Toshiba Strata DK24 Installation And Maintenance Manual

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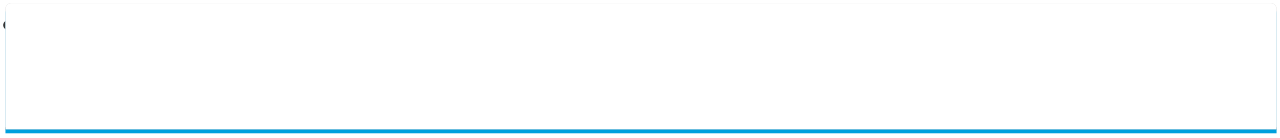

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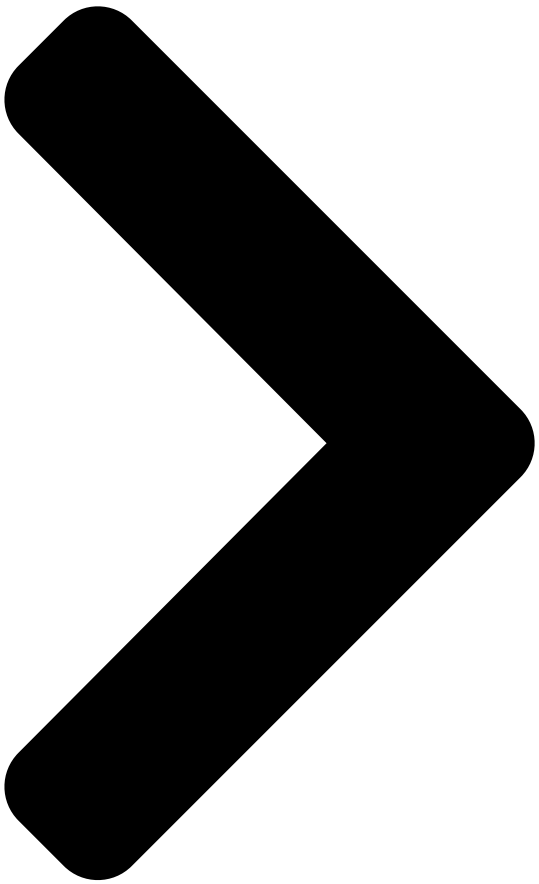

Digital Key Telephone Systems DK24, DK56, and DK96

INSTALLATION AND MAINTENANCE MANUAL

RELEASE 1, 2, 3, and 4

TOSHIBA AMERICA INFORMATION SYSTEMS, INC.
Telecommunication Systems Division

Strata® DK24/5

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Summary of Contents for Toshiba Strata DK24

Page 1 INSTALLATION AND MAINTENANCE MANUAL RELEASE 1, 2, 3, and 4 ©COPYRIGHT 1992 TOSHIBA AMERICA INFORMATION SYSTEMS, INC. Telecommunication Systems Division All rights reserved. No part of this manual, covered by the copyrights hereon, may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information retrieval systems—with the exception of the System Record forms, without written...

Page 3 INSTALLATION-INTRODUCTION TOSHIBA SYSTEM PRACTICES DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-201 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter One INTRODUCTION...

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Page 5 1.00 The purpose of this manual is to provide detailed step-by-step instructions for installing, 3.40 Fault Finding Procedures: Hardware trou- programming, and maintaining the STRATA DK24, bleshooting and diagnostic information presented DK56, and DK96 digital key systems. in flowchart form.

Page 6 DDCB (Release 4): Digital Door Phone/Lock Con- federal agency which regulates the telecommu- trol Unit—A peripheral hardware unit compat- nication industry. All Toshiba hardware is FCC ible with designated digital telephone circuits listed or approved. that supports optional door phones (MDFBs) and provides door lock control.

Page 7 OCA: Off-hook Call Announce. NOTE: The PDIU-DI and the PDIU-DI2 are identical, PBTC: A Toshiba-supplied cable used to connect customer-supplied batteries to any DK PPSU except that the PDIU-DI attaches to 1000- power supply for emergency reserve power. series Digital Telephones, while the PDIU- DI2 attaches to 2000-series Digital Tele- phones.

Page 8 PDKU1, except that the PDKU2 95) in system software. supports DIUs on all circuits (1~8). PPTC: A Toshiba-supplied adapter that is used to PEKU: Electronic Telephone Interface Unit—An connect the modular SMDR and/or maintenance optional printed circuit board (PCB) that pro-...

Page 9 INSTALLATION-INTRODUCTION SECTION 400-096-201 SEPTEMBER 1992 4.13 Cautions call attention to the possibility of equipment for damage. If equipment is missing or equipment being damaged if the instructions are damaged, contact your supplier immediately. not followed closely. 5.04 Be sure to retain original packaging materi- 4.14 Warnings are used when the given tasks als for reuse when storing or transporting system involved could cause the possibility of personal...

Page 11 TOSHIBA SYSTEM PRACTICES INSTALLATION-SYSTEM DESCRIPTION DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-202 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Two SYSTEM DESCRIPTION...

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Electronic Telephones .....2-19 8.20 Digital and Electronic Telephone Upgrade Options .....2-19 8.30 Direct Station Selection Consoles .....2-19 8.40 Toshiba-supplied Peripherals .....2-20 8.50 Customer-supplied Peripherals .....2-20 TABLE LIST TABLE TITLE PAGE TYPICAL RESERVE POWER FUNCTION ESTIMATES .....

Page 15: General

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 1 GENERAL 1.12 Hardware for all three system types is iden- tical, with the exception of the KSUs and power 1.00 This chapter provides an overview of the supplies. Differences between models are identi- technology employed in the STRATA DK system fied, as applicable.

Page 16: Stored Programming

2.21 System Operating Software. System oper- DK96 Height: 18.6 in. (475 mm) ating software is stored in Read Only Memory Width: 19.6 in. (500 mm) (ROM), and is revised only by Toshiba software Depth: 9.0 in. (229 mm) engineers. Weight: 55.1 lbs (25 kg) 2.22 Configuration and Custom Programming.

Page 17: Dk24 Ksu Interior

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 PPSU 24 -24V 1 -24V 2 CONNECTOR PCB SLOTS BATT POWER POWER -24V POWER PCTU SUPPLY FIGURE 2-2—DK24 KSU INTERIOR PPSU56 AC IN POWER +5V -5V DC OUT -24V -24V -24V BATT SG FG LG FG CONNECTOR POWER...

Page 18: Dk96 Ksu Interior

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 same vertical position on the KSU’s backplane. same vertical position on the KSU’s backplane. This standardization enables any of the optional This standardization enables any of the optional PCBs to be installed in any slot. The PCTU slot PCBs to be installed in any available slot.

Page 19: Reserve Power

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 VOLTAGE PPSU 24 CIRCUIT PPSU96 LEDs -24V 1 -24V 2 BREAKERS +5V 1 +5V 1 +5V 2 BATTERY CIRCUIT +5V 2 -24V 1 POWER BREAKERS CONNECTOR -24V 2 -24V 3 POWER -24V 4 SWITCH -24V 5 BATT DC OUT...

Page 20: Battery Charger

(5) Batteries used for this test are gel-cell, maintenance-free batteries. Reserve duration will vary depending on battery type and manufacturer. These figures should only be used as an estimate. 5 POWER FAILURE/EMERGENCY 4.12 A Toshiba-supplied, 9-foot battery cable, part TRANSFER UNIT (DPFT) number PBTC, supports the reserve battery instal- lation.

Page 21: Printed Circuit Board (Pcb) Descriptions

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 6 PRINTED CIRCUIT BOARD (PCB) DESCRIPTIONS 6.00 There have been 15 different types of PCBs TEL LINE CO LINE available for use in STRATA DK systems. A maxi- AMPHENOL mum of seven PCBs can be installed in DK24, nine CONNECTOR (J1) in DK56, and fifteen in DK96.

Page 22: Printed Circuit Boards

PCTU and is intended for sembly): The IMDU is an optional built-in mo- the STRATA DK24 only. Providing the Release dem that can be attached to the PIOU or PIOUS 2 software feature set, the PCTUS supports...

Page 23: Interface Pcb Options

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 TABLE 2-B COMMON CONTROL UNIT DATA Universal Station PCTU Clock Feature CO Line Conference Memory Memory PCB Slot Port Control Type Speed Capacity Capacity Capacity Capacity Capacity Capacity Board PCTU1 68000/16 bit 8 MHZ 256K 512K Release 1...

Page 24: System Functional Block Diagram

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 DKSU 24/56/96 PCOU 3 dB LINE 3 AND 4 LOOP START LINES 2-PAIR LOOP START MOD CORD 3 dB • FIC: 02LS2 LINE PCB • USOC: RJ14C (4 CIRCUITS) • REN: 0.2B 3 dB *2-PAIR LINE MODULAR...

Page 25: System Functional Block Diagram (Continued)

Except for the HESB, all external devices connected to the PCTU, PESU, PIOU, PIOUS, PEPU, PSTU, PEMU, and PCOU must be industry-standard and supplied CUSTOMER 12 VOLT 12 VOLT by the customer. All devices connected to the PDKU and PEKU are Toshiba SUPPLIED BATTERY BATTERY proprietary.

Page 26 (EOCU). (no load). In addition, the PSTU provides sup- PCOU (CO Line Unit): The PCOU provides the port for numerous Toshiba-supplied and cus- system with four loop-start CO lines and a tomer-supplied peripherals, including: standard, built-in Automatic Busy Redial (ABR) •...

Page 27 INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 peripherals function with high-ring voltage.) 7 SYSTEM CONTROLS AND INDICATORS PPSU96 +5V 1 7.00 System controls and indicators are located +5V 1 +5V 2 on the power supply and on various printed circuit +5V 2 POWER -24V 1 boards (PCBs).

