to the call.
Automatic Station Relocation

SYSTEM AVAILABLE

DESCRIPTION

When Automatic Station Relocation is activated, a telephone can automatically maintain its particular characteristics (station number, personal speed dial, feature set, etc.) when it is relocated from one jack/port to another jack/port. A vacant jack/port that is not programmed with any characteristics must be available whenever relocating a station. Only one telephone can be relocated at a time. Automatic Station Relocation is available system wide and can be turned off and on by a station assigned in system programming.

BENEFITS

Automatic Station Relocation makes moving telephones quick and easy. Just unplug the phone from one jack/port and plug it into another. It also saves the expense of having a third party reprogram the system to reflect these changes.

With most systems, whenever someone moves to a different office or location, the system administrator or third party installation support personnel must change system programming to reassign the telephone stations affected. This is time consuming if this activity takes place with any degree of frequency. It can also be expensive if the customer must call third party support personnel to have the station reassignment made.
System Availability

**SYSTEM FEATURES**

**STRATA**

**Auxiliary Device Interface**

**SYSTEM AVAILABILITY**

**STRATA S8** can have up to four Auxiliary Device Interfaces (HIOBs), allowing the system to be connected to up to four auxiliary devices.

The HIOB is not available and not necessary for DK systems. Two-wire auxiliary devices are supported by the Standard Telephone Interface Unit (KSTU or PSTU), or the Standard/Electronic Telephone Interface Unit (PESU). For details, see “Voice Mail Interface” in the System Features section of this manual.

**DESCRIPTION**

The Auxiliary Device Interface (HIOB external module) provides an interface between the **STRATA** and an external device such as a voice mail port, a standard DTMF or rotary telephone, a modem, or an answering/dictation machine. The interface allows the system to interact with these devices.

The HIOB unit contains a DTMF generator and a DTMF receiver for use with auxiliary devices. It also contains its own ring generator. Each HIOB requires one station port.

The maximum distance between the Key Service Unit (KSU) and the HIOB is 650 feet when 24 AWG wire is used. The loop limit between the HIOB and the device is 300 ohms.

When the Auxiliary Device Interface is used with a voice mail system, it can allow the following features, depending on the specific brand of voice mail system.

**CO LINE ASSIGNED TO RING HIOB**

If the CO line rings direct to the HIOB, the station assigned to the HIOB can be programmed to send 16 digits to the voice mail system when it answers. This would be useful if a customer wanted to have a caller connect directly to an audiotext message by dialing a certain telephone number.

**CALL FORWARD TO VOICE MAIL BOX**

Allows a station user to forward calls to voice mail box so that the caller can leave a voice message. DTMF tones are automatically sent to the voice mail device to direct the call to the called party’s mailbox.

**MESSAGE RETRIEVAL**

Allows a station user to retrieve messages from his/her mailbox by pressing the INT button, followed by the MW/FL button. DTMF tones are automatically sent to the voice mail device which accesses the station user’s mailbox.

**MESSAGE WAITING INDICATION**

If the voice mail system is assigned as the **STRATA** message center, it can activate a message waiting LED on a station when the mailbox corresponding to the station has received a voice message.

**VOICE MAIL CONTROL**

DTMF signaling is required to activate and control functions on voice mail systems. However, the dialpad on an electronic key telephone generates electronic, not DTMF tones. Since the Auxiliary Device Interface has a DTMF tone generator, it enables the station user to control the voice mail equipment with the dialpad on the EKT. The Auxiliary Device Interface will translate the electronic tones to DTMF tones.
BENEFITS

The Auxiliary Device Interface insures that a business will be able to easily connect certain peripheral devices to their system at a reasonable cost, enabling them to gain the cost and productivity benefits offered by such equipment.
## Background Music with Station Control

**SYSTEM FEATURES**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional on all STRATA systems.</td>
<td>Some employees find it relaxing to listen to music as they are working. This feature enables the employer to provide music that is conducive to the work environment. The employer can allow employees to listen to music, without the conflict that can accompany the use of radios or tape recorders.</td>
</tr>
</tbody>
</table>

If a system is connected to a music source and this feature is activated, a station user can access background music through the speaker of an Electronic Key Telephone. The music can be turned on and off at the user's option via the Speaker button on the EKT, and the BGM button or dial access code on a DK system. The user can control the volume.

If an external paging system is installed, music can also be broadcast through the external paging speakers, providing background music throughout the facility.

The background music source is customer-supplied. For STRATA S	extsubscript{E}, the background music source for EKTs and for external page is the same as the source for music-on-hold.

For DK systems, up to three separate music sources can be connected to the system at the same time. One source can broadcast background music over EKT speakers, while a second broadcasts over external speakers and a third provides music or a recording for music-on-hold.

When background music is broadcast over electronic key telephone (EKT) speakers, no optional hardware is required. The STRATA DK music source for both background music on EKT speakers and music-on-hold connects directly to the common control unit (KMAU, PCTU, or PCTUS). The music source for background music over EKT speakers can connect to a designated station port on a KCDU, PDKU, PEKU, or PESU, to allow separate sources for music-on-hold and EKT background music.

When music is broadcast unamplified over external speakers on a DK system, the Option Interface Unit (PIOU, PIOUS or PEPU) must be installed. Amplified output requires either the PIOU or PEPU.

On DK systems, the station assigned to port 00 can switch the background music over external page on and off by dialing a code.

Music on both the external speaker and the telephones will be muted when a paging announcement is made or when night ringing occurs.
Busy Station Ringing

**SYSTEM AVAILABILITY**

Standard feature, programmable by station, on Strata DK16 and DK24/56/96 Release 4 systems.

**DESCRIPTION**

Electronic and digital telephones programmed with this feature will ring even when they are busy on another call. This is important to voice mail and auto attendant applications, in which incoming calls are often transferred from the auto attendant to busy stations.

When either an internal caller places an intercom call, or transfers an external call to a busy telephone assigned with this feature, they hear ring back tone, not busy tone. The called, busy telephone will ring with a muted tone, and its applicable CO line or INT LED will flash continuously at a fast rate. To answer the incoming call, the called party can either transfer, release, or place the current call on hold before pressing the button associated with the flashing LED. Otherwise, the transferred call will camp-on after ringing and not being answered. Called stations can continue to operate other features in the normal way. If called while idle, these stations will ring as normal.

Any number of electronic and digital telephones can be programmed with this feature. Busy Station Ringing does not operate on standard telephones.

**BENEFITS**

Busy Station Ringing helps insure that important calls are answered more efficiently. This feature is especially useful for answer position telephones that must be available to answer calls. This prevents calls transferred from the auto attendant to a busy station, from being transferred back to the auto attendant. Callers are not frustrated by looping back and forth without talking to anyone.
Centrex/PBX Compatibility

SYSTEM FEATURES

SYSTEM AVAILABILITY

Standard on all STRATA systems.

DESCRIPTION

Any STRATA S
t or DK system can be installed behind a Centrex or PBX system. It can function as part of the Centrex or PBX system while providing its users with the STRATA S
t or DK features and electronic feature telephones.

To further enhance STRATA S
t and DK compatibility with Centrex and PBX, access codes for features in the host system can be programmed as if they were system speed dial numbers. These codes can then be assigned to Speed Dial buttons or SD buttons (also known as Station Automatic Dialing buttons or ADL buttons), providing one-button access to the CO, Centrex or PBX feature.

Each CO/Centrex/PBX feature access code to be programmed can have up to 16 digits, including pauses and flashes. Like system speed numbers, these codes can only be programmed or changed by Station 10 on S	 systems, and by the station assigned to port 00 (usually 200) on DK systems.

When a STRATA S
t or DK system is installed behind a PBX, some or all of the CO/PBX line buttons function like PBX extensions. When such a PBX line button is accessed, the station user will get dial tone—but it is PBX dial tone, not CO dial tone. If the user wants to access a CO line on the PBX, he or she must then dial an access code. For example, “9” might be dialed to get a local CO line; TIE lines to other company locations might be accessed by “72” or “73”.

A STRATA S
t or STRATA DK system can be instructed, through programming to recognize these PBX access codes, and disregard them on identified lines when it inspects dialed numbers for toll restriction purposes, or performs other features such as Last Number Redial. This allows the system to continue to provide its features, even when calls are ultimately going out from the PBX.

BENEFITS

Centrex and PBX compatibility can result in cost savings to the customer. The economical STRATA S
t and DK systems can be used in satellite locations; yet users can take advantage of the Centrex and/or PBX features, the PBX trunking, and the PBX networking capabilities.

STRATA S
t and DK systems can also be used within a PBX environment to serve a community of interest which needs the functionality of electronic key telephone sets that may not be provided by the PBX. Also, CO/Centrex/PBX Feature buttons give users easy, one-button access to features that would otherwise require more complicated access procedures. Since users do not have to look up feature access codes, they will save time. Dialing errors which waste time can also be eliminated through the use of feature buttons.
Centrex Ringing Repeat

**SYSTEM AVAILABILITY**

Standard on all STRATA systems.

**DESCRIPTION**

STRATA S0 and DK systems can be programmed to emulate Centrex or PBX ringing patterns, allowing the user to differentiate between station or CO line calls, and various callback features on the Centrex or PBX line.

**BENEFITS**

Centrex Ringing Repeat allows the user to hear the same on/off ringing patterns that are heard for special calling and callback features on CO, Centrex or PBX lines. Users do not have to learn new ringing cadences, and can easily differentiate between station or CO line calls, or various callback features on the Centrex or PBX line.
**CO Line Call Pickup Groups**

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY**

Standard on all STRATA systems.

**DESCRIPTION**

With the CO Line Call Pickup Group feature, up to two CO Line Call Pickup Groups can be programmed. Ringing CO lines in the first CO line group can be picked up with an access code or with the “CPU1” button (“PKUP1” button on DK systems), if it appears on the telephone. Ringing CO lines in the second CO line group can be picked up with an access code or with the “CPU2” button (“PKUP2” button on DK systems), if it appears on the telephone.

As an option, all CO lines could be put into one group. A ringing CO line could then be picked up with an access code or with the “CPU” button (“PKUP” button on DK systems).

On DK systems with tenant service, the CO lines for tenant 1 could be put into one CO line group, and the CO lines for tenant 2 could be put into another CO line group. Then, tenant 1 station users can use the “CPU1” (or “PKUP1”) button and tenant 2 station users can use the “CPU2” (or “PKUP2”) button to pick up the CO lines assigned to them.

**BENEFITS**

Call handling for CO line calls can be more convenient and efficient with this feature. Station users do not have to determine which CO line is ringing in order to answer it, nor does the ringing CO line have to appear on their telephone in order for them to pick it up.
CO Line Groups

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Also known as Trunk Groups, this feature allows the CO lines on any STRATA system to be assigned to CO line groups. Station users can access the CO line groups by dialing a specific CO line group access code. This allows a customer to group various types of CO lines together for convenient access.

For example, a customer might want to put TIE lines in one CO line group and WATS lines in another. Users would then access the CO line group that was appropriate for the type of call being placed. If all lines in that CO line group were busy, the user could queue for the CO line group.

If the system is programmed for Least Cost Routing, station users will not need to select a specific CO line group. STRATA Sx systems will recognize up to four CO Line groups. STRATA DK systems can be programmed for up to eight CO line groups.

On DK systems, CO line groups correspond to the pooled line groups that can be assigned to buttons on an EKT. Pooled Line Group 1 is CO Line Group 1. Pooled Line Group 2 is CO Line Group 2, and so on. Up to four Pooled Line Group buttons for the same CO line group can be assigned to a station to facilitate handling several calls on that CO line group at that station. See “Pooled CO Lines” later in this section.

BENEFITS
CO Line Groups are required for other features on the system. They enable queuing, single line telephone access to CO lines, Pooled Line Buttons, CO Line Call Pickup Groups, and Tenant Service. They are also used to define Least Cost Routing schemes.
# CO Line Queuing

## SYSTEM FEATURES

### SYSTEM AVAILABILITY

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on all STRATA systems.</td>
<td>Users save time since they do not have to keep checking to see if the line they want is free. Once they have queued for the line, they can return to their work, knowing that the system will call them as soon as the line is available.</td>
</tr>
</tbody>
</table>

This feature is also known as Trunk Queuing. When all lines are in use, this provides a means for station users to be stacked in a waiting queue for an available outgoing CO line. The Automatic Callback feature notifies the station user when a line becomes available.

With STRATA DK, an EKT or a standard single line station can queue up for a busy outgoing CO line or CO line group. When the desired line is available, the system calls the station back, and the station can proceed with the call.

With STRATA S<sub>1</sub>, as a programmable option, the system may be equipped to queue up for a line within one trunk group (dial 9) or eight trunk groups (dial 91-98).

If LCR is installed, CO Line Queuing provides a convenience to users who are restricted to certain call routes.
Conferencing

SYSTEM AVAILABILITY

On STRATA S₀ systems, non-amplified conference is standard, with amplified conference available as an option. Conferencing with two CO lines can not be originated by any type of single line EKT, or any station or device that is supported by an HOXB, HICB, or PSTU. An EKT which sets up a conference using two CO lines must have two CO line buttons.

On DK systems, non-amplified conference is also standard, with amplified conference available as an option on DK16 and DK24/56/96 Release 4 systems. Any electronic or standard telephone can set up conferencing with other electronic or standard telephones.

On DK systems, CO buttons are not required for conferencing. The Conferencing feature is available on pooled line buttons, but the originating telephone must remain connected until the call is complete.

The system can connect the following conference combinations:

<table>
<thead>
<tr>
<th>STRATA S₀</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ICMs</td>
<td>CO Lines</td>
<td>Stations</td>
</tr>
<tr>
<td>1</td>
<td>1 up to 4</td>
<td>up to 4</td>
</tr>
<tr>
<td>2</td>
<td>2 up to 3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DK Systems</th>
<th></th>
<th></th>
</tr>
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<tr>
<td>2</td>
<td>2 up to 2</td>
<td></td>
</tr>
</tbody>
</table>

The Conferencing feature can be enabled or disabled system-wide in programming.

On DK24/56/96 systems equipped with a PCTU common control, 32 conference channels are available. Four parties can participate in each conference, and as many as eight conferences can be held simultaneously. A DK16 system, or a DK24 equipped with a PCTUS, has 14 conference channels. Four parties can participate in each conference, and as many as three conferences can be held simultaneously.

On the STRATA S₀, one conference channel is available. Up to five parties can participate in a conference.

On S₀, DK16, and DK24/56/96 Release 4 systems, the conference can be optionally amplified with a customer-supplied 2-way amplifier. On the S₀, this amplifier will compensate for loss in volume through both the system and the public telephone network. On DK systems, there is negligible loss through the system, so the amplifier compensates for loss in volume over the public network. (See “Amplified Conference” for details.)
Conferencing

BENEFITS

Sometimes in business it is convenient, efficient, and productive to conference two CO lines. Everyone participating in the conference gets the same information at the same time, reducing confusion and saving time.
Credit Card Calling ("0+" Dialing)

SYSTEM AVAILABILITY

Standard feature, programmable by station on DK16 and DK24/56/96 Release 4 systems.

Note that STRATA S, and DK pre-Release 4 systems also allow "0+" dialing, but Toll Restriction must be programmed a certain way. This is not as flexible and lacks some of the safeguards provided by STRATA DK16 and DL24/56/96 Release 4.

"950-X0XX" credit card calling is available on STRATA S, and DK systems.

DESCRIPTION

Callers can make "0+" telephone credit card calls from selected toll restricted stations. Calls are billed to the credit card instead of the CO line. The "0+" credit card calling feature can be selectively assigned to stations and to CO lines.

If a toll restricted station has the credit card calling feature, the DK system requires the user to enter a certain number (programmable) of digits after dialing "0" on a CO line that has the feature. If the caller does not enter that number of digits within 20 seconds after dialing "0", the call will be dropped.

If the system has Least Cost Routing, a station that has the feature can place a "0+" credit card call on any CO line accessed by Least Cost Routing.

BENEFITS

Customers can provide the convenience of "0+" telephone credit card calling without compromising toll restriction.
Optional feature on DK16 and Release 4 STRATA DK24/56/96 systems.

A DK16 or Release 4 DK24/56/96 system has sophisticated data switching capabilities provided through data interface units (DIU). This allows internal calls between data devices such as personal computers, printers, terminals, and mainframe computers. It also allows external data calls over the public telephone network with a modem. The system can be programmed with 1-4 security groups, and can restrict calls between groups. It can also support modem pooling and printer sharing.

Data switching can be done through digital key telephones with integrated DIUs or stand-alone DIUs.

Simultaneous voice and data transmission over a single wire pair eliminates additional wiring requirements and minimizes port usage on the system.

Modem pooling and printer sharing enables multiple users to maximize efficient usage of expensive peripheral devices.

PC keyboard dialing of data or voice calls increases user efficiency. An example is auto dialing by name or initial from directories stored in PCs equipped with inexpensive desk organizer-type software (modem not required).

Security groups help control who is authorized to make outside data calls, which can get expensive if linked to databases which charge for access.
Delayed Ringing

SYSTEM AVAILABILITY

Standard on all STRATA systems.

DESCRIPTION

A ringing delay of 12 or 24 seconds can be programmed for each CO line that rings at a given station. For example, an incoming CO line can be programmed to ring at one station (or a group of stations) immediately when the call comes in, and at a second station (or group of stations) 12 or 24 seconds later.

Delayed Ringing can be applied to ringing assignments for DAY 1, DAY 2, and NIGHT ringing modes. (See Night Transfer.)

BENEFITS

Delayed Ringing improves call handling by allowing the customer to provide one or more alternate answering positions for any incoming CO line. Calls have a greater chance of being answered promptly.

Because of the delay in ringing, employees at alternate answering stations will not be disturbed by ringing while they wait to see if the called station will answer. If the line rings at their station, they know they should answer it.
Direct Inward System Access (DISA)

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY**

Standard on STRATA DK systems. Not available on the STRATA S series.

**DESCRIPTION**

By calling in on a specific telephone number assigned to Direct Inward System Access (DISA), callers can reach the DK system and then dial internal stations or outgoing CO lines directly, without going through the attendant.

The caller dials the CO line number for DISA and hears two rings. Then a tone sounds for nine seconds, during which the caller dials a station number or the access code for a specific outgoing CO line or line group (‘9’ for Least Cost Routing is not allowed). If the station or CO line is busy, the caller can dial another station or CO line. If no station number or CO line access code is dialed and the nine-second interval elapses, the call is transferred to a pre-assigned ringing arrangement (DAY, DAY2, or NIGHT).

An optional DISA security code (1 - 15 digits) can be programmed. When the security code is programmed, the caller must enter it in order to make DISA calls on CO lines. The security code is not required to dial internal stations.

DK systems can provide a DISA class of service to CO lines, which allows Toll Restriction to be applied to DISA CO line calls. For example, DDD lines could be restricted to local calls only when accessed through DISA.

Any number of CO lines can be programmed with the DISA feature. CO lines can be programmed as normal lines during daytime operation and DISA lines at night.

**BENEFITS**

DISA can save money for a customer by allowing employees to use the company’s calling network even when they are not in the office.

Employees working in the field will save time because they can call directly into the station they want. They don’t have to wait for the attendant to answer their calls and they won’t waste time holding for the attendant to process their calls.

DISA can reduce the attendant’s incoming call load, and possibly save money for the customer by eliminating the need for a second attendant. When the attendant has fewer calls to handle, he or she can give better service to the callers who need it.

Before and after hours, family members and others can use DISA to directly dial an employee’s station, improving the chances that the employee will receive the call.
Distinctive CO Line/Intercom Ringing

**SYSTEM AVAILABILITY**  Standard on all STRATA systems with electronic or digital telephones. On STRATA DK systems, this feature is optional for standard telephones.

**DESCRIPTION**  Incoming CO lines ring with a different tone than do intercom calls. Users can easily distinguish the type of call, even when the telephone is not in view.

**BENEFITS**  This feature is a convenience to the user since it identifies the type of call ringing to the station. The station user can answer with an appropriate greeting.
## Door Lock Control

### System Availability

| Optional on all STRATA systems. For details on Door Lock Control for STRATA S<sub>6</sub>, see the feature “Door Phones.” |

### Description

The Door Lock Control feature allows any telephone programmed with a Door Lock button to unlock a door. Pressing the button activates the electronic door lock and the lock opens for 3 or 6 seconds, as specified in programming. The electronic door lock mechanism must be supplied by the customer.

On the STRATA S<sub>6</sub>, Door Lock Control is a function of the HDCB external module. Each HDCB can support one door lock. The S<sub>6</sub> system maximum is four.

On STRATA DK systems, one Door Lock Control is supported by an Option Interface Unit—either the PIOU, PIOUS, or PEPU. Up to four more door locks can be installed, each requiring an HDCB or DDCB. On a DK24 system equipped with a PCTUS, a maximum of four door locks can be installed. On a DK16, a maximum of 3 door locks is supported.

### Benefits

Telephone control of a door lock is a great convenience, since it eliminates the need for extra equipment to remotely control the lock, or the need to physically get up and go to the door to open it.
Door Phones

SYSTEM AVAILABILITY
Optional on all STRATA systems. Up to 6 door phones can be installed on the STRATA systems, and up to 9 door phones can be installed on the DK24 if the system is equipped with a PCTUS, and up to 12 can be installed if the system is equipped with a PCTU. Up to 12 door phones can be installed on the DK56 and DK96.

DESCRIPTION
The optional door phone/monitor station is an external/remote two-way speaker box which has a direct voice link to a station. Pressing the button on a door phone sends a distinctive ringing to the stations which have been programmed to receive ringing from that door phone. When a station answers, it is automatically connected to the door phone. Door phones can be programmed to ring over external page when the system is in night mode.

A station can dial an individual door phone/monitor station and either converse with someone at the door phone, or simply monitor conversations or sound at the door phone. No warning tone will be heard at the door phone/monitor station when it is called by a station.

Door phones are supported by the door phone control box (HDCB or DDCB) external module. One control box supports up to three door phones. On the STRATA systems, each HDCB requires one circuit on a station card (SSTU). On DK systems, the HDCB requires one EKT station circuit on a PEKU or PESU, or the DDCB requires one DKT station circuit on a PDKU or KCDU.

On the STRATA systems, if the door phone option is installed in a system, the Alarm feature or the Lock feature can optionally be activated. The Alarm feature enables a signal to be sounded at all stations whenever a contact closure is received from an external alarm system. The alarm can be turned off by Station 10 only. The Alarm feature is supported by the HDCB module. See the “Alarm Sensor” feature for details about the alarm on DK systems.

The Lock feature enables selected stations to control a door lock or other device by pressing a “DRLK” button on the telephone. The door lock control can be programmed to operate for 3 seconds or for 6 seconds. On the STRATA systems, each HDCB module can support one door lock. Thus, if the customer wanted to have door lock control on both the front and the back doors of the building, two HDCBs would be required.

On DK systems, one door lock control can be supported by an Option Interface Unit (PIOU, PIOUS, or PEPU). Up to four more door locks can be installed, each requiring an HDCB or DDCB. On a DK24 system equipped with a PCTUS, a maximum of four door locks can be installed. On a DK16, a maximum of 3 door locks are supported.

BENEFITS
The door phone increases building security and employee safety, especially after hours. It can also provide a “hot line” calling link between an office and such facilities as a warehouse or laboratory.
Optional on STRATA DK systems only. Not available on STRATA Sx. The electronic DSS (Direct Station Selection) console is used with electronic telephones on all DK systems. The digital DSS console is used with digital telephones and is available only on DK16 and Release 4 STRATA DK24/56/96 systems.

DESCRIPTION

The DSS console is a separate unit that can be used in conjunction with an electronic or digital key telephone set for a dedicated answering position. The DSS console is installed when there is a high volume of incoming calls.

The DSS console has 60 buttons which can be flexibly assigned to either direct station selection, CO lines, or speed dial buttons. Night Transfer and All Call Page can be programmed on specific buttons. The DSS has Automatic Line Hold, Voice or Tone Signaling, and Call Forward Override. On the electronic DSS console, all LEDs light red. On the digital DSS console, LEDs light red or green depending on the function.

