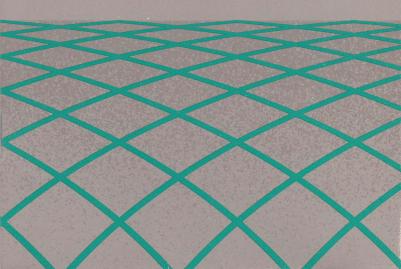


Telephone Security Device TSD 3600

User's Manual





TSD USERS MANUAL

<u>Telephone Security Device</u>

Model 3600

September 30, 1992

Customer Assistance

For assistance with problems, or to order optional accessories for the TSD, contact the AT&T Secure Communications Products Customer Service Center at the following telephone number.

AT&T Secure Communications Products Customer Service Center

Toll Free	Commercial	
800-952-4082	919-279-7617	

Have the following required information when calling the AT&T Secure Communications Products Customer Service Center.

AT&T Model	TSD	
Serial Number:		
Purchase Date:		
Purchased From:		

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Every effort has been made to ensure that the information in this book is complete and accurate at the time of printing. However, this information is subject to change.

SOFTWARE OWNERSHIP

AT&T provides the software included herein (programmed into the TSD) for a one-time license fee included in the price. The software remains the sole property of AT&T or its licensors and may not be copied, duplicated, or used in other than the device in which it was received.

EXPORT CONTROL

This product is subject to U.S. Department of State Export Regulations. Written U.S. Government approval is required prior to export.

IMPORTANT SAFETY INSTRUCTIONS

Always follow these basic safety precautions when using this product to reduce risk of injury from fire or electric shock.

- Read Chapter 2 prior to installing the TSD.
 Read and understand all instructions in this
 manual before using this product.
- Observe all warnings and instructions marked on the product.

- Unplug this product from wall outlets and telephone jacks before cleaning. Clean exposed parts with a soft, damp cloth. Do not use aerosol cleaners.
- Do not use the product near water or when you are wet. If the product comes in contact with any liquids, unplug the power cord immediately. Do not plug the product back in until it has been dried thoroughly.
- Install this product securely on a stable surface.
 Damage may result if the product falls.
- Install this product in a protected location where
 no one can step on or trip over power and line
 cords. Do not place objects on the cords that can
 cause damage or abrasion.
- The product is supplied with a power supply designed for use with 110 VAC. If you are not sure of the power supplied to your location, consult your local power company.
- 8. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it. Do not overload wall outlets as this can result in the risk of fire or electric shock. Do not staple or otherwise attach the AC power supply cord to building surfaces.

- 9. If this product does not operate normally, contact the AT&T Secure Communications Products Customer Service Center at the telephone number listed in the Customer Assistance section of this manual. If the product is damaged, refer to the AT&T Warranty in the back of this manual. Do not open the device. Opening the device may expose you to dangerous voltages or to other risks and may void the warranty. Repairs must be performed by an AT&T authorized technician.
 - Do not use the device in the vicinity of a gas leak. If you suspect a gas leak, report it immediately, but use a telephone away from the area where gas is leaking.

Overview

Congratulations on the purchase of your new AT&T Telephone Security Device (TSD), Model 3600. It has been designed to exacting AT&T standards for convenient and reliable service. The TSD is a light-weight device which provides an economical way to protect your most confidential telephone conversations. It provides two-way voice compression and encryption and is compatible with most modular telephones.

The TSD is small and portable for use at home or work or for tucking into your briefcase when you travel. The small size enables discrete use.

The voice compression algorithm used in the TSD provides superior voice quality.

For ease of use, two pushbuttons control all the operations involved in switching the unit between clear and secure modes. (The display indicates in which mode the unit is operating.) The TSD has different customer-selectable Handset Modules for operating with the various types of telephone handsets. Only one Handset Module is supplied with the initial TSD.

The TSD is a member of the AT&T secure communication products family. Its features include:

- Ease of use
- Superior voice quality
- Compatibility with multiple telephone handsets
- Portability
- Simple installation.

Parts Checklist and Verification

Inspect package contents. Inspect the contents for damage that may have occurred during transit. Save all packing material until the Handset Module is installed and working properly.

One complete, basic TSD (as shown in Figure 1-1) should include the following pieces.

- Telephone Security Device
- Handset Module
- TSD-to-Telephone Interface Cord
- 110-VAC Power Supply
- TSD Slip Cover (not shown)

Visually confirm that there are no broken parts and that the TSD housing and panel surfaces are free of obvious defects. If you suspect any part is damaged, or parts are missing, call the AT&T Secure Communications Products Customer Service Center.