Page 28: Location Of Pcb Controls And Indicators

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 MODULAR MODULAR HEAT JACK JACK SINK BAUD RATE VR1: 3-WATT BAUD BAUD AMPLIFIER RATE RATE VOLUME CONTROL VR1: 3-WATT AMPLIFIER VOLUME CONTROL 600 OHM PAGE DOOR LOCK/ AMP, MUTE NIGHT RELAY/ MOH CONTROL ALARM PIOU 50-PIN 50-PIN AMPHENOL AMPHENOL CONNECTOR...

Page 29: Dk24 Model Controls And Indicators

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 TABLE 2-D DK24 MODEL CONTROLS AND INDICATORS CONTROL/INDICATOR TYPE OF COMPONENT DESCRIPTION (Figure 2-11 Item No.) Power switch for application of AC Two-position rocker switch POWER Switch input power from wall socket to KSU power supply Cord for application of AC AC Power Cord...

Page 30: Dk56 Model Controls And Indicators

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 TABLE 2-E DK56 MODEL CONTROLS AND INDICATORS CONTROL/INDICATOR TYPE OF COMPONENT DESCRIPTION (Figure 2-12 Item No.) Power switch for application of AC ON/OFF Switch Two-position rocker switch input power from wall socket to KSU power supply Interface connector for application of AC IN Connector...

Page 31: F Dk96 Model Controls And Indicators

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 TABLE 2-F DK96 MODEL CONTROLS AND INDICATORS CONTROL/INDICATOR TYPE OF COMPONENT DESCRIPTION (Figure 2-13 Item No.) Power switch for application of AC ON/OFF Switch Two-position rocker switch input power from wall socket to KSU power supply Interface connector for application of 3-pin keyed male connector...

Page 32: Dk96 Model Controls And Indicators (Continued)

INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 TABLE 2-F DK96 MODEL CONTROLS AND INDICATORS (continued) CONTROL/INDICATOR TYPE OF COMPONENT DESCRIPTION (Figure 2-13 Item No.) Lights to indicate presence of +5VDC +5V Indicator Green LED (15) output from power supply (for KSU's lower PCB shelf backplane) Lights to indicate presence of -5VDC -5V Indicator...

Page 33 INSTALLATION-SYSTEM DESCRIPTION SECTION 400-096-202 SEPTEMBER 1992 digital telephones. 1. The PDIU-DI will function with all slots, except slots 11 ~ 14 in DK96. 2. PDKU1A Circuits 1 ~ 7 only can support 8.10 Electronic Telephones PDIU-DIs/PDIU-DI2s, while all PDKU2A circuits, 1 ~ 8, can support PDIU-DIs/ 8.11 Four 6500-series Electronic Telephones (the PDIU-DI2s.

Page 34 1. The DDCB is only available with Release 4. 8.41 This section describes each peripheral item 2. Each door lock that interfaces with a manufactured by Toshiba for use with the STRATA DDCB or HDCB reduces the door phone DK systems. Configuration and connection con- capacity of 12 by one.

Page 35: Site Requirements

INSTALLATION-SITE REQUIREMENTS TOSHIBA SYSTEM PRACTICES SECTION 400-096-203 DIGITAL KEY TELEPHONE SYSTEMS SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Three SITE REQUIREMENTS...

Page 36 INSTALLATION-SITE REQUIREMENTS SECTION 400-096-203 SEPTEMBER 1992 TABLE OF CONTENTS PARAGRAPH SUBJECT PAGE GENERAL .....INPUT POWER REQUIREMENTS ..... SITE CONSIDERATIONS .....3.00 Clearance and Location Requirements ..... 3.10 Electrical/Environmental Requirements and Characteristics ..... CABLE LENGTHS/NETWORK REQUIREMENTS .....GROUNDING REQUIREMENTS .....5.10 Third Wire Ground Test .....

Page 37 12-volt batteries) may be connected to the ies require a well-ventilated location close (within STRATA DK system to serve as a power failure nine feet) to the KSU. (The Toshiba- supplied bat- backup. tery cable, PBTC, is nine feet long.) 3 SITE CONSIDERATIONS 3.10 Electrical/Environmental Requirements...

Page 38 INSTALLATION-SITE REQUIREMENTS SECTION 400-096-203 SEPTEMBER 1992 TABLE 3-A SUMMARY OF ELECTRICAL/ENVIRONMENTAL CHARACTERISTICS GENERAL Primary Power Input AC 85VAC ~ 135VAC AC Frequency 50/60 Hz DK24 power supply 65 watts DK56 power supply 140 watts DK96 power supply 230 watts Environmental Specifications Operating Temperature 32 ~ 104°F (0 ~ 40°C) Operating Humidity...

Page 39 INSTALLATION-SITE REQUIREMENTS SECTION 400-096-203 SEPTEMBER 1992 4 CABLE LENGTHS/NETWORK water pipe or the building ground (Figure 3-3) to REQUIREMENTS further insure the presence of ground. 4.00 Tables 3-B and 3-C list station loop require- NOTES: ments and system network requirements, respec- 1.

Page 40 INSTALLATION-SITE REQUIREMENTS SECTION 400-096-203 SEPTEMBER 1992 TABLE 3-C NETWORK REQUIREMENTS TOSHIBA Facility Network Ringer Circuit Board Interface Code Jack Equivalence PCOU/PCOU2 02LS2 RJ14C 0.2B (Loop Start Line) PEMU (Type I, TIE Line) R2JEX 2-wire TL11M TL31M RJ2GX 4-wire PSTU/PESU (circuits 1 & 2)

Page 41 INSTALLATION-SITE REQUIREMENTS SECTION 400-096-203 SEPTEMBER 1992 CAUTION! 5.20 Frame Ground Test If a reading of zero volts is obtained on both voltage terminals (white wire to green 5.21 Use the following procedure to test the frame wire, black wire to green wire), the outlet is ground conductor for continuity.

Page 43: System Configuration

TOSHIBA SYSTEM PRACTICES INSTALLATION-CONFIGURATION DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-204 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Four SYSTEM CONFIGURATION...

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Page 45: Introduction

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 1 INTRODUCTION 1.03 Figure 4-1 shows that in most configurations, four CO lines can be traded for eight stations. 1.01 STRATA DK systems are flexible in their Conversely, for every eight stations that are given ability to meet a broad range of customer configu- up, four CO lines can be added.

Page 46: Common Control Pcbs

1. The station capacities apply to any combination of standard telephones, digital telephones (2000- and 1000-series) and 6500-series electronic telephones. Station capacities using other

Toshiba electronic telephones are given on Worksheet 7. 2. Installing a TIE line (PEMU) PCB or an peripheral interface (PIOU/PIOUS/PEPU) PCB reduces available CO lines by four or available station ports by eight.

Page 47 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-B SYSTEM CONTROL PCB (PCTU) CONFIGURATION INFORMATION PCTU1/PCTU2/ PCTUS1 Control Board Version PCTU3/PCTU4 System Compatibility DK24/56/96 DK24 only PCTU1-Release 1 PCTU2-Release 2 DK Feature Set Release 2 features PCTU3-Release 3 PCTU4-Release 4 6 max with DK24 6 max Universal PCB Slot Capacity 8 max with DK56...

Page 48: Options And Peripherals

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 used in any of the universal slots. (DK24 has six One PESU PCB universal slots, DK56 has eight, and DK96 has 14.) One CRCU subassembly • Table 4-C shows all the PCBs which can be in- Each of these PCBs, except for the CRCU, stalled in universal slots and the maximum quantity requires one universal slot.

Page 49 PEPU NOTES: 1. The appropriate capacities apply to digital and 6500-series electronic telephones only. If other Toshiba electronic telephones (2000-, 3000-, 6000-) are used, refer to Worksheet 7. 2. The number of digital telephones with PDIU-DIs is limited by the system’s power capacity per Worksheet 7. Also, DIUs are limited to slots 01 ~ 10 in DK96 and cannot be connected to Circuit 8 of a PDKU1 but can be connected to Circuit 1 of 8 of the PDKU2.

Page 50 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-D OPTION INTERFACE PCB INFORMATION Interface Option PIOU PIOUS PEPU Unamplified Page Output (Single zone, 600 ohms duplex) Amplified Page Output (Single zone, 3 watts, 8 ohms) Zone Page Interface (Unamplified, 4 zones) Night Transfer or Music-on-Hold Control Relay Door Lock or External Amplifier Control Relay...

Page 51: Data Interface Units

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 can be employed as the paging amplifier. tem can support a maximum number of PDIU- Since each HDSS console requires the DI(2)s, as shown in Table 4-B. The PDIU-DI(2) equivalent of two electronic telephones for which is attached to the digital telephone shares interface, a total of 17 equivalent electronic the same digital circuit on the PDKU.

Page 52: Door Phones

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 well as all versions of the PCTU, connects to this configuration, which can be supported electronic circuits associated with four ports. For by the DK24. system configuration, each DDCB and HDCB must be considered equivalent to a telephone as far as Example 7—Two tenants in one building require, consuming station capacity.

Page 53: Data And Modems With Release 1 Or

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 • The OCA upgrade for the electronic telephone is cuit. Both HDSS consoles require two elec- the HVSU2, which installs inside the base of the tronic telephone circuits. Therefore, includ- telephone. (The combined HVSU and HVSI sub- ing the 37 electronic telephone circuits re- assemblies can also provide electronic telephones quired for the electronic telephones, the con-...

Page 54: System Ports

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 DPFT power failure transfer unit, used to connect phone busy fields will be meaningful only if the last CO lines to standard telephones in the event of a two digits of the intercom number are consecutive, power outage;...

Page 55 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-E OPTIONAL ADD-ON UNIT CONFIGURATION Option Unit Interface/ PCB Capacity Function 4/system (PCTU4) DDCB (Digital PDKU Each DDCB provides interface for up to three door door phone/ (circuit 5) phones (MDFBs) or two MDFBs and one door lock. lock control) 4/system (PCTU1, 2, 3, Each HDCB provides interface for up to three door...

