

QUICK REFERENCE GUIDE

SECURE DATA TRANSFER DEVICE (DTD) 2000 SYSTEM (SDS) Version 3.2 (KIK-20)



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**REVISION RECORD
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CHAPTER 1 - SECURE DTD 2000 SYSTEM SETUP

1-1. Standard Components and Inventory List

The standard KIK-20 Secure Data Transfer Device 2000 System (SDS) includes the following items:

- SDS Host Computer
- Crypto Ignition Key (CIK)
- Lithium-Ion Battery (1ea.)
- AC Power Adapter
- Battery Charger Assembly (*Not Included*)
- AA Battery Pack (*Not Included*)

1-1.a. Battery, Charger, and Accessories

The SDS is designed to use a 3.6V rechargeable Lithium-Ion battery or three (3) AA batteries housed in a special battery pack adapter. The approximate battery life is as follows:

- *Standby* - 100 hours
- *Intermittently* – 60 hours
- *Continuously* - 8 hours

Note: To increase battery life, ensure the SDS backlight is turned off when not necessary.

The Battery Charger Assembly is designed to recharge the Lithium-Ion batteries externally from the SDS. Three different colored Light Emitting Diode (LED) indicators and one CONDITION button are visible on the Battery Charger Assembly. The orange RUN LED is visible when the battery is charging. The green READY LED is visible when the battery is completely charged, and the red FAIL LED is visible when a battery fault occurs. The CONDITION button is used to discharge the battery when it has not been used for long periods or when a battery fault occurs.

The AC Power adapter, shown in Figure 1-1, is designed to recharge the

Lithium-Ion battery while the SDS is in use. The AC Power Adapter must not be used when the Battery Pack Adapter (3 AA batteries) is installed in the SDS.



Figure 1-1 SDS AC Power Adapter

1-2. SDS Features

1-2.a. SDS with Integrated QWERTY Keyboard

The layout of the SDS is depicted in Figure 1-1 SDS Front View, Figure 1-2 SDS Bottom View, and Figure 1-3 QWERTY Keyboard.



Figure 1-2 SDS Front View

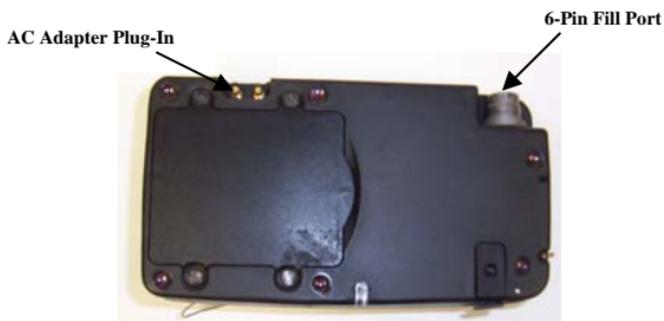


Figure 1-3 SDS Bottom View

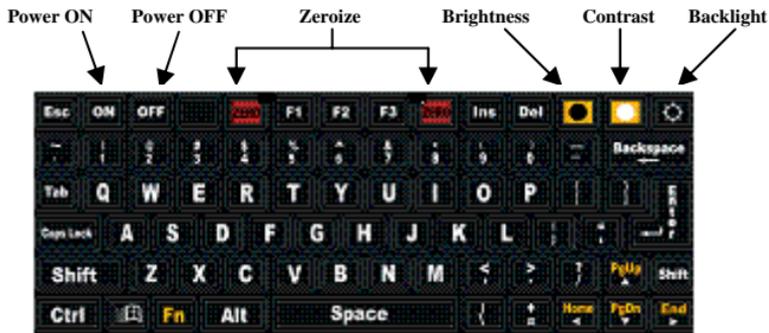


Figure 1-4 QWERTY Keyboard

Table 1-1 SDS Feature Description defines the features mentioned in Figure 1-2 SDS Front View, Figure 1-3 SDS Bottom View, and Figure 1-4 QWERTY Keyboard.

Table 1-1 SDS Feature Description

FEATURE	EXPLANATION
Touch Screen	Half VGA (640 x 240) Touch Screen allows alternate input method for the SDS.
Zeroize Indicator	Displays green LED when both Zeroize buttons are pressed simultaneously.
CIK	Controls access to the embedded KOV-21 card.
CIK Retainer	Ensures the removable CIK stays seated while inserted in the SDS.
USB Port	Allows mini A USB compatibility for the USB On-The-Go (OTG) standard.
KOV Light	Visual indicator for the KOV-21 card when in use. Blinking if error occurs.
Stylus w/ Lanyard	Input device used with the Touch Screen.

Table 1-1 SDS Feature Description (continued)

FEATURE	EXPLANATION
Charge Indicator	Displays blue LED when the battery is being charged with the AC adapter or a flashing LED when a battery

AC Adapter Plug-In	fault occurs. Plug-In for the AC Adapter to recharge the SDS Lithium-Ion battery without removing it from the SDS.
Fill Port	Communications Security (COMSEC) equipment connection to/ from the SDS.
Power ON	Applies power to the SDS.
Power OFF	Powers off the SDS.
Zeroize (2ea)	Zeroizes the SDS when both zeroize buttons are pressed simultaneously.
Brightness	Controls the brightness of the SDS Touch Screen.
Contrast	Controls the contrast of the SDS Touch Screen.
Backlight	Illuminates the SDS Touch Screen.