Copy the serial number from the bottom of the unit to the front of this manual for warranty purposes.

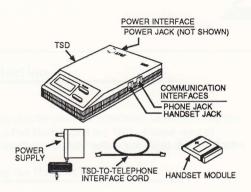


Figure 1-1 TSD and Accessories

Communication Interfaces

Physical implementation includes a TSD-to-Telephone Interface Cord that interfaces the TSD and the telephone being used.

Power Interface

An external, 110-VAC, plug-in, wall-type power supply furnishes power to the TSD.

Installation

2

Introduction

This chapter provides installation instructions for the Handset Module and the TSD. Please read all instructions carefully before you begin the installation.

Installing the Handset Module

To install the Handset Module, refer to Figures 2-1 and 2-2. Also refer to Tables 2-1 and 2-2.

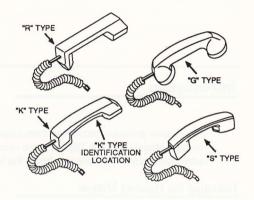


Figure 2-1 AT&T Handset Types

Table 2-1 Handset Module to Handset Cross-Reference

HANDSET TYPE	HANDSET MODULE	
AT&T G	HM-3	
AT&T K	HM-2 or HM-3	
AT&T R	HM-1	
AT&T S	HM-2	
All non-AT&T	See Note	

NOTE: For specific AT&T "K" type handsets and all non-AT&T telephones, call the AT&T Secure Communications Products Customer Service Center at 1-800-952-4082 or 1-919-279-7617 for initial assistance in selecting Handset Modules. if needed.

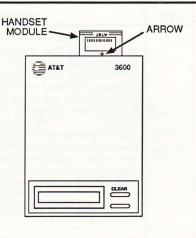


Figure 2-2 Handset Module Installation

Table 2-2 Handset Module Installation Procedures

STEP	ACTION
1	Follow these steps to install the Handset Module.
	CAUTION
	Always unplug the Power Supply before installing a new Handset Module.

STEP	ACTION
2	Refer to Figure 2-1 to identify the type of handset to be used with the TSD. If your telephone is not an AT&T telephone, call the AT&T Secure Communications Products Customer Service Center to exchange or purchase the correct module. Different Handset Modules may be required for use of this device with other telephones.
	NOTE: If you did not specify the Handset Module on your purchase order, a type HM-1 Handset Module was included as the default Module. Any other handset type requires the exchange of the type HM-1 Module for the proper Handset Module.
3	Refer to Table 2-1 to cross-reference the correct Handset Module to your AT&T handset type.
4	Grasp the rear of the Handset Module, and turn it so that the arrow is on top and points forward. Refer to Figure 2-2.
5	CAUTION Improper Handset Module insertion can cause pin damage. Use caution when installing a module into the TSD.
	Carefully insert the Handset Module into the rear of the TSD until the module is completely engaged.

Installing the TSD

To install the TSD, follow the steps in Table 2-3. Also refer to Figures 2-3 and 2-4.

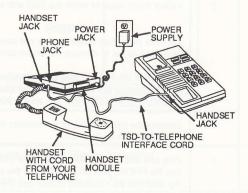


Figure 2-3 Equipment Installation

Table 2-3 TSD Installation Procedures

STEP	ACTION
1	Verify that the Handset Module is inserted, and place the TSD on a desk top or other suitable surface.
	NOTE: The device should not be exposed to heat (over 100° F) or cold (under 40° F) while in operation. It should be protected from water and extended exposure to sunlight.

E II all a transfer to the TOD with a tall all and
Follow these steps to install the TSD with a telephone.
CAUTION Exercise care when disconnecting and connecting
cables so as not to damage the connectors.
Disconnect the modular plug of the handset from the handset jack on the telephone. Do not disconnect the modular plug from the LINE jack on the telephone.
Connect the modular plug of the handset into the HANDSET jack on the TSD.
Plug one end of the TSD-to-Telephone Interface Cord into the PHONE jack on the TSD and the other end of the cord into the telephone (where you unplugged the handset).
Plug the Power Supply into the POWER jack on the rear of the TSD, and plug the Power Supply into an AC outlet. The TSD will run a self test.
When first plugged in, both the SECURE and CLEAR icons, as well as all segments of the 4-character hexadecimals, should be illuminated on the TSD display. They will remain illuminated until the unit has completed its self tests (approximately 3 seconds). The unit is ready to use when only the CLEAR icon is

Removing the TSD

To remove the TSD, follow the steps in Table 2-4.