A DSS console can be used with any of four designated stations. A maximum of 2 DSS consoles can be installed on a DK16. A maximum of three DSS consoles can be installed on a DK24 that is equipped with a PCTUS. A maximum of four DSS consoles can be installed in any DK24/56/96 system equipped with a PCTU. When a system is used in tenant service, each tenant can have a backup DSS. Up to four DSS consoles can be used with one station, provided the system supports four DSS consoles.

If the system is used in tenant service, the Night Transfer feature button on each console will activate the night ringing arrangement programmed for that tenant.

BENEFITS

The DSS console improves the call handling capability of the system. It allows the attendant to see at a glance which phones are in use, and avoid wasting time calling busy extensions. Callers will receive more efficient service. The attendant can call a station at the touch of one button, speeding up the call transfer process.

Customers who have more CO lines than can appear on the EKT associated with the DSS can program CO lines to appear on the DSS and gain visibility to the status of all lines.
DTMF and Dial Pulse CO Line Compatible

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Signals generated by pressing the buttons on the dialpad of an electronic key telephone are neither DTMF nor rotary dial signals. The system can be programmed to translate these station signals to either DTMF or rotary dial signals, as required by the serving central office.

Each line is programmed individually for DTMF or rotary dial signaling.

BENEFITS
A STRATA S or DK system can be installed anywhere, because it can accommodate both older, rotary central offices and newer Touch-tone offices. In both cases, the station user can still have the convenience and aesthetic appeal of a push-button phone.
**DTMF Signal Time Setting**

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY**
Standard on all STRATA systems.

**DESCRIPTION**
The standard DTMF signal time is 160 milliseconds, but it may be reduced to 80 if required by the central office or peripheral equipment such as a voice mail system. For STRATA DK systems, the DTMF signal time can be set independently in system programming for CO line outdialing and for voice mail auto dial digits.

**BENEFITS**
The customer has the flexibility to meet both the DTMF requirements of the serving central office and those of a voice mail device. As a result, a customer can have faster connection time to voice mail.
DTMF Signal Time Continuous

SYSTEM AVAILABILITY  

DESCRIPTION  
DTMF dial signal signal will be transmitted to the CO line or voice mail/auto attendant device for as long as the telephone user presses a button on the dial pad. This feature operates on 2000-series digital telephones only.

BENEFITS  
Users have compatibility with a variety of outside services and devices, which require manually dialing DTMF tones of varying lengths. Application examples are MCI credit card calling, which requires holding down the tone key for one second to make another call, or remotely signaling an answering machine to rewind by holding down the tone key for a specified amount of time.
## Dual FCC Registration

### SYSTEM FEATURES

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on all STRATA systems.</td>
<td>The system can be configured as either key or hybrid, with separate FCC registration numbers for each type. The appropriate configuration for an individual system depends on how it functions.</td>
<td>The system can be configured to meet the customer's requirements. Dual FCC registration insures compliance with FCC regulations, regardless of how the system is configured.</td>
</tr>
</tbody>
</table>

If the system is configured for only manual selection of outgoing lines, it may be registered as a key telephone system.

If the system is configured for automatic selection of outgoing lines such as dial access, least cost routing, pooled line buttons, etc., the system must be registered as a hybrid telephone system.

In addition, certain features (TIE Lines, Off-premises Stations, etc.) may also require hybrid telephone system registration in some areas.
External Amplified Speaker

Optional on all STRATA systems.

The External Amplified Speaker (HESB) is a six-inch, 3-watt speaker with a 3-watt amplifier that is built into a wooden speaker box. It can be used in any one of the following three applications:

- To amplify the ringing on an electronic or digital key telephone.
- To provide a paging amplifier/speaker.
- To create an amplified talk-back speaker arrangement in an area where a telephone is not needed. The HESB is installed as a speaker, and connected to a door phone unit which is used as the talk back microphone.

The number of HESBs that can be installed per system depends on the function of the HESB. Any number of HESBs can be used to provide loud ringing bells for electronic or digital key telephones. Only one HESB can be installed if it is used as a paging speaker or an amplified talk-back speaker.

Note that on 6500-series EKTs and on 2000-series digital key telephones, an HHEU interface and an HESC-65A cable are required for each phone that has a loud ringing bell. A digital key telephone that has been upgraded with a data interface unit cannot be upgraded with the HHEU option.

On DK systems, the PIOU or PEPU Option Interface Unit is required when an HESB is used as a paging/amplifier speaker or an amplified talk-back speaker.

The External Amplified Speaker gives several options to the customer for making the communications system more efficient.

A loud ringing bell can improve call handling in noisy areas, where non-amplified ringing on a phone may not be heard. A paging speaker ensures that paging announcements can be clearly heard throughout an area.

In an area where an EKT is not needed, a talk back speaker provides a cost-effective solution for communications.
Flexible Button Assignment

SYSTEM FEATURES

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
On both 10-button and 20-button telephones, one button is usually assigned to the Intercom function. In some cases, the Automatic Off-hook Selection feature can be programmed to select the Intercom line, eliminating the need for an Intercom button.

The other 9 buttons on a 10-button set or 19 buttons on a 20-button set can be assigned to a CO/PBX line or to certain features. Following are the possible assignments for a button:

CO/PBX LINE BUTTON
Up to 9 buttons on a 10-button set, or 19 buttons on a 20-button set can be assigned as CO/PBX buttons. If the set is being used in conjunction with a DSS console, all buttons could be used as CO/PBX buttons.

With DK systems, any of these 9 or 19 buttons can be assigned as a Pooled Line button. A Pooled Line button allows a group of CO lines to “appear” under one button. Up to four Pooled Line buttons per CO line group can be assigned at each telephone. (See “Pooled Line Buttons”.)

FEATURE ACTIVATION BUTTON
Assuming that one button is used as an Intercom button, up to 9 buttons on a 10-button set, or 19 buttons on a 20-button set can be assigned as feature buttons.

STRATA S
The following features can be assigned to feature buttons:
- Automatic Callback
- Automatic Dialing
- Alarm (Station 10 only on S)
- Alphanumeric Messaging
- Call Forward
- Call Pickup
- Do Not Disturb
- Door Lock 1
- Door Lock 2 (S only)
- DTMF/Rotary Signal Selector (Tone Key)
- Direct Station Selection
- "Locked" Automatic Dialing (assigned to system auto-dial location and used for Centrex, CO, or PBX access codes)
- Message Waiting/Flash
- Microphone Cutoff
- Pause
- Privacy
- Repeat Last Number Dialed
- Repertory Dial

Note: Repeat Last Number Dialed Button and Repertory Dial Button must be assigned together. One cannot be assigned without the other.

- Saved Number Redial
Flexible Button Assignment

**STRATA SYSTEM FEATURES**

**STRATA DK**

All of the features listed above for STRATA S	extsubscript{e} (except where noted) can be assigned to buttons.

In addition, the following additional features can also be assigned (see note on "Privacy" feature):
- Account Code
- All Call Voice Page
- Automatic Busy Redial
- Background Music (on/off)
- Call Forward Busy
- Call Forward Busy/No Answer
- Call Forward Fixed
- Call Forward No Answer
- Call Pickup 1 (Tenant 1)
- Call Pickup 2 (Tenant 2)
- Data
- Data Release
- Modem
- Night Transfer (Tenant 1)
- Night Transfer (Tenant 2)
- Pause (1.5, 3 or 10 seconds)
- Pooled Line Group 1
- Pooled Line Group 2
- Pooled Line Group 3
- Pooled Line Group 4
- Pooled Line Group 5
- Pooled Line Group 6
- Pooled Line Group 7
- Pooled Line Group 8
- Privacy
- Release
- Speed Dial Select (same as Repertory Dial on S	extsubscript{e})

For ease in making button assignments, there are several standard keystrip patterns that can be programmed. Changes can then be made for the buttons on individual stations which are to be different from the standard keystrip pattern selected for that station.

On all STRATA systems, there are four keystrip patterns to choose from. These are defined as A, B, C, and D.

However, Flexible Button Assignment allows the programmer to also define each of the 9 or 19 buttons individually instead of choosing a standard keystrip pattern and then changing individual buttons. Any button which is not programmed for a specific feature or CO line will automatically be assigned per the initialized pattern.

**BENEFITS**

This feature allows each phone to be customized to the particular needs of each station user. The system can be tailored to fit the business communication needs.
Flexible Intercom Numbering

SYSTEM FEATURES

Flexible Intercom Numbering allows a station intercom number, including the number for the attendant station, to be any number from one to four digits long. The intercom number does not have to correspond to the fixed station location number in the Key Service Unit (KSU).

This feature also allows any digit to be the leading digit of the door phone numbers, paging access codes, and/or CO line group access codes. For example, door phone numbers usually begin with the digit 6. With Flexible Intercom Numbering, the door phone numbers could be programmed to begin with the digit 4.

Flexible Intercom Numbering allows a business to have a consistent numbering plan for its communications system when the system includes several different types of telephone systems. Branch offices which have STRATA S or DK systems can have the same numbering plan as larger offices using PBXs.

In the case where a system is being used behind Centrex, intercom numbers can match Centrex numbers.

If a STRATA S or DK system is replacing a system that had a three- or four-digit numbering plan, the same plan can be used with the new system, eliminating the need for new directories and for new extension numbers.

Finally, if the STRATA S or DK system is being used with a voice mail system that has three- or four-digit mailbox numbers, the extension numbers can match the mailbox numbers.

Consistent numbering plans facilitate the efficient use of a communications system.
Flexible Line Ringing Assignment

SYSTEM AVAILABILITY

Each incoming CO/PBX line that appears on a given station can be programmed to either ring or not ring at that station. Each CO/PBX line can be programmed to ring at any number of electronic telephones. Thus, the number of ringing electronic telephones per CO line will be limited only by system size.

A related feature, Night Transfer, enables programming of up to three different CO line ringing patterns (Day 1, Day 2, and Night). On the S, the ringing pattern can be controlled from Station 10. On DK systems, the ringing pattern can be controlled by any station programmed with a Night Transfer (NT) button. In tenant service, there will be two Night Transfer buttons (NT1 and NT2).

CO/PBX lines can be programmed for delayed ringing (12 or 24 second delay) at any station for either of the three modes. Within a given ringing pattern (Day, Day 2, or Night), if a CO line is assigned to ring at a telephone which will be using the Call Forward feature on that line, the line should not be programmed to ring at any other stations. If more than one user is allowed to forward the same CO line, confusion could result.

If a DK system is being used in tenant service, each tenant can separately define and control three ringing patterns via the NT1 and NT2 buttons.

BENEFITS

The customer has the flexibility to define the CO ringing arrangements to fit the needs of the business. Calls can get to their destination quickly. CO/PBX lines can ring directly to a station or group of stations in a specific department, without going through a central attendant. This reduces the attendant call load and enables better service to callers. Flexible Line Ringing Assignment also allows the use of private lines in the system, and is used for tenant service.
**Flexible Slot Assignment**

**SYSTEM FEATURES**

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on DK24/56/96 systems only. Not available on STRATA S8. Available in expansion unit of DK16.</td>
<td>The flexible slot architecture on STRATA DK systems allows almost any combination of CO line and station ports. System slots in the KSU can be assigned as station, CO line, E&amp;M TIE line (not on DK16), or Option Interface slots in a variety of custom configurations. All stations, CO lines, and optional printed circuit boards are the same size and use the same connector to mount into the backplane of the Key Service Unit (KSU) cabinet. Therefore, any printed circuit board can be installed in any slot, with the exception of the PCTU or PCTUS common control unit.</td>
<td>Because flexible slot assignment increases the variety of line/station combinations, a customer can have a system that is sized and specifically tailored to meet their needs.</td>
</tr>
</tbody>
</table>
Least Cost Routing

SYSTEM AVAILABILITY
Available on STRATA DK systems. Not available on STRATA SE.

DESCRIPTION
Least Cost Routing (LCR) enables the system to automatically route each outgoing call over the least costly trunk or common carrier connected to the system. A station user simply dials the LCR access code (9), followed by the telephone number. When properly programmed, the system chooses the cheapest CO line available to the user.

Through programming options, the system can be set to allow or disallow calls for long distance information. If such calls are allowed, a specific route for them can be selected. Specific routes can also be assigned for local calls.

Up to five special codes can be exempt from LCR. Usually, these will be emergency codes such as 911, which should never be blocked by LCR.

There are four classes of LCR. There are eight office code exception tables. Up to eight office code exception tables may be assigned to a particular area code.

Up to three time-of-day schedules can be set up to allow different routes to be selected at different times of day.

As a programmable option, a warning tone can be heard when the system has selected the most expensive route. This gives the user the option to wait until a less expensive line becomes available.

BENEFITS
Least Cost Routing reduces the costs of long distance calling by insuring that each call is placed over the least costly route available to that user at that time. Placing a call is simpler for station users, since they do not have to decide which line to use, or remember how to access specific lines.
Live System Programming

SYSTEM FEATURES

SYSTEM AVAILABILITY  Standard on all STRATA systems.

DESCRIPTION  Programming can be performed on a STRATA S or DK system without taking the system out of service. The system can be put into programming mode, and data can be entered via Station 13 on the S. On DK systems, data can be entered via the station connected to port 05, usually Station 205.

During the programming, the station executing commands is the only station that loses normal functioning. Service is not interrupted to any other station.

Live system programming can be done locally from a terminal or remotely, if the system is equipped for remote administration/maintenance. When the system is programmed from a remote or local terminal, all stations remain functional.

BENEFITS  This feature eliminates any disruption to telephone service during the business day caused by programming adds, moves or changes. In addition, it helps control costs by eliminating the need to do these changes after hours at overtime rates.
Memory Protection

**SYSTEM AVAILABILITY**
Standard on all STRATA systems.

**DESCRIPTION**
The system memory has its own battery backup to protect the system data in the event of a power failure. System data will be maintained by the battery for approximately six years in the event of a power failure. This means that the system programming (i.e., system parameters, toll restriction tables, station classes of service, LCR programming, ringing assignments, message and speed dial memory, etc.) will not be lost.

**BENEFITS**
In the event of a power failure, the system data will be completely re-instated upon restoration of power.
Message Waiting

SYSTEM FEATURES

SYSTEM AVAILABILITY

Standard on all systems for key telephones only.

DESCRIPTION

The Message Waiting feature allows any station (including the designated Message Center, a standard telephone, or a voice mail system) to set a Message Waiting LED at any station which has a Message Waiting/Flash (MW/FL) button assigned to it. On DK systems, with digital telephones, there is a fixed Message Waiting button. Up to four Message Waiting indicators can be set on any given station. However, the fourth indicator is always reserved for a message from the Message Center. This means that a maximum of three other stations can activate Message Waiting on a station at any one time.

On an LCD telephone, the extension number of the station that sent the message will be displayed. The total number of station numbers that can be displayed depends on the length of the station numbers. Up to eight LCD characters can be used for all of the station numbers. Thus, if station numbers were two digits long, up to four station numbers could be displayed. All station numbers can be displayed using the Scroll button.

There can be only one designated Message Center in the system, even if tenant service is installed. On the S6i, the Message Center must be either station 10, 11, or 12. On a DK system, any station can be the Message Center.

On any STRATA system, a voice mail system can be assigned as the Message Center. The voice mail system can set Message Waiting at a station when a message arrives in that station’s mailbox. It can also dial a code to cancel the Message Waiting LED on a station, once the station user has picked up the message.

When the voice mail system leaves a Message Waiting indication on an LCD telephone, a “V” is displayed next to the voice mail port extension number to indicate that the message is from the voice mail system.

BENEFITS

People often forget to check for messages, or do so infrequently, especially if they are not located near the attendant station. They may not be aware that they have messages, and important messages or requests for timely callbacks can go unattended for several hours. The Message Waiting feature alerts the station user to the fact that messages are waiting, thereby making the communication system more efficient and providing better service to customers and other callers.
Multiple Simultaneous Handsfree Intercom Paths

SYSTEM AVAILABILITY

Standard on all STRATA systems.

DESCRIPTION

The intercom paths on the STRATA S_e and DK systems are designed to carry handsfree conversations on all intercom calls at the same time.

Two intercom paths are standard on the STRATA S_e.

The digital technology of the DK systems provides completely non-blocking intercom paths, enabling unlimited simultaneous handsfree intercom calls.

BENEFITS

On STRATA S_e, if an intercom line is free, any station user with the Handsfree feature can make a handsfree intercom call on that line. This eliminates delays that occur on some older systems which could only handle one handsfree conversation, regardless of the number of intercom lines.

On STRATA DK systems, the digital technology allows any station to make a handsfree intercom call at any time.
# Music-on-Hold Interface

## SYSTEM FEATURES

### SYSTEM AVAILABILITY

The Music-on-Hold interface enables the system to be connected to a customer-supplied music source to provide Music-on-Hold. CO lines placed on hold will be connected to this music source.

On STRATA S systems, the music source will be the same as that used for background music through electronic key telephones or through an external speaker (if installed).

On STRATA DK systems, background music can share a music source used for music-on-hold, or can have a separate source.

For the STRATA S, a small STRATA printed circuit card can be used to provide one of two on-board, electronic synthesized melodies. More often, the customer will provide an external music source such as a tuner or tape player.

For a STRATA DK system, if it is configured with a tape recorder that plays a pre-recorded message to holding parties, the Option Interface Unit (PIOU, PIOUS, or PEPU) is suggested. These units have a relay that can be programmed to control a tape player every time a CO line is placed on hold. When the relay activates, the tape plays. When the line goes off hold, the tape stops. The tape recorder does not run continuously.

The Music-on-Hold volume can be adjusted through system controls.

### BENEFITS

Customers can realize a cost benefit with this feature, as they do not have to purchase a separate interface card for Music-on-Hold (the customer does have to provide the music source).

Music-on-Hold is not simply for entertaining callers while they are on hold. It also assures the caller that he or she is still connected to the system. The customer can substitute a promotional tape for a music source, allowing the customer to advertise while callers are on hold.

The separate music sources available on STRATA DK allows callers on hold to hear special music and/or advertising messages while station users and external speakers hear different music.

Some firms like to select a particular type of music to re-inforce an image they are trying to create.
Music-on-Hold Source

STRATA SYSTEM FEATURES

SYSTEM AVAILABILITY
Optional on the STRATA S0. Not available on STRATA DK systems (customer supplied).

DESCRIPTION
When installed, this optional Toshiba proprietary music source provides electronic synthesized music in a choice of two melodies. The music source is a board called the SMOU-1.

BENEFITS
This music-on-hold source is installed as part of the system, and does not require attention to proper tuning and station selection, like a tuner does.
Night Ringing Answer Code

SYSTEM FEATURES

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
The Night Ringing Answer Code enables any station to answer an incoming call that rings when the system is in night mode. The user dials a two-digit code to answer the call.

When a DK system is used in tenant service, each tenant can have a separate Call Pickup button which will connect the user to the ringing call.

BENEFITS
This feature enables employees who are in the building after hours to answer a call when it rings in over the external page, a night bell, or through selected telephones. Family members, other employees, and even customers can reach employees after hours. This affords peace of mind to the employees and their families.
Night Ringing over External Page

System Availability

Description

An option can be selected through system programming to have incoming CO line calls and door phones ring over external paging when the system is in night mode. Night ringing over the external page can be assigned on a CO line-by-CO line basis.

On DK systems, door phone ringing can also be programmed to sound over an external speaker.

If a system is sold for Tenant Service, the lines assigned to Tenant #1 and Tenant #2 can be programmed to ring over the external paging system. Lines for Tenants #1 and #2 will ring according to the night mode which is programmed for them.

Benefits

If a customer has an external paging system that gives sufficient coverage to the work area, there is no need to purchase additional equipment for night ringing. CO line calls after hours ring over the existing paging system, insuring that people working after hours will be more likely to get important calls.

Because ringing can be programmed on a line-by-line basis, lines which do not require attention after hours need not ring over page. This minimizes disturbance to those working after hours.
### SYSTEM FEATURES

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Optional on DK16 and Release 4 STRATA DK24/56/96 systems.</td>
<td>If zone paging has been installed, incoming CO line calls can be programmed to ring over selected page zones via customer-supplied paging equipment. The CO lines can be placed into two groups and each group can be assigned to night ring over different PIOU paging zones.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>BENEFITS</th>
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</thead>
<tbody>
<tr>
<td>A customer can have night calls ring over external paging and differentiate between two groups of calls. People working after hours will not be bothered by calls that are not directed to their area.</td>
</tr>
</tbody>
</table>
Night Transfer (Day/Night Modes)

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Also known as Night Service, all STRATA systems can be programmed for up to three alternate CO line ringing arrangements. These are: DAY (also known as DAY1 on S2c), DAY2, and NIGHT.

“DAY” (or DAY1) mode is for normal system operation during business hours. “DAY2” mode is often used for a ringing arrangement to handle calls when the attendant is at lunch or on a break. For example, incoming calls could be sent to a secretary who has been designated as the backup attendant. “NIGHT” mode is used after hours and on weekends.

For each of the three modes, each CO line can be assigned to ring at any stations in the system, including off-premises stations and stations supported by an HIOB, PSTU, or PESU. For example, CO lines could be assigned to ring a voice mail port. The CO line can ring any number of stations, and for a given CO line, the ringing arrangements for each of the three modes can be entirely different. The Delayed Ringing feature can also be applied individually to all three modes.

If a CO line is programmed to ring at only one EKT in a particular ringing arrangement, a CO line call to that EKT will forward if the EKT is in the Call Forward mode. If the EKT is in a station hunt group, the call will hunt.

Night Ringing can also go to external page on all systems except the S2c. It can also go to a night bell and/or to an answering machine or service. Note that the PIOU, PIOUS or PEPU option interface unit is required for night ringing over external page on a STRATA DK system. Remember that the PIOUS does not include the 3-watt amplifier.

BENEFITS
Incoming calls will be handled efficiently by several pre-programmed ringing arrangements. The customer can easily switch among the arrangements to handle calls at different times of day.
**Non-blocking Dialing**

<table>
<thead>
<tr>
<th>SYSTEM FEATURES</th>
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<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM AVAILABILITY</td>
<td>Standard on all STRATA systems.</td>
<td>A customer can buy the size system that is required for their business, knowing that the capacity of the system can be fully utilized at all times. The customer does not have to buy extra capacity in order to insure that calls will never be blocked during busy hours.</td>
</tr>
<tr>
<td><strong>DESCRIPTION</strong></td>
<td>On the S&lt;sub&gt;2&lt;/sub&gt;, Non-blocking Dialing means that all CO lines and all intercom lines can be in use at the same time. No one would be blocked from making a call if a line was free.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On DK systems, Non-blocking Dialing means that all CO lines can be in use at the same time and simultaneously, any station can be connected to any other station on an intercom call. There is no set number of intercom paths, as there is with the S&lt;sub&gt;2&lt;/sub&gt;.</td>
<td></td>
</tr>
</tbody>
</table>
Off-premises Line

**SYSTEM AVAILABILITY**
Optional on STRATA S3. Not available on DK systems.

**DESCRIPTION**
This feature allows a CO/PBX line connected to a STRATA S3 system to be bridged with a conventional single line telephone (rotary or DTMF/tone) either on- or off-premises. When a call comes in on that CO/PBX line, the call will ring the single line phone in addition to the station(s) it normally rings in the system. Calls can be placed from the Off-premises Line (OPL) as well.

These Off-premises Lines are supported by the HOLB external unit. An HOLB can support up to three OPLs.

Up to three OPLs can be installed on a STRATA S3.

The CO lines that are bridged with the three OPLs on the HOLB can also be programmed to “hunt” to a device that has been connected to the “hunt output” on the HOLB when the system is in night operation. For example, an answering machine is a typical “hunt device” that can be connected to the “hunt output.” In a hunting situation, the OPL and the answering machine would ring simultaneously. If the OPL was not answered within the specified number of rings, the answering machine would answer the call.

Unlike an Off-premises Extension (OPX), an OPL does not function as a station within the system. It does not have intercom calling capability or access to system features.

**BENEFITS**
The OPL feature allows selected employees to receive and make calls on specific CO lines when they are at a location other than the office. This provides user convenience, system flexibility, and better service to callers.