1-3. SDS Lithium-Ion Battery Installation

To install the battery, place the SDS upside down on a clean, dry, flat surface so that the bottom of the SDS is facing up, see Figure 1-3. Loosen the four captive screws using a standard screwdriver or coin to remove the Battery Pack Cover. Remove the Battery Pack Cover and set aside. Place the Rechargeable Lithium-Ion Battery or Battery Pack with three (3) AA batteries in the battery cavity. Replace the Battery Pack Cover and tighten the four

captive screws using a standard screwdriver or coin.

CAUTION

Batteries must be changed in less than 90 seconds to avoid zeroization of keying material and related data.

1-4. CIK Installation and Removal

CAUTION

Ensure that the SDS is powered off before installing or removing the CIK.

To install the CIK, press and hold the CIK retainer. Place the CIK in the CIK cavity ensuring the contacts on the CIK are seated tightly against the contacts in the CIK cavity.

Note: When the CIK is inserted and the SDS contains COMSEC material, the SDS is to be protected to the highest classification level of COMSEC material contained in the SDS.

To remove the CIK, press and hold the CIK retainer. Grab the chain attached to the CIK and gently pull.

Note: The SDS, the CIK and its password are classified when existing together, and must be protected to the classification level of the COMSEC material stored in the device, in accordance with NSTISSI 4005 and applicable Agency/Service implementing regulations. The SDS is considered UNCLASSIFIED if it does not contain the CIK.

**CHAPTER 2 - SDS POWER-UP, INITIALIZATION, AND
NAVIGATION**

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2-1. Turning on the SDS

Once the charged Rechargeable Lithium-Ion Battery or Battery Pack Adapter with three (3) AA batteries and CIK have been installed, the SDS is ready for power up.

Open the Liquid Crystal Display (LCD) cover to expose the SDS keyboard. Press **On** and power is applied to the SDS and the calibration screen is displayed.

2-2. Calibration

The SDS prompts the user to calibrate the screen each time the SDS is zeroized. However, the SDS retains the last calibration settings and the calibration process can be bypassed by pressing the ESC button on the keyboard.

Note: It is recommended that the user calibrate the SDS when prompted.

To calibrate the SDS when not prompted, select **Start → Settings → Control Panel → Stylus**. The Stylus Properties dialog box with a Double-Tap tab and a Calibration tab is displayed. Select **Calibration tab** and **Recalibrate**. The Calibration screen is displayed with instructions. Once the calibration process has been completed, press **ESC** and the Control Panel window is displayed. Close the Control Panel window and continue.

2-3. SDS Desktop Overview

The SDS Desktop is the first screen that appears when the SDS is powered up. The Desktop contains four shortcut icons:

- My Computer
- Recycle Bin
- Card Test App
- DTD2000

2-3.a. Card Test App

Card Test Application is an advanced application used to assist in troubleshooting the SDS.

Note: The use of this application causes the SDS to zeroize all keying material and related data.

2-3.b. DTD2000

Selecting the DTD2000 icon initiates the Core Library software application and displays the KOV-21 Card logon dialog box.

2-3.b. (1) Default Site Security Officer (SSO) Login

When initiating Core Library for the first time, the Default SSO Login dialog box appears. The User ID and Password that appear are hard coded into the SDS software. To initialize and pair the KOV-21 Card to the SDS, the user designated as the SSO must create a valid SSO account by setting a new SSO Password.

2-4. Setting SSO Password

Select **OK** when the Default SSO Login dialog box appears and the card pairing dialog box appears as seen in Figure 2-1.

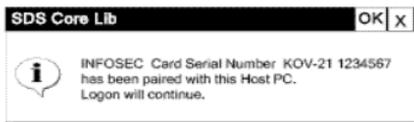


Figure 2-1 KOV-21 Card Pairing

Select **OK** from the KOV-21 Card Pairing dialog box and the Change Password dialog box appears as seen in Figure 2-2.

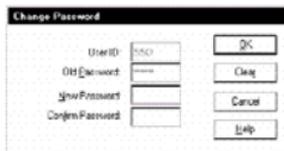


Figure 2-2 Change Password

Enter the new password (6 to 12 characters) consisting of lower case, upper case, numeric, and/or special characters. Reenter the new password in the Confirm Password textbox and select **OK**. The dialog box indicating *“Password successfully updated.”* appears.

Select **OK** and the Card Monitor dialog box appears as seen in Figure 2-3.

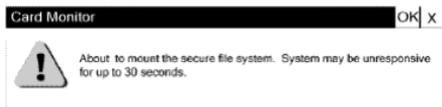


Figure 2-3 System Mounting

Select **OK** and the Core Library Main Menu is displayed.