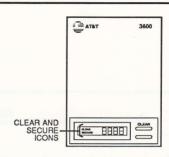


Figure 2-4 TSD Display Indicators

Table 2-4 TSD Removal Procedures

STEP	ACTION
1 alon	Unplug the Power Supply from the AC outlet, and disconnect the Power Supply cord from the POWER jack on the rear of the TSD.
2	Disconnect the TSD-to-Telephone Interface Cord from the handset jack on the telephone and the PHONE jack on the TSD.
3	Disconnect the modular plug of the handset from the HANDSET jack on the TSD, and connect it into the handset jack on the telephone.
4 (Optional)	Grasp the Handset Module, and pull it away from the TSD.
5	Place the TSD and its accessories in a safe location.



Introduction

This chapter provides operating instructions for the TSD. Please read all instructions carefully before you begin the operation.

Make all adjustments to the telephone before initiating the secure call. The secure call receive volume has been preset in the TSD. Attempts to adjust the receive volume in your telephone will not affect the secure call volume.

Take care not to interrupt a user while in an active secure call, causing the secure call to fail. An interruption can occur if:

- · The user attempts to use the speakerphone
- The user attempts to use the mute switch on the telephone
- The user attempts to adjust the receive volume on the telephone
- Another party picks up an extension on the line.

If the secure call does fail for any reason, both parties must acknowledge by pressing the CLEAR pushbutton before the clear conversation can proceed.

Operating the TSD

To operate the TSD, follow the steps in Table 3-1.

CAUTION

Both parties must have a TSD with the same security algorithm in order to access and communicate in the secure mode. The label on the back of the TSD identifies the model as either 3600-D or 3600-E. Additional models differing in encryption may be developed, as required.

NOTE: The TSD does not have to be disconnected in order to make a normal call.

Table 3-1 Operating Procedures

STEP	ACTION
a.1.a.r	To access secure mode, perform the following steps. Pick up the handset, and dial your party.
2	Inform your party that only one of you should initiate the secure mode. Agree on who will initiate the secure call.
	NOTE: Either party may initiate a secure call. Only initiate the secure mode using one TSD.

STEP	ACTION
3	Only one party presses the red pushbutton on the TSD to initiate the secure mode.
processing control of the control of	NOTE: After pressing the red pushbutton, the SECURE icon will blink, and voice communications will be blocked for approximately 10 seconds while secure communication is being established. The party not initiating the secure call will hear multiple tone signals.
4	After 10 seconds, observe that the SECURE icon and hexadecimal characters are displayed.
5	Ask your party for the hexadecimal characters on their TSD display.
isplay	NOTE: The equipment is operating in secure mode when the SECURE icon and the same hexadecimal characters are displayed on both TSDs. If the hexadecimal characters on both displays are not identical, press the CLEAR pushbutton on both units. Repeat steps 3 through 6. If the hexadecimal characters do not agree on the second try, there is a high probability that your line may be tapped, and the call is not secure.
6	If the call is secure, begin conversation.
	NOTE: If either you or your party receive an incoming call during secure communication, press CLEAR to return to normal operation.

STEP	ACTION
7	To switch back to the clear mode or to terminate secure communication, both parties must press CLEAR.
	Press the CLEAR pushbutton to resume non-secure communications. After both parties have pressed CLEAR, communication can resume in the clear mode You may then return to secure communication by performing steps 2 through 6, above.
	NOTE: If both parties do not press CLEAR and the call is not terminated, the call remains established, but voice will not be transmitted from either end. If PUSH is displayed on the TSD display and the CLEAR icon is blinking, the CLEAR pushbutton should be pressed on this unit. If the red pushbutton is pressed when PUSH is displayed, the TSD display will show a -XX-diagnostic code.

Maintenance and Troubleshooting

4

Maintenance

The only maintenance required by the TSD is periodic cleaning of the TSD display. To clean this area, use a clean, damp, lint-free cloth. Refer to Tables 4-1 and 4-2 for TSD Display Messages and Maintenance and Troubleshooting Procedures, respectively.

Display Messages

Table 4-1 provides a listing of the TSD display messages.

Table 4-1 TSD Display Messages

MESSAGE	DESCRIPTION	
PUSH	The CLEAR icon blinks, and this message appears on the TSD display when leaving the secure mode.	

MESSAGE	DESCRIPTION	
FAIL	The CLEAR icon blinks, and this message appears on the TSD display when the TSD self tests fail.	
A numeric code such as -XX-	Represents a diagnostic code for use by the AT&T Secure Communications Products Customer Service Center.	
out	Handset Module is not inserted correctly or is missing.	