OPLs can also be used to connect external devices such as modems and answering machines to the STRATA S3 system.
**Off-premises Station**

**SYSTEM FEATURES**

**DESCRIPTION**

Optional on all STRATA systems.

An Off-premises Station (OPS) is a standard 2500-type (DTMF/tone) or 500-type (rotary) single line set located off the site where the system is installed. An OPS (or OPX) normally requires a special line from the central office.

For STRATA S, the term “OPX” also refers to a standard 2500-type or 500-type single line set which is on-premises. STRATA S can support up to a total of four OPXs (on- or off-premises).

STRATA DK16 can support up to a total of 12 OPXs (on- or off-premises).

When equipped with a PCTUS, the DK24 system can support up to 24 standard single line telephones (on- or off-premises). When equipped with a PCTU, it can support up to 32.

The DK56 system can support up to 56 standard single line sets (on- or off-premises), and the DK96 can support up to 96.

Standard single line sets have access to many of the same features as the electronic key stations, although their method of access will be different, since the standard phone does not have feature buttons. Access codes are used to activate features.

The system can be programmed to allow standard single line sets to access an outside line by dialing a CO line access code (often “9”). CO lines can be selectively included in or excluded from the “dial 9” group.

As a programmable option, CO line groups can be defined. The standard single line set can then access a CO line group by dialing the CO line group access code. This option is useful when the set is only to be allowed access to a certain group of CO lines. Individual CO lines can be selected by a standard single line set by dialing “7” plus the CO line number. Standard single line sets will also function behind a PBX.

On the STRATA S, standard single line sets will use specific HKSU station locations. Using Flexible Intercom Numbering, the sets can be assigned any intercom number. On DK systems, the PCBs that support standard telephones (PSTU and PESU) can occupy any flexible slot in the Key Service Unit (KSU). On DK16 systems, the KSTU also supports standard telephones.

**BENEFITS**

This feature allows the installation of stations beyond the 1000-foot limitation of the EKT. It also enables the less expensive standard telephones to be used at satellite locations and to have access to many system features. It can eliminate the cost of installing a separate phone system.

Customers can use the less expensive standard single line telephones on-premises for employees who do not need the full complement of features afforded by the electronic key telephone.
Outgoing Call Restriction

SYSTEM FEATURES

OUTGOING CALL RESTRICTION

Standard feature, programmable by station on all STRATA systems.

Through programming, stations can be selectively restricted from making outgoing calls on any or all CO/PBX lines. However, a station that is restricted from making outgoing calls may still receive calls on those lines.

There are potential cost and productivity benefits for a customer with this feature. By restricting employees who do not need to make outgoing calls as part of their job, the company can minimize phone abuse.

In addition, if an employee’s job is to answer incoming calls, this feature insures that the employee will not tie up those lines with outgoing calls. More efficient service can then be given to the incoming callers.

Because Outgoing Call Restriction is applied on a CO line-by-CO line basis, each employee’s phone can be programmed so that the employee can only access those CO lines necessary to do his or her job. For example, if a set of WATS lines was installed in the system for the use of a special sales group, employees who are not in the sales group can be restricted from accessing those WATS lines.
SYSTEM FEATURES

SYSTEM AVAILABILITY

All Call Voice Page allows a station user to make a voice announcement through the speakers of all telephones which are not in use or otherwise blocked from receiving an all call page. The user presses the All Call Page button or dials an access code and makes the announcement through the station handset. Stations that are busy on-hook or off-hook will not receive the page, even if equipped with Off-hook Call Announce.

The system can be programmed to include external paging in the All Call Voice Page. Through programming, stations can also be excluded from receiving such page announcements.

The All Call Voice Page access code is factory programmed to be 80 on S8 systems, and 30 on DK systems. However, the leading digit of the code can be changed in situations where a customer has several types of telephones systems in company branch offices and wants a consistent numbering plan.

BENEFITS

Many small and mid-sized offices do not need an external paging system, but do require some method of reaching all employees simultaneously for announcements. All Call Voice Page provides this capability without the expense of an external paging system. Even if an external paging system is installed, the All Call Voice Page feature can still be very useful. People sometimes “tune out” external paging. Paging through the phone with this feature gets attention. Also, some employees may not be located within range of the external paging system. This feature can bring a paging announcement directly to their desk top.
Paging—External Page Interface

SYSTEM AVAILABILITY

Standard on STRATA S8. Optional on STRATA DK systems.

DESCRIPTION

STRATA S8 systems provide two external page interfaces:

- One provides a 3-watt amplifier and connects to any customer-provided standard 8-ohm speaker system. The 3-watt amplifier is located on the optional SEPU board.

  The number of speakers that can be connected depends on the type of speaker, the desired volume, and the type of wiring used.

- The other interface provides a 600-ohm output which can be connected to a customer-provided external amplifier and any compatible speaker system. This interface would be used if more than 3 watts of power is required.

  This 600-ohm output interface can also be used to provide talk back capability with a customer-provided talk-back speaker.

On DK16 systems, there is a 600-ohm output which can be connected to a customer-provided external amplifier and compatible speaker.

On DK systems, an Option Interface Unit (PIOU, PIOUS, or PEPU) can be installed to provide an internal 3-watt amplifier and an external page interface. The PIOU can support zone paging with up to four zones. The PEPU can support just one zone. An optional two-way 600-ohm voice path is available on the PIOU, PEPU, or PIOUS for use with a customer-supplied talk-back speaker/amplifier.

The PIOU or PEPU provides a relay contact to mute background music over external page when a voice page is in progress.

BENEFITS

A paging system provides instant access to employees who do not have phones or who are away from their desks, and saves time locating them.

All STRATA systems are capable of easily connecting to an external paging system, using either an optional STRATA S8 or DK amplifier or a customer-provided external amplifier.
## Paging—External Zone Paging

### SYSTEM FEATURES

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional on DK systems. Not available on STRATA S8.</td>
<td>A STRATA DK system will support up to four external paging zones. To page a specific zone, a user dials a two-digit access code. The customer must supply the speakers and amplifier(s), and the PIOU Option Interface Unit is required to support external zone paging.</td>
<td>The customer can conveniently page a specific area without distracting employees who do not need to hear the announcement.</td>
</tr>
</tbody>
</table>
Paging—Group Paging

STRATA SYSTEM FEATURES

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Up to four groups of stations can be defined as paging groups. A unique 2-digit access code is assigned to each paging group, which allows voice paging exclusively to the telephones assigned to that group.

Any number of stations can be in a paging group, and a station can be in up to four paging groups. Group paging is always heard through the speakers on the Electronic Key Telephones.

If one group is being paged, the Group Paging feature is not available to any other group until the first group page is completed.

BENEFITS
This feature enhances office efficiency by providing a quick way to contact a group of people without disrupting other workers who do not need to hear the message. When all groups are paged, everyone in all groups can hear the announcement simultaneously.
Pooled CO Lines

SYSTEM FEATURES

SYSTEM AVAILABILITY
Standard on DK systems. Not available on STRATA Sx.

DESCRIPTION
A “CO line group” and a “CO line pool” are the same except a pool of CO lines can appear under one CO line button on a telephone. CO lines can be pooled in categories. For example, all WATS lines of the same type can be in one pool, all regular CO lines in another, and all TIE lines to the same destination in a third. Up to eight CO line pool/groups can be defined.

Each CO line pool/group can appear on up to four Pooled Line buttons on an electronic key telephone. This enables the user to process several calls in that CO line group at the same time. If a station user will regularly process more than one call at a time, Toshiba recommends that the station be assigned more than one Pooled Line button.

BENEFITS
Pooled CO lines can save money for the customer. The less expensive 10-button telephones can be used instead of 20-button telephones to provide access to the same number of CO lines.

Pooled Line buttons also offer “hybrid” type system operation, even while configured for “key” operation. This will also enable the STRATA DK to compete more cost effectively against hybrids.
Power Failure Transfer

**SYSTEM AVAILABILITY**  
Optional on STRATA S4 and DK systems.

**DESCRIPTION**  
On the STRATA S4, the power failure transfer module (SPFU-1) will switch up to three CO lines directly to dedicated, customer-provided conventional single line telephones (2500-type or 500-type) in the event of a power failure. The CO lines identified as CO1, CO2, and CO3 can be switched.

On DK16 systems, a power failure transfer port is provided to switch one CO line directly to a standard single line telephone.

On DK24/56/96 systems, the power failure transfer module (DPFT) will transfer up to 8 CO lines to dedicated, customer-provided conventional single line telephones. The DPFT requires one standard single line port on a PSTU and only one DPFT can be supported by a PSTU. The DPFT 24V control connects only to a PSTU. However, standard telephones connected to a PESU can also be connected to the DPFT to provide emergency service.

It is recommended that only one DPFT be connected to the system due to system power limitations.

**BENEFITS**  
In the event of a power failure, the customer will be able to make and receive calls without interruption of service.
SYSTEM FEATURES

Privacy/Non-privacy Option

SYSTEM AVAILABILITY

Standard feature on all STRATA systems.

DESCRIPTION

An S6 system can be programmed to be private or non-private. When the system is in the private mode, a station user who makes a call on a CO/PBX line or an intercom line has exclusive use of that line. Other stations cannot enter the line by pressing the line button. When the system is in the non-private mode, other stations can enter the line by pressing the line button.

If an S6 system is programmed to be non-private, an EKT station with a Privacy (PRV) button can activate privacy on any call in progress at that station.

STRATA DK24/56/96 Release 1 or 2 systems are always private. An EKT station which has a Privacy Release (PRV RLS) button and originates a CO line call can deactivate the privacy on that line by pressing the PRV RLS button. Once the privacy is released, a maximum of four parties, including the distant CO line party, can participate in the call.

STRATA DK16 and DK24/56/96 Release 3 or 4 systems can be programmed so Privacy either functions like the S6 using a Privacy button, or like a DK Release 1 or 2 using the Privacy Release button.

BENEFITS

The benefit to the customer is greater flexibility. The system can be customized to meet the needs of the business.
**Relay Services for External Page or Door Lock**

### SYSTEM AVAILABILITY
On DK systems, an optional relay can be used either for external page or door lock control. Not available on the S8.

### DESCRIPTION
If a system has background music on an external paging system, the external page relay makes it possible to suppress the background music when a voice announcement is made over the paging system.

On a DK system, an Option Interface Unit (either the PIOU, PIOUS, or PEPU) must be installed to provide the external page/door lock control relay. The door lock control relay enables any telephone station programmed with a Door Lock button to unlock a door. (See “Door Lock Control” feature.)

### BENEFITS
Voice announcements can be heard clearly without interference from the background music.
Relay Service for Night/Hold

SYSTEM FEATURES

SYSTEM AVAILABILITY
On DK systems, a Night/Hold relay is optional. Not available on the STRATA S series.

DESCRIPTION
The Night relay allows one of two possibilities to occur when the system is in night service. Either:

- The system will provide signals to activate an answering machine which answers calls that ring in, or
- The system will provide the signals to activate a night bell or chime.

If a DK system is configured for night chimes, door phones that ring at night can be programmed to ring over the chimes.

On DK systems, the Hold relay activates any time a caller is put on hold. It is normally used to control the Music-on-Hold source. It can control a tape deck such that the tape goes on when a caller is put on hold and the relay is activated, and goes off when the caller is taken off hold. With the relay installed, the tape does not have to play continuously. The Night/Hold relay is provided by an Optional Interface Unit (either the PIOU, PIOUS or PEPU), which must be installed.

BENEFITS
This feature allows the customer to have more options for handling calls when the system is in night service. The customer can choose an arrangement that best meets the needs of the business.
Remote Administration/Maintenance

Optional on all STRATA systems.

The Remote Administration/Maintenance module provides a built-in modem and allows administrative and diagnostic software programs to be run from a remote location. The modem can operate at 300 or 1200 baud full duplex. Remote administration and maintenance can be done “live,” without interruption to normal system operation.

With STRATA systems, the SDTU is required for remote administration/maintenance. STRATA DK systems require either a PIOU or PIOUS.

The Remote Administration module requires two programmable security codes for access to all programs (Level 1) or station class of service programs only (Level 2).

In order for the Remote Administration module to work, one CO/CENTREX/PBX line must be connected to the system. However, this line does not have to be dedicated to the module. If the customer wants to have a CO line dedicated to the Remote Administration module, that CO line can be programmed to ring the module directly during any ringing mode (Day, Day 2, or Night).

If automatic connection is not programmed, connection between a CO line and the module is accomplished via the Call Transfer feature. Remote administration/maintenance can also be accessed through Direct Inward System Access (DISA).

There are five operating modes for Remote Maintenance:
- Programming mode—all programs.
- Data Dump mode—all programs.
- Test CO Lines/Stations.
- LCD Messaging—Edit and set completely new messages for any EKT (system and personal messages).
- Speed dial edit/change.

Service costs can be reduced because routine service and administrative procedures can be done from the service company’s office, eliminating the cost of having a technician travel to the site each time a routine procedure is required. Service time is also reduced.

A company that has a centralized telecommunications department to do routine administrative procedures for field office communications systems can save time and money since the telecom staff will be able to perform routine procedures from the central location, without having to travel to the field sites.
Station Hunting

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY**

Standard on all STRATA systems.

**DESCRIPTION**

Station hunting allows an intercom call that comes to a busy station to “hunt” through a predetermined group of stations and complete to the first idle station. Incoming CO line calls that have been transferred or call forwarded to a station will also hunt. Hunting always starts with the called number, and ends with the last number in the predetermined group. The hunting does not have to follow the numeric sequence of the stations.

Any number of hunt groups can be defined. A station can only be in one hunt group. Calls from the DSS console will hunt or not hunt according to how the system has been programmed. (DSS console not used with STRATA S60.)

**BENEFITS**

Station hunting can help calls to be completed on the first try, enhancing call handling. It can provide better service to customers and other outside callers, since they will usually reach someone who can help them. It can also boost productivity for internal callers, since they will not have to hang up and redial another intercom number if the first party does not answer.
STATION MESSAGE DETAIL RECORDING (SMDR)

SYSTEM AVAILABILITY

OPTIONAL ON ALL STRATA SYSTEMS.

DESCRIPTION

STATION MESSAGE DETAIL RECORDING (SMDR) allows the system to print call records of both incoming and outgoing calls or only outgoing calls. On DK systems with Release 2 software, the system can also print a call record of only outgoing long distance (toll) calls. Calls of less than either one or ten seconds (programmable option) will not be recorded.

On the S2 and V1x, SMDR is supported by an external module, the HSMB. The HSMB is equipped with an RS232C connector, for attachment to a customer-provided printer or recording device. Data output speed can be set at 300 or 1200 bps. The HSMB can be located a maximum of 50 feet from the printer or other output device.

The STRATA S2 requires the STMU-5 optional circuit card as well as the HSMB-5 in order to have the SMDR feature.

On DK systems, SMDR is supported by the Option Interface Unit (PIOU or PIOUS) which is equipped with an ASCII RS232/6-wire modular connector, compatible with most call accounting devices. A PPTC connector is available from Toshiba to convert G-wire/modular to 25-pin DB25 connection.

The SMDR printout includes time and duration of the call, as well as the number of the station that made the call and the directory number of the destination. It also includes time to answer, and the station to which the call was transferred, if any. Account codes are also printed if the system has been programmed for them.

A sample of the SMDR output for an outgoing call is shown below:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01 17 10:00 00:00,36 32</td>
<td>3832726 123456</td>
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<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3-1

SMDR Output—Outgoing call

3-67
A sample of the SMDR output for an incoming call is shown below.

<table>
<thead>
<tr>
<th>MM/DD/YY</th>
<th>Time of Call</th>
<th>Duration of Call</th>
<th>Time to Answer</th>
<th>Acct. Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 17</td>
<td>10:13</td>
<td>00:00.23</td>
<td>00,10</td>
<td></td>
</tr>
<tr>
<td>02 10</td>
<td>10:13</td>
<td>00:00.15</td>
<td>00,00</td>
<td>654321</td>
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<td>00:00.29</td>
<td>00,14</td>
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</tr>
<tr>
<td>02 10</td>
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<td>00:00.14</td>
<td>00,07</td>
<td></td>
</tr>
<tr>
<td>02 12</td>
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</tr>
<tr>
<td>02 12</td>
<td>10:17</td>
<td>00:00.19</td>
<td>00,00</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3-2
SMDR Output—Incoming call

**BENEFITS**

SMRD can help a customer realize cost savings. Telephone bills can be allocated back to the departments which made the calls. Telephone abuse can be pinpointed and corrected.

Further, since account codes are included in the SMDR printout, lawyers, accountants, and others who provide hourly professional services can accurately bill clients for telephone time.

SMRD can also help increase productivity continued for employees such as telemarketers who must learn to spend the optimal amount of time on each call.
## System Battery Backup Interface

### Optional on all STRATA systems.

**DESCRIPTION**

On the S10, an optional battery backup unit is available for the system power supply. The S10, the backup unit (HPFB-6) includes the battery pack and mounts externally.

A customer-supplied battery pack can be connected to a STRATA DK system as a power failure backup system. Batteries are connected to the system's standard power supply by an optional connector cable.

In the event of a power failure, the system will automatically be switched to battery power. All functions of the STRATA system will continue to operate for several hours after a loss of normal electrical power. The exact time period depends on the type and size of batteries used and on system capacity and traffic. No calls will be disconnected during switchover to battery power.

During normal power conditions, the batteries are kept fully charged by the system power supply.

**BENEFITS**

A battery backup system insures that telephone service will not be interrupted in the event of a power failure.
### SYSTEM AVAILABILITY

**DESCRIPTION**

Any system can be programmed through an electronic LCD telephone in the system. On the STRATA S series, programming is done via Station 13. On DK24/56/96 systems, programming is done from the electronic key telephone connected to PDKU/PEKU port 05. On DK16 systems, programming can be done through any station port.

During programming, the station executing the commands is the only station that loses normal functioning. Service to all other stations remains normal.

**BENEFITS**

No special equipment is needed to program the system. A customer who wants to do simple moves and changes does not have to purchase additional terminal equipment. All programming can be done with an electronic or digital LCD telephone.
SYSTEM SPEED DIAL

SYSTEM AVAILABILITY

DESCRIPTION

Standard on all STRATA systems.

Also known as Automatic Dialing—System, this feature enables the customer to assign a two-digit dialing code to each of 40 telephone numbers that are frequently used for company calls. All station users can then “speed dial” the number by using the code, instead of manually dialing the number.

On S0 systems, each System Speed Dial number can have up to 16 digits. On DK systems, each number can have up to 20 digits. Two or more speed numbers can also be “chained” during one call to accommodate numbers that have more than 16 (or 20) digits. Pauses can be programmed into the number.

On the S0i, System Speed Dial numbers can be stored or changed only by station 10. Station 10 can also assign a 12-character name to each System Speed Dial number. These names can be viewed by a station user with an LCD telephone when the user scrolls through System Speed Dial numbers. (See STRATA DK Electronic Telephone User Guide.)

On STRATA DK systems, the station assigned to port 00 (initialized as station 200) performs these functions.

Access to System Speed Dial numbers can be assigned on a station-by-station basis. Stations can be restricted from using System Speed Dial numbers. If a station user is restricted from using System Speed Dial numbers, that user will automatically be restricted from having station speed numbers.

STRATA systems can also be programmed to allow System Speed Dial numbers to override toll restriction.

If the system is installed behind Centrex or a PBX, system speed dial locations can also be used for storage of Centrex/PBX feature access codes. Those codes can then be assigned to appear as Automatic Dialing buttons on phones that need them. In this way, Centrex or PBX feature codes can be programmed for one-button access.

System Speed Dial codes 90-99 can be pre-defined and then incorporated into any other Speed Dial code to allow up to 29 digits to be automatically dialed via one code. For example, an OCC access number could be programmed as Speed Dial code 90. Then, Speed Dial code 90 could be used as part of the telephone number for another Speed Dial code by entering “*90” as the first three digits in the telephone number for that Speed Dial code.
BENEFITS

Looking up telephone numbers can be time-consuming. Errors can be made in dialing which also waste time and can be costly. By using automatic dialing for numbers that are frequently called, those time-wasters can be eliminated.

Sometimes certain employees need to make business toll calls. However, it may also be desirable to toll restrict those employees. The system can toll restrict those employees, yet allow them to dial specific business toll calls using system speed dial numbers. This eliminates the possibility of telephone abuse and can result in cost savings.
**Tandem CO Line Connection (Trunk-to-Trunk)**

**SYSTEM AVAILABILITY**
Standard on all STRATA systems. An EKT that sets up a Tandem CO line connection must have two CO line appearances. The feature is not available on a single line EKT, an OPX, or a station supported by an HIOB. It is not available on Pooled Line buttons.

**DESCRIPTION**
Also known as Trunk-to-Trunk Connection, this feature allows a station user to connect two CO lines in a conference, and then drop out of the conversation, leaving the two outside parties in an unsupervised conference. The CO lines will remain connected until one of the parties hangs up. Each CO line in the system can be allowed or denied the capability to be in a tandem CO line connection.

Please note that STRATA has an Automatic Release from Hold capability that provides the automatic disconnect. It recognizes the disconnect signal from the central office. If the central office does not provide the disconnect signal (most do), the trunk-to-trunk conference must be monitored and released by the station user who set it up.

On the STRATA, there can be one tandem CO line connection at a time. A maximum of four tandem CO line connections can be maintained simultaneously on a DK16, and a maximum of ten on STRATA DK24/56/96 systems.

If the amplified conference option is installed and the amplifier is available, the tandem CO line connection will automatically be amplified.

**BENEFITS**
This feature allows important incoming calls to be connected to employees who are out of the office, resulting in greater calling convenience and more efficient handling of calls.

Internal callers who set up conference calls can drop out of the conference when they no longer need to participate. They can return to productive work and use their phone to make and receive other calls.
Tenant Service

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY**

**DESCRIPTION**
One STRATA DK system can be shared by two businesses. CO/PBX lines for each tenant will appear in the correct sequence on key telephones, and each tenant can have up to two dedicated DSS consoles. Station-to-station calling can be done between the two businesses.

CO lines assigned to Tenants 1 and 2 can activate night ringing over external page. Each tenant has its own Night Transfer button (NT1 and NT2), and can independently control night ringing via their DSS units. Both tenants share a common night bell or a common external page zone for night ringing. With DK16 and DK24/56/96 Release 4 systems, if zone paging is installed, the two CO line groups can ring over different paging zones at night.

Ringing CO lines assigned to Tenant #1 can be picked up with a button labeled “PKUP1”, while ringing CO lines assigned to Tenant #2 can be picked up with a button labeled “PKUP2”.

**BENEFITS**
Two small companies that do not individually require the full capacity of a DK system can have the functionality and features of the system at an affordable cost. They may also be able to reduce costs further by sharing a receptionist. If the businesses are related, a common system can allow them to communicate easily with each other, without the expense of separate systems.

Tenant service allows the businesses to appear as two separate companies. They can have separate lines, separate attendants, and separate ringing arrangements. Costs can easily be allocated according to use.
TIE Lines

SYSTEM AVAILABILITY
Optional on DK24/56/96 systems. Not available on STRATA S4, DK16.

DESCRIPTION
TIE lines can be installed on a DK24/56/96 system to connect it to a PBX or another DK system in a private communications network. A maximum of four TIE lines can be installed on a DK24. If TIE lines are installed on a DK24 that is equipped with a PCTUS, the station capacity is reduced to 16 stations. Up to 8 TIE lines can be installed on the DK56, and up to 12 on the DK96.

TIE lines are supported by the E&M TIE line Unit (PEMU), which provides four E&M Type 1 Signaling TIE lines. The TIE lines can be 2-wire or 4-wire transmission TIE lines, and are immediate start only.

TIE lines can be configured as dial pulse (rotary) or DTMF (tone), and can be toll restricted.

Incoming TIE lines are allowed Voice First Calling, and the called station can answer back handsfree. Incoming TIE lines cannot originate Off-hook Call Announce to a station at the distant end.

BENEFITS
Since TIE lines are tariffed at a flat rate per month, they are not usage dependent. If a customer has heavy traffic to specific locations such as branch offices, the installation of TIE lines can help fix costs. If TIE lines are used in conjunction with toll restriction, there can be significant reductions in telephone expense.