CHAPTER 3 - SDS CORE LIBRARY

The Core Library Main Menu seen in Figure 3-1 has four applications available, which include:

- Session
- Tools
- Launch
- Help



Figure 3-1 Core Library Main Menu

3-1. Session

The Session application enables the user to perform the following:

- Login and logout of the KOV-21 card
- Establish the communication interface protocol, which consists of either DS-101 or RS-232
- Reset the KOV-21 card
- Exit

3-2. Tools

The Tools application is broken down into two categories consisting of:

- User
- SSO

The user is able to perform the following:

- Change user password
- Get the KOV-21 card time/date
- Get the status of the KOV-21 card
- Perform a card self test

The SSO is able to perform the following:

- Set the KOV-21 card time/date
- Create and delete user accounts
- Change user passwords

- View, clear, and upload the audit
- Update and clone firmware
- Update software

3-2.a. Setting Date and Time

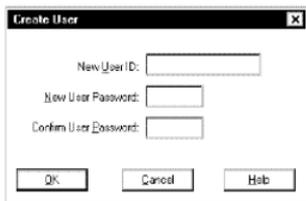
Select **Tools**→ **SSO** → **Set Card Time/Date** from the Core Library Main Menu, see Figure 3-1. The Set Card Date/Time dialog box appears indicating the KOV-21 cards date and time.

To set the date, select the Card Date list box and select the correct date by utilizing the pop-up calendar. To set the time, select the time component from the Card Time textbox to be changed (hour, minute, second, etc.) and use the scroll arrows to the right of the textbox to select the correct value.

Once the date and time are correct, select **OK** and the new date/time is displayed. Select **OK** and the Core Library Main Menu is displayed, see Figure 3-1.

3-2.b. User Accounts

The SDS has only one SSO account and 10 User accounts. All user accounts are created or deleted by the SSO. The SSO creates a user account by selecting **Tools** → **SSO** → **User Management** → **Create User**. The Create User dialog box appears, see Figure 3-2.



The image shows a screenshot of a software dialog box titled "Create User". The dialog box has a standard Windows-style title bar with the text "Create User" and a close button (X) on the right. Inside the dialog, there are three text input fields arranged vertically. The first field is labeled "New User ID:", the second is labeled "New User Password:", and the third is labeled "Confirm User Password:". Below these fields, there are three buttons: "OK", "Cancel", and "Help", arranged horizontally from left to right.

Figure 3-2 Create User Account

Enter the User ID (1 to 20 case sensitive characters) in the New User ID textbox. Enter the password (6 to 12 characters) consisting of lower case, upper case, numeric, and/or special characters in the New User Password textbox. Reenter the password in the Confirm User Password textbox and select **OK**. The dialog box indicating the user was created appears. Select **OK** and the Core Library Main Menu is displayed, see Figure 3-1.

To delete a user account, the SSO selects **Tools → SSO → User Management → Delete User**. The Delete User dialog box appears with the user list box displaying all user accounts created. Select the user account from the user list box that is no longer needed and select **OK**. The Confirm Delete User dialog box appears with the user to be deleted. Select **YES** and the dialog box appears indicating the user has been deleted. Select **OK** and the Delete User dialog box returns. Select **Cancel** and the Core Library Main Menu is displayed, see Figure 3-1.

3-3. Launch UAS (Menu Option)

Launch is enabled when the SSO or user is logged into the KOV-21 Card. The launch application is the primary application used in Equipment Based Key Loading for the SDS.

3-4. Core Library Help

The Core Library Help application is broken into two categories consisting of the following:

- **Help Topics** - Assist in obtaining information and instructions for the Core Library Application
- **About DTD2000** - Displays the current version of Core Library installed on the SDS.

CHAPTER 4 – EQUIPMENT BASED KEY MANAGEMENT PARADIGM

The Equipment Based Key Management Paradigm, depicted in Figure 4-1, is the modern EKMS Tier 3 method for managing keys and Electronic Protection (EP) data using databases (platform, equipment, key) where keys, tagging information, and other related data are virtually pre-assigned to End Cryptographic Units (ECUs) and then logically grouped into virtual platforms. Platforms and/or Equipments can be configured in numerous ways depending on operator preference. Additionally, the SDS provides ECU fill instructions similar to ECU Standard Operating Procedures.

A properly constructed platform allows for a consistent, recurring, error free ECU key fill/issue process. The Equipment Based Key Management Paradigm eliminates the guesswork as to what key segments are to be loaded into what particular fill location for what particular ECU. The SDS also allows for a “key based” single key fill similar to the functionality of the legacy DTD Fill User Application Software (UAS) and Common Fill Devices (KYK-13, KOI-18, and KYX-15).

Databases constructed utilizing the Equipment Based Key Management Paradigm can also be transferred between DTDs loaded with the Common Tier 3 (CT3) UAS, another SDS, and the Simple Key Loader (SKL).