Troubleshooting

The TSD has been designed to give years of troublefree operation. If a problem does develop, it can normally be resolved by pressing the CLEAR pushbutton and reinitiating the secure call. If either party has pressed CLEAR, the other party must press CLEAR to acknowledge that the call is no longer secure. If the problem cannot be cleared by checking all connections (including the Handset Module, handset and telephone cords, and power supply) and pressing the CLEAR pushbutton, you should call the AT&T Secure Communications Products Customer Service Center at 1-800-952-4082 or 1-919-279-7617. Refer to Table 4-2 for troubleshooting procedures.

Table 4-2 Troubleshooting Procedures

SYMPTOM/ DISPLAY MESSAGE	POSSIBLE CAUSES/ ACTION
Unable to communicate	Read TSD display message, and press the CLEAR pushbutton.
	Check all TSD connections.
Unable to communicate and call is secure	Wrong Handset Module inserted or Handset Module not inserted correctly. Refer to Table 2-1, and verify that the
Contra (terretra	correct Handset Modules are in use.
Volume high or low	Refer to Table 2-1, and verify that the correct Handset Modules are in use.
FAIL message on TSD display	Internal self test failure.
13D display	Press the red pushbutton, and record the 2-digit diagnostic code.
o spilminglish (III) Trip contar will	Call the AT&T Secure Communications Products Customer Service Center.
PUSH message on TSD display during attempt to go secure; CLEAR icon blinks (loss of voice)	Attempted to go secure with a non-TSD system. NOTE: The other party may hear tone signaling, and there will be loss of voice until the CLEAR pushbutton is pressed.
voice	Attempted to go secure with different TSD Models (-D or -E).
	Poor telephone line quality.
	Press the CLEAR pushbutton.

SYMPTOM/ DISPLAY MESSAGE	POSSIBLE CAUSES/ ACTION
PUSH message on TSD display while in secure mode:	CLEAR pushbutton pressed by other party.
CLEAR icon blinks (loss of voice)	Telephone call terminated prior to leaving secure mode.
	Telephone extension picked up.
	Attempt to change volume of handset or speakerphone activation.
	Significant signal degradation from the line connected to the network.
	MUTE switch pressed on telephone.
	Push CLEAR pushbutton.
A numeric code such as -XX-	Represents a diagnostic code which displays when the red pushbutton is pressed after PUSH or FAIL displays on the TSD.
Tengua diyarada SaT-nona diyarada Kumana diyarada	Press CLEAR pushbutton to return to normal operation.
Messages or problems not covered in this manual	Call the AT&T Secure Communications Products Customer Service Center.

Warranty Information



LIMITED WARRANTY TELEPHONE SECURITY DEVICE

AT&T warrants to the Customer that, for ONE YEAR from the date of purchase, the Telephone Security Device (hereinafter referred to as "TSD") will be free from defects in material and workmanship.

The initial warranty provided hereunder can be extended under the same terms and conditions as specified in this initial warranty at AT&T's then current price by issuing AT&T a check, money order, or acceptable purchase order. This option may be exercised no later than 30 days prior to the expiration of the initial ONE YEAR warranty. The current price of this option will be provided upon request. Additional information on this option is available through the AT&T Customer Service number.

AT&T Customer Service for the TSD is available from 8:00 a.m. to 8:00 p.m. Eastern Standard Time, Monday through Friday, for reporting problems with the TSDs. When not attended by Customer Service personnel, messages can be left on an answering machine. Inside the continental United States the number is 1-800-952-4082; outside the continental United States the number is 1-919-279-7617.

AT&T can provide on-line diagnostic service by qualified technicians at these numbers. Only the above numbers have the authority to instruct Customers to return TSDs to AT&T for warranty purposes.

When TSDs are returned to AT&T for repair pursuant to AT&T instruction and in accordance with packing and shipping directions provided by AT&T, Customer shall bear commercial transportation costs, risk of loss or damage to TSDs to AT&T's repair facility, and any applicable export, import, taxes, or other like costs.

Except as provided herein, within one working day from the date that AT&T receives a TSD which is expected to be covered under warranty, AT&T will mail a replacement TSD. AT&T shall not mail a replacement TSD within one day if a valid export license is required. In such cases, the replacement TSD will be shipped within one day of receipt of a valid export license.