TIE lines can also be used to access features or CO lines in the distant PBX or Key system, providing the opportunity to further reduce costs.
Toll Restriction

SYSTEM FEATURES

SYSTEM AVAILABILITY

All STRATA systems can be programmed for one of three types of toll restriction:
- 0/1 type
- Area code (3-digit)
- Area code/office code (6-digit)

DESCRIPTION

Station users can be restricted from making toll calls, according to one of three toll restriction schemes.

0/1 type toll restriction can be assigned on a station-by-station basis. If a station is subject to 0/1 toll restriction, the system will deny any CO calls made by that station which uses 0 or 1 as the first or second digit in the number dialed.

If a station is subject to 3-digit or 6-digit toll restriction, the system will deny any calls made by that station whose first 3 digits or first 6 digits are denied by that station's level of toll restriction.

The 3- and 6-digit toll restriction schemes can be further refined as follows:
- Any one of four levels of toll restriction can be assigned on a station-by-station basis. The four levels can be defined so that each one is progressively more restrictive by allowing or denying specific area or office codes; calls to long distance information; international calls; and operator-assisted calls.
- The four levels of restriction can be further modified by up to eight exception tables that allow access to specific office codes within restricted area codes.
- A toll restricted station can still be allowed to dial 411, 911, or 800 numbers, if desired.
- System Speed Dial numbers can be programmed to override toll restriction.
- Up to two toll restriction override codes can also be defined. When dialed at a toll restricted station, these codes enable the user of the code to override the toll restriction at that station. The codes may be changed by certain stations that are selected in programming.
- With DK16 and Release 4 DK24/56/96 systems, up to four traveling class of service codes can be defined, one for each level of toll restriction. When dialed at a toll restricted station, these codes change the level of toll restriction on the station to the level allowed by the code for one call. The station then reverts back to its original level of toll restriction. The codes may be changed by certain stations that are selected in programming.
- With DK16 and Release 4 DK24/56/96 systems, any toll restricted station can be assigned the credit card calling feature, which allows a user to make a "0+" telephone credit card call from that station.
- With DK16 and Release 4 DK24/56/96 systems, verifiable account codes can have a toll restriction class of service. When such an account code is entered at a station, the station assumes the toll restriction class of service of the account code for that call.
- The Toll Restriction feature can be disabled on a given CO line. For example, toll restriction might be disabled on a TIE line, to allow the station to dial extension numbers on the distant PBX.
Toll Restriction

SYSTEM FEATURES

All systems can also be programmed to recognize equal access codes (10XXX and 950-10XX), an OCC (Other Common Carrier) directory number, authorization codes, and PBX access codes.

On an Sx, an Off-premises Extension (OPX) which uses a DTMF phone or a TIE line configured as DTMF cannot be toll restricted unless the system has LCR. On DK systems, any OPX or TIE line can be toll restricted, but it is recommended to use LCR for standard single line telephones.

BENEFITS

Toll restriction can result in direct telephone bill reduction. Station users can be allowed to make only those toll calls that are necessary for them to carry out their job responsibilities.
**Toll Restriction Override Codes**

**SYSTEM FEATURES**

**SYSTEM AVAILABILITY** Standard on all STRATA systems.

**DESCRIPTION**

Up to two Toll Restriction Override codes can be defined. When dialed at a toll restricted station, these codes enable the user of the code to override the toll restriction at that station. The codes may be changed by certain stations that are selected in programming.

With DK16 and Release 4 STRATA DK24/56/96 systems, up to four traveling class of service codes can be defined, one for each level of toll restriction. When dialed at a toll restricted station, these codes change the level of toll restriction on the station to the level allowed by the code for one call. The station then reverts back to its original level of toll restriction. The codes may be changed by certain stations that are selected in programming.

See the “Toll Restriction” feature previously described for additional information.

**BENEFITS** This feature allows authorized users the convenience of overriding toll restriction for more flexible outgoing calling.
Toll Restriction Override by System Speed Dial

**SYSTEM AVAILABILITY**
Standard on all systems.

**DESCRIPTION**
System Speed Dial numbers (also called Automatic System Dialing numbers) can be programmed to override toll restriction. Toll restricted stations will then be able to use the System Speed Dial numbers to place calls.

**BENEFITS**
This feature allows the system to be tailored to the needs of the customer. It allows employees to dial specific legitimate business toll calls, without allowing them to make any other calls to that particular area or office code. This can result in cost savings by preventing unnecessary toll calls.

Sometimes an attendant is asked to screen and place calls for toll restricted users. This feature could eliminate that extra work, and free the attendant to give more attention to incoming calls.
## Transfer Privacy

### SYSTEM FEATURES

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on all STRATA systems.</td>
<td>In a system programmed for Transfer Privacy, an outside call that has been transferred can only be answered at the station to which the call has been transferred or at another station using the Directed Call Pickup feature. No other station can pick up the transferred call via a CO line button.</td>
<td>Businesses which deal with confidential matters can use Transfer Privacy to protect the confidentiality of outside calls that have been transferred. They will have the assurance that the only station which can answer the transferred call is the station to which the call has been transferred.</td>
</tr>
</tbody>
</table>
### Traveling Class of Service

#### SYSTEM AVAILABILITY

#### DESCRIPTION
Each of the four toll restriction classes of service can be assigned a 4-digit code. These codes can be given to users. By entering the code at a station, a user changes the toll restriction class of service on that station to the class of service of the code, which remains in effect for the duration of the call. The station then reverts to its normal class of service.

Any station can be programmed to have the ability to change these codes for security purposes. The codes do not print on the Station Message Detail Recording (SMDR) call records.

#### BENEFITS
Traveling class of service helps organizations manage telephone expense. It also allows a company to give selected employees the convenience of using any station while maintaining toll restriction control.
SYSTEM AVAILABILITY

DESCRIPTION

Optional on all STRATA systems.

Any STRATA S or DK system can be configured with a customer-supplied voice mail messaging system.

On a STRATA S, each port on the voice mail system requires one HIOB external module and one proprietary station port. STRATA S can support a maximum of four HIOBs.

When voice mail is installed with a DK system, each port on the voice mail system requires one standard single line telephone port on a KSTU, PSTU, or PESU. No external modules are required.

Depending on the voice mail product installed, some or all of the following features may be provided:

- Automated Attendant
- Call Forward to Voice Mailbox
- Message Waiting Indication
- Voice Mail Control from Electronic Telephone
- Feature Integration

AUTOMATED ATTENDANT

An integrated Automated Attendant can streamline call answering capability. The supervised transfer capability virtually eliminates unanswered or missed calls.

CALL FORWARD TO VOICE MAILBOX

Each telephone user can forward calls directly to a personal mailbox. The caller bypasses the usual sequence of voice mail commands, and simply leaves a message after hearing a greeting and/or a tone.

MESSAGE WAITING INDICATION

When a message is recorded into a user's mailbox, the voice mail system automatically sets a message waiting indication at the user's station (EKT stations only). The indication is turned off after the station user listens to the message.

VOICE MAIL CONTROL FROM ELECTRONIC TELEPHONE

Station users can control voice mail equipment from their telephone dialpad.

FEATURE INTEGRATION

The integration of special voice mail features in system software enables the systems to work together more efficiently.

BENEFITS

The customer can gain the benefits of using a voice mail system because it can easily be attached to a STRATA S or DK system. STRATA S and DK systems are compatible with many different brands of voice mail systems.
Voice or Tone Signaling

STRATA SYSTEM FEATURES

SYSTEM AVAILABILITY

Standard on all STRATA systems.

DESCRIPTION

Any STRATA system can be programmed for either tone ringing or voice announce as the standard method of intercom call signaling. If tone ringing is selected, a station will ring when called. If voice announce is selected, the station will not ring. Instead, a tone burst will be heard, followed by the caller’s voice.

Regardless of the standard choice, a caller can always select the alternate method by dialing “1” following the station number.

If there is a DSS console in the system, it can be programmed for voice or tone signaling independent of the choice for the system (DSS console not used with STRATA S-series).

If the system has Off-hook Call Announce, it must be programmed for voice first.

BENEFITS

The customer can choose the method that meets the specific needs of the business. Tone signaling provides privacy and protects confidential communications. Voice signaling enables quick communication.
## Wall or Table Mounting

### System Features

<table>
<thead>
<tr>
<th>System Availability</th>
<th>Optional on all STRATA DK24/56/96 systems.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>The Key Service Unit (KSU) for the STRATA S, and DK16 is designed for wall mounting only. The KSU for DK24/56/96 systems can be mounted on a table top or on a wall.</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td>The benefit to the customer is that the system can be installed almost anywhere the customer has space available.</td>
</tr>
</tbody>
</table>
Automatic Busy Redial

SYSTEM AVAILABILITY
Standard on DK systems. Requires electronic telephone and DTMF receivers. Not available on Sx.

DESCRIPTION
The Automatic Busy Redial feature allows a station user to automatically have the DK system redial a busy outside number up to 15 times at pre-programmed intervals. Call attempts can be programmed to occur at 30- or 60-second intervals.

When the call is successfully completed, the station receives Automatic Busy Redial ringback tone for 40 seconds, or until the call is answered.

Automatic Busy Redial will not be tried if the station is busy with another call, but it will continue to time out.

This feature can be allowed or denied on a station-by-station basis. It can be accessed by using a feature code, or it can be programmed as a feature button.

Automatic Busy Redial is 100% compatible with Least Cost Routing functions.

BENEFITS
Automatic Busy Redial saves time and can save money. The station user does not waste time looking up a number several times. The system will redial the number accurately, eliminating costly dialing errors, especially on long telephone numbers. Business can be completed efficiently, since the user will not get distracted with something else and forget to try the number again.

Since the feature can be assigned on a station-by-station basis, a company can assign it only to those who require it. This way, CO lines will not be tied up with an excessive amount of redials.

With Least Cost Routing, Automatic Busy Redial can cut calling costs because it will redial a call only on the CO line it originally selected after going through the LCR program.
## FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Busy Redial</td>
<td>4-1</td>
</tr>
<tr>
<td>Automatic Callback (Intercom)</td>
<td>4-2</td>
</tr>
<tr>
<td>Automatic Off-hook Line Selection</td>
<td>4-3</td>
</tr>
<tr>
<td>Background Music with Station Control</td>
<td>4-4</td>
</tr>
<tr>
<td>Busy Override Tone</td>
<td>4-5</td>
</tr>
<tr>
<td>Call Forward</td>
<td>4-6</td>
</tr>
<tr>
<td>Call Park</td>
<td>4-8</td>
</tr>
<tr>
<td>Call Pickup</td>
<td>4-9</td>
</tr>
<tr>
<td>Call Transfer with Camp-on</td>
<td>4-10</td>
</tr>
<tr>
<td>Centrex/PBX Feature Buttons</td>
<td>4-11</td>
</tr>
<tr>
<td>Direct Station Selection (DSS) Buttons</td>
<td>4-12</td>
</tr>
<tr>
<td>Distinctive LED Indicators</td>
<td>4-13</td>
</tr>
<tr>
<td>Distinctive Station Ringing</td>
<td>4-14</td>
</tr>
<tr>
<td>Do Not Disturb</td>
<td>4-15</td>
</tr>
<tr>
<td>Do Not Disturb Override</td>
<td>4-16</td>
</tr>
<tr>
<td>DP/DTMF Mode Change (Tone Button)</td>
<td>4-17</td>
</tr>
<tr>
<td>Exclusive Hold</td>
<td>4-18</td>
</tr>
<tr>
<td>Executive Override (Break-in)</td>
<td>4-19</td>
</tr>
<tr>
<td>Flash Button</td>
<td>4-20</td>
</tr>
<tr>
<td>Handsfree Answerback on Intercom</td>
<td>4-21</td>
</tr>
<tr>
<td>Hearing Aid Compatible</td>
<td>4-22</td>
</tr>
<tr>
<td>LCD—Alphanumeric Messaging</td>
<td>4-23</td>
</tr>
<tr>
<td>LCD—Busy Station Messaging</td>
<td>4-24</td>
</tr>
<tr>
<td>LCD—Called Station Messaging</td>
<td>4-25</td>
</tr>
<tr>
<td>LCD—Calling Station Messaging</td>
<td>4-26</td>
</tr>
<tr>
<td>LCD—Remote/Group Station Messaging</td>
<td>4-27</td>
</tr>
<tr>
<td>LCD—Automatic Callback Number Display</td>
<td>4-28</td>
</tr>
<tr>
<td>LCD—Busy Lamp Field (BLF) Indication</td>
<td>4-29</td>
</tr>
<tr>
<td>LCD—Call Duration Display</td>
<td>4-31</td>
</tr>
<tr>
<td>LCD—Call Forward Source/Destination Display</td>
<td>4-32</td>
</tr>
<tr>
<td>LCD—Calling/Called Number Display</td>
<td>4-33</td>
</tr>
<tr>
<td>LCD—Clock/Calendar Display</td>
<td>4-34</td>
</tr>
<tr>
<td>LCD—CO Line Identification</td>
<td>4-35</td>
</tr>
<tr>
<td>LCD—Dialed Number Display</td>
<td>4-36</td>
</tr>
<tr>
<td>LCD—Feature Prompting with Soft Key Operation</td>
<td>4-37</td>
</tr>
<tr>
<td>LCD—Intercom Name/Number Display</td>
<td>4-38</td>
</tr>
<tr>
<td>LCD—Message Waiting Station Display</td>
<td>4-39</td>
</tr>
<tr>
<td>LCD—Recalling Station Identification</td>
<td>4-40</td>
</tr>
<tr>
<td>LCD—Speed Dial Memo Directory Dialing</td>
<td>4-41</td>
</tr>
<tr>
<td>LCD—Station Identification</td>
<td>4-42</td>
</tr>
<tr>
<td>LCD—Timed Reminders</td>
<td>4-43</td>
</tr>
<tr>
<td>Message Waiting/Flash</td>
<td>4-44</td>
</tr>
<tr>
<td>Microphone Control Button</td>
<td>4-45</td>
</tr>
<tr>
<td>Modular Handset and Line Cords</td>
<td>4-46</td>
</tr>
<tr>
<td>Modular Headset</td>
<td>4-47</td>
</tr>
<tr>
<td>Off-hook Call Announce</td>
<td>4-48</td>
</tr>
<tr>
<td>On-hook Dialing</td>
<td>4-49</td>
</tr>
<tr>
<td>Pooled CO Line Buttons</td>
<td>4-50</td>
</tr>
</tbody>
</table>
### FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private CO Lines</td>
<td>4-54</td>
</tr>
<tr>
<td>Push-button Dialing</td>
<td>4-55</td>
</tr>
<tr>
<td>Release Button</td>
<td>4-56</td>
</tr>
<tr>
<td>Remote Retrieval of Held Calls</td>
<td>4-57</td>
</tr>
<tr>
<td>Repeat Last Number Dialed</td>
<td>4-58</td>
</tr>
<tr>
<td>Ringing Line Preference</td>
<td>4-59</td>
</tr>
<tr>
<td>Saved Number Redial</td>
<td>4-60</td>
</tr>
<tr>
<td>Speed Dial Buttons</td>
<td>4-61</td>
</tr>
<tr>
<td>Station Speed Dial</td>
<td>4-62</td>
</tr>
<tr>
<td>Timed Reminder</td>
<td>4-63</td>
</tr>
<tr>
<td>Toll Restriction Override Code Revision</td>
<td>4-64</td>
</tr>
<tr>
<td>User Programmable Feature Buttons</td>
<td>4-65</td>
</tr>
</tbody>
</table>
**Automatic Callback (Intercom)**

**STATION FEATURES**

**SYSTEM AVAILABILITY** Standard on all STRATA systems.

**DESCRIPTION** A station user makes an intercom call and finds the called station busy or in Do Not Disturb. By dialing a special code, the caller can activate automatic callback. When the called station is free, the system will ring the caller with a special tone. When the caller answers, the system will automatically ring the called party again.

The caller can cancel the callback request at any time with a cancellation feature code.

If the caller hears a busy tone upon answering the callback, it means that the called party has received or originated another call. The callback request is not canceled, and the system will ring the caller as soon as the called station is free again.

**BENEFITS** Automatic Callback minimizes the time spent redialing a busy number. The caller can use that time for a more productive purpose. Automatic Callback also minimizes the frustration of continuous busy signals.

Sometimes people “hang around” outside an office, waiting for someone to complete a phone call. Automatic Callback could be used instead to give an indication that the person is off the phone. Time wasted “pacing the hall” could then be spent more productively.
Automatic Off-hook Line Selection

SYSTEM AVAILABILITY
Programmable by station on all STRATA systems. This feature is not available on an Off-premises Extension (OPX) or on a station supported by an HIOB, PSTU, or by a standard single line station circuit on a PESU.

DESCRIPTION
Automatic Off-hook Selection allows a station to automatically access a specific line or line group when the station user lifts the handset to place a call. The station user does not have to press the line button for the preferred line. On the DK systems, the SPKR button also auto selects the programmed line or line group.

A station can be programmed to require manual selection of a line or to automatically access one of the following when the user picks up the handset to place a call:
- A specific CO/PBX line group.
- An intercom line.
- The lowest numbered CO/PBX line that appears on the EKT.

If Automatic Off-hook Selection is not assigned, the user gets no dial tone and must manually access the line or feature.

If Automatic Off-hook Selection for a particular station is assigned to a CO/PBX line group, the station user will get dial tone from the last free line in that line group when the handset is lifted. The station user can simply dial the telephone number without pressing a CO/PBX line button. If all lines in the assigned group are busy, the user will hear busy tone, and can use the trunk queuing feature.

Assigning Automatic Off-hook Selection to a trunk group is a convenience to the user who almost always makes outside calls. If Automatic Off-hook Selection is assigned to an intercom line, the user will get intercom dial tone when the handset is lifted. The user can dial another station without using the intercom button. This is a convenience to the user who almost always makes internal calls.

If Automatic Off-hook Selection is assigned to the lowest numbered CO/PBX line on the telephone, the user will get dial tone from that specific CO line, and can dial a telephone number without pressing the button for that line. This could be a convenience to an executive whose private line appears on that EKT.

BENEFITS
This feature is a real convenience to station users who almost always access a certain type of line. The user does not have to look for a free line, or even press a line button in order to place the type of calls most frequently made.
**Background Music with Station Control**

**STATION FEATURES**

**SYSTEM AVAILABILITY**
Optional on all STRATA systems.

**DESCRIPTION**
If a system is connected to a music source and this feature is activated, a station user can access background music through the speaker of an Electronic Key Telephone. The music can be turned on and off at the user's option via the Speaker button on an S2, and via the BGM button on a DK system. The user can control the volume.

If an external paging system is installed, the same music can also be broadcast through the external paging speakers, providing background music throughout the facility. On a DK system, station 200 can switch background music over external page on and off.

When external speakers are used on a DK system, the Option Interface PCB (PICU, PICUS or PEPU) must be installed. On STRATA DK systems, up to three separate music sources can be connected to the system at the same time. One source can broadcast background music over electronic telephone speakers, a second can broadcast over external speakers, and a third can provide music-on-hold.

Music on both the external speaker and the telephones will be muted when a paging announcement is made or ringing occurs.

**BENEFITS**
Some employees find it relaxing to listen to music as they are working. This feature enables the employer to provide music that is conducive to the work environment. The employer can allow employees to listen to music, without any conflict over the type of music played.
## Busy Override Tone

### SYSTEM AVAILABILITY
Standard feature, programmable by station on all STRATA systems.

### DESCRIPTION
After dialing an internal station and receiving a busy signal, a caller can dial a code which will signal the called station with a tone burst, indicating that a call is waiting.

### BENEFITS
This feature provides user convenience and calling efficiency. Selected users can access busy extensions, either to give them a priority message, or to announce a caller or guest.
Call Forward

SYSTEM AVAILABILITY
Call Forward All Calls is standard on all STRATA systems. All other Call Forward modes are available and standard on STRATA DK systems only.

DESCRIPTION
Using the Call Forward feature, a station user can route all calls to an alternate station. Except for fixed call forwarding, the station user selects the destination when setting call forward. Intercom calls and CO line calls that have been transferred to the station will be forwarded. CO lines that ring only at that EKT will also forward. CO lines that ring more than one station will not forward.

On DK systems, calls from the DSS may or may not be forwarded, depending on programming. The DSS may be set up so that calls placed via the DSS button will be forwarded, or calls placed via the dialpad of the associated EKT will be forwarded. If calls placed via the DSS button are forwarded, calls placed from the dialpad will not forward, and vice versa.

Calls placed via a DSS button on an EKT will always forward. If a station in a hunt group activates call forward, calls to that station will forward, but will not hunt to the next station in the group.

When a station is in any call forward mode, outgoing calls can still be made from that station. If system power is lost, call forward remains on stations when the power is restored.

CALL FORWARD MODES
There are five available Call Forward modes. Each can be set and canceled by the station user.

- All Calls: When a station is idle or busy, all calls to the station will forward immediately. The station will not ring.
- Busy: When a station is busy, all calls to the station will forward immediately. When the station is not in use, incoming calls will ring normally.
- No Answer: When a station does not answer after 12 seconds, the call will forward. When the station is busy, incoming calls will get busy tone.
- Busy/No Answer: When a station is busy, incoming calls will forward immediately. When the station is idle, calls will ring for 12 seconds and then forward.
- Fixed: A feature button can be programmed on an EKT to put that station in call forward mode to a fixed station. For example, the station may be programmed to forward to the attendant station or a voice mail system. The destination is fixed in programming and cannot be changed by the station user. A station user with fixed Call Forward registration can also have standard call forwarding.

Intercom calls and CO line calls which ring only at that station will be forwarded. CO line calls programmed to ring at more than one station will not be forwarded.

The system can be programmed so that the attendant station can override Call Forward registration in order to ring station users who may forget that their telephone is in forward mode.
Call Forward

Call Forward enables more efficient handling of calls and better service to callers. With Call Forward, it is more likely that calls to a station will be answered promptly. By providing more efficient handling of calls, this feature can help a company project a professional and courteous image, both internally and externally.

Station users can work in locations other than at their desks and not miss their telephone calls. They can forward their calls to a nearby phone.

Used in conjunction with voice mail, Call Forward can help ensure that calls are not lost and callers have the opportunity to leave complete and detailed messages.
# Call Park

**System Availability**

<table>
<thead>
<tr>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on STRATA DK systems. Not available on Sx.</td>
<td>This feature enables convenient “consultation” calling for stations which do not have direct CO line appearances. Without Call Park, these stations have no way to retrieve the call after putting it on hold. Call Park enables the station user to keep one call on hold while placing another call, and to return directly to the first call. It saves time and can facilitate business transactions.</td>
</tr>
</tbody>
</table>

**Description**

When a CO line does not have an appearance on a station, that station can use a feature code to put the call on hold, and then place a second call. The second call can be an intercom call, a page, or a CO line call. After completing the second call, the original call can be retrieved using a feature code.

Any station user can page for someone else to pick up a call that is “parked” at his/her station. The person who was paged can selectively retrieve the call from any other station by dialing an access code plus the CO line number, or an access code plus the intercom number of the “parking” station.
Call Pickup

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Any station can pick up:
- Intercom or CO line calls that are ringing or on hold (including exclusive hold).
- Parked calls (STRATA DK only)
- An external page
- A CO line ringing at night over external page or a night bell.

To pick up a call, the station user dials a code and the number of the ringing station or uses the CPU button (S system) or PKUP button (DK systems) and the station number.

A station user can also pick up CO line calls when the ringing station number is not known by dialing a specific code number. See the “CO Line Call Pickup Groups” feature in the System Features section for information on call pickup by CO line group.

BENEFITS
This feature provides a convenience to station users by allowing them to answer their intercom and CO line calls from another station in the area. Employees in the same work area can answer calls for others who are away from their desks, minimizing long ringing times and reducing disturbances in the work area.
Call Transfer with Camp-on

STATION FEATURES

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Call transfer with camp-on allows a station user to transfer an outside call to a station that is idle or busy. The call can be transferred even if the CO line does not appear on the station to which the call is transferred.

If the called station is busy, a one-second "warning" or "camp-on" tone will be heard at the called station.

