9. Menu

- **System Security**
  - Enter → Select Security Level
  - Enter → Change Password
  - ESC → Select Security Level

- **System Setup**
  - Enter → Serial Port Device
  - Enter → Serial Port Settings
  - Enter → Calibrate Adapter
  - Enter → Calibrate Voltage
  - Enter → Pow or Fail Resume Hours
  - Enter → Date/Time
  - ESC → Serial Port Device
  - ESC → Serial Port Settings
  - ESC → Calibrate Adapter
  - ESC → Calibrate Voltage
  - ESC → Pow or Fail Resume Hours
  - ESC → Date/Time

- **Program Settings**
  - Enter → Custom Programs
  - Enter → Self Discharge Rest
  - Enter → Od menst Setpoints
  - Enter → Automatic Od menst Runtime Settings
  - Enter → Charge Optimization
  - Enter → LifeCycle Counter
  - ESC → Custom Programs
  - ESC → Self Discharge Rest
  - ESC → Od menst Setpoints
  - ESC → Automatic Od menst Runtime Settings
  - ESC → Charge Optimization
  - ESC → LifeCycle Counter

- **Option Controls**
  - Enter → Company Name
  - Enter → Battery Startup
  - Enter → Prog/Target Changes
  - Enter → Sound Control
  - Enter → Sound Check
  - Enter → Voltage Display
  - Enter → Set Service Counter
  - Enter → Clear Service Counter
  - Enter → Quick Results
  - Enter → Recalibration Counter
  - ESC → Company Name
  - ESC → Battery Startup
  - ESC → Prog/Target Changes
  - ESC → Sound Control
  - ESC → Sound Check
  - ESC → Voltage Display
  - ESC → Set Service Counter
  - ESC → Clear Service Counter
  - ESC → Quick Results
  - ESC → Recalibration Counter

- **Print Utilities**
  - Enter → Battery Service Report
  - Enter → System Setup Report
  - Enter → Adapter Setup Report
  - Enter → Auto-Print
  - ESC → Battery Service Report
  - ESC → System Setup Report
  - ESC → Adapter Setup Report
  - ESC → Auto-Print

- **Event Log**
  - Enter → View Event Log
  - Enter → Print Event Log
  - Enter → Clear Event Log
  - Enter → Events to Log
  - ESC → View Event Log
  - ESC → Print Event Log
  - ESC → Clear Event Log
  - ESC → Events to Log

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**Quick Reference Guide**

For Cadex C7200-C, C7400-C and C7400ER-C
Battery Analyzers — Firmware Version 1.00

1. **Getting Started**

   Connect the unit to the correct voltage and turn power on. The power switch is located on the back of the unit.

   - **EMPTY**  **EMPTY**  **EMPTY**  **NO ADAPT**
   - **Auto**  **QuickTest**  **Prime**

   Global start-up display shows status and selected programs. Insert battery only on **EMPTY**. (Display sample of 4-station unit)

2. **Viewing and Changing Settings**

   To view settings, press station key in **EMPTY** mode. To return to global display, press **Esc** key or wait for 30 seconds.

   Each Battery Adapter contains up to 10 individual battery settings (C-Codes).

   To choose a C-Code, select station, scroll to desired location with the ▲▼ Direction keys and press **Enter** twice. The star [*] indicates the default setting. To choose another C-Code, press station key again, scroll to desired location and press **Enter** twice.

   To select another program, press station key, press **Edit**, apply changes with ▲▼ and press **Enter**.

   To change the Target Capacity, press station key, then **Edit**. Go to Target with ▲, make changes with ▲▼ or number keys and press **Enter**.

   To create or modify C-Code, press station key, select C-Code to be modified with ▲▼ and press **Edit**. Go to lower line by pressing ▲ twice. Change settings with ▲▼. Move to extended C-Code settings (if needed) using ▲▼. Press **Enter** to save the changes.

   To erase a C-Code, select C-Code to be erased and press **Fn-0**.

   To reset extended C-Code to default setting, select C-Code and press **Fn-1**.

   To erase QuickTest matrix, select C-Code and press **Fn-2**.

   **Note:** Reprogramming a C-Code will erase the matrix. To protect against tampering, activate System Security with menu.