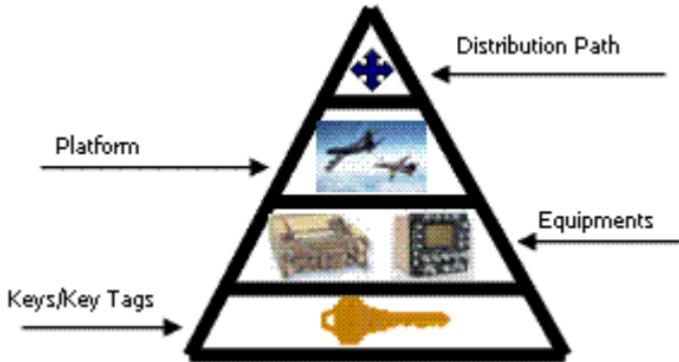


Figure 4-1 Key Management

CHAPTER 5 - SDS USER APPLICATION SOFTWARE (UAS)

5-1. Launch SDS UAS

To launch the UAS, select **Launch** → **Launch DTD2000 UAS**. The Launch UAS dialog box is displayed listing all installed applications. Select **OK** and the SDS UAS Main Menu is displayed see Figure 5-1.

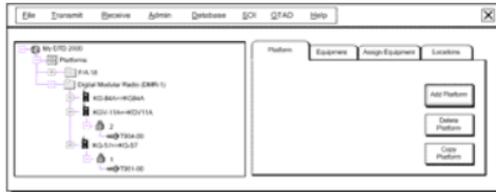


Figure 5-1 SDS UAS Main Menu

The SDS UAS Main Menu Bar consists of options, which include:

- File
- Transmit

- Receive
- Admin
- Database
- SOI
- OTAD
- Help

5-2. File

The File option allows the user to add a platform or equipment to an existing database and exit the SDS UAS. The Add Platform and Add Equipment options/functions are identical to Add Platform and Add Equipment from the Tab Windows.

Note: The following menu options are performed from the Tab Window.

5-2.a. Adding Platform and/ or Equipment

To add a platform, select **File → Add Platform** and the New Platform dialog box appears requiring the user to enter the Platform Name, Distribution Path, and whether or not the platform is bussed, see Figure 5-2.



Figure 5-2 New Platform

Enter the new unique platform name (1 to 20 alphanumeric characters) in the Platform Name textbox. In the Distribution Path list box, use the drop-down menu to select the desired distribution path if it exists within the database or leave blank if no distribution path is desired. Select the Bussed checkbox only if the platform has DS-101 ECUs that connect via the MIL-STD-1553 data

bus and can receive data in address or station ID orient mode.

Once all information has been entered into the New Platform dialog box, select **OK** and the platform appears in the UAS Tree under Platforms.

To add equipment, select the equipment type from the equipment list and **Add Equipment** from the Equipment tab, see Figure 5-3.



Figure 5-3 Add Equipment

Once the equipment type and Add Equipment have been selected, the New Equipment dialog box appears requiring the user to enter the Equipment Name, Distribution Path, and DS101 Address, see Figure 5-4.



Figure 5-4 New Equipment

Enter the new unique equipment name (1 to 16 alphanumeric characters) in the Equipment Name textbox. In the Distribution Path list box, use the drop-down menu to select the desired distribution path if one exists within the database, leave blank if no distribution path is desired, or create a desired distribution path. Enter the DS-101 bus address in the DS101 Address textbox

if the equipment is DS-101. The default buss address is 255.

Once all information has been entered in the New Equipment dialog box, select **OK** and the virtual unique equipment identification appears in the UAS Tree under Equipments.

After the virtual unique equipment has been created, the newly created equipment should be assigned to a platform. Select the Assign Equipment tab and all equipment added to the user database is displayed in the list box. Select the desired platform from the UAS Tree and select the desired equipment from the Assign Equipment tab list box. Select **Assign Equipment** and the selected equipment appear under the designated platform in the UAS Tree under Platforms.

5-3. Receive

The Receive option includes the following:

- Receive an EKMS Tier 3 database from COMSEC equipment or workstation
- Receive key when key tags are already present
- Receive key with key tags
- Receive Black Key

5-3.a. Unassigned

To receive key without a key tag being present in key database, select **Receive** → **Unassigned** from the SDS UAS Main Menu, see Figure 5-1, and the Receive Unassigned Key dialog box is displayed. Select the equipment from where the key is brought in from and **Receive Key(s)**.

When KOI-18 is selected from the Key Source Equipment list box, the KOI-18 Source dialog box is displayed. The following is a list of modes available when using the KOI-18 to bring in key:

- Normal
- Enhanced Position Location Reporting System (EPLRS)

- Joint Tactical Information Distribution System (JTIDS) Key Encryption Key (Jkek)
- Ground Only Equipment (GOE2)

The EPLRS and GOE2 modes display profile instructions while Normal and Jkek modes display the Tag Data dialog box, see Figure 5-5.

Profile instructions are provided for the user when DTD, WKS, KOK-13, KOK-22, or MX-18290 are selected from the Key Source Equipment list box.

When UNKNOWN is selected from the Key Source Equipment list box, the Unknown Equipment Transmit Protocol dialog box appears with the following protocols:

- KYK-13 Mode
- KYX-15 Mode
- DS-101 Mode
- RS-232 Mode
- Kemple Mode
- DS-102 Mode
- KOI-18 Mode
- Miniaturized Airborne Global Positioning System (GPS) Receiver (MAGR) Mode.