Page 56 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-F OPTIONAL SUBASSEMBLY PCB CONFIGURATION Subassembly Main PCB (Mount) Capacity Function EOCU PEKU or PESU One for each PEKU or Provides Off-hook Call PESU that supports OCA Announce path for all electronic telephone circuits of main PCB CRCU (4 or 8 PCTU (1, 2, 3, or 4) or One per PCTU or...

Page 57: Configuration Guide, Worksheet 1

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 1 Customer: Location: Complete Worksheet 1 before proceeding with other worksheets. (A1) DDSS A1. DDSS consoles required (refer to DDSS in Table 4-E): (A2) DDCB A2. Digital door phone/lock units required (refer to DDCB in Table 4-E): A3.

Page 58 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 WORKSHEET 1 (continued) C2. Number of auxiliary devices/ports, i.e., voice mail ports, auto attendant ports, fax machines, modems , separate BGM source (refer to PSTU and PESU in Table 4-C): (C2) Auxiliary devices D. Number of CO lines required (refer to PCOU in Table 4-C): (D) CO lines E.

Page 59 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 2 (PDKU/PEKU PCB requirements) Customer: Location: A. PDKU PCBs (eight station ports) 1. Determine the total PDKU ports required using Chart 1A. CHART 1A—PDKU PORT REQUIREMENTS Equipment (Ports/ Equipment Type: Ports Used Quantity per) DDSS consoles:...

Page 60: Configuration Guide, Worksheet 2

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 2 (continued) (PDKU/PEKU PCB requirements) Customer: Location: B. PEKU PCBs (eight station ports) 1. Determine the total PEKU ports required using Chart 1. CHART 1—PEKU PORT REQUIREMENTS Equipment (Ports/ Equipment Type: Ports Used Quantity per) HDSS consoles:...

Page 61 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 3 (PSTU/PESU PCB requirements) C. PSTU PCBs (eight station ports) 1. Determine the total PSTU ports required using Chart 3. CHART 3—PSTU PORT REQUIREMENTS Equipment Equipment Type: Ports Ports Used Quantity Standard telephones: (C1) (see Worksheet 1, C1) Other devices:...

Page 62: Configuration Guide, Worksheet 3

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 4 (PCOU/PEMU requirements) D. PCOU PCBs (four CO lines) 1. Enter the number of CO lines required from Paragraph D of Worksheet 1. CO lines 2. Determine the number of PCOU PCBs using Chart 5. CHART 5—ACTUAL PCOU PCB REQUIREMENTS Lines 01 ~ 04 05 ~ 08 09 ~ 12 13 ~ 16 17 ~ 20 21 ~ 24 25 ~ 28 29 ~ 32 33 ~ 36...

Page 63: Configuration Guide, Worksheet 4

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 5 F. System and Slot Check 1. Add total PCB/slot requirements (from Worksheets 2 ~ 4): AT + BT + CT1 + CT2 + DT + ET + FT = PCB/slot total. IMPORTANT NOTE! One or two additional slots should always be considered for future growth.

Page 64: Configuration Guide, Worksheet 5

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 6 (Miscellaneous Option Requirements) G. CRCU PCB (refer to Table 4-F): A CRCU (-4 or -8) must be installed on the PCTUS1, PCTU1, PCTU2, PCTU3, or PCTU4 PCB if the customer has TIE lines, DISA CO lines, or is using standard telephones or voice mail-type devices connected to PSTU or PESU standard telephone ports.

Page 65: Configuration Guide, Worksheet 6

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 6 (Continued) N. HESC-65A (refer to Table 4-F): One HESC-65A modular connecting cable is required to connect the HESB to the HHEU in each digital telephone and 6500-series electronic telephone requiring the Loud Ringing Bell option. Actual HESC-65As O.

Page 66: Configuration Guide, Worksheet 7

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 7 (System Power Check) Total Power Used: Equipment Power Used Equipment Type: Ports Used Quantity (Factor) 2000- and 1000-series digital telephone (1.0) 2000-series electronic telephone (2.0) 3000-series electronic telephone (2.5) 6000-series electronic telephone (2.0) 6005-series electronic telephone (2.0)

Page 67: System Hardware Configuration

INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 3.00 To use a methodical step-by-step procedure to order shown below) the type of PCB that should be configure a system, a configuration guide consisting of installed in each slot. • seven worksheets is provided in this chapter. PCTU: Assign the PCTU to the PCTU slot, Slot 00.

Page 68 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 the appropriate slot. A special PCB code is of the Program 03 record sheet. Use the sequen- required for PCBs that support this option. An tial order shown below: • EOCU (OCA) will not function in Slots 11 ~ 14 on PCTU (1, 2, 3, 4, or S): Assign the appropriate DK96 and slots 05 and 06 on DK24 with PCTUS.

Page 69: Door Phone Hardware Configuration Notes

PCTU (1, 2, 3, or 4)-controlled DK24, 24 combination of both) are allowed for systems stations will be available, because of power operating with the PCTU (1, 2, 3, and 4) and supply capacity. three for STRATA DK24 systems with a PCTUS. 4-25...

Page 70: Data Interface Unit (Diu) Configuration Notes

A maximum of four DSS consoles are allowed Notes per systems with a PCTU (1, 2, 3, or 4) and three • for STRATA DK24 systems with a PCTUS. The Integrated Data Interface Unit (PDIU-DI or • There are two types of DSS consoles, the digital...

Page 71 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 DK 96 (Top Shelf) SLOT NO. PCB CODE PDKU PDKU PDKU PDKU PEKU PSTU PCOU PCB TYPE PDKU DDSS3/ DSS1/ATT1 PDIU-DI ATT3 DSS2/ATT2 OPTIONS DDCB 04 PDIU-DI (1-3) DDCB 12 (1-6) 08 - 15 16 - 23 24 - 31 32 - 39 40 - 47...

Page 73 TOSHIBA SYSTEM PRACTICES INSTALLATION-KSU DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-205 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Five KSU INSTALLATION...

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Page 75 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 1 INTRODUCTION 1.03 Figure 4-1 shows that in most configurations, four CO lines can be traded for eight stations. 1.01 STRATA DK systems are flexible in their Conversely, for every eight stations that are given ability to meet a broad range of customer configu- up, four CO lines can be added.

Page 76 1. The station capacities apply to any combination of standard telephones, digital telephones (2000- and 1000-series) and 6500-series electronic telephones. Station capacities using other Toshiba electronic telephones are given on Worksheet 7. 2. Installing a TIE line (PEMU) PCB or an peripheral interface (PIOU/PIOUS/PEPU) PCB reduces available CO lines by four or available station ports by eight.

Page 77 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-B SYSTEM CONTROL PCB (PCTU) CONFIGURATION INFORMATION PCTU1/PCTU2/ PCTUS1 Control Board Version PCTU3/PCTU4 System Compatibility DK24/56/96 DK24 only PCTU1-Release 1 PCTU2-Release 2 DK Feature Set Release 2 features PCTU3-Release 3 PCTU4-Release 4 6 max with DK24 6 max Universal PCB Slot Capacity 8 max with DK56...

Page 78 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 used in any

of the universal slots. (DK24 has six One PESU PCB universal slots, DK56 has eight, and DK96 has 14.) One CRCU subassembly • Table 4-C shows all the PCBs which can be in- Each of these PCBs, except for the CRCU, stalled in universal slots and the maximum quantity requires one universal slot.

Page 79 PEPU NOTES: 1. The appropriate capacities apply to digital and 6500-series electronic telephones only. If other Toshiba electronic telephones (2000-, 3000-, 6000-) are used, refer to Worksheet 7. 2. The number of digital telephones with PDIU-DIs is limited by the system's power capacity per Worksheet 7. Also, DIUs are limited to slots 01 ~ 10 in DK96 and cannot be connected to Circuit 8 of a PDKU1 but can be connected to Circuit 1 of 8 of the PDKU2.

Page 80 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-D OPTION INTERFACE PCB INFORMATION Interface Option PIOU PIOUS PEPU Unamplified Page Output (Single zone, 600 ohms duplex) Amplified Page Output (Single zone, 3 watts, 8 ohms) Zone Page Interface (Unamplified, 4 zones) Night Transfer or Music-on-Hold Control Relay Door Lock or External Amplifier Control Relay...

Page 81 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 can be employed as the paging amplifier. tem can support a maximum number of PDIU- Since each HDSS console requires the DI(2)s, as shown in Table 4-B. The PDIU-DI(2) equivalent of two electronic telephones for which is attached to the digital telephone shares interface, a total of 17 equivalent electronic the same digital circuit on the PDKU.

Page 82 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 well as all versions of the PCTU, connects to this configuration, which can be supported electronic circuits associated with four ports. For by the DK24. system configuration, each DDCB and HDCB must be considered equivalent to a telephone as far as Example 7—Two tenants in one building require, consuming station capacity.

Page 83 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 • The OCA upgrade for the electronic telephone is cuit. Both HDSS consoles require two elec- the HVSU2, which installs inside the base of the tronic telephone circuits. Therefore, includ- telephone. (The combined HVSU and HVSI sub- ing the 37 electronic telephone circuits re- assemblies can also provide electronic telephones quired for the electronic telephones, the con-...

Page 84 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 DPFT power failure transfer unit, used to connect phone busy fields will be meaningful only if the last CO lines to standard telephones in the event of a two digits of the intercom number are consecutive, power outage;...

Page 85 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-E OPTIONAL ADD-ON UNIT CONFIGURATION Option Unit Interface/ PCB Capacity Function 4/system (PCTU4) DDCB (Digital PDKU Each DDCB provides interface for up to three door door phone/ (circuit 5) phones (MDFBs) or two MDFBs and one door lock. lock control) 4/system (PCTU1, 2, 3, Each HDCB provides interface for up to three door...

Page 86 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 TABLE 4-F OPTIONAL SUBASSEMBLY PCB CONFIGURATION Subassembly Main PCB (Mount) Capacity Function EOCU PEKU or PESU One for each PEKU or Provides Off-hook Call PESU that supports OCA Announce path for all electronic telephone circuits of main PCB CRCU (4 or 8 PCTU (1, 2, 3, or 4) or One per PCTU or...

