



# Staging Area Quick Reference Sheet for SSC DHCTs with One or Three LEDs

## Audience

This quick reference sheet is for staging area personnel who stage new, RMA, or field-return SSC (Separable Security Host with CableCARD™ module) Explorer® DHCTs that have either one or three LEDs.

## Scope

This document only addresses staging for SSC DHCTs. For information on staging non-SSC DHCTs, refer to the *Explorer Digital Home Communications Terminal Staging Guide* (part number 734375).

## Document Version

This is the first revision of this document.

## Permission to Copy

You may photocopy this document for use in your staging area.

## Additional Documentation

For more detailed information about staging and other concepts discussed in this document, read the following publications:

- *DBDS Utilities Version 6.3 Installation Instructions and User Guide* (part number 4031374)
- *Downloading New Client Application Platform Installation Instructions* (part number 4003052)
- *Explorer Digital Home Communications Terminal Staging Guide* (part number 734375)
- *M-Card and S-Card Diagnostic Screens on a TV Host: A Reference Guide* (part number 4015203)
- *RNG and 8550 Diagnostic Screens Application Guide* (part number 4010384)
- *Separable Security Host Staging Guide* (part number 736107)
- *Separable Security Host Staging Guide for System Release 4.3 and Later Operation & Maintenance Guide* (part number 4024836)
- *Troubleshooting Power LED SSC Set-Tops with Single- and Triple- LEDs* (part number 4021198)
- *Troubleshooting Scientific Atlanta's Separable Security Set-Tops* (part number 4019359)
- *Understanding Diagnostic Screens for the Explorer DHCTs Application Guide* (part number 749244)

## Staging New and RMA SSC DHCTs

1. Check with your DNCS operator and billing system operator to verify that the EMM data for the SSC DHCTs you are preparing to stage has been properly installed.
  2. Scan the DHCTs into the billing system using the appropriate procedures authorized by your billing system provider.  
**Important:** Ensure that the billing system operator does **not** send billing transactions to the DHCT at this time.
  3. Unpack the DHCTs and place them onto the staging rack.
  4. Connect the CABLE IN port to the RF signal.
  5. Connect the DHCTs to AC power. The DHCT downloads the OS and ResApp software from the DNCS. One of the following actions occurs:
    - **One LED:** The POWER LED blinks twice, pauses, and repeats during this download.
    - **Three LEDs:** The LEDs rotate to the right.
- Important:** To view the staging progress on a TV monitor, you must power on the DHCT.

6. After a few minutes, the set-top reboots.
7. After the reboot, the paired CableCARD module begins to download the software from the DNCS. The POWER LED blinks twice, pauses, and repeats during the download.

**Important:** You will only see this download pattern if you are using software version EXP2.1.0.0501 or later. Older versions of software will not display any indication during the CableCARD module download. If you are using an older version of code, you must connect a TV monitor to the DHCT to monitor the CableCARD module download.

8. Wait for the DHCTs to reboot and to indicate that the CableCARD module download is complete. The DHCT will be in a power off state. Power on the DHCT. The POWER LED will either blink eight times, pause, then repeat (brick mode indicator) or blink four times, pause and repeat only once (normal operation indicator).
9. Power the DHCT on and send a "hit" from the billing system to the DNCS to place the set-tops in service with at least one package. The DHCT will be in a power off state. Power on the DHCT. The POWER LED will either blink eight times, pause, then repeat (brick mode indicator) or blink four times, pause and repeat only once (normal operation indicator).
10. At this time, binding\* should occur. Are you using manual binding?
  - If **yes**, follow the procedures in **Manual Binding** in the *Separable Security Host Staging Guide* (part number 736107) or *Separable Security Host Staging Guide for System Release 4.3 and Later Operation & Maintenance Guide* (part number 4024836).
  - If **no**, you are using either combo binding or autobinding. The binding process should occur without intervention.
11. Verify authorized and high-value copy-protected channels.
12. Does your business process require inventory DHCTs to be authorized for service?
  - If **yes**, go to step 13.
  - If **no**, downgrade (disable) the DHCTs in accordance to your site process, wait for the POWER LED to blink eight times, pause, then repeat (brick mode indicator) or for the loss of secure services, and then go to step 13.
13. Disconnect the DHCTs and prepare them for shipment by placing them back in the original shipping container.

**Note:** Some sites reverse steps 12 and 13 to let installers see services during installation before having the DHCT receive a hit with the subscriber's contracted services. If your site does this, the DHCT will only display services if it is installed within the EMM timeout period. After the timeout period, the DHCT will need to receive a hit before it can display secure services.

## Viewing Diagnostic Screens on the SSC DHCTs (SARA Only)

1. On the remote control, press and hold the **PAUSE** button until the POWER LED blinks, then press the **PAGE +** button.  
**Note:** You can also view the diagnostic screens by following these steps:
  - a Press and hold the **POWER** button until the POWER LED on the front panel blinks, then release the **POWER** button.
  - b While the LED continues to blink, press the **POWER** button a second time. (Do not hold the **POWER** button the second time.) The LED should blink quickly.
2. To page up and page down within the diagnostic screens, press **PAGE +/PAGE UP/NEXT +** or **PAGE -/PAGE DOWN/NEXT -**, based on the type of remote control you are using.
3. To exit the diagnostic screens, press the **EXIT** button on the remote control.