When any of the other equipments are selected from the Key Source Equipment list box, the Tag Data dialog box appears see Figure 5-5.



Figure 5-5 Tag Data

Once the Tag Data dialog box appears select the appropriate classification from the following:

- Unclassified
- Confidential
- Secret
- Top Secret

Select the appropriate key use from the following:

- Traffic Encryption Key (TEK)
- Key Encryption Key (KEK)
- Transmission Security Key (TSK)
- Key Production Key (KPK)
- Word of the Day (WOD)
- Multiple Word of the Day (MWOD)

Enter the Text ID, Short Title, Edition, Segment Number, and Register Number, Effective Date, and Expires After Date. Once all the pertinent information has been entered or selected, select **OK** and the Status Report dialog box appears with instructions. When the Status Report dialog box indicates the operation is complete, the Close button appears. Select **Close** to exit and return to the SDS UAS Main Menu, see Figure 5-1.

Utilizing the Equipment Based Key Management Paradigm, keys brought into the SDS should be mapped or assigned to the unique virtual equipment via the identified equipment fill location. To assign the key to the equipment fill location, select the Locations tab from the Tab Window. Select the desired equipment from the UAS Tree and all equipment locations are displayed in the locations tab list box. Select the desired location from the list box and **Assign Key**. The Assign Key dialog box appears with the Keys list box displaying all keys that are present in the user database. Select the desired key

and **OK**. The key appears in the designated location under the specified equipment.

The key is present in every instance of the unique virtual equipment and the SDS is ready to load the designated location of that equipment.

5-3.b. Key Needed

Software applications like Joint Automated Communications Electronics Operating Instructions (CEOI) System (JACS) or Data Management Device (DMD) are capable of creating key tags and sending those tags to the SDS via workstation. When tags are present without key, the receive key needed operation is required.

To receive key when only tags are present select **Receive → Key Needed** from the SDS UAS Main Menu, see Figure 5-1. The Receive Key Needed dialog box appears with a list of key tags in the Select Key Tag list box and the corresponding equipment in the Key Source list box.

Select the Key Source equipment type and select the desired mode, which consists of either:

- **Automatic** – Receives all key tags in the Select Key Tag list box
- **Manual** – Allows user to select individual key tags

Once the selections have been made, select **Receive Keys**. Profile instructions appear with instructions. When the Status Report dialog box indicates receive complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-3.c. Database

To receive an EKMS Tier 3 database, select **Receive → Database** from the SDS UAS Main Menu, see Figure 5-1. A menu appears listing the following operations:

- SDS/CT3
- Workstation
- Single Channel Ground and Airborne Radio System (SINCGARS)
- Secure Telephone Unit – Third Generation (STU-III)
- Secure Terminal Equipment (STE)
- Universal Serial Bus (USB).

To receive an EKMS Tier 3 database from another SDS or DTD, select **Receive → Database → SDS/CT3** from the SDS UAS Main Menu, see Figure 5-1. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To receive an EKMS Tier 3 database from a workstation via DS-101, select **Receive → Database → Workstation → DS-101** from the SDS UAS Main Menu, see Figure 5-1. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To receive an EKMS Tier 3 database from a workstation via RS-232, select **Receive → Database → Workstation → RS-232** from the SDS UAS Main Menu, see Figure 5-1. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To receive an EKMS Tier 3 database via SINCGARS, select **Receive → Database → SINCGARS** from the SDS UAS Main Menu, see Figure 5-1. The New Polling Address dialog box is displayed requesting the polling address (Broadcast ID), which is used to identify the remote SDS/CT3 device and locate the remote station. Enter the polling address and select **OK**. The Status Report dialog box appears with instructions. When the Status Report

dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To receive an EKMS Tier 3 database from equipment via STU-III, STE, or USB, select **Receive → Database → STU-III, STE, or USB** from the SDS UAS Main Menu, see Figure 5-1. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-3.d. Black Key

To receive Black Key from a computer file located in the root directory of the host platform, select **Receive → Black Key** from the SDS UAS Main Menu, see Figure 5-1. A dialog box opens displaying the folders and files in the root directory of the SDS. Locate and select the file containing the Black Key. Select **OK** and the Status Report dialog box appears displaying the status of the receive operation. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-4. Transmit

The Transmit option includes the following:

- Automatic
- Platform
- Keys
- Database either manual or assisted
- ECU Commands for JTIDS (KGV-8B), RT-1794, ADDI (i.e. PSC-5D), and KGV-23.

5-4.a. Platform

Selecting **Transmit → Platform** transmits keys and/or EP data to user

selected platform, equipment, and/or fill locations. The keys transmitted are based on user-defined settings for the following:

- Platform Mode
- Equipment Mode
- Mission Date
- Net ID

Platform Defined Settings, shown in Table 5-1, describes the user settings.