Page 87 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 1 Customer: Location: Complete Worksheet 1 before proceeding with other worksheets. (A1) DDSS A1. DDSS consoles required (refer to DDSS in Table 4-E): (A2) DDCB A2. Digital door phone/lock units required (refer to DDCB in Table 4-E): A3.

Page 88 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 WORKSHEET 1 (continued) C2. Number of auxiliary devices/ports, i.e., voice mail ports, auto attendant ports, fax machines, modems , separate BGM source (refer to PSTU and PESU in Table 4-C): (C2) Auxiliary devices D. Number of CO lines required (refer to PCOU in Table 4-C): (D) CO lines E.

Page 89 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 2 (PDKU/PEKU PCB requirements) Customer: Location: A. PDKU PCBs (eight station ports) 1. Determine the total PDKU ports required using Chart 1A. CHART 1A—PDKU PORT REQUIREMENTS Equipment (Ports/ Equipment Type: Ports Used Quantity per) DDSS consoles:...

Page 90 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 2 (continued) (PDKU/PEKU PCB requirements) Customer: Location: B. PEKU PCBs (eight station ports) 1. Determine the total PEKU ports required using Chart 1. CHART 1—PEKU PORT REQUIREMENTS Equipment (Ports/ Equipment Type: Ports Used Quantity per) HDSS consoles:...

Page 91 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 3 (PSTU/PESU PCB requirements) C. PSTU PCBs (eight station ports) 1. Determine the total PSTU ports required using Chart 3. CHART 3—PSTU PORT REQUIREMENTS Equipment Equipment Type: Ports Ports Used Quantity Standard telephones: (C1) (see Worksheet 1, C1) Other devices:...

Page 92 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 4 (PCOU/PEMU requirements) D. PCOU PCBs (four CO lines) 1. Enter the number of CO lines required from Paragraph D of Worksheet 1. CO lines 2. Determine the number of PCOU PCBs using Chart 5. CHART 5—ACTUAL PCOU PCB REQUIREMENTS Lines 01 ~ 04 05 ~ 08 09 ~ 12 13 ~ 16 17 ~ 20 21 ~ 24 25 ~ 28 29 ~ 32 33 ~ 36...

Page 93 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 5 F. System and Slot Check 1. Add total PCB/slot requirements (from Worksheets 2 ~ 4): AT + BT + CT1 + CT2 + DT + ET + FT = PCB/slot total. IMPORTANT NOTE! One or two additional slots should always be considered for future growth.

Page 94 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 6 (Miscellaneous Option Requirements) G. CRCU PCB (refer to Table 4-F): A CRCU (-4 or -8) must be installed on the PCTUS1, PCTU1, PCTU2, PCTU3, or PCTU4 PCB if the customer has TIE lines, DISA CO lines, or is using standard telephones or voice mail-type devices connected to PSTU or PESU standard telephone ports.

Page 95 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 6 (Continued) N. HESC-65A (refer to Table 4-F): One HESC-65A modular connecting cable is required to connect the HESB to the HHEU in each digital telephone and 6500-series electronic telephone requiring the Loud Ringing Bell option. Actual HESC-65As O.

Page 96 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 CONFIGURATION GUIDE, WORKSHEET 7 (System Power Check) Total Power Used: Equipment Power Used Equipment Type: Ports Used Quantity (Factor) 2000- and 1000-series digital telephone (1.0) 2000-series electronic telephone (2.0) 3000-series electronic telephone (2.5) 6000-series electronic telephone (2.0) 6005-series electronic telephone (2.0)

Page 97 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 3.00 To use a methodical step-by-step procedure to order shown below) the type of PCB that should be configure a system, a configuration guide consisting of installed in each slot. • seven worksheets is provided in this chapter. PCTU: Assign the PCTU to the PCTU slot, Slot 00.

Page 98 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 the appropriate slot. A special PCB code is of the Program 03 record sheet. Use the sequen- required for PCBs that support this option. An tial order shown below: • EOCU (OCA) will not function in Slots 11 ~ 14 on PCTU (1, 2, 3, 4, or S): Assign the appropriate DK96 and slots 05 and 06 on DK24 with PCTUS.

Page 99 PCTU (1, 2, 3, or 4)-controlled DK24, 24 combination of both) are allowed for systems stations will be available, because of power operating with the PCTU (1, 2, 3, and 4) and supply capacity. three for STRATA DK24 systems with a PCTUS. 4-25...

Page 100 A maximum of four DSS consoles are allowed Notes per systems with a PCTU (1, 2, 3, or 4) and three • for STRATA DK24 systems with a PCTUS. The Integrated Data Interface Unit

(PDIU-DI or • There are two types of DSS consoles, the digital...

Page 101 INSTALLATION-CONFIGURATION SECTION 400-096-204 SEPTEMBER 1992 DK 96 (Top Shelf) SLOT NO. PCB CODE PDKU PDKU PDKU PDKU PEKU PSTU PCOU PCB TYPE PDKU DDSS3/ DSS1/ATT1 PDIU-DI ATT3 DSS2/ATT2 OPTIONS DDCB 04 PDIU-DI (1-3) DDCB 12 (1-6) 08 - 15 16 - 23 24 - 31 32 - 39 40 - 47...

Page 103 TOSHIBA SYSTEM PRACTICES INSTALLATION-KSU DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-205 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Five KSU INSTALLATION...

Page 104 INSTALLATION-KSU SECTION 400-096-205 SEPTEMBER 1992 TABLE OF CONTENTS PARAGRAPH SUBJECT PAGE GENERAL ..... KSU INSTALLATION.....2.10 Wall Mounting ..... 2.20 Tabletop Mounting .....2.30 KSU AC Power and Ground ..... POWER SUPPLY TEST PROCEDURE .....POWER SUPPLY REMOVAL AND REPLACEMENT .....4.10 Power Supply Removal .....

Page 105: General

INSTALLATION-KSU SECTION 400-096-205 SEPTEMBER 1992 1 GENERAL 1.00 This chapter provides the procedures neces- 15.9 in. (DK96) sary to install the DK key service units (KSUs). 12.4 in. (DK56) Included in the chapter are mounting consider- 12.6 in. (DK24) ations, grounding instructions, and instructions to test the power supply.

Page 106: Power Supply Test Procedure

INSTALLATION-KSU SECTION 400-096-205 SEPTEMBER 1992 STUD PLASTER PLASTER BOARD BOARD HARD BOARD FIGURE 5-2 KSU WALL MOUNTING NOTE: 2) Lightly press all power supply circuit breakers to ensure they have not accidentally opened The AC power must be dedicated to the KSU. during shipment.

Page 107: Power Supply Removal And Replacement

INSTALLATION-KSU SECTION 400-096-205 SEPTEMBER 1992 4) Using a multimeter (set to the appropriate range), 1) Loosen the four screws holding the panel on measure the voltages at the pins of the DC OUT the back of the KSU. connector for DK56/DK96 or the P1 backplane 2) Lift the panel up and pull it off of the KSU.

Page 108: Power Supply Replacement

INSTALLATION-KSU SECTION 400-096-205 SEPTEMBER 1992 PPSU56 PPSU96 DC OUT PPSU56 AC IN POWER +5V -5V PPSU96 +5V 1 -24V 1 -24V 2 -24V 3 DC OUT +5V 1 +5V 2 +5V 2 SG FG LG FG BATT -24V 1 POWER -24V 2 DC OUT -24V 3...

Page 109: Circuit Breaker Distribution

INSTALLATION-KSU SECTION 400-096-205 SEPTEMBER 1992 4.22 DK56/96. Refer to Figure 5-4 or 5-5, and replace the power supply in accordance with the following steps: 1) Slide the new power supply into the opening in the KSU. 2) Align the mounting screw holes on the power supply’s front panel with the holes in the KSU's power supply mounting bracket.

Page 111 TOSHIBA SYSTEM PRACTICES INSTALLATION-PCB DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-206 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Six PRINTED CIRCUIT BOARD INSTALLATION IMPORTANT! It is strongly advisable to install PCBs in the positions and the manner specified in Paragraphs 2.10 and 2.20.

Page 112 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 IMPORTANT INITIAL INSTALLATION NOTES: These minimum installation steps must be carried out for proper system operation. 1. Set PCTU or PCTUS jumper plug for BATTERY OPERATION; otherwise, all programmed customer data will be lost on power down. 2.

Page 113 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE OF CONTENTS PARAGRAPH SUBJECT PAGE GENERAL ..... 6-1 PCB INSTALLATION OVERVIEW .....6-1 2.10 PCB Installation Considerations .....6-1 2.20 Recommended Universal PCB Slot Assignments .....6-1 2.30 Station and Line Expansion ..... 6-1 2.40 PCB Option Considerations .....

Page 114 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE OF CONTENTS (continued) PARAGRAPH SUBJECT PAGE 9.20 PEMU Installation Procedures .....6-19 9.30 PEMU Wiring .....6-20 9.40 PEMU Programming Overview .....6-20 OPTION INTERFACE UNIT (PIOU and PIOUS) ..... 6-22 10.00 General ..... 6-22 10.10 PIOU and PIOUS Hardware Options.....

Page 115: General

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 1 GENERAL This order is the same for all systems. 1.01 This chapter provides procedures for the in- 1) Install all PDKU or PEKU PCBs, from left to stallation of STRATA DK system printed circuit right, starting with Slot 01.

Page 116: Pcb Option Considerations

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 3 COMMON CONTROL UNIT button LCD telephone to Port 05. It is sug- (PCTU1, PCTU2, PCTU3, PCTU4, PCTUS) gested that a live telephone not be connected to Port 05 to avoid accidentally entering the programming mode. 3.00 General 2.40 PCB Option Considerations 3.01 The Common Control Unit (PCTU) PCB pro-...