## Staging Field-Returned SSC DHCTs

Complete these steps when staging DHCTs that have been returned from the field.

1. Connect the DHCTs to the plant; then, wait for them to display either DHCT-ready mode indicator or Brick mode indicator.
2. Scan the DHCTs into the billing system and take them out of service. The DHCTs will display the Brick mode indicator.
3. Power on the DHCT.
4. Check the IPPV information page of the CableCARD diagnostic screens for stranded IPPV events. If the EID field is greater than zero, you have stranded IPPV events. Select one of the following options:
  - a If the EID field shows zero, go to step 5.
  - b If the EID field shows any number other than zero, complete the following actions:
    - i Tag the DHCT.
    - ii When ready, complete the **Clearing Stranded IPPV Events from SSC DHCTs** procedure for the DHCTs you have tagged.
5. If you are using Brick mode, do the following:
  - a Activate the Staging Toolkit.
  - b Clear the SARA menu settings by pressing either the **MENU** button or the **SETTINGS** button (based on the type of remote control you are using), entering the **728469** PIN, and power cycling the set-top.

**Note:** If the DHCT does not accept the PIN, press the **EXIT** button and start over. You can also clear the SARA menu settings using the billing system or the DNCS.

**Note:** If you are using the DNCS, complete the following steps:

  - a Click the **Server Applications** tab and select **DHCT Config**.
  - b Select **Addressable** and click **Continue**.
  - c Enter the MAC address of the DHCT, then click **Reset User Settings**.
6. Move the DHCTs into an authorized status in accordance with your site process. Wait for the DHCTs to show either the DHCT-ready mode indicator or the Brick mode indicator.
7. Connect the DHCT to a TV and verify authorized channels.
8. Do authorized channels appear?
  - If **yes**, go to step 9.
  - If **no**, send a *ModifyDhctConfiguration (modDhctConfig -s)* hit using your billing system. The EMM ISE column should increment by 4 or more, and authorized channels should appear.
9. Place the DHCTs into the warehouse inventory according to your site process.

## Clearing Stranded IPPV Events from SSC DHCTs

Complete these steps to clear stranded IPPV events.

1. Check the billing system to make sure that the DHCT has an account status that corresponds to in-service, two-way.
2. Open the diagnostic pages following the instructions in **Viewing Diagnostic Screens on the SSC DHCTs (SARA Only)**, and check for an IP address.

**Note:** Do not go to step 3 without verifying the IP address. An IPPV poll will not work if the DHCT does not have an IP address.
3. Use the IPPV Information diagnostic screen to determine if you have any remaining IPPV events. If the EID field is greater than zero, you still have stranded IPPV events; repeat this procedure. Do not proceed to step 4 until you have verified that the DHCT has no remaining stranded IPPV events.
4. Place the DHCTs out of service, disconnect them, and return them to the original group of field-return DHCTs. Go back to the **Staging Field-Returned SSC DHCTs** section and repeat the procedure from step 5.

## Verifying EMMs for SSC DHCTs That Failed to Stage

Complete these steps if you have DHCTs that did not stage.

1. Verify the PowerKEY® provisioning by displaying the CA diagnostic screen of the CableCARD module. Verify the number of EMM messages received and validated by the CableCARD module and that those numbers match your site's standard numbers. If the numbers of EMMs processed is zero, the CableCARD module has yet to receive the EMM messages.

**Note:** If DHCTs do not authorize after receiving the *ModifyDhctConfiguration (modDhctConfig -s)* transaction, verify that the FDC signal on the Status Summary diagnostic screen is between +10 and -10 dBmV. If the FDC signal is OK, send an "instant hit" from either the billing system (preferred) or from the DNCS.
2. Check the status of the conditional access for the CableCARD module. The CA status (Status) will be in one of the following states:
  - **Ready**—Desired value; PowerKEY CA launched successfully.
  - **Not Ready-No CA Strm**—CA stream is not available.
  - **Not Ready-No Time GBAM**—CA stream is available, but waiting for Time GBAMs.
  - **Not Staged**—CableCARD module is not provisioned in the headend.
  - **N/A**—Initialization error or an internal problem while attempting to receive the status.
3. Verify that you can receive high-value copy-protected services (those services with copy-protection settings of copy once or copy never).

## Brick Mode and SSC DHCT Ready Indications

When the SSC DHCT (including the CableCARD module) has booted and finished downloading software, it will exhibit one of the following indications:

- **Brick Mode indicator:** The POWER LED blinks eight times, pauses, and repeats. The DHCT will be in a power off state.
- **DHCT ready indicator:** The POWER LED blinks four times, pauses, and repeats only once. After that, the DHCT will be in a power off state.

\* **Binding** is a DNCS function that matches the CableCARD module's ID to the host's ID to ensure that the host device conforms to the copy-protection rules defined by the Copy Control Information (CCI). You must bind a CableCARD module to its host before the host can receive high-value copy protected services (those copy-protected services with copy protected settings of copy once or copy never).



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