If the transferred call is not answered, it will recall to the originating station within a pre-programmed time from 16 to 64 seconds.

As an option, the system can be programmed so that a transferred call can only be picked up by the station to which it was transferred or by a station using Directed Call Pickup. (See Transfer Privacy.)

BENEFITS
This feature provides an easy and convenient way to transfer calls to the appropriate people and to alert a busy station to a waiting call. The benefit is better service to callers.
**Centrex/PBX Feature Buttons**

**STRATA**

**STATION FEATURES**

**SYSTEM AVAILABILITY** Standard on all STRATA systems.

**DESCRIPTION** Feature access codes, including pauses and flashes, which access features in a host CO, Centrex, or PBX system can be programmed as if they were system speed dial numbers. Such codes can then be assigned to a Station Speed Dialing (SD) button, and used for one-button access to the CO, Centrex, or PBX feature. An SD button that is programmed in this way is called a “locked” SD button.

Each feature access code can have up to 16 digits, including pauses and flashes. Like System Speed Dial numbers, these codes can only be programmed or changed by station 10 on an S8X, or the station assigned to port 00 on a DK system. Buttons are assigned to system speed dial numbers (60-99) in system programming.

**BENEFITS** CO/Centrex/PBX feature buttons give users easy, one-button access to features that would otherwise require more complicated access procedures. Users can more easily make use of the features that must be accessed through the CO/Centrex/PBX.

Since users will not have to look up feature access codes, they will save time. Dialing errors can also be eliminated.
Direct Station Selection (DSS) Buttons

**SYSTEM AVAILABILITY**
Programmable on all STRATA systems.

**DESCRIPTION**
Any available button on a 10-button or 20-button DKT/EKT can be programmed to provide a direct DSS “hot line” to any other telephone in the system. The LED associated with each button serves as a Busy Lamp Field (BLF) for the station named on the button and lights when that station is busy. Pressing a DSS button immediately rings the station assigned to that button.

Calls made with station DSS buttons will forward if the station assigned to the DSS button is in Call Forward mode.

**BENEFITS**
DSS buttons provide instant, one-button access to other stations, eliminating the need to repeatedly look up extension numbers to place intercom calls, and allowing visibility to the busy status of the extension. This feature provides quick communication for two people who work closely, such as an executive and the executive’s secretary.
Distinctive LED Indicators

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
Each line/feature button on an electronic key telephone has an associated LED. When a button is assigned to a CO/PBX line, this LED flashes at different rates to indicate the status of that line.

The **In-Use** flash rate appears on the LED when the line is in use by that station. Other stations will show a steady LED on that line.

The **Incoming Call** flash rate appears when a call (intercom or CO/PBX) is ringing in on that line.

The **On-Hold** flash rate appears on a station when the station puts a call on hold. Other stations show the usual system hold flash rate.

Other distinctive flash rates appear on LEDs associated with a CO/PBX line when that line is on exclusive hold, is being recalled from hold, or has a conference call in progress.

When a line/feature button is assigned to a feature, the LED indicates the status of the feature. For example, a lighted LED with the “Message Waiting/Flash” button indicates that a message is waiting for that station.

LEDs are also Distinctive LED Indicators with certain dedicated feature buttons: SPKR, MIC, and MESSAGE. The “SPKR” LED indicates the on/off status of the speaker or background music. The “MIC” LED indicates the on/off status of the station’s microphone when the station is in speakerphone mode. The “MESSAGE” LED indicates there is a message waiting.

An LED associated with a DSS button functions as a busy lamp for the station assigned to the DSS button.

Digital telephones (available only on STRATA DK systems) have dual-color LED indicators. Green indicates CO line or intercom buttons you are using. Red indicates use by someone else.

BENEFITS
User convenience is a primary benefit from this feature. A station user can quickly see the status of a line or feature by looking at the LED.
## Distinctive Station Ringing

### STATION FEATURES

| **SYSTEM AVAILABILITY** | Standard feature on STRATA DK systems. Not available on STRATA S.<br><br>**DESCRIPTION** | Stations in close proximity to one another can be programmed to ring differently. Two different tones are available for incoming CO line calls that are transferred to a station or ring directly to a station. | **BENEFITS** | Station users whose telephones are near each other can readily tell whose telephone is ringing when they are not at their desks. |
Do Not Disturb

SYSTEM AVAILABILITY
Standard feature, programmable by station on all STRATA systems.

DESCRIPTION
When the Do Not Disturb (DND) feature is activated by a station, intercom calls will not ring to the station, and voice announcements will not come through. When a station is in DND, the station user can still place outgoing calls. Off-hook Call Announce will be blocked.

Incoming CO line calls to stations in DND will ring with a muted ring, indicating an incoming outside call.

If a call is placed to a station that is in the DND mode, the caller will hear a fast busy tone. DND can be overridden by any station that has the DND Override feature.

Do Not Disturb can be assigned selectively on a station-by-station basis. DND can only be activated by electronic telephone or digital telephone stations, not by standard single line telephones.

BENEFITS
Employees who have this feature can improve their time management and productivity by dedicating uninterrupted blocks of time to projects or meetings.
# Do Not Disturb Override

**STATION FEATURES**

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard feature, programmable by station on all STRATA systems.</td>
<td>After dialing an internal station and receiving a Do Not Disturb (DND) signal, a caller with the DND Override feature can dial an access code. The called station will be signaled with a tone burst, indicating that a call is waiting. If the called party has an LCD phone, the number of the calling station will be displayed. This feature can be assigned on a station-by-station basis.</td>
<td>DND Override provides user convenience and calling efficiency. Selected users can access stations which are in DND, and give a priority message or announce an important caller or guest.</td>
</tr>
</tbody>
</table>
**DP/DTMF Mode Change (Tone Button)**

**SYSTEM AVAILABILITY**
Standard feature, programmable by station on all STRATA systems.

**DESCRIPTION**
If a Tone button has been assigned to a station, that station user can choose the outputting mode on a CO/PBX line in use. The Tone button will activate either rotary pulses or DTMF tones.

**BENEFITS**
The Tone button allows users to output DTMF tones at any time. This is especially useful for the remote operation of equipment that requires DTMF tones for operation, such as answering machines, bank-by-telephone systems, dictation machines, and voice mail systems.

With some other electronic key systems, DTMF tones are generated by the Key Service Unit (KSU) only while an external number is being outputted. After that, the tone generator is no longer engaged, and the system simply “passes through” the electronic pulses generated by the user’s dialpad. Since these electronic pulses are neither rotary nor DTMF, the user is unable to remotely operate any systems requiring DTMF tones.

The Tone button on STRATA systems allows the user to tell the system to switch from rotary output pulse to DTMF tone output pulse when required.

The Tone button also allows users who are in a location served by a rotary-only CO to generate DTMF tones for the remote operation of answering machines and other devices.
**Exclusive Hold**

**SYSTEM AVAILABILITY**
Standard on all STRATA systems.

**DESCRIPTION**
Exclusive Hold allows a station user to put a call on hold so that the call can only be picked up at that station or at another station using Directed Call Pickup. No other station can pick up the call by simply pressing the line button. A distinctive LED flash will indicate that the line is on Exclusive Hold.

In order for the feature to work, there must be an appearance of the CO line on the station activating Exclusive Hold.

**BENEFITS**
This feature adds to call handling efficiency by providing a way for a station to secure a call on hold. It eliminates any annoyance to a caller caused by being accidentally picked up by another party.
Executive Override (Break-in)

**SYSTEM AVAILABILITY**
Standard feature, programmable by station, on all STRATA systems.

**DESCRIPTION**
Executive Override can be selectively assigned to allow a station user to “break-in” to a conversation upon reaching a busy station. A tone signal (optional on DK systems) is heard through the handset which indicates to the conversing parties that another station is about to enter the conversation. After the “break-in”, a three-way conference is in effect until one of the parties hangs up.

This feature can be assigned to any station in the system.

**BENEFITS**
This feature makes it possible for selected stations to access a busy station for an emergency or high priority message.
**Flash Button**

**STATION FEATURES**

**SYSTEM AVAILABILITY** Standard on all STRATA systems.

**DESCRIPTION** The Flash button serves one of two purposes:
- If pressed when the station is connected to an outside line, it sends a “flash” signal to the CO that is long enough to disconnect the line and get CO dial tone again.
- If pressed when the station is connected to a PBX can be used to operate features on the PBX or Centrex.

Different flash times are usually required for each purpose. The flash can be programmed with one value only, and can thus serve one of these two functions, but not both, unless the flash timing happens to be the same.

**BENEFITS**
- When a station user is making a series of CO calls or is redialing a busy number, it is inconvenient to have to press the hookswitch, release it, and access a CO line again. By using the Flash button, the user disconnects the line and gets CO dial tone again on the same CO line—by touching one button.
- When the system is installed behind a PBX, users can access PBX features that require a “flash” to operate, allowing stations to function more fully as a part of the PBX, and to take advantage of the PBX features.
## Handsfree Answerback on Intercom

<table>
<thead>
<tr>
<th>STRATA</th>
<th>STATION FEATURES</th>
</tr>
</thead>
</table>

### System Availability
Standard STRATA feature, programmable by station, on all 10-button and 20-button DKT/EKTs.

### Description
All electronic key telephones are equipped with either Handsfree Answerback or a full speakerphone. The Handsfree Answerback feature can be allowed or disallowed on a station-by-station basis. If allowed, a station user can answer a voice intercom call without lifting the handset. The station user simply speaks in the direction of the phone. If the call is a tone call, the user must first press the SPKR button and then begin to talk.

A “Microphone Control” button can be assigned to an EKT and used to disable the Handsfree Answerback feature to assure private office conversation.

### Benefits
User convenience and calling efficiency are benefits from this feature. In some cases, this feature can help increase productivity. People who are engaged in “hands-on” work, such as engineers, architects, designers, and people who use PCs, can carry on short conversations without having to pick up the handset.
## Hearing Aid Compatible

### System Availability

**Description**

All Toshiba Electronic Key Telephones are hearing aid compatible.

The Federal Communications Commission (FCC) requires that telephones in certain locations be hearing aid compatible. For example, emergency phones, phones in hotel rooms, and phones in lobbies must be hearing aid compatible.

All Toshiba Electronic Key Telephones are hearing aid compatible and will not interfere with the operation of a hearing device.

**Benefits**

Users with hearing aid devices can use STRATA telephones very effectively. Customers who install the Toshiba Electronic Key Telephones will be in compliance with FCC regulations.
**LCD—Alphanumeric Messaging**

**SYSTEM AVAILABILITY**

Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**

If a station is equipped with a 20-button LCD telephone, system messages and personal messages can be displayed on the 32-character Liquid Crystal Display.

Forty (40) system messages can be created, each of which can be up to 32 characters long. These messages are created and controlled by station 10 on the S8, and by the station assigned to port 00 on DK systems. System messages can be used by all LCD telephones. For example, a system message might be: “Out to lunch.” Some system messages can be personalized. For example, a user can complete the system message “Back at ______.”

A specific number of LCD stations can also create up to 10 personal messages. With a STRATA S8 system, four stations can create personal messages. On STRATA DK24 systems equipped with a PCTUS, six stations can have the feature. DK16 and DK24/56/96 systems with a PCTU allow 16 stations to have it.

Stations that are enabled for personal messages are also enabled for the personal speed dial memo feature.

System and personal messages are used with the following features:

- Busy Station Messaging
- Called Station Messaging
- Calling Station Messaging
- Remote/Group Station Messaging
- Timed Reminders

Each of these features has a separate description on the following pages.

**BENEFITS**

Alphanumeric messaging allows station users to leave quick messages for people they call as well as for people who call them. It saves time by eliminating the need to walk to another office to leave a note, or to leave a message with a secretary or the attendant.
## LCD—Busy Station Messaging

### Station Features

<table>
<thead>
<tr>
<th>System Availability</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on all STRATA systems which have LCD telephones.</td>
<td>When one LCD station calls another LCD station and the called station is busy, the caller can send a pre-programmed LCD message (system or personal) to the busy station. A tone will be heard at the called station and the message will appear on the called station’s LCD. The busy station can respond with another pre-programmed message which will appear on the caller’s LCD. The two stations can exchange messages back and forth, creating an interactive silent “conversation.”</td>
<td>This feature allows silent communication with an LCD station user who is engaged in another telephone conversation. The caller can send a message without creating background conversation (as would be the case with Off-hook Call Announce). Busy Station Messaging also insures the privacy of the message since it can not be heard by the distant party.</td>
</tr>
</tbody>
</table>

Note: See “Liquid Crystal Display Features: Alphanumeric Messaging” for a general description of Alphanumeric Messaging.
**SYSTEM AVAILABILITY**  
Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**  
Note: See “Liquid Crystal Display Features: Alphanumeric Messaging” for a general description of Alphanumeric Messaging.

An LCD telephone user can leave his or her station number and a message indication at another LCD telephone. When the called party accesses the message, the complete LCD message will automatically appear on the LCD.

**BENEFITS**  
LCD users can leave private messages at another LCD telephone.
SYSTEM AVAILABILITY
Standard on all STRATA systems which have LCD telephones.

DESCRIPTION
Note: See “Liquid Crystal Display Features: Alphanumeric Messaging” for a general description of Alphanumeric Messaging.

An LCD telephone user can set a message on his or her telephone. Whenever another LCD user calls that station, the pre-selected message will be displayed on the LCD of the calling station.

BENEFITS
Calling Station Messaging allows LCD station users to leave information for other LCD callers about where they can be reached or when they will return. It eliminates the need for callers to disturb a secretary or attendant to find out where someone is, how to reach them, or when they will be back.
** LCD—Remote/Group Station Messaging **

** SYSTEM AVAILABILITY **
Standard on all STRATA systems which have LCD telephones.

** DESCRIPTION **
Note: See “Liquid Crystal Display Features: Alphanumeric Messaging” for a general description of Alphanumeric Messaging.

Remote/Group Station Messaging allows any station to set a Called Station Message for another station or group of stations.

Note: Calling station messages can be set remotely by one station for another station, but not by one station for a group of stations.

** BENEFITS **
Group Station Messaging saves time. An LCD user can set the same message for an entire group at once.
LCD—Automatic Callback Number Display

**STATION FEATURES**

**SYSTEM AVAILABILITY**
Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**
A station user makes an intercom call and finds the called station busy or in Do Not Disturb status. By dialing a code, the caller activates the Automatic Callback feature. When the called station is free, the system rings the caller with a tone. When the caller answers, the system will automatically ring the called party again, and display the station number of the called party.

**BENEFITS**
Sometimes the called station will be busy for a long time. If the calling station user forgets who they called and activated the Automatic Callback feature, the LCD will display the station number of who they are calling.
SYSTEM AVAILABILITY

DESCRIPTION

Standard on all STRATA systems which have LCD telephones.

The Liquid Crystal Display can be used to indicate the status of all telephones in the system. Each 16-character LCD line will display the status of 10 stations. Two LCD lines allow the display of 20 stations at a time. Station numbers or port group numbers are indicated in the display as follows:

<table>
<thead>
<tr>
<th>10</th>
<th>20</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>...</th>
</tr>
</thead>
</table>

(S² or DK16 systems)

<table>
<thead>
<tr>
<th>00</th>
<th>10</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>...</th>
</tr>
</thead>
</table>

(DK24/56/96 systems)

On S² and DK16 systems, the “10” stands for group 10, and each dot following represents a station number—10, 11, 12, 13, 14, and so on. Likewise the “20” stands for station group 20, and each dot following represents the station numbers—20, 21, 22, 23, 24, and so on.

On DK24/56/96 systems, stations are usually numbered from 200-295. On the BLF, the “00” stands for port group 00, and each dot following represents a three-digit station number that starts with “2”—200, 201, 202, 203, 204, and so on. Likewise the “10” stands for station group 10, and each dot following represents the station numbers 210, 211, 212, 213, 214, and so on.

If there are more than 20 stations in the continued system, other station numbers can be displayed by pressing the PAGE button.

If the PAGE button is pressed once, the display changes to:

<table>
<thead>
<tr>
<th>20</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>...</th>
</tr>
</thead>
</table>

Pressing the PAGE button again shows:

<table>
<thead>
<tr>
<th>30</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>...</th>
</tr>
</thead>
</table>

and so on. When a station is on-hook (free), a dot appears in the location of the station number. If a station becomes busy, the last number of that station will replace the dot.
For example, on an S16 or DK16 system, if stations 20, 24, and 37 were busy, the display would show:

```
 20  0 . . . 4 . . . .
 30  . . . . . . 7 .
```

The very same display on a DK24/56/96 system would indicate that stations 220, 224, and 237 were busy.

**BENEFITS** The BLF feature on the LCD telephone allows the customer to have as many Busy Lamp Fields as are needed in the business without the expense of additional Key Service Unit (KSU) hardware or extra station equipment.
**SYSTEM AVAILABILITY**
Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**
When an LCD station user is on an outgoing or incoming CO line call, the LCD displays the elapsed time of a call. Call duration may be toggled with time and date via the PAGE button.

**BENEFITS**
Station users know exactly how long they have been on a call. This is useful in billing applications where outside parties are billed for professional services which include telephone consultation. It also makes station users aware how long they have been on long distance calls. This makes them more conscious of controlling telephone costs.
**SYSTEM AVAILABILITY**

Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**

When call forwarding is set at your telephone, the LCD displays the station number to which your calls will be forwarded. In STRATA DK systems, it will also show the type of call forwarding set.

When you make an intercom call to a station, the LCD displays the station number you dialed. If that station is forwarded to another, your LCD display changes to the station number to which your call is being forwarded.

When an intercom call is forwarded to your telephone from another station, both the calling station number and the number of the station called is displayed.

**BENEFITS**

Intercom users have complete visibility of where their calls are going when they make them, and of calls received.
## LCD—Calling/Called Number Display

### System Availability

Standard on all STRATA systems which have LCD telephones.

### Description

When an LCD station user receives an intercom call, the LCD displays the number of the station that is calling. When the user places an intercom call, the LCD displays the number of the station that was dialed by the user. For incoming or outgoing CO line calls, the LCD displays the CO line in use.

### Benefits

Called station users will know which station is calling them on intercom calls. When making intercom calls, they can see who they are calling in case they are momentarily distracted. Knowing the CO line an incoming call is using is useful in paging applications.
LCD—Clock/Calendar Display

**SYSTEM AVAILABILITY**

Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**

The date and time are continuously displayed when the LCD station is idle. Date and time can be adjusted on a system-wide basis from Station 10 on S0 and Station Port 00 on STRATA DK. The clock/calendar can be alternated with call duration on the display during a CO line call by pressing the PAGE button.

**BENEFITS**

This provides convenience to the user. They can see both the date and time at a glance.
SYSTEM AVAILABILITY  Standard on all STRATA systems which have LCD telephones.

DESCRIPTION  Each CO line can be identified by a 16-character name. When a user with an LCD telephone selects a CO line or receives a CO line call, the name of the CO line will be displayed instead of the number. Names are assigned to the CO lines in system programming.

BENEFITS  LCD users have the convenience of being able to quickly verify that they are using the appropriate CO line for the call being made.

When used in conjunction with the Least Cost Routing feature, the CO Line Identification feature will let the LCD user know what type of line is being used for the call. If the user sees that the call is being routed on an expensive route and the call is not urgent, he or she can choose to place it at another time. This can result in cost savings to the customer.

When used in conjunction with the Pooled Line Button feature, CO Line Identification helps users identify the specific line they are using.
## LCD—Dialled Number Display

<table>
<thead>
<tr>
<th><strong>SYSTEM AVAILABILITY</strong></th>
<th>Standard on all STRATA systems which have LCD telephones.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DESCRIPTION</strong></td>
<td>When an LCD station places a call on a CO line, the LCD displays the digits dialed. The display will automatically change from dialed number to elapsed time after a programmed period of time.</td>
</tr>
<tr>
<td><strong>BENEFITS</strong></td>
<td>Displaying the digits dialed enables the user to verify the telephone number. If they see they have misdialed, they can hang up and dial again before the party answers. If they are calling long distance, this can save money as well as aggravation.</td>
</tr>
</tbody>
</table>
System Availability

Standard on all Strata DK16 and DK24/56/96 Release 4 systems, which have LCD telephones.

Description

Feature access is made easier with feature prompting instructions appearing on the LCD. Station users do not have to use or remember any access codes or operational sequences to access commonly used features. While on a call or one that is in the ring state, users can access these features by pressing the soft keys that correspond to labels displayed on the LCD. Some displays prompt users to dial a station or telephone number. As a call progresses, the labels change to provide the most logical options allowed by the user’s class of service.

Station users can still use access codes and flexible feature buttons, instead of the prompting/soft key mode, to access features. The prompting/soft key feature also can be turned on and off with an access code. When soft key prompting is turned off, the buttons otherwise used as soft keys function as MODE, SCROLL, and PAGE, while in the idle state.

Benefits

Features are much easier to use. No need to look up or memorize feature access codes. This makes call processing quicker and more efficient. Customers can use sophisticated features while not being intimidated by what they may consider complex procedures.
**SYSTEM AVAILABILITY**  
Standard on STRATA DK systems. Not available on STRATA S80.

**DESCRIPTION**  
Station users with LCD telephones can program a title (name, location, etc.) of up to 16 characters in station memory. When the station is idle, the name displays on the top line of the station’s LCD. The station user has the option of using a simple access code to “toggle” between the title display and the usual intercom number display. When the station calls another LCD station, whichever display is on the calling station appears on the bottom line of the called station.

Non-LCD stations, including standard telephones, electronic telephones, and voice mail ports, can be programmed (from station 200) to send a name to LCD stations that they call.

**BENEFITS**  
Called stations can know at a glance who is calling, without having to recognize the station number.
**SYSTEM AVAILABILITY**  
Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**  
When an LCD station user activates message waiting at another LCD station, the calling LCD shows the number of the station at which the message was left. When an LCD station user receives a message waiting signal, the display shows up to four station numbers that left messages. The messages may be scrolled (right to left) by pressing the SCROLL button. The fourth "message" is always reserved for a message from the message center. This means that a maximum of three stations other than the message center can leave a message on an LCD.

The total number of station numbers that can be displayed on an LCD phone as a result of message waiting activations depends on the length of the station numbers. Up to 8 LCD characters can be used for all of the station numbers. Thus, if station numbers were two digits long, up to four station numbers could be displayed.

**BENEFITS**  
This improves inter-office communications. The station user will readily see they have messages because the LED will be lit. The LCD will also display the message information.
**SYSTEM AVAILABILITY**

Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**

If a transferred call goes unanswered, it recalls the station that originated the transfer, displaying both the CO line number and the station from which it is recalling.

**BENEFITS**

This notifies the recalled station user that the call is coming back. Knowing the station and line number enables them to answer appropriately, and either transfer the call elsewhere, or provide any required special handling.
**SYSTEM AVAILABILITY**

Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**

Depending on the STRATA system, up to 16 stations can be allowed to program a 12-character name for each of their 40 personal speed dial numbers. These will be the same stations that can create personal messages.

The number of stations on a STRATA system that can have these features are:

- S0: 4 stations.
- DK16 stations.
- DK24 (PCTUS), 6 stations.
- DK24/56/96 (PCTU), 16 stations.

Station 10 on the S0 and the station assigned to port 00 on DK systems (usually station 200) can program 12-character names for the system speed dial numbers. The LCD telephone user can then scroll through the “memo pad” of names and numbers, including system speed names and numbers. When the desired name and number appears on the LCD, the user can press a CO line button to automatically dial the number.

**BENEFITS**

This feature gives the LCD user the ease and convenience of having a speed dial directory always at their fingertips.

Speed dial numbers will be identified with the name of the person or company associated with the number. This insures that the correct speed dial number will be selected, and can eliminate charges for calls placed to a wrong speed dial number.
LCD—Station Identification

SYSTEM AVAILABILITY
Standard on all STRATA DK systems which have LCD telephones. Not available on STRATA Sx.

DESCRIPTION
When the handset is on-hook, the LCD displays the station’s number as well as the time and date. If a title is programmed for the station, the station user can toggle between the title and the station number by using an access code.