Page 117 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 HEARTBEAT LED BATT P7, shown in OFF position X = A for PCTU1 and 2 X = M for PCTU3 PCTU X = P for PCTU4 (1, 2, 3, 4) LITHIUM IC9 and IC10 BATTERY are not used VERSION on PCTU4...

Page 118 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-A PCTU AND PCTUS1 CONTROLS, INDICATORS, AND INTERFACE CONNECTORS CONTROL/INDICATOR/ CONNECTOR TYPE OF COMPONENT DESCRIPTION (Figures 6-1 & 6-2) PCTU ON/OFF Enables PCTU (1 & 2 only) PCB for 3-terminal jumper plug Jumper P1 operation.

Page 119: Pctu Installation Procedures

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 CRCU (-4 or -8) All PCTU Types (2 each — PCTU4) (4 each — PCTU 1, 2, 3, and S1) Located under CRCU FIGURE 6-3 DTMF RECEIVER UNIT (CRCU) INSTALLATION 3) Apply firm, even pressure to CRCU to ensure NOTE: proper mating of connectors.

Page 120: Pctu Wiring

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 4 DIGITAL TELEPHONE INTERFACE 6) After installing the PCTU, gently pull the PCB UNIT (PDKU, 1 & 2) outward. If the connectors are properly mated, a slight resistance will be felt. 4.00 General NOTES: 1. Do not adjust trimmer capacitor C4. The 4.01 The Digital Telephone Interface Unit (PDKU), capacitor is factory-calibrated.

Page 121: Pdku Wiring

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 50-PIN AMPHENOL CONNECTOR (FEMALE) BACKPLANE CONNECTOR FIGURE 6-4 PDKU INTERFACE CONNECTORS 2) Insert the PDKU into the appropriate slot, and Program 03 • apply firm, even pressure to ensure proper Specify Code 61 to indicate a station line PDKU •...

Page 122: Electronic Telephone Interface Unit (Peku)

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 5 ELECTRONIC TELEPHONE INTERFACE 96. If using an electronic telephone series other UNIT (PEKU) than, or mixed with, the 6500-series, see Section 400-096-204, Worksheet 7. 5.00 General 5.03 The PEKU can be configured for Off-hook Call Announce (to receive OCA calls) by installing 5.01 The Electronic Telephone Interface Unit an EOCU.

Page 123 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-B PEKU CONTROLS AND INTERFACE CONNECTORS CONTROL/INDICATOR/ TYPE OF COMPONENT DESCRIPTION CONNECTOR (Figure 6-4) Interface connector for optional Off-hook Off-hook Call Call Announce subassembly 10-pin connector Announce P10 connector (used in conjunction with P20, P40, P50, and P60).

Page 124 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 2) Set the SW1 DSS/EKT switch to DSS. 3) Refer to Telephone Installation, Section 400- 096-207, for installation procedures for the HDSS console. Each HDSS console requires dedicated use of Circuits 7 and 8

of a particu- lar PEKU PCB.

Page 125: Peku Installation Procedures

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 • digital and electronic telephone speakers and/ Specify Code 22 to indicate a PEKU configured or PIOU, PIOUS, PEPU PCBs. For Release 3 for OCA. • and 4 use Program 19 to identify BGM slot Specify Code 23 to indicate a PEKU configured number.

Page 126: Pstu Installation Procedures

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 W1 Ring Voltage 50-PIN AMPHENOL CONNECTOR (FEMALE) H = 190V P-P L = 130V P-P (For PSTU (and PSTU2 only) SSTU SUBUNIT BACKPLANE CONNECTOR FIGURE 6-7 PSTU AND SUBUNIT (SSTU) PSTU1 (V.4) became available in November are identical except for the ring generator.

Page 127: Pstu Wiring

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 voice mail or auto attendant devices (see Voice 6.21 Install the PSTU in accordance with the fol- Mail Installation, Section 400-096-208, for more lowing steps: details). 1) Remove the PCB from its protective packag- 7 STANDARD/ELECTRONIC TELEPHONE ing.

Page 128

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 CUT W7 ONLY IF BGM IS CONNECTED TO PORT 07, CIRCUIT 8, (SLOT 01 WITH PCTU2 AND PCTUS1) OPTIONAL EOCU, EQUIP FOR OCA FEATURE 50-PIN AMPHENOL CONNECTOR (FEMALE) CUT W9 FOR DOOR PHONE OPTION (HDCB ON CIRCUIT 5) ESTS BACKPLANE...

Page 129

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-D PESU CONTROLS AND INTERFACE CONNECTORS CONTROL/INDICATOR/ TYPE OF COMPONENT DESCRIPTION CONNECTOR (Figure 6-7) Interface connector for optional Off-hook Off-hook Call Call Announce subassembly 10-pin connector Announce P10 connector (used in conjunction with P20, P40, P50, and P60).

Page 130: Pesu Installation Procedures

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 connection. NOTE: PESU connectors P10, P20, P40, P50, and NOTE: P60 are positioned to allow installation of the With PCTU2 or PCTUS, the PESU must be EOCU only in the proper position (Figure 6-8). installed in Slot 01 to support BGM. With PCTU3 and PCTU4, it can be in any slot.

Page 131: Co Line Unit (Pcou, 1 & 2)

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 • Specify Code 26 for all slots that have PESUs 8.00 General equipped with an EOCU. 8.01 Each CO Line Unit (PCOU) PCB adds four NOTE: CO lines to the system. The PCOU provides Ring A special code is not required to connect an Detection, Dial Outpulsing, and Hold, as well as HDCB, BGM source, or other two-wire de-...

Page 132: Pcou Installation Procedures

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-E PCOU CONTROLS, INDICATORS, AND INTERFACE CONNECTORS CONTROL/INDICATOR/ CONNECTOR TYPE OF COMPONENT DESCRIPTION (Figure 6-8) Lights to indicate CO line circuit 1 is in CO Line Circuit 1 operation (NOTE: CO line indicator will Red LED Indicator CD112 not light unless PCOU is connected to...

Page 133: Pcou Wiring

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 • NOTE: Use to assign special ringing of CO lines: Night Ring Over Page, DISA, and internal mainte- Ensure the PCOU’s component side is facing nance modem (IMDU). right when installing it in the KSU. Programs 81 ~ 89 •...

Page 134: Pemu Wiring

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 lowing steps: crossed). 1) Remove the PCB from its protective packag- 5) Insert the PEMU into the appropriate slot ing. (refer to Paragraph 2.20), and apply firm, even pressure to ensure proper mating of 2) Determine if the E & M TIE lines will be connectors.

Page 135 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-F PEMU CONTROLS, INDICATORS, AND INTERFACE CONNECTORS CONTROL/INDICATOR/ CONNECTOR TYPE OF COMPONENT DESCRIPTION (Figure 6-9) TIE Line Circuit 1 Red LED Lights to indicate TIE line 1 is in operation. Indicator CD102 TIE Line Circuit 2 Red LED Lights to indicate TIE line 2 is in operation.

Page 136: Option Interface Unit (Piou And Pious)

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-F PEMU CONTROLS, INDICATORS, AND INTERFACE CONNECTORS (continued) CONTROL/INDICATOR TYPE OF COMPONENT DESCRIPTION (Figure 6-9) M-lead origination for TIE line 4 (must GND/BAT Jumper Three-terminal jumper P402 be in BAT position per FCC requirements). 2W/4W Jumper Selects 2- or 4-wire configuration Three-terminal jumper...

Page 137 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 Refer to Section 200-096-208 for external 5) Mate IMDU connectors J1, J2, and J3 with option installation procedures. PIOU or PIOUS connectors P1, P2, and P3 (refer to Figure 6-13). 10.12 Remote Maintenance Modem Unit (IMDU) Installation.

Page 138 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-G PIOU CONTROLS AND INTERFACE CONNECTORS CONTROL/INDICATOR/ CONNECTOR TYPE OF COMPONENT DESCRIPTION (Figure 6-10) Interface connector for SMDR printer/ SMDR/TTY Interface Dual modular connector call accounting device and Connector J3 maintenance terminal/modem. Interface connector for Remote IMDU Connector P1 10-pin connector Maintenance Modem piggy-back module.

Page 139: Piou And Pious Wiring

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 W4 NOT FACTORY INSTALLED FOR BELL MODEM SPECIFICATION CCITT W4 NORMAL OPEN SMDR BELL NORMAL CLOSED IMDU MAKE OPTIONAL IMDU PCB BREAK REMOTE MAINTENANCE MAKE MODEM BREAK BACKPLANE CONNECTOR TERMINAL STRIP PIOUS FIGURE 6-12 PIOUS PCB SWITCH/JUMPER, OPTION LOCATION ured for the appropriate hardware options Section 400-096-208, and Wiring Diagrams, Sec- (refer to Paragraph 10.10 and Section 400-...

Page 140: External Page Interface Unit (Pepu)

INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-H PIOUS CONTROLS AND INTERFACE CONNECTORS CONTROL/INDICATOR/ CONNECTOR TYPE OF COMPONENT DESCRIPTION (Figure 6-11) Interface connector for SMDR printer/ SMDR/TTY Interface Dual modular connector call accounting device and Connector J3 maintenance terminal/modem. Interface connector for Remote IMDU Connector P1 10-pin connector Maintenance Modem piggy-back module.

Page 141 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 NOTE: Refer to Peripheral Equipment Installation, Section 400-096-208, and Wiring Diagrams, Section 400-096-209, for installation of exter- nal options. 11.12 PEPU does not support the following PIOU and PIOUS options: • Alarm Sensor • Four-zone Page •...

Page 142 INSTALLATION-PCB SECTION 400-096-206 SEPTEMBER 1992 TABLE 6-I PEPU CONTROLS AND INTERFACE CONNECTORS CONTROL/INDICATOR/ CONNECTOR TYPE OF COMPONENT DESCRIPTION (Figure 6-13) M/B Make/Break External Page/Door Lock Control Relay Three-terminal jumper plug Jumper Plug P10 MAKE or BREAK jumper plug. M/B Make/Break Night/Hold Relay MAKE or BREAK jumper Three-terminal jumper plug Jumper Plug P11...