If AT&T determines repairs to be outside the scope of the warranty, AT&T will notify the Customer and provide a not-to-exceed price for the necessary repairs. AT&T will make no repairs until an acceptable purchase order, check, or money order is received from the Customer to cover the necessary repairs. If AT&T does not receive such a check, money order, or purchase order within 30 days after the date of AT&T's letter notifying Customer of the out-of-warranty determination, Customer's original TSD shall be returned, and Customer shall be responsible for payment to AT&T for the replacement TSD (if one was erroneously furnished), all shipping charges, and, if payment is not made, all reasonable and necessary collection fees and costs.

Furthermore, Customer will receive their repaired TSD back upon payment for necessary repairs or, if a replacement TSD was erroneously furnished, the Customer will have title to the replacement TSD and AT&T will have title to Customer's original TSD when final payment is received by AT&T for repairs to Customer's original TSD.

Any replacement TSD provided by AT&T to Customer shall be covered by the balance of the warranty on Customer's original TSD.

LIMITATIONS AND EXCLUSIVITY OF WARRANTY

- (1) The warranty set forth herein does not extend to failures of TSDs to perform properly due to:
 - (i) misuse, neglect, accident, or abuse of TSDs:
 - (ii) use in other than a normal and customary manner;
 - (iii) improper installation, storing, or handling by other than AT&T;
 - (iv) unauthorized alterations or repairs;
 - (v) acts of God; or
 - (vi) improper use of peripheral devices.

The warranty specified herein does not extend to the security effectiveness of the TSD algorithms and processes.

AT&T MAKES NO WARRANTY THAT THE TSD WILL PREVENT CRYPTANALYTIC ATTACK ON ANY ENCRYPTED TRANSMISSION BY ANY GOVERNMENT AGENCY, ITS AGENTS, OR ANY THIRD PARTIES. FURTHERMORE, AT&T MAKES NO WARRANTY THAT THE TSD WILL PREVENT ANY ATTACK ON ANY COMMUNICATION BY METHODS WHICH BYPASS ENCRYPTION.

NOTWITHSTANDING ANY OTHER CONTRACTUAL PROVISIONS, THE ABOVE RIGHTS AND REMEDIES ARE EXCLUSIVE, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED FROM ANY OBLIGATION CONTAINED IN THIS WARRANTY. IN ADDITION, AT&T SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

Technical Specifications

B

This appendix provides the technical specifications for the TSD.

Information Protected

 Sensitive business and/or business proprietary

User Community

- · U.S. Corporations
- Multinational Corporations

Security Features

- Type 3
- · Negotiated key

- Legal and Financial Organizations
- High-tech
 Manufacturing Industries
- Display window for identification (4-digit anti-spoofing number)

Compliance with Standards

- FCC Part 15, Subpart J, Class B
- FCC Part 68

 Underwriters Laboratory (UL) 1459

Voice Modes

Clear voice

 Secure voice (4.8 Kbps full duplex Relaxed Code Excited Linear Prediction (RCELP)

Modem Features

- Near/far echo cancellation
- Frequency offset compensation

 4.8 Kbps: CCITT V.32 secure; full duplex

Interfaces

 Standard 110 VAC power supply · Two phone jacks

Physical Characteristics

- · 4.5"w x 1.3"h x 7.0"d
- Approximately 1.5 lbs.

Environmental Data

- Operating temperature range: 40° to 100° F
- Short term temperature range: 35° to 120° F
- Operating humidity:
 20% to 55%
- Short-term humidity: Minimum 20%, Maximum 80%

Power

- External power supply
 5 watts
- Input frequency 60 Hz
- Input power dissipation
 3 watts

FCC Rules, Part 15 and Part 68

C

Part 15

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential/business installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, can cause harmful interference to radio or television reception, which can be determined by turning the equipment Off and On. The user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

NOTICE

For United States installations and U.S. territories and possessions, this equipment must be used with the provided power supply. Changes or modifications not expressly approved by AT&T could void the user's authority to use the equipment.

For installations outside the United States, you may need to purchase a different power supply that is compatible with the available electrical wall outlet and approved by AT&T.

Part 68

This equipment complies with Part 68 of the FCC Rules. It is compatible with inductively coupled Hearing Aids. In cases where the telephone is leased/owned by another party, permission to connect the TDS to their telephone equipment must first be obtained.

Optional Accessories



The TSD is supplied with all cables necessary for operation with most voice/data terminal telephone. The following optional accessories are available for the TSD. Contact the AT&T Secure Communications Products Customer Service Center at 1-800-952-4082 or 1-919-279-7617 for pricing and ordering information.

- Soft Carrying Case
- Handset Modules for Other Handsets
- Power Supply for 220-V Operation
- Power Plug Adapters for International Use
- Acoustic Coupler for non-Detachable Handsets

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