7245 NCT
Network Connectivity Tool
AES 7245 Network Connectivity Tool Quick Start Guide

1 Overview
The Model 7245 Network Connectivity Tool (NCT) from AES is designed to be used for evaluating the suitability of a particular proposed installation site of an AES Mesh Radio by testing the connectivity to a network at a specific location and displaying the connectivity level attainable at that location: NetCon 7, 6, or 5.

2 Configuration
The NCT needs to be correctly configured to operate with your IntelliNet network. The operating frequency is set as part of the ordering process. Similarly to AES subscribers, the ID and Cipher Code must then be configured by the user. The ID must be a unique 4-digit hex value and be a valid ID on your network. The Cipher must match that of the IntelliNet network.

NOTE: Ensure that the central station is aware of the NCT ID because a Check-In message will be received from this ID during operation.

Follow the instructions below to set the ID and Cipher:

1. Connect the handheld programmer via the RJ11 adapter cable to the programming port at the base of the NCT.
2. Power up the NCT and wait for the power-up sequence to complete the boot-up sequence (approximately 15 Seconds). The screen on the handheld programmer will display “F1:Set ID/Cipher”.
3. On the programmer, press the F1 key and follow the prompts:

   SETUP UNIT-OLD: NEW
   ENTER ID#-7245:
     <enter a unique 4-digit hex ID then press ENTER>
   CPHR CODE-XXXX:
     <enter your 4-digit hex cipher code then press ENTER>

4. The screen on the handheld programmer will display “DONE”. Power down the NCT by momentarily pushing the power-on button. Observe all Led lights turn off.
5. Disconnect the handheld programmer. It is needed only for configuration.

This completes the configuration of the NCT. Note that you do not have to repeat this procedure each time you power up the NCT. Perform this procedure only if you need to change the NCT ID or Cipher Code.
3 General Operation

1. Momentarily push the power-on button on the top of the unit to turn on the device.

2. The 7-segment display and Netcon LEDs will run through a quick segment lighting pattern check, then the green NetCon LEDs will blink while “booting up”.

3. Once booted, a NetCon value of 7 may be displayed on the 7-segment display and as new RF paths are acquired the NetCon value will change to 6 or 5. This may take between 20 seconds to a few minutes. Below you will find an explanation of the LEDs and the 7-segment display:

<table>
<thead>
<tr>
<th>Led Type</th>
<th>NetCon Value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom located Red LED</td>
<td>NetCon 7</td>
<td>Out of Network – No subscribers detected</td>
</tr>
<tr>
<td>Middle located Green LED</td>
<td>NetCon 6</td>
<td>1 subscriber peer detected (marginal)</td>
</tr>
<tr>
<td>Top located Green LED</td>
<td>NetCon 5</td>
<td>Two or more subscriber peers detected (good)</td>
</tr>
</tbody>
</table>

NOTE: Ensure that the central station is aware of the NCT ID because a Check-In message will be received from this ID each time the NCT connects with the network.

4. Push the power button again to turn off the NCT.

NOTE: The NCT will self-power down after 10 minutes.

4 Status Indicator

System status is indicated by a two-second blinking pattern using the 7-segment display decimal point on the lower right of the numeric display. The following states are displayed to indicate device conditions as follows:

<table>
<thead>
<tr>
<th>State</th>
<th>Description</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Normal operation</td>
<td>One blink</td>
</tr>
<tr>
<td>Battery Warning</td>
<td>Battery at 20% capacity – recharge soon.</td>
<td>Two blinks</td>
</tr>
<tr>
<td>Radio Offline</td>
<td>No communication with radio</td>
<td>Three blinks</td>
</tr>
<tr>
<td>Aux Power Fail</td>
<td>Radio power supply failure</td>
<td>Four blinks</td>
</tr>
<tr>
<td>Battery Low</td>
<td>Low battery – recharge immediately</td>
<td>Continuous fast blink</td>
</tr>
</tbody>
</table>

NOTE: System Status is not available when the NCT is powered by the AC adapter.
5 Charging

Connect ONLY the AES supplied Li-ion smart charger to the charging port at the base of the NCT. The LED on the external charger will display red during the charging stage, and green when fully charged.

6 Pictorial Diagram