Table 5-1 Platform Defined Settings

USER SETTINGS	DESCRIPTION
Mission Date & NET ID	Keys to be transmitted are filtered by Mission Date and Net ID. Only keys corresponding to the user selection in Mission Date and Net ID is displayed in the keys list and transmitted to equipment.
Platform Mode – Automatic	All equipments assigned to the selected platform are automatically selected to receive keys.

Table 5-1 Platform Defined Settings (continued)

USER SETTINGS	DESCRIPTION
Platform Mode – Manual	Only the equipment selected by the user receives keys.
Equipment Mode – Automatic	All fill locations are automatically selected to receive keys.
Equipment Mode - Manual	Only the fill locations selected receives a key and only the key selected is transmitted to the receiving equipment. The equipment mode can only be set to manual if the platform mode is set

	to manual.
Select Receiving Platform	Select a platform to receive keys and view assigned equipment.
Select Equipment	Select equipment to receive keys when Platform Mode is set to Manual and display fill locations that have keys assigned.
Location	Select fill locations to receive keys when Equipment Mode is set to Manual and display keys assigned to selected fill location.
Keys	Select keys to transmit when Equipment Mode is set to Manual.
View Key	Select to view tagging information.

To transmit a platform, select **Transmit → Platform** from the SDS UAS Main Menu, see Figure 5-1. The Transmit Platform dialog box appears. Select the appropriate Mission Date, Net ID, Platform, Equipment, Location, Key, Platform Mode, and Equipment Mode. Select **Transmit** and the Profile Instructions dialog box appears with instructions. Select **OK** and follow the Status Report dialog box instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** and the SDS returns to the Transmit Platform dialog box. Select **Cancel** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-4.b. Keys

To transmit individual keys to specific equipment, select **Transmit → Keys** from the SDS UAS Main Menu, see Figure 5-1. The Transmit Key(s) dialog box appears with all keys present in the user database listed in the Key(s) to Transmit list box and all available equipment in the Equipment Type list box.

Select the desired key to transmit from the Key(s) to Transmit list box and select the equipment to be filled from the Equipment Type list box. Select **Transmit** and the Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-4.c. Database

An EKMS Tier 3 database can be transmitted utilizing the Assisted command or by the Manual command. The Assisted command transfers the platform and equipment data (including keys and tagging information) based on the distribution path. The Manual command transfers all databases or specifically selected databases.

To transmit an EKMS Tier 3 database utilizing the Assisted command, select **Transmit → Database → Assisted** from the SDS UAS Main Menu, see Figure 5-1. The Transmit Database Assisted dialog box appears. Enter the partial match Distribution Path in the corresponding textbox or select the exact Distribution Path from the list box. Select the appropriate Transfer Mode from the following:

- Direct Connection
- SINCGARS
- STU-III
- STE
- USB

If Direct Connection, STU-III, STE, or USB are selected for the Transfer Mode, select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

If SINCGARS is selected for the Transfer Mode, select **OK**. The Choose Broadcast Address dialog box appears. Select the appropriate Broadcast

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Address from the list box and select **OK**. The Status Report dialog box returns with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To transmit an EKMS Tier 3 database utilizing the Manual command, select **Transmit → Database → Manual** from the SDS UAS Main Menu, see Figure 5-1. The Transmit Database Manual dialog box appears with database options and transfer modes. Select **All** from Database Options to transmit all databases or select **Selected** to select appropriate databases to be transmitted. Select one of the following Transfer Modes:

- Direct Connection
- SINGARS
- STU-III
- STE
- USB

If Direct Connection, STU-III, STE, or USB are selected for the Transfer Mode, select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

If SINGARS is selected for the Transfer Mode, select **OK**. The Choose Broadcast Address dialog box appears. Select the appropriate Broadcast Address from the list box and select **OK**. The Status Report dialog box returns with instructions. When the Status Report dialog box indicates the transfer is complete, the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-4.d. ECU Commands

ECU commands for JTIDS (KGV-8B) include the following:

- Set Station Address
- Set Station ID
- Zeroize Secure Data Unit (SDU)

ECU commands for the RT-1794 only include:

- Zeroize SDU

ECU commands for ADDI (i.e. PSC-5D) include:

- Set Station Address
- Set Station ID

ECU commands for the KGV-23 consist of:

- Set Station ID
- Zeroize SDU.

To set the station address for JTIDS or ADDI, select **Transmit → Commands → JTIDS** (for JTIDS) or **ADDI** (for ADDI) → **Set Station Address** from the SDS UAS Main Menu, see Figure 5-1. The Equipment Address dialog box appears requesting the user to enter the equipment address in the textbox. Enter the Station Address (from 1 to 255) and select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates “*Command Transferred,*” the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To set the station ID for JTIDS, ADDI, or KGV-23, select **Transmit → Commands → JTIDS** (for JTIDS) or **ADDI** (for ADDI) or **KGV-23** (for the KGV-23) → **Set Station ID** from the SDS UAS Main Menu, see Figure 5-1. The Set Station ID dialog box appears requesting the user to select either Select Station ID or New Station ID Mode.