Page 143: Telephone Installation

INSTALLATION-TELEPHONE TOSHIBA SYSTEM PRACTICES SECTION 400-096-207 DIGITAL KEY TELEPHONE SYSTEMS SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Seven TELEPHONE INSTALLATION...

Page 144 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992...

Page 145 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 TABLE OF CONTENTS PARAGRAPH SUBJECT PAGE OVERVIEW .....7-1 1.00 Purpose ..... 7-1 1.10 Types of Telephones ..... 7-1 TELEPHONE/SYSTEM CONNECTION .....7-1 2.10 Connecting Digital Telephones to the System 7-1 2.20

Connecting Electronic Telephones to the System .....7-2 2.30 Connecting Standard Telephones to the System .....

Page 146 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 FIGURE LIST (continued) FIGURE TITLE PAGE 1000-SERIES DIGITAL TELEPHONE STRAP AND CONNECTOR LOCATIONS ... 7-8 7-10 HHEU INSTALLATION FOR DIGITAL TELEPHONES .....7-8 7-11 HESC-65A CABLING .....7-8 7-12 HVSU2 INSTALLATION FOR ELECTRONIC TELEPHONES .....7-14 7-13 ELECTRONIC TELEPHONE PCB CONNECTIONS .....

Page 147: Overview

AC power line. AC power lines should be ° in this manual apply only to the Toshiba 2000- crossed at right (90) angles only. In par- and 1000-series Digital Telephones. The 2000-...

Page 148: Connecting Electronic Telephones To The System

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 cable. the cable should be terminated in a modular sta- tion connector block (RJ-11) at the station location. 2.30 Connecting Standard Telephones to the The standard single-pair, modular digital telephone System cord that is sent with the telephone is 7 feet (the maximum allowed is 25 feet).

Page 149 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 grated Data Interface Units (PDIU-DIs or PLASTIC PDIU-DI2s) cannot be wall mounted. HANDSET 2. Electronic and older digital telephones HANGER equipped with an HHEU can be wall mounted. 2000-series Digital Telephones can only be wall mounted with an HHEU2. Loosen the captive screws, and remove the telephone base (Figure 7-1).

Page 150: Digital Telephone Upgrades

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 screws (Figure 7-3). phone equipped with a PDIU-DI2 can support an HHEU at the same time, but 4) Connect the telephone to the wall modular cannot support a DVSU. A 1000-series connector with a cord approximately four Digital Telephone equipped with a PDIU- inches long (available at most telephone sup- DI cannot support an HHEU or a DVSU.

Page 151 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 RS-232 (FEMALE) DB-25 CONNECTOR DIU & VSU DIU & ADM TO P1 OF BOTTOM PCB DIGITAL WIRE TELEPHONE TO P2 OF TOP ASSEMBLY BOTTOM PCB PDIU-DI2 2000 DIGITAL TELEPHONE BASE FIGURE 7-4 PDIU-DI2 INSTALLATION INTO 2000-SERIES DIGITAL TELEPHONE RS-232 (FEMALE) DVSU DB-25 CONNECTOR...

Page 152: Off-Hook Call Announce Upgrade (Dvsu)

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 NOTE: Although Figure 7-1 specifically illustrates how to remove an electronic telephone base, WIRE it also applies to digital telephones. RED WIRE 2) Loosen the four captive screws securing the metal plate to the standoffs inside the base where the DVSU will be installed (Figure 7-6).

Page 153 DKT2010-H STRAP AND CONNECTOR LOCATIONS STRAP AND CONNECTOR LOCATIONS 4. A Toshiba HESC-65A cable is required to 2) Using a screwdriver or other suitable tool, connect the HHEU in a digital telephone remove the plastic tab located on the back of to the HESB.

Page 154 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 EX: POWER DKT1020H DKT1020SD HHEU W101/W102-1020H W303 BEEP W302 W202 W301-1020H HHEU CARBON W304-1020SD W201 W203 W301 CARBON EX: POWER CARBON W101/W102-1020SD 1020SD ROOM DVSU NOISE SWITCH HHEU WIRE DVSU DVSU EXSP STRAP W204-1020H HHEU W305-1020SD DVSU WIRE...

Page 155: Carbon Headset/Handset Straps

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 connected to the HHEU, cut both sides of the Figure 7-7 (DKT2010-H) or Figure 7-8 R607 resistor (Figure 7-10), then remove the (DKT2010-SD, DKT2020-S, DKT2020-SD), resistor to eliminate electrical contact. and locate the HHEU strap on the PCB in the telephone.

Page 156: Beep Strap

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 3) Reinstall the telephone base, and secure it (DKT1020-SD), refer to Figure 7-9, and lo- with its four captive screws. cate the ROOM NOISE switch. Push the switch carefully to the H (high) position (for 3.50 Beep Strap low sensitivity) when there is high background noise in the area surrounding the telephone.

Page 157: External Power Straps

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 NOTE: Refer to Section 400-096-209 for external 2) Refer to Figure 7-7, and install a strap in the AC/DC power supply installation instructions. HS-BOV W409 location. 4 ELECTRONIC TELEPHONE UPGRADE 3) Reinstall the telephone base, and secure it with its four captive screws.

Page 158: Loud Ringing Bell/Headset Upgrade (Hheu)

HHEU2 has longer wires to accommodate wall mounting. 5B) For the V.4 HHEU1 or the HHEU2: If only the 3. A Toshiba HESC-65 or HESC-65A cable headset is connected to the HHEU, cut the is required to connect the HHEU in a OCA strap (Figure 7-15).

Page 159: Carbon Headset/Handset Straps

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 8) Cut the HHEU strap on the telephone PCB (7- 2) Locate and cut the BEEP strap on the tele- 13). phone printed circuit board (PCB) (Figure 7- 13). NOTE: 3) Reinstall the electronic telephone base, and The HHEU strap must be replaced if the secure in place using the four captive screws.

Page 160 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 R-UP (6510-H, TO HVSU 6510-S, 6520-S) CONNECTOR ROOM NOISE TO HHEU ON MAIN PCB CONNECTOR INSIDE HVSU2 TELEPHONE BEEP STRAP R-UP WIRE TO HVSU (6520-SD) CARBON CONNECTOR CARBON STRAPS W201 W202 HHEU STRAP W203 FIGURE 7-13 FIGURE 7-12 ELECTRONIC TELEPHONE PCB CONNECTIONS HVSU2 INSTALLATION FOR ELECTRONIC...

Page 161: Direct Station Selection Console/System Connection

INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 7) Connect the HHEU subassembly wire plug to 5.12 DDSS Console Configuration. The follow- the P1 connector on the electronic telephone ing considerations should be made when installing PCB (Figure 7-13). DDSS consoles: • 5 DIRECT STATION SELECTION DDSS consoles connect only to a PDKU, Circuit 8 only.

Page 162: Hdss Console

6.02 Systems equipped with PCTU (1, 2, 3, 4) can service unit (KSU) with regard to wiring needs. support up to 12 MDFBs, and STRATA DK24 systems with PCTUS can accommodate up to nine 4) Secure the DDCB/HDCB to the mounting MDFBs.

Page 163 INSTALLATION-TELEPHONE SECTION 400-096-207 SEPTEMBER 1992 mounting surface and secure with two one- inch panhead wood screws (Figure 7-17). EXTERNAL POWER STRAPS (DDCB ONLY) 3) Attach cover to the metal frame and base. 6.32 Door Phone Volume Control. Adjust the ring and voice volume to the MDFB in accordance with the following procedure: 1) Remove the screw from the bottom of the cover.

Page 165 INSTALLATION-PERIPHERALS TOSHIBA SYSTEM PRACTICES SECTION 400-096-208 DIGITAL KEY TELEPHONE SYSTEMS SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Eight PERIPHERALS INSTALLATION...

Page 166 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992...

Page 167 Remote Maintenance Option Installation.....8-38 VOICE MAIL OPTIONS .....8-39 10.00 System Hardware Requirements ..... 8-39 10.10 Toshiba VP Voice Messaging System.....8-39 10.20 Customer-supplied Voice Mail Messaging Systems ..... 8-40 10.30 General Voice Mail (PSTU or PESU) Programming Considerations ....8-40 10.40...

Page 168 PDIU-DI TO IBM AT-TYPE COMPUTER RS-232 CONNECTOR/CABLE CONNECTIONS .....8-45 8-30 PDIU-DI TO IBM XT-TYPE COMPUTER, RS-232 CONNECTOR/CABLE CONNECTIONS .....8-46 8-31 PDIU-DS TO TOSHIBA PRINTER, RS-232 CONNECTOR/CABLE CONNECTIONS .....8-47 8-32 PDIU-DS TO HAYES-TYPE SMART

MODEM, RS-232 CONNECTOR/ CABLE CONNECTIONS .....8-48 8-33 PDIU-DI/PDIU-DS MODULAR CABLE/RJ-45 ADAPTER CONNECTIONS ..

Page 169 FIGURE LIST (continued) FIGURE TITLE PAGE 8-35 PDIU-DS JUMPER PLUG OPTIONS/RS-232 CONNECTOR INFORMATION ..8-54 8-36 PDIU-DI/PDIU-DS SW1 DIP SWITCH INFORMATION .....8-57 8-37 PDIU-DS DISASSEMBLY/ASSEMBLY DIAGRAM .....8-58 8-38 PC-TO-PC TEST CALL USING AT COMMANDS .....8-59 8-39 PC-TO-PRINTER TEST CALL USING MANUAL DIALING .....8-60 8-40 INTERNAL-PC-TO-EXTERNAL-PC TEST CALL USING AT COMMANDS ..

Page 171: General

3) Connect the white lead of the PBTC-3M bat- interface cable for installation of the Reserve Power tery cable to the open positive terminal of the option (PBTC-3M) is available from Toshiba. 12VDC battery. Connect the black lead to the open negative terminal of the second 12VDC WARNING! battery.