BENEFITS
The station number can always be visible. Guests or employees working in areas other than their usual workstation can conveniently reference the extension if they need to have someone call them. Station identification is useful for technicians when troubleshooting.
**LCD—Timed Reminders**

**SYSTEM AVAILABILITY**

Standard on all STRATA systems which have LCD telephones.

**DESCRIPTION**

LCD telephone users can define up to five separate messages and have each message appear on their LCD at a specific time. When the message appears, the station user will hear a muted ring for 30 seconds, or until the handset is lifted or the MODE button is pressed.

The user can program a message to appear just once, or to appear at the same time each day.

The number of stations that can have these features are:
- S, 4 stations.
- DK16 stations.
- DK24 (PCTUS), 6 stations.
- DK24/56/96 (PCTU), 16 stations.

A variation on this feature is available on all DKT/EKTs, even without the LCD. DKT/EKT users can program up to 5 timed “alarm” reminders. At the appointed times, the user will get a 30-second muted ring.

**BENEFITS**

This feature helps LCD users be more efficient by providing them with a convenient, simple way to remind themselves of appointments or other responsibilities. It can help eliminate the need to “write notes to oneself,” which often get misplaced on a busy desk.
Message Waiting/Flash

STATION FEATURES

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
When used for “Message Waiting,” the LED will flash to alert the user they have a message or messages. If they have an LCD phone, message information is displayed. If they have a handsfree phone, they press the INT and MW/FL buttons respectively, and will call the station that set the message indicator. If they have voice mail, pressing INT and MW/FL will automatically call the voice mail device to retrieve messages.

When used for “flash,” the MW/FL button serves one of two purposes:
- If pressed when the station is connected to an outside line, it sends a “flash” signal to the CO that is long enough to disconnect the line and get CO dial tone again.
- If pressed when the station is connected to a PBX line, it can be used to operate features on the PBX.

Different flash times are usually required for each purpose. The flash can be programmed with one value only, and can thus serve one of these two functions, but not both, unless the flash is the same.

To generate a flash signal from a single line EKT, dial *59 when connected to the line on an S2 system, or on a DK system, press “CONF/TRNS”, followed by “45”.

BENEFITS
Message Waiting button LED indication improves inter-office communications. The station user will readily see they have messages because the LED will be lit and flashing. The LCD, if used, will also display message information.

Flash operation provides two main benefits:
- When a station user is making a series of CO calls or redialing a busy number, it is inconvenient to press the hookswitch, release it, and access a CO line again. By using the Flash button, the user disconnects the line and gets CO dial tone again in one operation.
- When the system is installed behind a PBX, users can access PBX features that require a “flash” to operate, allowing stations to function more fully as a part of the PBX, and to take advantage of the PBX features.
### Microphone Control Button

**SYSTEM AVAILABILITY**  
Standard feature, programmable by station, on all STRATA systems.

**DESCRIPTION**  
If a Microphone Cutoff button (MCO) is assigned on a station, the station user can enable or disable the Handsfree Answerback feature for that station when the station is in the idle state. This is used for station security and insures a station user that private office conversation will not be heard via handsfree answerback.

**BENEFITS**  
The Handsfree Answerback feature can be very convenient. However, if the system is programmed for voice signaling, an intercom caller could hear any conversation in progress in the called party’s office.

The Microphone Control Button (MCO) allows a station user to insure that no intercom callers will hear private office conversations. The station user can use the MCO button to disable the handsfree answerback feature whenever he or she is in confidential meetings.
Modular Handset and Line Cords

STATION FEATURES

SYSTEM AVAILABILITY
Standard on all Toshiba electronic and digital telephones.

DESCRIPTION
All electronic and digital key telephones have modular handsets and can connect to the system by standard 2-pair or 3-pair modular line cords.

BENEFITS
This feature gives the customer the flexibility to use long coil cords or line cords, should they be required. Modular cords also simplify maintenance, reducing the time and cost of repair.
Modular Headset

STRATA STATION FEATURES

SYSTEM AVAILABILITY
Optional on all 6500-series 10-button and 20-button telephones and on 2000-series digital key telephones.

DESCRIPTION
Every 10-button and 20-button telephone can be upgraded to provide a modular headset jack and a loud ringing bell interface. An upgrade assembly (HHEU) is installed inside the phone. Most standard carbon-type headsets plug into the HHEU jack and are compatible with the electronic telephone. Both options may be installed simultaneously. If a digital telephone is upgraded with a data interface unit, it cannot have the HHEU assembly.

BENEFITS
The HHEU upgrade assembly simplifies the use of headsets for customers who want to use them for reasons of convenience or productivity.
**Off-hook Call Announce**

**STATION FEATURES**

**SYSTEM AVAILABILITY**

Optional on all STRATA systems using electronic or digital key telephones.

If a station is equipped with Off-hook Call Announce, any station can call that station and speak to the station user who is off-hook on a call. The caller's voice is heard through the speaker of the called station. The called station can reply via the telephone's microphone as long as the telephone remains off-hook. The called station does not have to put the existing caller on hold in order to respond to the intercom call.

If the called station is using the speakerphone or the Handsfree Answerback feature, the caller will get a busy signal. If the called station is in Do Not Disturb mode, Off-hook Call Announce will be blocked.

Any telephone may originate Off-hook Call Announce via intercom dialing, transfer/conference dialing, or Direct Station Selection. There are no special requirements to enable an EKT, a DKT or a conventional single line telephone to originate Off-hook Call Announce calls. The feature is activated either automatically or by dialing "2", depending on how the station is programmed. (TIE line calls cannot complete Off-hook Call Announce calls.)

However, the station receiving the Off-hook Call Announcement must be an EKT/DKT. Each must be equipped for Off-hook Call Announce. Standard single line telephones cannot receive off-hook call announcement.

The EKT requires three-pair cabling and the HVSU2 upgrade assembly installed in the base of the phone.

The digital key telephone requires its continued standard one-pair cabling and the DVSU upgrade assembly installed in the base of the telephone.

On the S, Off-hook Call Announce also requires an SVCU interface unit. One SVCU is required for every eight stations requiring Off-hook Call Announce. Each SVCU provides two talk paths exclusively for the use of Off-hook Call Announce.

On DK systems, every PEKU or PESU that supports stations with Off-hook Call Announce must be equipped with the Off-hook Call Announce Piggy-back Unit (EOCU). A PDKU or KCDU that supports digital telephones with Off-hook Call Announce does not require the EOCU.

**BENEFITS**

Off-hook Call Announce ensures that users can get important telephone calls. A caller with an important message can get through to the called party, even if the called party is using the telephone. The caller can contact the called party directly rather than through an anonymous "camp-on" tone, which is often ignored.
On-hook Dialing

**SYSTEM AVAILABILITY**  
Standard on all STRATA systems.

**DESCRIPTION**  
A station user can dial any call without lifting the handset, and can hear the progress of the call (outpulsing, ringing, busy signal, intercept announcements, etc.) through the speaker. The user must lift the handset in order to converse with the called party, unless the telephone is a full speakerphone. On-hook dialing is available on all electronic key telephones.

**BENEFITS**  
This feature provides convenience and comfort to the station user. Often a station user will make a call, only to get a recording, and a request to “wait for the next available agent.” Not wanting to waste time, the user will hold the phone with his shoulder, to free his hands to do something else. Being able to monitor the call with the handset on hook eliminates the discomfort of “shoulder hold.”

On-hook dialing provides monitoring capability without the expense of a full speakerphone.
Pooled CO Line Buttons

**SYSTEM AVAILABILITY**
Standard on DK systems. Not available on STRATA Sx.

**DESCRIPTION**
Pooled Line Buttons allow a group of CO lines to “appear” under one button. A maximum of eight CO line groups can be defined on a system. A CO line group can be assigned to up to four Pooled Line Buttons on an electronic telephone. Multiple appearances of the CO line group can facilitate handling several calls on lines in the same group.

A CO line group can be accessed for an outgoing call by pressing the Pooled Line Button, or by using an assigned access code.

**BENEFITS**
Pooled Line Buttons can save money for the customer, since the less expensive 10-button telephones can be used instead of 20-button telephones to provide access to the same number of lines.

Pooled Line Buttons also offer a “hybrid” type operation, enabling the STRATA DK to compete more effectively against other hybrids.
SYSTEM AVAILABILITY

Standard feature, programmable by station on all STRATA systems. For a similar feature on DK systems, see “Privacy Release Button.” STRATA DK systems can be programmed with either a Privacy Button or a Privacy Release Button.

DESCRIPTION

If a STRATA S or DK system has been programmed to be non-private, a button can be assigned to a station that activates privacy on the CO lines and the intercom lines for that station. Privacy prevents other stations from breaking in on calls via common CO Line buttons. It does not prevent alternate point answer of transferred calls if the system is set for it.

The privacy remains in effect until the button is pressed again, even if the user makes several other calls.

STRATA DK systems are automatically set as private, which means that stations have the exclusive private use of a CO or intercom line. If all stations are allowed the Privacy Override feature, the system becomes non-private. If a station is programmed with the “Privacy Override” feature, the station user can break into any ongoing CO line call that appears on the station by pressing the CO line button.

A Privacy Button can be assigned to any station on STRATA DK. By pressing the Privacy button, the station user prevents Privacy Override. Privacy remains in effect on that station until the user presses the Privacy Button again to release privacy.

BENEFITS

Selected users can make private calls, even when the system is programmed to be non-private, adding more flexibility to the system and allowing the customer to tailor the system to the needs of the business.

Organizations can use Privacy Override for quick conferencing or for training purposes and still allow private, confidential calls.
# Privacy Release Button

## Station Features  
**Strata**

<table>
<thead>
<tr>
<th>System Availability</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard feature, programmable by station on all STRATA DK systems. For a similar feature on S8, see “Privacy Button.”</td>
<td>All STRATA DK CO lines are in private mode by default. Individual CO lines can be changed to non-private and back to private by pressing the Privacy Release (PRV RLS) button while the CO line is selected. A maximum of four parties, including the distant party on the CO line can participate in a “non-private” call.</td>
<td>Users can conveniently and easily release the privacy on a CO line when they want to set up a “quick conference.”</td>
</tr>
</tbody>
</table>
**Private Override**

**SYSTEM AVAILABILITY**
Standard feature, programmable by station, on all STRATA systems.

**DESCRIPTION**
Privacy Override enables a station user to break into any ongoing CO line call by pressing that CO line button on his or her telephone. If the system is programmed to be private, this feature overrides the system privacy.

When the overriding station breaks into a call, the conversing parties hear a single tone (optional on DK systems), and a three-way conference is immediately in effect. No periodic warning tones are heard after the initial tone.

On the STRATA S10, only two stations in the system can have the Privacy Override feature. If more than two stations are programmed for Privacy Override, the two with the lowest directory numbers will have the feature by default. The others will not have the feature.

On DK systems, any number of stations can have the feature. Any station can be assigned a Privacy Button, which will prevent Privacy Override.

**BENEFITS**
Privacy Override provides a way to instantly contact any station that is engaged in a CO line conversation to deliver an emergency message.
**Private CO Lines**

**STATION FEATURES**

**SYSTEM AVAILABILITY**  
Standard on all STRATA systems.

**DESCRIPTION**  
All systems can be programmed to allow certain CO lines to appear only on one station and be accessed only by that station. This effectively provides a "private" CO line. If the station is in the Call Forward mode, calls on the private CO line will be forwarded.

**BENEFITS**  
This feature allows a business to provide the prestige, convenience and privacy of a private line to selected employees. Private lines insure that a CO line will always be available to the user. Private lines can also be used to help a business manage costs by billing back the full cost of the private line to the user.
Push-button Dialing

SYSTEM AVAILABILITY
Standard on all STRATA systems.

DESCRIPTION
The dialpad on all Toshiba electronic key telephones is push-button style. Electronic signals generated by the dialpad are neither DTMF nor rotary dial signals. On outgoing calls, the system converts the station signals to DTMF or rotary before they are outpulsed, according to the requirements of the central office.

For STRATA S0, on internal calls to an HIOB station, the HIOB converts the electronic signals from the telephone dialpad to DTMF signals and sends them to the station connected to the HIOB. This is called “end-to-end signaling.”

On DK24/56/96 systems, the CRCU which mounts on the PCTU (or PCTUS) provides end-to-end signaling, and is required whenever devices which send DTMF signals are connected to the system. On DK16 systems, the KRCU mounts on the KMAU to provide similar DTMF capabilities.

BENEFITS
All station users can enjoy the ease and convenience of a push-button phone, regardless of the serving Central Office.
Release Button

SYSTEM AVAILABILITY
Standard on STRATA DK systems. Not available on STRATA S8.

DESCRIPTION
A Release button can be programmed on a button of an electronic telephone. The user can press the Release button to disconnect from an existing call, and does not have to press the hookswitch. The Release button puts the telephone into an idle state. For automatic off-hook selection, the switchhook must still be used.

BENEFITS
Fumbling with the switchhook can be eliminated. People often waste time and become irritated when using the hookswitch to disconnect calls. They press it too quickly to send a clear disconnect signal, and have to try several times to actually disconnect. With one touch of the Release button, a user can conveniently, quickly and smoothly disconnect from a call. A release button is especially useful in headset applications.
## Remote Retrieval of Held Calls

**STRATA STATION FEATURES**

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
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</tr>
</thead>
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<td>Standard on all STRATA systems.</td>
<td>Remote Retrieval of Held Calls allows any station user to retrieve a call that has been put on hold by another station. This feature is particularly useful if the call to be retrieved has been held on a CO line that does not appear on the station from which it will be retrieved. If more than one call is on hold at a station, the lowest number CO line will be picked up first. Also see “Call Pickup” earlier in this section.</td>
<td>Remote Retrieval improves call handling by providing complete flexibility for call retrieval. A user can easily pick up a call that was held at a different station without having to physically go to that station. Time is saved, and calls can be handled more promptly.</td>
</tr>
</tbody>
</table>
## Repeat Last Number Dialed

### STATION FEATURES

#### SYSTEM AVAILABILITY
Standard on all STRATA systems.

#### DESCRIPTION
This feature allows a station to automatically redial the last number dialed from their station by selecting an outgoing line and pressing the “#” button or the “RDL” button.

This feature can be assigned to a button on an Electronic Key Telephone. The station must also have a Repertory Dial button programmed on the EKT in order to be able to use the button for Repeat Last Number Dialed.

Digital key telephones (not used with STRATA Sx) have a fixed “REDIAL” button for automatically redialing the last number dialed.

#### BENEFITS
Redialing a number that was busy or was not answered can waste time, especially if dialing errors are made. With this feature, the station user is assured of an accurate and speedy redial of the last number that he or she dialed from the station.
Ringing Line Preference

**SYSTEM AVAILABILITY**
Standard feature, programmable by station on all STRATA systems.

**DESCRIPTION**
If a line is ringing at a station, the station user who has this feature can answer the line by simply lifting the handset or, on DK systems, pressing the Speaker button. The station user will automatically be connected to the line that was ringing, without having to press the specific line button for the call.

**BENEFITS**
Because the station user does not even have to look at the line buttons or think about which line button to press, calls can be answered more quickly and conveniently.
# Saved Number Redial

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<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
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<td>Standard feature, programmable by station on all STRATA systems.</td>
<td>A station user with this feature can save a dialed number for redial at a later time. The number can be saved before the called number rings, during a conversation, or after the call has ended. This feature is independent of the “Repeat Last Number Dialed” feature, and allows the saved number to be redialed at any time by selecting a CO line and pressing the “SAVE” button. The user can make other calls and then redial the saved number. The number is saved until the “SAVE” button is used to save another number.</td>
<td>Redialing a number that was busy or was not answered can waste time, especially if dialing errors are made. However, the user may want to make other calls before redialing, so the “Repeat Last Number Dialed” feature cannot be used to redial that number. The “Saved Number Redial” feature allows the number to be saved, and then redialed at a later time even if calls are made to other numbers in the interim. The station user can save time because he or she doesn’t have to look up the number and redial it again.</td>
</tr>
</tbody>
</table>
**SYSTEM AVAILABILITY**

Programmable on 10-button and 20-button EKTs on all STRATA systems.

If there are unassigned buttons on an electronic key telephone, those buttons can be assigned as Speed Dial Buttons for personal speed dial numbers ("SD" buttons on DK systems; "AD" buttons on Se). Each button will store a pre-programmed telephone number, providing "one-touch" dialing for frequently called numbers. Telephone numbers can be up to 16 digits on Se systems, and up to 20 digits on STRATA DK systems.

SD (AD) buttons can also be used for CO/Centrex/PBX feature access codes. On the Se, Station 10 can program these codes in system speed dial locations 60-99, using pauses and flashes as required. On DK systems, the station assigned to port 00 (usually 200) programs them.

Those system speed dial codes can then be assigned in system programming to a button on any EKT, using the Flexible Button Assignment feature. When an SD button is used in this way, it is referred to as a "locked" SD button. Station 10 (on an Se) and the station assigned to port 00 (on a STRATA DK) are the only stations that can program or change the numbers programmed for a "locked" SD button.

Each SD button programmed on an EKT reduces by one the number of station automatic dialing numbers available to that station.

**BENEFITS**

Speed Dial Buttons provide instant, one-button access to personal speed dial numbers, eliminating dialing errors and saving time used to look up frequently called numbers.
**Station Speed Dial**

**STATION FEATURES**

**SYSTEM AVAILABILITY**

Standard feature, programmable by station, on all STRATA systems.

**DESCRIPTION**

This feature allows the station user to have a private automatic dialing list. On all systems, each station can have up to 40 automatic dialing numbers. The numbers in this list can be changed by the station user at will. Station Speed Dial can be allowed or denied on a station-by-station basis.

The station user assigns a two-digit code to each of the telephone numbers, and programs a number for each code. The user can then “speed dial” the number by using the code, instead of having to dial the number manually. If the station has buttons assigned as Speed Dial buttons, one speed dial number can be programmed for each SD button. Numbers not assigned to an SD button must be accessed with a speed dial code.

Each number that is assigned a dialing code can have up to 16 digits on an S0 system, and 20 digits on a DK system. Two dialing codes can be “chained” to accommodate numbers that have more than 16 (or 20) digits. Pauses and flashes can be programmed when the EKT has a PAUSE button and/or a MW/FL button on the set.

If System Speed Dial codes 90-99 have been pre-defined, they can be incorporated into a Station Speed Dial code to allow up to 29 digits (37 digits on a DK system) to be automatically dialed via one code. For example, an OCC (Other Common Carrier) access number could be programmed as System Speed Dial code 90. Then, System Speed Dial code 90 could be used as part of the telephone number for a Station Speed Dial code by entering “90” as the first three digits in the telephone number for that Station Speed Dial code.

If the station user is using a 20-button LCD telephone and has the “Speed Dial Memo” feature, he or she can program a 12-character name for each of the 40 personal speed dial numbers. The LCD user can then scroll through the “memo pad” of names and numbers. When the desired name and number appears on the LCD, the user can press a CO line button to automatically dial the number.

The number of stations on a STRATA system that can have these features are:
- S0, 4 stations.
- DK16, 16 stations.
- DK24 (PCTUS), 6 stations.
- DK24/56/96 (PCTU), 16 stations.

**BENEFITS**

Speed dialing saves time in looking up telephone numbers. It prevents costly dialing errors.

Station Speed Dialing allows the STRATA S0 or DK system to be customized. Station users can use personal speed dial for telephone numbers they need which are not on a System Speed Dial list.
## Timed Reminder

### System Availability
Standard on all STRATA systems.

### Description
An electronic telephone (EKT) or digital telephone (DKT) station user can set five separate reminders on his/her station even if the EKT has no LCD. The reminder tone sounds at the pre-set time. Each reminder may be set to ring only once, or at the same time daily.

### Benefits
Any EKT or DKT user has a convenient, built-in tone reminder system.
**Toll Restriction Override Code Revision**

**STATION FEATURES**

<table>
<thead>
<tr>
<th>SYSTEM AVAILABILITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard on all STRATA systems.</td>
<td></td>
</tr>
</tbody>
</table>

On all STRATA systems, two special codes can be defined to override toll restriction. Each code can have up to four digits. Access to these override codes can be assigned to individual employees as required. Any person who knows either code will be able to override toll restriction at any station.

On STRATA DK systems, the toll restriction override check method is very sophisticated and makes it almost impossible for anyone to break the override code.

These codes can be changed from any station that is enabled to do so in system programming. The codes are easily changed from these stations by dialing a special feature code and entering the new override code. This makes it simple for selected executives to change the override codes without having to call the service company.

**BENEFITS**

This feature provides a way for the customer to insure that certain non-restricted users (such as the executives) will be able to make calls from any telephone in the system and not be subject to the toll restriction on the station used to place the call.
User Programmable Feature Buttons

SYSTEM AVAILABILITY
Standard on Strata DK16 and DK24/56/96 Release 4 systems, with digital or electronic telephones.

DESCRIPTION
This feature enables digital and electronic telephone users to program their own flexible buttons to perform sequences of operation. This is done by enabling the speed dial function to dial features as well as directory and station numbers.

As many as 20 digits can be stored on a button, and more than one feature can be linked together. For example, a user can program a button with the Park and Page features, so with one push of a button, the user is ready to make an announcement.

In addition to being stored on speed dial buttons, feature sequences can also be stored on speed dial codes.

BENEFITS
Access to features is simple and fast. Multi-step feature operation can be stored and activated at the touch of one button. Users don’t have to remember or look up how to do things, or follow prompting instructions.