If Select Station ID Mode is selected, the Select Station ID list box appears

containing all valid Station IDs. Select the appropriate Station ID from the list box.

If New Station ID Mode is selected, the New Station ID textbox appears. Enter a valid Station ID (equipment specific name no longer than 14 characters) in the textbox.

Once the mode has been selected and the Station ID is selected or the new Station ID is entered, select **OK**. The Equipment Address dialog box appears requesting the user to enter the equipment address in the textbox. Enter the Station Address (from 1 to 255) and select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates “*Command Transferred*,” the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

To zeroize JTIDS, the RT-1794, or the KGV-23 utilizing ECU commands, select **Transmit** → **Commands** → **JTIDS** (for JTIDS) or **RT-1794** (for the RT-1794) or **KGV-23** (for the KGV-23) → **Zeroize SDU** from the SDS UAS Main Menu, see Figure 5-1. The JTIDS Zeroize SDU Mode dialog box appears requesting the user to select one of the following modes:

- BOTH
- Electronically Erasable Programmable Read Only Memory (EEPROM)
- Random Access Memory (RAM)

When BOTH and the OK button are selected, the Equipment Address dialog box appears requesting the user to enter the equipment address in the textbox. Enter the Station Address (from 1 to 255) and select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates “*Command Transferred*,” the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

When EEPROM and the OK button are selected, the EEPROM Location dialog box appears requesting the user to enter the EEPROM location to be

zeroized. Enter the appropriate EEPROM location (ranging from 1 to 9) and select **OK**. The Equipment Address dialog box appears requesting the user to enter the equipment address in the textbox. Enter the Station Address (from 1 to 255) and select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates “*Command Transferred*,” the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

When RAM and the OK button are selected, the RAM Location dialog box appears requesting the user to select either Selected Locations or All Locations.

If Selected Locations is selected, the SDS requests the user to enter the appropriate RAM location. The RAM location for JTIDS, RT-1794, and KGV-23 are as follow:

- *JTIDS & KGV-23* - RAM Locations 0-7.
- *RT-1794* - RAM Locations 0-63

Enter the appropriate RAM location and select **OK**. The Equipment Address dialog box appears requesting the user to enter the equipment address in the textbox. Enter the Station Address (from 1 to 255) and select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates “*Command Transferred*,” the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

If All Locations and the OK button are selected, the Equipment Address dialog box appears requesting the user to enter the equipment address in the textbox. Enter the Station Address (from 1 to 255) and select **OK**. The Status Report dialog box appears with instructions. When the Status Report dialog box indicates “*Command Transferred*,” the Close button appears. Select **Close** to exit the operation and return to the SDS UAS Main Menu, see Figure 5-1.

5-5. Admin

The Admin option allows for administrative functions including: viewing status information, identification/deletion of expired keys, viewing and resetting the Key Load Status Log, and the deletion of all or selected databases. The Admin option is also used for setting key tag defaults, matching length defaults, mission dates and net IDs and their prompting options, user mode defaults and modification of key expiration constants.

5-5.a. Defaults

The Defaults menu enables the user to view or change current defaults for the following:

- DS-101 key tag
- Match-length or a string of searches
- Mission dates and Net ID prompting
- Operator mode
- Crypto period

The commands accessed by the menu include:

- Tag, Match
- Match Keys
- Platform
- Mission Date
- Net ID
- User Mode
- Crypto Period
- Baud Rate

5-5.a. (1) Using EPLRS and PRC-137

The default user mode does not account for EPLRS and the PRC-137. EPLRS and the PRC-137 are special types of equipment that require specific user modes to be activated before utilizing the SDS with either equipment.

To activate the EPLRS and/or the PRC-137 user modes, select **Admin → Defaults → User Mode** from the SDS UAS Main Menu, see Figure 5-1. The

default User Mode dialog box is displayed, see Figure 5-6.

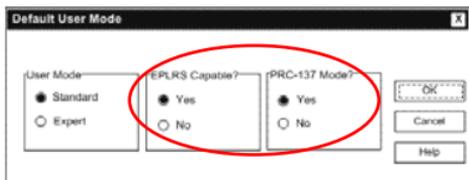


Figure 5-6 Default User Modes

To make the SDS EPLRS and/or PRC-137 capable, select the appropriate radio button and **OK**. The SDS enables the mode or modes and returns to the SDS UAS Main Menu, see Figure 5-1.

5-6. Database

The Database option provides access to data management capabilities that allow the viewing of the following:

- Platforms
- Equipment
- Keys
- EP data
- Mission dates
- Network IDs
- File headers
- SDS UAS stored data/commands

Additional functionality consists of:

- Deletion and/or addition of selected mission dates and network IDs
- Deletion and/or assignment of key/EP variables to mission dates and network IDs
- Deletion of file headers.

5-7. Signal Operating Instructions (SOI)

The SDS provides the capability to import and display SOI data, which includes the following:

- Network groups
- Networks
- Call signs
- Call words
- Cue and manual frequencies
- Suffixes
- Expanders
- Signs
- Countersigns
- Pyrotechnic and smoke signals
- Quick references

The importing and displaying of SOI data is for lookup/ validation purposes and to ensure simplicity, speed, and security of communications.