Page 172: Power Failure Emergency Transfer Option

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 TWO-PRONG PPSU MALE CONNECTOR 24/56/96 (PRE-ASSEMBLED) PBTC-3M BATTERY CABLE WITH RING TERMINALS AND PPSU CONNECTOR (LENGTH 9 FEET) WHITE BATT – BLACK IN-LINE FUSE HOLDER 10 A (FUSE PROVIDED) BLACK WHITE POWER SUPPLY 16AWG – –...

Page 173 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 J2-26 J2-27 TO TEL-T1 TO PSTU-T1 J2-1 J2-2 TO TEL-R1 TO PSTU-R1 TELEPHONE CURRENT DETECTOR J1-26 J1-27 TO CO-T1 TO PCOU-T1 J1-1 J1-2 TO CO-R1 TO PCOU-R1 J1-50 DG (INPUT) RELAY PSTU CONTROL -24V (INPUT) J1-25 NOTES: 1.

Page 174: Music-On-Hold (Moh)/Background Music (Bgm) Options

PDKU, PEKU, PESU, and PSTU to provide of this telecommunications system. MOH for E & M TIE lines, CO lines, electronic, Toshiba America Information Systems, digital, and standard telephones. Inc., hereby disclaims any liability arising out of the failure to obtain such a license.

Page 175 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 SEE MDF TIP & RING WIRING DIAGRAMS (CHAPTER 9) TWISTED PAIR PCTU 24 AWG. PEMU TIE LINES MOH/BGM BACKPLANE PCOU VOLUME CONTROL CO LINES PSTU CO LINES MUSIC- MAX. SINGLE-LINE MUSIC ON-HOLD PESU MUSIC- STATIONS ON-HOLD (CKTs 1-2) SOURCE...

Page 176: Bgm Options

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 3.20 BGM Options source to be connected to either a PEKU (Circuit 3), a PESU (Circuit 8), or, with Re- 3.21 The BGM options allow music to play over lease 4, a PSTU (Circuit 3 or 8) PCB (see optional external speakers (external page system) and/or digital and electronic telephone speakers.

Page 177 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 CO LINES AND MOH SOURCE STATIONS ON-HOLD P6, TERMINAL VR1 (VOLUME) (BGM WHEN BGM/PAGE PAGE IS IDLE) PCTU PSTU OR PESU 25-PAIR CONNECT0R TO EXTERNAL VT = P40, BK-S PAGE SYSTEM PIOU VR = P15, S-BK PIOUS (BGM: 491 ON/490 OFF) SLOT XX*, CIRCUIT 8...

Page 178 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 CO LINES AND MOH SOURCE STATIONS ON-HOLD P6, TERMINAL VR1 (VOLUME) PCTU PSTU or PESU 25-PAIR CONNECT0R VT = P40, BK-S BGM/PAGE VR = P15, S-BK SLOT XX**, CIRCUIT 8 CUT W7 ON PESU PROG 10, LED 10/ON ELECTRONIC/ DIGITAL TELEPHONE * PSTU, PESU,...

Page 179 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 provide zone relays; therefore Configuration 3.23 BGM Source to PEKU, PESU, or PSTU C is not possible with these PCBs.) Installation. A BGM source can be connected to either a PEKU, PESU, or PSTU to send music to NOTES: all electronic/digital telephone speakers and to 1.

Page 180 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 PIOU/PEPU PCB MDF 66M PIOU 25 PR. SELECT RELAY FUNCTION BLOCK CONNECTIONS WITH PROGRAM 77-1 PIN NO. COLOR PIN NO.s DOOR LOCK OR EXTERNAL PAGE CONTROL BREAK DOOR DE.T LOCK DE. R CONTROL MAKE SP.T0 Bk-Gn PAGE Ω...

Page 181 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 KSU BACKPLANE SP.T PAGE PAGE AMPLIFIER SP.R BREAK MUTE DE.T CONTROL DOOR MAKE LOCK DE.R CONTROL BREAK NH.T MAKE SOURCE NH.R UNIT NIGHT BELL NORMAL OPEN ALM.T FACILITY ALARM ALARM SENSOR UNIT ALM.R NORMAL CLOSE PIOUS •...

Page 182: Relay Control Options And Door Lock Control

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 for telephone system applications may have NOTE: this protection built-in and do not require the Refer to the Programming Procedures, Sec- transformer. (Consult the documentation pro- tion 400-096-300, as necessary when in- vided with the music source.) structed to program the PIOU, PIOUS, or PEPU in the following paragraphs.

Page 183 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 25-PAIR AMPHENOL FIGURE 8-8 PIOU/PEPU FOR WIRING PIN 34, R-BR TO DOOR LOCK PIN 9, BR-R PROGRAM 77-1 DOOR LOCK 0 BUTTON LED 07, 20 FOR RELAY OPTIONS NOTE: UnlockŒDoorŒ0 (DRLKŒ0) PIOUS assigned to digital and electronic BREAK telephones in Program 39 with Code 71.

Page 184 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 DDCB or HDCB NOTE 1 RJ11 MDFB RELAY CONTROL DOOR PHONE CONTACT TO CUSTOMER SUPPLIED DEVICE PDKU RJ11 MDFB (See Ch. 9 - OR- wiring diagrams) DOOR PHONE PEKU - or - (Port 04, 12, 20, or 28) - OR - DOOR LOCK CONTROL PESU...

Page 185 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 1) Connect PDKU Circuit 5 (T/R and PT/PR) to 2) Connect the Circuit 5 VT/VR and DT/DR pairs the DDCB HKSU modular jack per Chapter 9 to the HDCB HKSU modular jack per the DDCB wiring diagram. Chapter 9 HDCB wiring diagram.

Page 186 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 NOTE: 1) Access Program 77-1. Set LED 05 to OFF to The HDCB W2 strap is not used with STRATA configure the Night/Hold Relay for the Night DK systems. The strap provides an alarm Relay function. function with other STRATA systems.

Page 187: External Speaker Unit (Hesb) Options

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 relay is activated. 3) Refer to Figures 8-8 and 8-9 for wiring/inter- connecting details. Connect the PIOU, PI- 7B) If using a PIOUS, solder the jumper W2 on the OUS, or PEPU to the MDF as required for the PIOUS to the MAKE or BREAK position, as MOH Relay function.

Page 188 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 HESB (REAR VIEW) VOLUME CONTROL INTERNAL (L2) WIRING: VOICE JUMPER WIRES: 1 2 3 4 5 6 7 8 9 10 2-10 6 5 4 3 2 1 6 5 4 3 2 1 JUMPERS NOT USED NOT USED 24 AWG...

Page 189 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 HESB (REAR VIEW) VOLUME CONTROL (+) (RED) (-) (GREEN) VOICE TIP INTERNAL VOICE RING WIRING: VOICE JUMPER WIRES: 1 2 3 4 5 6 7 8 9 10 JUMPERS 6 5 4 3 2 1 6 5 4 3 2 1 24 AWG NOT USED JACKETED...

Page 190 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 PIOUS Ω PAGE OUTPUT JACKETED NOTE: PIOU OR BLOCK TWISTED Only one interface PCB PEPU PAIR PIN NO.s (PIOU, PIOUS, or PEPU) 24 AWG Ω is allowed per system. SPT (38, BK-GN) PAGE SPR (13, GN-BK) OUTPUT VOLUME CONTROL 66 BLOCK...

Page 191: Hesb Option Installation

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 following installation procedures for the system 1) On the HESB TB1 terminal block: connect a hardware requirements for each option: jumper between Terminals 6 and 7, and con- nect another jumper between Terminals 5 and 5.20 HESB Option Installation 5.21 Loud Ringing Bell Installation.

Page 192 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 MDFB (REAR VIEW) NOTE: Only one interface PCB (PIOU, PIOUS, or PEPU) is allowed per system. 2 L1 L2 DOOR PHONE PIOUS TALKBACK MICROPHONE JACKETED Ω TWISTED PAGE DUPLEX PAIR OUTPUT

24 AWG MDF BLOCK JACKETED PIOU OR PIN NUMBERS...

Page 193 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 HESB and adjusting the ring volume control 7) Connect the power supply's +12V lead to on the telephone. Terminal 1 of the HESB TB2 terminal block, and connect the OV lead to Terminal 2. 3) If ringing is heard at the station, but not over 8) Plug the provided power cord into the power the HESB, perform the following check while supply and to a 117VAC, 60Hz power source.

Page 194 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 66 BLOCK PIN NUMBERS EXTERNAL PIOU/PEPU PAGING AMP NIGHT RING SPT (38) AND PAGE FROM KSU Ω SPR (13) BACKPLANE DET (32) EXTERNAL PAGE/ DOOR LOCK RELAY MUTE 2 (SEE PROGRAM 77-1) DER (7) INPUT 2 PIOU/PEPU PIN NUMBERS 25-PAIR CABLE...

Page 195: External

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 9) Set the PIOU or PEPU SW4 switch to the SPO Paging. position. 6.02 Either a PIOU, PIOUS, or PEPU PCB is 10) Connect the HACU-120's +12V lead to Termi- required to support the external paging/BGM op- nal 1 of the HESB TB2 terminal block, and tions.

Page 196 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 66 BLOCK PIN NUMBERS PIOU JACKETED TWISTED PAIR 24 AWG PGOUT 1 (15) PGIN 1 (40) ZONE 1 PGOUT 2 (17) PGIN 2 (42) ZONE 2 PGOUT 3 (19) ZONE 3 PGIN 3 (44) PGOUT 4 (21) ZONE 4 PGIN 4 (46) NIGHT...