Individual station users can use flexible buttons to tailor their phones even more to fit their special needs. They can even use codes if they do not have buttons available.
STRATA

ACD/MIS Features

H
<table>
<thead>
<tr>
<th>FEATURES</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>5-1</td>
</tr>
<tr>
<td>ACD System Features</td>
<td>5-3</td>
</tr>
<tr>
<td>Overview</td>
<td>5-3</td>
</tr>
<tr>
<td>After Call Work Time</td>
<td>5-3</td>
</tr>
<tr>
<td>After Shift Service</td>
<td>5-3</td>
</tr>
<tr>
<td>Call Distribution</td>
<td>5-3</td>
</tr>
<tr>
<td>Data Collection and Reporting</td>
<td>5-3</td>
</tr>
<tr>
<td>Delay Announcements and Music</td>
<td>5-4</td>
</tr>
<tr>
<td>Inbound Call Routing</td>
<td>5-4</td>
</tr>
<tr>
<td>Overflow to Another ACD Group</td>
<td>5-4</td>
</tr>
<tr>
<td>Queuing</td>
<td>5-4</td>
</tr>
<tr>
<td>ACD Agent Feature</td>
<td>5-5</td>
</tr>
<tr>
<td>Overview</td>
<td>5-5</td>
</tr>
<tr>
<td>ACD Call Status Display</td>
<td>5-5</td>
</tr>
<tr>
<td>Assistance</td>
<td>5-5</td>
</tr>
<tr>
<td>Auto-answer and Zip Tone</td>
<td>5-5</td>
</tr>
<tr>
<td>Intra-group Call Pickup</td>
<td>5-5</td>
</tr>
<tr>
<td>Login/Logout</td>
<td>5-5</td>
</tr>
<tr>
<td>Remote Login/Logout</td>
<td>5-5</td>
</tr>
<tr>
<td>Ring State Preselection</td>
<td>5-5</td>
</tr>
<tr>
<td>Unavailable</td>
<td>5-5</td>
</tr>
<tr>
<td>Work Unit (Stroke Count, Call Record Identifier)</td>
<td>5-6</td>
</tr>
<tr>
<td>ACD Supervisor Feature</td>
<td>5-7</td>
</tr>
<tr>
<td>Overview</td>
<td>5-7</td>
</tr>
<tr>
<td>Agent Assistance</td>
<td>5-7</td>
</tr>
<tr>
<td>Agent Monitoring</td>
<td>5-7</td>
</tr>
<tr>
<td>Alarm Indication</td>
<td>5-7</td>
</tr>
<tr>
<td>MIS Access</td>
<td>5-7</td>
</tr>
<tr>
<td>MIS Displays</td>
<td>5-8</td>
</tr>
<tr>
<td>Overview</td>
<td>5-8</td>
</tr>
<tr>
<td>Agent Statistics</td>
<td>5-8</td>
</tr>
<tr>
<td>Agent Status</td>
<td>5-8</td>
</tr>
<tr>
<td>Group Traffic Monitor</td>
<td>5-8</td>
</tr>
<tr>
<td>System Status</td>
<td>5-8</td>
</tr>
<tr>
<td>MIS Reports</td>
<td>5-9</td>
</tr>
<tr>
<td>Overview</td>
<td>5-9</td>
</tr>
<tr>
<td>Agent Performance</td>
<td>5-9</td>
</tr>
<tr>
<td>Agent Statistics</td>
<td>5-9</td>
</tr>
<tr>
<td>Delayed Call</td>
<td>5-9</td>
</tr>
<tr>
<td>Group Overflow</td>
<td>5-10</td>
</tr>
<tr>
<td>Incoming Call Duration</td>
<td>5-10</td>
</tr>
<tr>
<td>Lost Call</td>
<td>5-10</td>
</tr>
<tr>
<td>Supervisor Group</td>
<td>5-10</td>
</tr>
<tr>
<td>FEATURES</td>
<td>PAGE</td>
</tr>
<tr>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>Description</td>
<td>5-1</td>
</tr>
<tr>
<td>ACD System Features</td>
<td>5-3</td>
</tr>
<tr>
<td>Overview</td>
<td>5-3</td>
</tr>
<tr>
<td>After Call Work Time</td>
<td>5-3</td>
</tr>
<tr>
<td>After Shift Service</td>
<td>5-3</td>
</tr>
<tr>
<td>Call Distribution</td>
<td>5-3</td>
</tr>
<tr>
<td>Data Collection and Reporting</td>
<td>5-3</td>
</tr>
<tr>
<td>Delay Announcements and Music</td>
<td>5-4</td>
</tr>
<tr>
<td>Inbound Call Routing</td>
<td>5-4</td>
</tr>
<tr>
<td>Overflow to Another ACD Group</td>
<td>5-4</td>
</tr>
<tr>
<td>Queuing</td>
<td>5-4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Features</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACD Agent Feature</td>
<td>5-5</td>
</tr>
<tr>
<td>Overview</td>
<td>5-5</td>
</tr>
<tr>
<td>ACD Call Status Display</td>
<td>5-5</td>
</tr>
<tr>
<td>Assistance</td>
<td>5-5</td>
</tr>
<tr>
<td>Auto-answer and Zip Tone</td>
<td>5-5</td>
</tr>
<tr>
<td>Intra-group Call Pickup</td>
<td>5-5</td>
</tr>
<tr>
<td>Login/Logout</td>
<td>5-5</td>
</tr>
<tr>
<td>Remote Login/Loginout</td>
<td>5-5</td>
</tr>
<tr>
<td>Ring State Preselection</td>
<td>5-5</td>
</tr>
<tr>
<td>Unavailable</td>
<td>5-5</td>
</tr>
<tr>
<td>Work Unit (Stroke Count, Call Record Identifier)</td>
<td>5-6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Features</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACD Supervisor Feature</td>
<td>5-7</td>
</tr>
<tr>
<td>Overview</td>
<td>5-7</td>
</tr>
<tr>
<td>Agent Assistance</td>
<td>5-7</td>
</tr>
<tr>
<td>Agent Monitoring</td>
<td>5-7</td>
</tr>
<tr>
<td>Alarm Indication</td>
<td>5-7</td>
</tr>
<tr>
<td>MIS Access</td>
<td>5-7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Features</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS Displays</td>
<td>5-8</td>
</tr>
<tr>
<td>Overview</td>
<td>5-8</td>
</tr>
<tr>
<td>Agent Statistics</td>
<td>5-8</td>
</tr>
<tr>
<td>Agent Status</td>
<td>5-8</td>
</tr>
<tr>
<td>Group Traffic Monitor</td>
<td>5-8</td>
</tr>
<tr>
<td>System Status</td>
<td>5-8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Features</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS Reports</td>
<td>5-9</td>
</tr>
<tr>
<td>Overview</td>
<td>5-9</td>
</tr>
<tr>
<td>Agent Performance</td>
<td>5-9</td>
</tr>
<tr>
<td>Agent Statistics</td>
<td>5-9</td>
</tr>
<tr>
<td>Delayed Call</td>
<td>5-9</td>
</tr>
<tr>
<td>Group Overflow</td>
<td>5-10</td>
</tr>
<tr>
<td>Incoming Call Duration</td>
<td>5-10</td>
</tr>
<tr>
<td>Lost Call</td>
<td>5-10</td>
</tr>
<tr>
<td>Supervisor Group</td>
<td>5-10</td>
</tr>
</tbody>
</table>
SYSTEM AVAILABILITY
Optional on Strata DK24/56/96 Release 4 systems. Not available on Strata DK16 or Se systems.

DESCRIPTION
Automatic Call Distribution (ACD) is an extremely efficient method for distributing inbound calls among one or more groups of call-handling agents. These agents may work in telemarketing, inside sales, customer service, technical support, or any function in which a group of people handle a large volume of incoming calls. Strata ACD ensures that calls are distributed evenly, so agent productivity is maintained at a high level, and inbound callers are handled effectively and efficiently.

Calls to an ACD group are routed to a pilot number and then queued to wait for an available agent in the group. Depending upon the application, agents may be available to take the call immediately, or the end-user may extend the productivity of the agents by having callers wait a predetermined average amount of time before being answered. While in queue, callers typically are provided messages encouraging them to wait to be answered. Music from the system's music-on-hold device is often provided to make the waiting period more tolerable.

The Strata DK transmits data about the operation of the ACD system to the Management Information System (MIS) Processor, where it can be stored on hard disk. This data is manipulated by the MIS Processor and organized into real-time displays and reports, and historical reports. The displays are provided to ACD group supervisors via the MIS Processor display screen. The reports can be called up for shift, hourly, daily, weekly, monthly, and annual periods. They can be either displayed at the supervisor terminal, or printed on a printer connected to the MIS Processor.

ACD agents may use either Toshiba proprietary digital and electronic telephones or standard 2500-set telephones. The ACD supervisors will use digital/electronic telephones. The use of digital/electronic telephones permits the end-user to assign agent features to flexible feature buttons for easier, more efficient operation. Use of LCD telephones allows both supervisors and agents to use valuable displayed information such as the number of calls waiting in the group's queue and the length of time spent on each ACD call.

When applying the ACD function with the general use of the Strata DK, it is important to note that additional instruments are not needed for ACD agents. They can use that same telephone to make and receive regular system calls as well as receive calls into the ACD group. Outgoing calling privileges can be controlled by class of service and toll restriction.

Strata ACD capacities are:

- Agent Groups: 8
- Agent IDs per Group: 192
- Agent IDs per System: 192
- Simultaneous Active Agents: 96
- Supervisors per Group: 1
ACD/MIS FEATURES

Strata DK’s ACD capability is provided as a value-added option in the Release 4 version of software. The optional MIS Processor is an IBM compatible PC that connects to the Strata DK by an RS-232 link.

BENEFITS

ACD gives the end-user a powerful tool for evenly distributing large volumes of inbound calls. It makes the jobs of the people processing those calls easier and more efficient, saving money and increasing the productivity of the call handling agents. This also improves the service provided to the outside caller.

The MIS displays and reports enable supervisors to monitor the performance of ACD groups and of individual agents within each group. This information makes it possible to configure the operation of the ACD system for maximum productivity and profitability.
ACD SYSTEM FEATURES

OVERVIEW
An ACD group is usually composed of a number of agents handling similar types of incoming calls. Each ACD group is identified by an ACD pilot directory number, which conforms to the Strata DK numbering plan.

Agents in each ACD group are identified by agent ID numbers. Agents log into the system by entering their ID from any telephone. This means agents are not tied to particular telephone sets, providing the flexibility to serve most any application. Incoming ACD calls for the agent's group are then routed to that station, when available or next in line to receive calls.

AFTER CALL WORK TIME
Allows ACD agents to automatically enter an after-call work mode after disconnecting from an ACD call. This is sometimes referred to as "wrap-up time," and gives the agent a predetermined amount of time to complete work regarding the last ACD call (i.e., paperwork, order processing, filing, etc.). The agent position remains in this mode until the predetermined "After Call Work Time" expires, or the agent manually exits this mode. When an agent position is in after-call work mode, it is not available for ACD calls. This feature is available to agents only.

AFTER SHIFT SERVICE
Allows calls directed to the ACD group to be routed to a predefined answering position when all agents have logged out of the ACD mode. Each ACD group can be programmed with one after-shift answering position. This can be any one of the following: another ACD group, another station, an audible signaling device (night bell), a voice mailbox, or an answering/announcement machine. The group will remain in after-shift service until at least one agent logs into the ACD group, at which time the system will resume routing calls into the group.

CALL DISTRIBUTION
End-users can choose between two call-routing algorithms to deliver calls through the ACD-group queues to agents for handling.

The first of these is true-ACD time-based routing. This algorithm attempts over a period of time to keep agents in the group on ACD calls for approximately the same length of time. This is known as Most-Idle-First.

The second algorithm, which is call-based, attempts to deliver an equal number of calls to the agents in the group over a given time period. This is known as Next-Available-First.

Most-Idle-First routing is appropriate for most call distribution applications, since it tends to maximize the productivity of individual agents and the overall efficiency of the entire group. However, some applications may need the specific capabilities of Next-Available-First routing. End-user can choose the call distribution method that best fits their application.

DATA COLLECTION AND REPORTING
The system collects ACD-related real-time data and transfers it in packets to the MIS processor. The MIS processor organizes the information into real-time displays, statistics, and reports. The information collected includes ACD call activities (before and after answer), agent status, ACD queue activities, and station call activities (non-ACD calls placed and received).
ACD SYSTEM FEATURES

ACD/MIS FEATURES

STRATA

DELAY ANNOUNCEMENTS AND MUSIC

Provides announcements and music to calls in queue at predetermined time intervals. The system provides flexible announcement patterns which can be individually assigned to each ACD group by the customer. Up to three different announcements can be programmed per group. Each announcement may be customer-programmed. The lengths of all music intervals are selected by each customer initially when the feature is programmed. Calls connected to announcements will be synchronized to the beginning of the message.

INBOUND CALL ROUTING

Calls can be routed into the ACD queues from an incoming Central Office line or Tie line. Calls can also be transferred into the ACD queue from the auto attendant, answer position, or any station in the system.

OVERFLOW TO ANOTHER ACD GROUP

Overflow allows the calls waiting in queue to be routed to another ACD group. Each ACD group can have one overflow group to act as a backup in the event that the originally-dialed ACD group is unable to handle the call. Each ACD group can be the overflow point for multiple ACD groups.

Each ACD group queue is associated with an overflow threshold which governs the disposition of calls to be overflowed. Overflow can be set to occur after a user-specified time in queue. When a call is forwarded due to an overflow, the total waiting time in queue and the announcement status (overflow disposition) will be carried into the overflow queue for further processing (e.g., statistics accumulation, call progress information displaying). If the overflow group’s agents are all busy, the call will not overflow, but will remain in the original queue.

QUEUING

Each ACD group has its own queue. As calls arrive at an ACD group, if no agent positions are available, the call enters and waits in queue until it is answered. Calls are answered from the queue on a first-in, first-out basis as the agents become available. While waiting in the queue, calls may receive announcements and music, and/or forward to an overflow group.
A variety of agent features are provided for each ACD group. These enhance the call processing abilities of each individual agent associated with the group.

**ACD CALL STATUS DISPLAY**
This feature provides ACD agents (using an electronic/digital telephone with LCD) with a visual indication of ACD call progress information, in addition to the standard display operation. When an agent position is in ACD mode, the number of ACD calls waiting in queue will be shown on the LCD. The call status information will also be shown on the LCD.

**ASSISTANCE**
Allows an ACD agent to call the supervisor position for assistance. Activation of this feature, while in the talk state, will automatically place the current ACD call on hold and initiate an assistance call to the supervisor position. As soon as the supervisor answers the call, the agent may establish a three-way conversation or may talk privately with the supervisor, and then return to the caller.

**AUTO ANSWER AND ZIP TONE**
Auto answer will automatically connect an available agent to an incoming ACD call without requiring the agent to lift the handset or push a button. When an ACD agent position is in auto-answer mode (electronic/digital telephone feature), while using a headset, the system will provide an audible burst of tone to the agent position before connecting the agent to the incoming ACD call.

**INTRA-GROUP CALL PICKUP**
Allows ACD agents to answer ACD calls to other agents within their group. Access to this feature is controlled by the station's assigned Call Pick-up Group. ACD stations must be assigned to the same pick-up group of other ACD stations they wish to use this feature on.

**LOGIN/LOGOUT**
Allows an ACD agent to start and end his or her shift by dialing their agent identification (ID) code from the agent station. When an agent logs into the system, the station is activated as an ACD position and is available for incoming ACD calls. Operating statistics are collected for the agent, and output to a connected MIS processor until the agent logs out (station leaves ACD mode).

**REMOTE LOGIN/LOGOUT**
Allows the ACD agents to log into the system from a station which was not originally assigned to the ACD group. Once the agent logs into the system, the station enters the ACD mode and is available to receive ACD calls for the agent's group until the agent logs out.

**RING STATE PRESELECTION**
When an ACD call rings an agent's station, that call is provided to the agent either via automatic answer, or when the agent goes off-hook. The end user chooses the mode desired.

**UNAVAILABLE**
Allows an ACD agent to enter a state which makes the position temporarily unavailable to receive ACD calls, without being logged out. This state is normally used for short breaks from work.
Also called Stroke Count or Call Record Identifier, this feature allows an ACD agent to use the agent station’s dial pad to register a two-digit code which indicates the type of work being performed on the call. Each Work Unit code will be totaled individually for each agent or each ACD group, depending on the type of display/report requested. The values of the codes are customer-defined. An unlimited number of work units can be entered for each call and will be recorded on the MIS report for each call. Only the last work unit entered is output with the SMDR record for that call.
ACD SUPERVISOR FEATURES

OVERVIEW
The ACD group supervisor is allowed to access all the standard Strata features. The supervisor position is identified by a supervisor’s ACD directory number. Each supervisor can supervise only one group at a time. It is highly recommended that the supervisor use an LCD telephone. The following ACD features are available only to the supervisor position.

AGENT ASSISTANCE
Provides visual indication to the supervisor position when an agent assistance call takes place. If the position is idle, the supervisor station starts ringing and a message, indicating the assistance call and the agent ID, is shown on the LCD. The supervisor can connect directly to the agent by pressing the ACD Directory Number button. The agent can then speak privately with the supervisor, or can initiate a three-way conference with the supervisor and the ACD caller. When the supervisor hangs up, the agent is automatically reconnected to the ACD call.

AGENT MONITORING
Allows a supervisor to tap into a conversation between an ACD agent and ACD caller. A one-way, listen-only path will be established for the supervisor while the agent and the caller continue their conversation. When an agent is monitored, a continual low-frequency tone will be heard in the conversation, and a message that indicates supervisor monitoring will be shown on the LCD. Or, on a system-wide basis, the monitoring can be done without tone being inserted into the conversation.

ALARM INDICATION
Provides an audible alarm to the supervisor station as certain predefined queue thresholds (e.g., number of calls waiting, waiting time for the oldest call) are exceeded. The audible alarm will remain on the station until the supervisor acknowledges the alarm by pressing the MONITOR button.

MIS ACCESS
The ACD group supervisor may access the MIS displays and reports via the MIS processor terminal. The supervisor can call up displays and reports on the groups or individual agents to monitor ongoing performance. The supervisor can also signal the system to print out reports at a printer connected to the MIS processor.
The MIS Processor provides supervisors with a wide variety of status, statistics, and traffic displays used to monitor the performance of ACD groups and individual agents.

These real-time displays show the supervisor what type of work the agents are involved in, how efficiently the group is handling incoming calls, how quickly calls are being answered, how many calls were lost, and how many non-ACD calls have been placed and received during the requested reporting period.

These real-time displays are updated every few seconds by the MIS Processor. Supervisors use the MIS Processor display screen to view this information. The following are brief descriptions of the displays available.

**AGENT STATISTICS**
Displays the current status of each agent within the ACD group, plus the accumulative call-processing information for that period. Included are number of calls waiting, longest call waiting, calls handled, average talk time, average after-call work time, average handling time (talk plus after-call work time), available time, auxiliary-work time (non-ACD), number of non-ACD calls originated and received, and productivity percentage. The display will show the totals of each agent's statistics and will give the group statistics, including the group-productivity percentage, and a warning if the service level of the group is falling below acceptable levels.

**AGENT STATUS**
Displays the current availability of each agent within the ACD group. Included will be the agent's ACD ID number, agent's name, current status, and work unit code, if used.

**GROUP TRAFFIC MONITOR**
Displays real-time statistical information used by the supervisor in evaluating ACD staffing requirements. Included are: total calls offered, answered, overflowed, and lost; service-level percentage, average speed of answering, maximum delayed call (in seconds), current calls waiting; number of manned, busy, available, and unavailable stations. There are three warning messages used with this display to indicate when the service level for a group is falling below the acceptable levels (e.g., service quality is low, bad, or unacceptable).

**SYSTEM STATUS**
Displays accumulative totals for whichever ACD groups are allowed to the supervisor for viewing. Included for each group are overall service level percentage; total numbers of calls offered to the group, calls answered, calls overflowed to another group, calls lost offered but not answered, calls delayed before answered; average talk, handling, and delayed times; total current number of calls waiting to be answered; the maximum number of calls waiting at one time; the longest time (in seconds) that a call waited to be answered.
A number of reports are available to the supervisor which provide information and statistics on individual agents, ACD groups, or the system status over a selectable period of time. Each report can be run for periods of 30 or 60 minutes, shift, daily, weekly, monthly, and annually. The top of each report will indicate the exact time frame that has been used to compile the report. The end of each report will show an overall total (or average) of each item on the report for quick reference. The following briefly describes the purpose and contents of each report.

**AGENT PERFORMANCE**

Provides call processing and after-call-activity information for all agents within an ACD group. This report can be used for evaluating the performance of each agent in relation to other agents in the group. Included on the report are:

- Agents' ID numbers and names.
- Total login times.
- Number of ACD calls handled.
- Average ACD talk, work-handling times, available times, auxiliary-work times.
- Agents' productivity percentages.
- Numbers of station (non-ACD) calls received and originated.
- Average length of station (non-ACD) calls.

**AGENT STATISTICS**

This report summarizes the performance of individual agents. The information regarding the agent will include:

- Name and ID number, ACD group number.
- Productivity percentage, number of calls per hour, number of work unit codes entered, number of supervisor assistance calls.
- Total login time, talk time, after-call work time, available and unavailable time.
- Number of calls received and originated, and average length of calls.

**DELAYED CALL**

Provides a summary of all calls offered to a group vs. totals and percentages of calls handled, calls delayed, and percentages of calls answered within predefined time increments. This information can be compared to other reports, such as Agent Statistics and System Status Reports, to see if agents are working efficiently, and if staffing is adequate.
MIS Reports

ACD/MIS FEATURES

GROUP OVERFLOW
Overflow information is used to determine under-staffing and over-staffing conditions. This report summarizes the calls to the group and displays primary and secondary traffic for comparison purposes. Included on the report are:

- ACD group number.
- Number of calls offered.
- Percentage of calls handled, lost, and overflowed to another group.

INCOMING CALL DURATION
Provides call duration statistics for a specified ACD group. This report is useful in determining staffing requirements and modifying acceptable service levels for each group. Information included is:

- Average duration of calls.
- Longest single-call duration.
- Percentage of calls answered within predefined time periods (in seconds).

LOST CALL
Provides a summary of calls that were disconnected before being answered. Percentages will be calculated based on 13 time intervals (defined by the System Administrator for each group). This information is useful in determining waiting periods before delay announcements should be given, or when to overflow ACD calls into another group.

SUPERVISOR GROUP
Provides call processing and after-call activity information for ACD groups. The report contains similar information to the Agent Performance report except that instead of the report detailing each agent’s statistics, the report will show group totals based on the time frame requested. Daily reports reflect each hour in the day. Monthly reports reflect each day in the month. Yearly reports reflect each month in the year.

SYSTEM STATUS
Summarizes the call handling characteristics of a group during the current report interval. Statistics include:

- Number of calls offered, answered, overflowed, and lost.
- Average talk time, after-call time, and handling time.
- Number of calls delayed (held in queue).
- Service level percentage.
- Average and maximum delay time.
- Maximum number of calls in queue at one time.
- Number of agents required to handle current group traffic and maintain the defined quality level.
Work Unit codes are established by each customer to represent types of call activities that an agent may be involved in. These two-digit codes are entered from the agent’s telephone dial pad during an ACD call. This information will help with modifying the distribution of particular types of calls for more efficient handling. The information shown includes:

- Total number of calls handled per work unit.
- Average time spent per work unit on talking, in after-call work, handling, and in auxiliary work.
# Table of Contents

## Introduction

### FEATURES

- Automatic Hold
- Busy Station Transfer/Ringing
- LCD—Feature Prompting with Soft Key Operation
- User Programmable Feature Buttons

## 2000-SERIES DIGITAL TELEPHONES

- 10-button Telephone with Handsfree Answerback
- 10-button Speakerphone with LCD
- 20-button Speakerphone
- 20-button Speakerphone with LCD
- 60-button Digital DSS Console

## FIGURE LIST

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>SUBJECT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-Series Digital Telephone Diagram</td>
<td>6-7</td>
<td></td>
</tr>
<tr>
<td>Digital DSS Console</td>
<td>6-15</td>
<td></td>
</tr>
</tbody>
</table>
This supplement is an update to the STRATA Feature Description Manual originally issued September, 1991. Place this new section in your existing manual to provide new product information pertaining to STRATA DK. STRATA S, and VI are not affected by this supplement.

The updated information describes the new features brought by the Release 4 version of STRATA DK24/56/96.

- Automatic Hold
- Busy Station Transfer/Ringing
- LCD Feature Prompting with Soft Key Operation
- User Programmable Feature Buttons

It also contains information about the new 2000-series Digital Key Telephones.

- 10-button Telephone with Handsfree Answerback
- 10-button Speakerphone with LCD
- 20-button Speakerphone
- 20-button Speakerphone with LCD
- 60-button DSS Console

Refer to recent sales bulletins for additional information about the release of these new products.

Product Line Strategy:

The Release 4 version takes the place of both Release 2 and Release 3 in the STRATA DK product line. Release 4 has all the features of Release 3 plus more. The Release 4 processor is available at the same price as the Release 2 processor providing greater capabilities and value.

The Release 4 processor (PCTU4) becomes the standard processor for the DK24 as well as the DK56 and DK96. The PCTUS will no longer be offered because of the cost effective pricing of Release 4.

STRATA DK Release 4 uses the same KSU cabinetry as previous versions. All existing CO line, station and option PCBs are interchangeable with both old and new versions. The only new hardware involving Release 4 systems is the new PCTU4 processor PCB and the new Digital Door Phone Control Box, DDCB.

The 2000-series telephones replace the 1000-series telephones in the Toshiba product line. They are designed and priced to become the telephone of choice for STRATA DK and PERCEPTION systems. They can be mixed with 6500-series electronic and/or standard phones all on the same system. They will also be upwardly compatible with PERCEPTION 4000 systems in the future. The 6500-series will continue to be offered and supported by all STRATA and PERCEPTION systems.
Automatic Hold

STATION FEATURES

SYSTEM AVAILABILITY
Standard on Strata DK24/56/96 Release 4 systems.

DESCRIPTION
Each station can be individually set in programming for either Auto Hold or Auto Release of an existing call when another incoming call is answered.

Auto Hold automatically places an existing CO line or intercom call on hold when another incoming call is answered.

Auto Release automatically releases an existing CO line or intercom call when another incoming call is answered.

Both Auto Hold and Auto Release can be overridden by pressing the Release or Hold button, respectively, before answering another incoming call.

BENEFITS
The customer can choose whichever is most efficient for their business, on an individual station basis. Auto Hold saves time in call splitting applications in which users want to switch back and forth between two calls, particularly for the busy DSS operator. Auto Release saves time in heavy call answering applications in which users want to disconnect from a call they are finished with and answer the next call simultaneously.
**Busy Station Transfer/Ringing**

**SYSTEM AVAILABILITY**

Standard feature, programmable by station, on Strata DK24/56/96 Release 4 systems.