5-8. Over the Air Key Distribution (OTAD)

The OTAD function allows Saville Advanced Remote Keying (SARK) functions used in Over the Air Rekey (OTAR) operations, which include the following:

- **Variable Generate (VG)** – Commands VG capable COMSEC equipment to generate key.
- **Variable Update (VU)** – Provides the capability to send a KEK to VU capable equipment, which performs a deterministic update of key and returns the revised key. The tag of the original is applied to the updated KEK and the segment and suffix are incremented by one.
- **Automatic Remote Keying (AK)** – Provides the capability to automatically rekey an entire communications net with a replacement TEK.

- **Manual Remote Keying (MK)** – Provides the capability to manually rekey single COMSEC equipment with a replacement TEK.
- **Receive Variable (RV)** – Provides the capability to receive a key into a fill device via local equipment from an MK operation performed at the Net Control Station.

5-9. UAS Help

The UAS Help option in the SDS UAS Main Menu, see Figure 5-1, is broken into two categories consisting of:

- **Help** - Assists in obtaining information and instructions for the SDS UAS application.
- **About DTD2000** - Displays current version of UAS installed on the SDS.

CHAPTER 6 - SDS ZEROIZATION

The two types of SDS zeroization include the following:

- **Passive** – Hardware function resulting from batteries removed longer than 90 seconds or 10 consecutive failed SSO logon attempts. Batteries removed longer than 90 seconds causes all keying material and related data to be erased. Ten consecutive failed SSO logon attempts causes all accounts, keying material, and related data to be erased.
- **Active** – User action resulting from simultaneously pressing both RED zeroize keys on the keyboard or when zeroize is selected from the Core Library Application Main Menu. Active zeroization causes all databases consisting of Platforms, Equipments, Keys, EP Data, and SOI data to be erased.

CHAPTER 7 - SDS SHUTDOWN

To shutdown the SDS and ensure that the database is saved, select **File** → **Exit** from the SDS UAS Main Menu, see Figure 5-1. The database auto saves and the Core Library Main Menu is displayed, see Figure 3-1. Select **Session** → **Logout** and the SDS Core Library dialog box indicating “*Logout and close current session?*” appears. Select **YES** and the Core Library Main Menu returns. Select **Session** → **Exit** and the SDS Desktop is displayed. Press **OFF** on the keyboard and the SDS is ready for proper storage.

Note: For security purposes, the SDS and CIK should be stored separately.

CHAPTER 8 – ADDITIONAL ASSISTANCE

Additional assistance information is provided below:

National EKMS Tier 3 Support Help Desk

Hours: 0300 to 1800 PST
 Toll Free: 1-866-383-7878
 E-mail: help@ekmstier3support.com
 Web: <https://www.ekmstier3support.com>

CHAPTER 9 - APENDICES

9-1. Appendix A – Acronym List

Acronym	Description
AC	Alternating Current
AK	Automatic Remote Keying
CCI	Controlled Cryptographic Item
CEOI	Communications Electronics Operating Instructions
CIK	Crypto-Ignition Key
COMSEC	Communications Security

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CT3	Common Tier 3
DMD	Data Management Device
DTD	Data Transfer Device
DTD2000	Data Transfer Device 2000
ECU	End Cryptographic Unit
EEPROM	Electrically Erasable Programmable Read Only Memory
EKMS	Electronic Key Management System
EP	Electronic Protection
EPLRS	Enhanced Position Location Reporting System
GOE2	Ground Only Equipment
GPS	Global Positioning System
ID	Identification
IKEK	Initialization Key Encryption Key
INFOSEC	Information Security
JACS	Joint Automated CEOI System
JTIDS	Joint Tactical Information Distribution System
Jkek	JTIDS Key Encryption Key
KEK	Key Encryption Key
KP	Key Processor
KPK	Key Production Key
LCD	Liquid Crystal Display
LCMS	Local COMSEC Management Software
LED	Light Emitting Diode
LKEK	Local Key Encryption Key
LMD	Local Management Device
MAGR	Miniaturized Airborne GPS Receiver
MK	Manual Remote Keying
MSSDE	Mission Specific Software Development Environment
MWOD	Multiple Word of the Day
NSA	National Security Agency
OTAD	Over the Air Distribution
OTAR	Over the Air Rekey
OTG	On-The-Go
RAM	Random Access Memory
RV	Receive Variable

SARK	Saville Advanced Remote Keying
SDS	Secure DTD2000 System
SINCGARS	Single Channel Ground and Airborne Radio System
SKL	Simple Key Loader
SOI	Signal Operating Instructions
SSO	Site Security Officer
STE	Secure Terminal Equipment
STU-III	Secure Telephone Unit – Third Generation
TEK	Traffic Encryption Key
TrKEK	Transfer Key Encryption Key
TSK	Transmission Security Key
UAS	User Application Software
USB	Universal Serial Bus
VG	Variable Generate
VGA	Video Graphic Array
VU	Variable Update
WOD	Word of the Day