   **Warning:** Always use the correct C-Code to service a battery. A wrong setting may cause damage to the battery, fire or explosion.
3. Servicing a Battery
Insert battery into Battery Adapter and press Enter to verify settings.
If correct, press Enter again to start service.
To change settings, press Edit, apply changes and press Enter.
To change C-Code, go to correct location with ▲▼ and press Enter twice.

<table>
<thead>
<tr>
<th>S1 Discharge</th>
<th>Cap: 98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.10V/Cell</td>
<td>-600mA</td>
</tr>
<tr>
<td></td>
<td>120mΩ</td>
</tr>
<tr>
<td></td>
<td>25°C</td>
</tr>
<tr>
<td></td>
<td>1:30</td>
</tr>
</tbody>
</table>

Sample of display during battery service; Cap % advances if flashing; mΩ is taken during service.

4. Printing
To print, select station and press Print key, scroll to desired print option with ▲▼ and press Enter. Select Port Device with menu (see 9. Menu, System Setup).

5. Programs
Basic Programs
- Auto: Exercises battery and applies Recondition (nickel-based batteries only) if the Target Capacity cannot be reached.
- Charge: Applies fast charge only; no capacity readings taken.
- Prime: Prepares a new battery for field use by repeated cycling until maximum capacity is reached.
- QuickSort: To rapidly sort Li-Ion, 3.6V, 500-1500mAh batteries.
- Advanced: Press ▶ to enter Advanced Programs

Advanced Programs
- SelfDCH: Tests battery self-discharge.
- Lifecycle: Cycles battery continuously until capacity drops to target setting.
- DCHOOnly: Discharges battery, then stops.
- ExtPrime: Applies 16h trickle charge, then Prime. Used for stored batteries.
- OhmTest: Measures internal battery resistance.
- RunTime: Provides 3 discharge levels, set in hours and minutes (5-5-90).
- Boost: Wakes up dead batteries, applies 3 min slow charge. Pressing station key for 3 seconds starts Boost. Press ESC to cancel.
- Q-Learn: Adds QuickTest matrix by scanning new battery (3-5 min).

Learn: Improves QuickTest matrix by scanning additional batteries (3-8h).
Import: Run batteries in sequence from high to low capacity.
QuickTest: Checks battery state-of-health in 3 minutes. Applies brief charge or discharge if outside range. (16K adapters only)
Custom: Allows four separate user-defined programs.
Basic: Press ▶ to return to Basic Programs.

6. Target Capacity
- 90-100%: Critical applications; fewer batteries will pass.
- 80%: Recommended nominal setting.
- 60-70%: Less stringent applications; more batteries will pass.
Note: The target setting does not affect the charge level; the batteries are always fully charged.

7. Short Key Functions
Common functions can be set with the Fn or Alt with number key.

<table>
<thead>
<tr>
<th>From Edit Display</th>
<th>From Global Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fn-0</td>
<td>Deletes C-Code</td>
</tr>
<tr>
<td>Fn-1</td>
<td>Resets extended C-Code to default settings</td>
</tr>
<tr>
<td>Fn-2</td>
<td>Erases QuickTest matrix</td>
</tr>
<tr>
<td>Fn-3</td>
<td>Copies single C-Code</td>
</tr>
<tr>
<td>Fn-6</td>
<td>Copies all C-Codes from one adapter to another</td>
</tr>
<tr>
<td>Fn-9</td>
<td>Matrix Protect</td>
</tr>
<tr>
<td>Alt-0</td>
<td>Resets defaults and restarts unit</td>
</tr>
<tr>
<td>Alt-Stn Key</td>
<td>3 second key press starts Boost</td>
</tr>
<tr>
<td>Stn Key</td>
<td>Restart Program</td>
</tr>
</tbody>
</table>

8. Abbreviations
S1 = Station 1 selected.
C1 = C-Code 1 selected. Each adapter holds 10 C-Codes.
* = Default C-Code setting.
SOH = State-of-health indication in % on QuickTest.
CG = Confidence Grade for QuickTest.
T = QuickTest matrix present. Matrix added using Q-Learn or Learn.
S = Charge/discharge rate scaled back due to excess current.
L = C-Code locked for safety reasons.
P = Matrix locked.