**DESCRIPTION**

Digital and electronic telephones, programmed with this feature, will ring and provide ringback even when they are busy on another call. This is important to voice mail and auto attendant applications, in which incoming calls are often transferred from the auto attendant to busy stations, especially the DSS station. It prevents outside callers from being sent back to the auto attendant or voice mail after already making their choice from the auto attendant or voice mail greeting.

When either an internal caller or auto attendant transfers an external call to a busy telephone assigned with this feature, they hear ring back tone, not busy tone. The called, busy telephone will ring with a muted tone, and its applicable CO line or INT LED will flash in synchronization with ringing. Both the called party and the calling party must be programmed for this feature. If one is not, normal operation will occur.

To answer the incoming call, the called party can either transfer, release, or place the current call on hold before pressing the button associated with the flashing LED. Or, if Auto Hold is programmed for that station, the user just presses the button of the new call and the existing call is held automatically. Otherwise, the transferred call will camp-on after ringing and not being answered. If the called station is an LCD telephone, it will show which CO line is camped-on. Called stations can continue to operate other features in the normal way. If called while idle, these stations will ring as normal.

Any number of electronic and digital telephones can be individually programmed with this feature. Busy Station Ringing does not operate on standard telephones.

**BENEFITS**

Busy Station Transfer Ringing helps ensure that important calls are answered more efficiently. It reduces caller frustration by preventing them from looping back and forth from the auto attendant or voice mail without talking to anyone.

This feature may also have applications for stations needing to get through to a busy answering position or message center without getting a busy signal.
**SYSTEM AVAILABILITY**

Standard on all Strata DK24/56/96 Release 4 systems, which have LCD telephones.

**DESCRIPTION**

Feature access is made easier with feature prompting instructions appearing on the LCD. Station users do not have to use or remember access codes or operational sequences to access commonly used features. While on a call or one that is in the ring state, users can access these features by pressing one of the soft keys that correspond to labels displayed on the LCD. Some displays prompt users to dial a station or telephone number. As a call progresses, the labels change to provide the most logical options allowed by the user’s class of service.

The example below shows a typical sequence of soft key LCD prompts which will display if soft keys are enabled while you are using the Conference feature. Grey is used to indicate which button would be pushed in each step of the Conferencing sequence.

1. While talking on a CO line, the TRNS, CONF, and PGE soft keys appear:

   ![Soft Key LCD Prompts](image)

   1. After pressing the button under CONF soft key (CONFERENCE), the following display will appear. In this example, you would press the STA. (STATION) soft key to conference to another station.

   ![Soft Key LCD Prompts](image)

   3. The soft key feature will prompt you to dial the station number that you wish to conference with. Pressing RTRN cancels the Conference operation and returns you to the display in Step 1.

   ![Soft Key LCD Prompts](image)
Station users can still use access codes, and fixed and flexible feature buttons, instead of the prompting/soft key mode, to access features. The prompting/soft key feature also can be turned on and off with an access code. When soft key prompting is turned off, the buttons otherwise used as soft keys will function as MODE, SCROLL, and PAGE while in the idle state.

Features are much easier to use. This makes call processing quicker and more efficient. Customers can use sophisticated features while not being intimidated by what they may consider complex procedures. Provides user-friendliness for initial installation, for the occasional feature user or for the executive who is afraid of dropping a call when conferencing (or forgets how to do it).
User Programmable Feature Buttons

SYSTEM AVAILABILITY
Standard on Strata DK24/56/96 Release 4 systems, with digital or electronic telephones.

DESCRIPTION
This feature enables digital and electronic telephone users to program their own flexible buttons to perform sequences of operation. This is done by enabling the speed dial function to dial features as well as station numbers or outside telephone numbers.

As many as 20 digits can be stored on a button, and fixed feature button functions (such as Intercom, Conference/Transfer, and Hold) can be stored. In addition, several features can be linked together. For example, a user can program a button to place the call on hold, access intercom and dial a page access code, so that with one push of a button the user is ready to make an announcement.

In addition to being stored on speed dial buttons, feature sequences can also be stored in speed dial numbers.

BENEFITS
Access to features is simple and fast. Multi-step feature operation can be stored and activated at the touch of one button. Users don’t have to remember or look up how to do things, or follow prompting instructions.

Individual station users can use flexible buttons to tailor their phones even more to fit their special needs. They can even use access codes if they do not have buttons available.
**Digital Telephones**

**DESCRIPTION**

The 2000-series digital telephone is pictured below. Digital telephones can be used on DK 24/56/96 Release 3 or 4 systems, and are connected to the DK system with a single pair modular line cord. When equipped with an integrated data interface unit, digital telephones can transmit and receive simultaneous voice and data.

There are four models of the 2000-series digital telephone.

**TYPES OF DIGITAL TELEPHONES**

10-button Telephone with Handsfree Answerback

This telephone is equipped with a unit that allows handsfree answerback on intercom calls only.

10-button Speakerphone with Liquid Crystal Display (LCD)

This telephone has a full speakerphone and a 32-character alphanumeric Liquid Crystal Display (LCD). All display functions occur automatically as call processing proceeds. A description of the features of the LCD telephone is found in the Station Features section of this manual.

20-button Speakerphone

This telephone has a full speakerphone, allowing two-way handsfree conversation on both intercom and outside line calls.
This telephone has a full speakerphone and a 32-character alphanumeric Liquid Crystal Display. All display functions occur automatically as call processing proceeds. A description of the features of the LCD telephone is found in the Station Features section of this manual.

**PHYSICAL CHARACTERISTICS**

**Dialing Pad**
The push button dialing pad on the 2000-series Digital telephones is large and easy to use. The ideal size not only provides easier operation but minimizes dialing errors. The push button keys generate electronic signals that are neither DTMF nor rotary. Signals sent by the phone to the KSU are translated by the system into DTMF or rotary dial signals as required by the serving Central Office.

**LEDs**
Each of the line/feature keys on a digital phone has an associated two-color LED. If a key is assigned to a CO/Centrex/PBX line, the LED provides an indication of the status of that line. Green indicates the line or intercom buttons you are using, and red indicates use by someone else. (See the Station User Guide for a detailed explanation of LED signals.)

If a key is assigned to a feature, the LED indicates the status of the feature. For example, the LED associated with the “Do-Not-Disturb” key lights when the DND feature has been activated on the station.

LEDs are also associated with three of the six dedicated feature keys. On the “Msg” key, a lighted LED indicates that a message is waiting for the station. The “Spkr” LED indicates the on/off status of the speaker or background music. The “Mic” LED indicates the on/off status of the station’s microphone.

**Volume Controls**
Two electronic volume control buttons are conveniently located below the dialing pad on the 2000-series digital telephone. These keys adjust all volume functions of the telephone including the ring, speaker, handset, and muted tone burst levels.

**Modular Handset and Line Cords**
A digital telephone is equipped with a modular handset and line cord, and is connected to the system via 1-pair wiring.

**Optional Hardware**
A digital telephone can be upgraded with the integrated data interface unit (PDIU-DI2), which enables it to transmit and receive simultaneous voice and data. The PDIU-DI2 replaces the standard base of the digital telephone, with a unit of the same size and shape.

To receive Off-Hook Call Announce, a digital telephone must be equipped with an DVSU upgrade assembly, which is installed in the base of the telephone. No special equipment is required for digital telephones to originate Off-Hook Call Announce. (See “Off Hook Call Announce” in the Station Features section of this manual for further details.)

To have a loud ringing bell and/or a modular headset, a digital telephone must be equipped with the Headset Control Unit (HHEU2) upgrade assembly. The HHEU2 mounts inside the telephone, providing a headset.
### Digital Telephones

**jack and an interface to an external speaker amplifier (HESB) for a loud ringing bell. A HESC-65A cable is required to connect the telephone (HHEU2) to the external speaker (HESB).**

A digital telephone that has been upgraded with a data interface unit (PDU-DI2) cannot be wall mounted or upgraded with the DVSU for Off-Hook Call Announce. The data interface unit can coexist with the HHEU2 for a headset or a loud bell, which was not possible with the previous DKT-1000 digital telephone.

<table>
<thead>
<tr>
<th>Color</th>
<th>All digital telephones come in a stylish charcoal gray color with a non-glare, matte finish.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distance from KSU</strong></td>
<td>A digital telephone set can be up to 1000 feet from the KSU. This may vary according to the type of wiring used. A local external power supply may be used to ensure 1000 feet with options.</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>A digital telephone can be wall mounted, unless the set has been upgraded with a data interface unit.</td>
</tr>
<tr>
<td><strong>Hearing Aid Compatible</strong></td>
<td>All digital telephones are hearing aid compatible.</td>
</tr>
<tr>
<td><strong>Memo Tray</strong></td>
<td>A memo tray slides out from the bottom front of the telephone, and can hold an easy to read directory sheet.</td>
</tr>
</tbody>
</table>
Digital Telephones

**BUTTON ASSIGNMENTS**

**FIXED BUTTONS**

All digital telephones are equipped with six permanently dedicated feature buttons, called fixed buttons. These six buttons are used for the following functions:

- **Spkr** (Speaker On/Off button with LED indicator)
  Turns the speaker on and off. In on-hook dialing, can pick up line or hang up.

- **Mic** (Microphone button with LED indicator)
  Cuts off the microphone during speakerphone operation for private office conversation.

- **Cnf/Trn** (Conference and transfer button)
  Used to set up conference calls and to transfer calls.

- **Hold** (Hold button)
  Places an outside or intercom call on hold.

- **Msg** (Message waiting button with LED indicator)
  The LED lights to indicate a message waiting. Push button to retrieve message.

- **Redial** (Last Number Redial button)
  Redials the last number dialed from the station.

**FLEXIBLE BUTTONS**

The digital telephones also have either 10 or 20 line/feature buttons. One of these buttons is usually assigned to the intercom function. The other 9 or 19 buttons can be assigned to a CO/PBX line or used as feature buttons.

**CO/PBX line keys**

All 10 buttons on a 10-button set or 20 buttons on a 20-button set can be assigned as CO/PBX keys. If the set is programmed for Automatic Off-Hook Selection to intercom, all keys could be used.

Any of these buttons can be assigned as a pooled line button. A pooled line button allows a group of CO lines to “appear” under one button. Up to four pooled line buttons per CO line group can be assigned at each telephone. (See “Pooled Line Buttons” in the Station Features section of this manual.)

**Feature Activation Buttons**

All 10 buttons on a 10-button set or 20 buttons on a 20-button set can be assigned as feature buttons. Digital telephones can have the following features assigned to buttons on Strata DK systems:

- Account Code
- Alarm
- All Call Voice Page
- Alphanumeric Messaging
- Automatic Busy Redial
For ease in making key assignments, there are several standard key strip patterns that can be programmed. Changes can then be made for the keys on individual stations which are to be different from the standard keystrip pattern selected for that station.

However, with the Flexible Key Assignment feature, the programmer can define each of the 10 or 20 keys individually instead of choosing a standard keystrip pattern and then altering it.

Any key which is not programmed for a specific feature or CO line will remain as defined in initialization.
APPLICATIONS

Some common applications for digital phones are:

- A customer wants to transmit simultaneous voice and data, internally or externally. See “Data Interface Unit” later in this section for details.
- A customer wants to maximize outdialing efficiency for sales or telemarketing groups by allowing them to use a PC keyboard auto dialing program. The digital phone with an integrated data interface unit enables use of such programs without a modem.
- The customer needs handset volume control for personal comfort or to compensate for variations in transmission quality.
- Two-color LED indicators provide improved usage indication for flexible buttons. Green indicates the line or intercom buttons you are using, and red indicates use by someone else.
- A customer wants to have the “latest and greatest” technology and equipment, and believes that having digital telephones will best serve the organization’s future needs.
- The customer wants to maximize use of available buttons. The digital key telephone has fixed keys for message waiting and last number redial, freeing more flexible buttons for other functions.

10-Button Applications include:

1. The 10-button telephone is generally used as the basic station telephone for people who do not require one-button access to many features.

2. If the Pooled Line Button feature is used, 10-button telephones can also be a cost-effective alternative to the 20-button telephone.

20-Button Applications include:

1. The customer has a requirement for several features to be programmed for one-button access. For example, executives may want the convenience of one-button access to the features they use.

2. Some customers may require several features that can be accessed only by a button. In such a case, the 20-button phone may be needed to provide the features. For example, features requiring button access usually require an LED status indicator, and are listed below.

Alarm (Alarm Reset button)
Call Forward (Call Frwd To: ___)
Data Call (Data Call button)
Modem (Modem button)
DSS Buttons (DSS: ___ button)
Do Not Disturb (Do Not Disturb button)
Door Lock (Unlock Door button)
DP/DTMF Mode Change (Tone Dial Select button)
Message Waiting (Msg button)
Night Transfer (Night Transfer button)
Pause (for speed dial) (Speed Dial Pause button)
Pause (long) (Speed Dial Lng Pause button)
3. The customer has a requirement for multiple speed dialing buttons. Travel agents, real estate agents, purchasing managers and others who place several calls daily to the same numbers can benefit from having multiple automatic dialing buttons on which they can program their most frequently called numbers for one-button access.

4. The customer wants more than 9 CO lines to appear on a station. For example, in a company which has 14 CO lines, a 20-button telephone at the attendant station could have appearances for all 14 CO lines.
Digital DSS Console

DESCRIPTION

The Direct Station Select console (DSS) is a separate unit which can be used with a digital key telephone for a dedicated answering position. The digital DSS console is available in the same attractive charcoal gray color and matte finish as the other digital telephones. The digital DSS console can be used on Strata DK systems and on Perception systems.

The digital DSS console is equipped with 60 buttons, each with an associated two-color LED. Each button can be flexibly assigned as a CO line appearance, a DSS button for one-touch dialing of a specific station, or a speed dial number. Night Transfer and All Call Voice Page are assigned to specific buttons on the DSS unit. If a button is assigned to a CO/Centrex/PBX line, the LED provides an indication of the status of the line. Green indicates the line or intercom buttons you are using, and red indicates use by someone else. When assigned as a DSS button, the adjacent LED shows busy status as red.

To dial a station, the attendant simply presses the DSS button assigned to that station. It is not necessary to access an intercom line and dial the station number. The connection is made via a DKT station associated with the DSS console.

The Strata DK24, DK56, and DK96 can support four DSS consoles. The DSS consoles are supported in the KSU by the Digital Telephone Interface Unit (PDKU). Each digital DSS console requires only one station port on a PDKU; one PDKU can only support one DSS console.

Digital DSS consoles can be used with any type of DKT station. However, it is helpful to an attendant if a 20-button LCD set is installed with the DSS unit, since the LCD will identify recalling stations, unanswered CO lines, etc.

APPLICATIONS

1. High volume of incoming calls
   When a business has a high volume of incoming calls to a central answering point, a DSS console speeds call processing and makes it efficient. The DSS gives the attendant instant information on the busy status of all extensions, and enables quick, one-touch dialing of a station.

2. Attendant screening of calls
   Some businesses may not have a high volume of incoming calls, but do require the attendant to spend more time on each call. For example, some businesses want the attendant to screen all calls and announce the caller to the called party. Screening takes additional time, but the DSS console enables the call to be processed more quickly once it has been screened.

3. Tenant Service
   In tenant service, any combination of the four DSS consoles can be used. For example, each tenant could have one main DSS position and one backup DSS position. Or, one tenant could have two DSS consoles while the other had only one.
Figure 5-2
Digital DSS Console
Digital DSS Console

FEATURES

ALL CALL VOICE PAGE
DESCRIPTION: One specific button on the DSS console can be programmed as the All Call Voice Page button (AC) and allows the attendant to voice page all of the DKT and EKT speakers in the system simultaneously. If external page is desired with All Call Page, a user programmable button can be set up to dial Intercom + 3 9.

BENEFITS: This feature gives the attendant a way to reach an employee when the employee is not at his or her desk. The customer has some assurance that if the employee is in the building, he or she can be found when necessary.

AUTOMATIC HOLD
DESCRIPTION: A call on a CO/PBX line is automatically placed on hold when the attendant presses a button for a specific station. The attendant does not have to put the call on hold before pressing the button.

BENEFITS: Automatic Hold saves time for the attendant by providing “one button” operation for two functions: 1) putting the caller on hold and 2) dialing the station number. It makes the process of call notification more efficient, and allows the attendant to give better service to callers.

FLEXIBLE DSS BUTTONS
DESCRIPTION: Buttons on the DSS buttons can be programmed as:

- All Call Page Key (Key 59 only)
- Night Transfer 1 or 2 (Key 60 only)
- CO Line Appearance (any key)
- DSS Button (any key)
- Personal or System Speed Dial Button (any key)

BENEFITS: The DSS buttons can be configured to meet the specific needs of each customer.

NIGHT TRANSFER BUTTON
DESCRIPTION: One button on the DSS can be programmed as a Night Transfer (NT1 or NT2) key. This button is used to put the system ringing in “DAY”, “DAY2” or “NIGHT” mode. (See “Night Transfer” in the System Features section for details about ringing modes.) If the system is installed in tenant service, each tenant has independent control of night transfer for its lines. Tenant 1 uses the “NT1” button, and Tenant 2 uses the “NT2” button.

BENEFITS: With Night Transfer, incoming calls can ring at stations other than the console, can ring over an external paging system, or can ring to an answering machine when the attendant is not available. The customer has assurance that calls can be answered at all times.
VOICE OR TONE SIGNALING

DESCRIPTION: The DSS may be programmed for tone or voice signaling preference, independent of how the system is programmed. As with all stations, the attendant can choose the alternate mode by dialing a “1” following the station number.

BENEFITS: This feature gives flexibility to the system, and allows the attendant to use the more efficient voice signaling, even if the system is programmed for tone signaling.
Index

STRATA

A
1A2 Key System Interface 3-1
Account Codes 3-2
Alarm Sensor 3-4
Alternate Point Answer 3-5
Amplified Conference 3-6
Automated Attendant 3-7
Automatic Busy Redial 4-1
Automatic Call Distribution 5-1
Automatic Callback (Intercom) 4-2
Automatic Hold 6-2
Automatic Hold/Automatic Release (Hold/Split) 3-8
Automatic Hold Recall 3-9
Automatic Off-hook Line Selection 4-3
Automatic Release from Hold 3-10
Automatic Station Relocation 3-11
Auxiliary Device Interface 3-13

B
Background Music with Station Control 3-14, 4-4
Busy Lamp Field (BLF) Indication 4-29
Busy Override Tone 4-5
Busy Station Ringing 3-15
Busy Station Transfer/Ringing 3-3

C
Call Forward 4-6, 4-32
Call Pickup 4-8

dialPickup 4-9
Call Transfer with Camp-on 4-10
Centrex/PBX Compatibility 3-16
Centrex/PBX Feature Buttons 4-11
Centrex Ringing Repeat 3-17
CO Line Call Pickup Groups 3-18
CC Line Groups 3-19
CO Line Queuing 3-20
Conferencing 3-21
Credit Card Calling ("012" Dialing) 3-23

D
Data Switching 2-12, 3-24
Delayed Ringing 3-25
Direct Inward System Access (DISA) 3-26
Direct Station Selection (DSS) Buttons 2-19, 2-23, 4-12
Distinctive CO Line/Intercom Ringing 3-27
Distinctive LED Indicators 2-2, 2-8, 4-13
Distinctive Station Ringing 4-14
Do Not Disturb 4-15
Do Not Disturb Override 4-16
Door Lock Control 3-28
Door Phones 2-14, 3-29
DP/DTMF Mode Change (Tone Button) 4-17
DSS Console 2-19, 2-23, 3-30
DTMF and Dial Pulse CO Line Compatible 3-31
DTMF Signal Time Continuous 3-32
DTMF Signal Time Setting 3-33
Dual FCC Registration 3-34

E
Exclusive Hold 4-18
Executive Override (Break-in) 4-19
External Amplified Speaker 3-35

F
Feature Availability Chart 1-3
Feature Prompting 4-37
Flash Button 4-20
Flexible Button Assignment 3-36
Flexible Intercom Numbering 3-38
Flexible Line Ringing Assignment 3-39
Flexible Slot Assignment 3-40

H
Handsfree Answerback on Intercom 4-21
Hearing Aid Compatible 4-22

L
Least Cost Routing 3-41
LED Indicators 2-2, 2-8, 4-13

M
Memory Protection 3-43
Message Waiting 3-4, 4-39, 4-44
Message Waiting/Flash 4-44
Microphone Control Button 4-45
MIS Displays 5-8
MIS Reports 5-9
Modular Handset and Line Cords 4-46
Modular Headset 4-47
Multiple Simultaneous Handsfree Intercom Paths 3-45
Music-on-Hold Interface 3-46
Music-on-Hold Source 3-47

Liquid Crystal Display Features 4-23
Alphanumeric Messaging 4-23
Busy Station Messaging 4-24
Called Station Messaging 4-25
Calling Station Messaging 4-26
Remote/Group Station Messaging 4-27
Auto Callback Number Display 4-28
Busy Lamp Field (BLF) Indication 4-29
Call Duration Display 4-31
Call Forward Source/Destination Display 4-32
Calling/Called Number Display 4-33
Clock/Calendar Display 4-34
CO Line Identification 4-35
Dialed Number Display 4-36
Feature Prompting with Soft Key Operation 4-37, 6-4
Intercom Name/Number Display 4-38
Message Waiting Station Display 4-39
Recalling Station Identification 4-40
Speed Dial Memo Directory Dialing 4-41
Station Identification 4-42
Timed Reminders 4-43
Live System Programming 3-42

Updated—September 1992
INDEX STRATA

S
Saved Number Redial 3-36, 4-60
Soft Keys 4-37
Speed Dial Buttons 4-61
Station Availability Chart 2-1
Station Equipment Description and Application 2-1
6500-series Electronic Telephones 2-2
1000-series Digital Telephones 2-8
2000-series Digital Telephones 6-7
Data Interface Units 2-12
Door Phones 2-14
Standard Single Line Telephones 2-16
Voice Mail and Other Devices 2-18
DSS Consoles 2-19, 2-23, 6-14
Station Features 4-1
Station Hunting 3-66
Station Message Detail Recording (SMDR) 3-67
Station Speed Dial 3-71, 4-61

T
Tandem CO Line Connections (Trunk-to-Trunk) 3-73
Tenant Service 3-74
TIE Lines 3-75
Timed Reminder 4-43, 4-63
Toll Restriction 3-76
Toll Restriction Override Codes 3-78
Toll Restriction Override Code Revision 4-64
Toll Restriction Override by System Speed Dial 3-79
Transfer Privacy 3-80
Traveling Class of Service 3-81

U
User Programmable Feature Buttons 4-65, 6-6

V
Voice Mail Interface 2-18, 3-82
Voice or Tone Signaling 3-83

W
Wall or Table Mounting 3-84

N
Night Ringing Answer Code 3-48
Night Ringing Over External Page 3-49
Night Ringing Over Selected Page Zones 3-50
Night Transfer (Day/Night Modes) 3-51
Non-blocking Dialing 3-52

O
Off-hook Call Announce 4-48
Off-premises Line 3-53
Off-premises Station 3-54
On-hook Dialing 4-49
Outgoing Call Restriction 3-55

P
Paging
  All Call Voice Page 3-56
  External Page Interface 3-57
  External Zone Paging 3-58
  Group Paging 3-59
  Pooled CO Line Buttons 3-37, 3-60, 4-50
  Pooled CO Lines 3-60
  Power Failure Transfer 3-61
  Privacy Button 3-36, 3-37, 3-62, 4-51
  Privacy Release Button 3-36, 3-37, 3-62, 4-52
  Privacy/Non-privacy Option 3-62
  Privacy Override 4-53
  Private CO Lines 4-54
  Push-button Dialing 4-55

R
Relay Service—External Page
  Door Lock Relay 3-63
Relay Service—Night/Hold Relay 3-64
Release Button 3-37, 4-56
Remote Administration/Maintenance 3-65
Remote Retrieval of Held Calls 4-57
Repeat Last Number Dialed 4-58
Ringing Line Preference 4-59