Page 197 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 66 BLOCK PIN NUMBERS PIOU JACKETED PAGE ACCESS TWISTED PAIR CODES ( ): 24 AWG PGOUT 1 (15) ZONE 1 PGIN 1 (40) (35) PGOUT 2 (17) ZONE 2 PGIN 2 (42) (36) PGOUT 3 (19) ZONE 3 PGIN 3 (44) (37)

Page 198 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 66 BLOCK PIN NUMBERS PIOU JACKETED PAGE ACCESS TWISTED PAIR CODES ( ): 24 AWG PGOUT 1 (15) ZONE 1 PGIN 1 (40) (35) PGOUT 2 (17) PGIN 2 (42) ZONE 2 (36) ZONES (39) PGOUT 3 (19) ZONE 3 PGIN 3 (44)

Page 199 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 • K1/zone 1 = 35 4) Connect the music amplifier output to Termi- • K2/zone 2 = 36 nal 23 (PG COMMON) of the PIOU, and to the • K3/zone 3 = 37 "C" terminal of Zone 1 ~ Zone 4 speakers. •...

Page 200 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 R-TEC, VFR5050 R-TEC EDGE R-TEC EDGE AMPLIFIER CONNECTOR CONNECTOR STRATA DK 24/56/96 (see NOTES) 24AWG PCTU3/ PCOU 25-PAIR PEKU OUTSIDE PCTU4 CABLE PARTY 1 CONFERENCE VT(2), P28/W-GN T, P51 SWITCH CKT, X PORT A CKTA CO LINE R, P33 VR(2), P3/GN-W...

Page 201: Two-Co Line External Amplified Conference

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 10) Press the Night Transfer button on a digital or 7.01 Customer-supplied two-way amplifiers can be electronic telephone to set the system into the installed to amplify two-CO line tandem and/or NIGHT mode. Then test by calling into the conference calls.

Page 202 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 07/06/90 <DD/MM/YY, EVERY FIFTY CALL RECORDS AND AT MIDNIGHT> 205 08:14 00:00;22 123456987 456789 01 MODM 08:15 00:00;18 00;00 <DISA CALL TO IMDU> 200 08:16 00:00;28 00;08 202 03 DISA 08:16 00:00;15 <OUTGOING DISA ACCESS BY INCOMING DISA 01> 01 DISA 08:17 00:00;25 <INCOMING DISA AND ACCESS CO 03 OUTGOING>...

Page 203: Station Message Detail Recording (Smdr) Printer/Call Accounting Device Options

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 customer-supplied two-way amplifier. In the ing, and transferred calls, as well as Account Code example in Figure 8-21, this is CKTA (Central entries. Call record data is printed out at the com- Office Side A) of the VFR5050. pletion of each eligible call and is ASCII-formatted, 8-bits, no parity, 1-stop bit.

Page 204: Example 1-Ring, No Answer Disa Call

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 CO LINE NUMBERS (CO LINE) (LEDs ON) 11111111 11111111 11111111 11111111 11111111 (LEDs OFF) 00000000...

Page 205 PIOUS Device • 1-stop bit 50 ft. max SMDR 24 AWG Wire Modular Toshiba Twisted Pair Jack PPTC1A-5M, Modularized RS232, Modular to DB25 Adaptor BASIC WIRING (see: PIOU or PIOUS TTY and SMDR Wiring in Chapter 9 for more detail)

Page 206: Smdr Hardware Requirements

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 • Item 3—Selects the records of outgoing calls or DISA 12:22 00:02;01 (incoming) outgoing and incoming calls to be printed. • Item 4—Selects the digit length of Account Codes Disconnect Timer: (4 to 15 digits). 01 DISA 12:24 00:04;57 (incoming) •...

Page 207 PIOUS T&R External Modem 50 ft. max Central Office Connection (Hayes-Compatible) 24 AWG Wire Line (T&R) Modular of External Toshiba Twisted Pair Jack Modem Only PPTC1A-5M, Modularized RS232, Modular • 7-bits to DB25 Adaptor • Even parity • 1-stop bit...

Page 208: Maintenance Terminal/External Modem Option System Hardware Requirements

NOTE: • Push in for 300 bps (baud rate indicator The Toshiba PPTC RS-232 modular-to-DB25 CD4 is lighted); let out (by pushing again) adaptor is factory-configured for ASCII termi- for 1200 bps (CD4 is not lighted).

Page 209 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 NOTE: PCTU The CRCU (-4 or -8) must be installed on the PCTU or PCTUS1 to allow VM DTMF dialing. PCTUS CRCU (-4 OR -8) VOICE MAIL MACHINE PSTU (CKT 1~8) PESU (CKT 1 & 2) PSTU/PESU CIRCUIT TIP &...

Page 210: Voice Mail Options

Message Waiting Indication swer a Toshiba VP blind transfer. (The B tone • Voice Mail Control from Digital and Electronic notifies Toshiba VP that the call is a recall and not Telephones a new call, allowing Toshiba VP to respond with •...

Page 211 1) Set Toshiba VP Maintenance Menu system nected to a particular VM machine should be set parameters to “D” = STRATA DK (see Toshiba in the same VM group (Program 31, LEDs 05 ~ VP documentation for other parameter set- 08).

Page 212: Voice Mail System Installation

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 • Program 35: LEDs 01 and 02 must be ON 10.40 Voice Mail System Installation for stations to receive the message waiting 10.41 Install the voice mail (VM) system in accor- indication (flashing LED) from a VM device. dance with the following steps: It is advisable to turn Busy Station Transfer (LED 20) ON for all VM/Auto Attendant ports,...

Page 213 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 NOTE: Some VM devices may ring trip when called; in this case, set the ring voltage jumper to L (low position) on the PESU or PSTU2 PCB connected to the VM device. 11 ALARM SENSOR INSTALLATION 11.00 The PIOU or PIOUS PCB provides a circuit that can be set to detect a relay open or closed condition from a facility alarm system.

Page 214 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 11.03 Alarm Sensor Wiring. Refer to Figure dialing from a PDIU-DI-equipped digital telephone 8-27, and connect the facility alarm system relay dialpad, but take note that many PC software contacts to the PIOU/PIOUS PCB. programs and UART, RS-232 communication ports do not reliably operate at 19.2 kbps.

Page 215 DKT/PDIU-DI RS-232 SERVICE (201) PDKU (PORT 01) SERIAL PRINTER RS-232 TELEPHONE PDKU LINE X (PORT 03) RS-232 PDIU-DS LINE Z TOSHIBA POWER READY CONNECT

(203) MODEM PSTU PUBLIC PCOU TELEPHONE LINE 1 PESU NETWORK (PORT 08) MODEM (208)

Page 216 PIN # NAME NAME Rear view of asynchronous (serial) Rear view of PDIU-DI DB25, communication interface connector (DB9) of RS-232 female connector Toshiba laptop or IBM AT personal computer 2 3 4 5 DB25 FEMALE 6 7 8 9 CONNECTOR DB25...

Page 217 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 PDIU-DI IBM XT PERSONAL COMPUTER OR ASCII TERMINAL (FUNCTIONS LIKE A DCE) (FUNCTIONS LIKE A DTE) DB25 PIN DESIGNATIONS DB25 PIN DESIGNATIONS PDIU-DI PDIU-DI PIN # PIN # NAME NAME Rear view of personal computer Rear view of PDIU-DI DB25, or ASCII terminal DB25, DB25 FEMALE...

Page 218 2. The PDIU-DS should be in the connect-to-DTE mode (P1 ~ P9 are strapped A-B), so that it transmits data on Pin 3 (RD) and receives data on Pin 2 (TD). FIGURE 8-31 PDIU-DS TO TOSHIBA PRINTER, RS-232 CONNECTOR/CABLE CONNECTIONS 8-47...

Page 219 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 HAYES-TYPE SMART MODEM PDIU-DS (CONFIGURED IN THE "CONNECT TO MODEM" (FUNCTIONS LIKE A DCE) MODE, P1 ~ P9 = B-C, SO IT FUNCTIONS LIKE A DTE) MODEM PDIU-DS PIN # PIN # NAME NAME Rear view of modem DB25 connector Rear view of PDIU-DS DB25, connector DB25 FEMALE DB25 FEMALE...

Page 220 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 CONNECTION EXAMPLE 1 DIGITAL TELEPHONE TOSHIBA LAPTOP OR IBM AT TYPE PERSONAL COMPUTER (PC) PDIU-DI BASE TYPE 1 MODULAR ADAPTER TYPE B MODULAR CORD (CROSSED) (50 ft max, 24AWG) TYPE 2 MODULAR ADAPTER IMPORTANT! Will not function with applications that require the RI signal to PC.

Page 221 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 TYPE 1 RJ45 TO DB9 (FEMALE) ADAPTER 8 7 6 5 4 3 2 1 RJ45 LEAD NAME TYPE 2 RJ45 TO DB25 (MALE) ADAPTER 8 7 6 5 4 3 2 1 RJ45 LEAD NAME DB25 2 3 4 5 6 7 8...

Page 222 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 by-step data calling procedures are provided in the the DCE device when they are ready to transmit STRATA DK Data Interface User Guide. data on the TD lead. If the DTE device does not generate the RTS signal, the DIU DIP switch 12.20 EIA Interface Leads (Signals) SW1-4 should be set ON to inform the DIU.

Page 223 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 transmit or receive data. DIP switch SW1-2 should signal of the calling DTE is used as the RTS lead be set OFF in most cases (see Figure 8-36 for of the called DTE and the DCD signal of the DIP switch information).

Page 224 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 § 2. Do not cut the PERCEPTION strap when LEDs 03 and 04: Should be OFF for installing the PDIU-DI in STRATA DK sys- PDIU-DI ports. § tems. LED 05: Should be ON if the system is installed behind a PBX or Centrex that 3) Connect the appropriate RS-232 cable be- uses access codes to make external...

Page 225 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 PDIU-DS (FRONT VIEW) PDIU-DS (REAR VIEW) MODULAR JACK FOR CONNECTING 1- OR 2-PAIR TO PDKU CIRCUIT POWER READY CONNECT 1 2 3 4 DNTA CONNECT LED SW1: SEE FIGURE 8-36 FOR READY LED SWITCH (1 ~ 4) OPTIONS POWER LED INFORMATION PERCEPTION...

Page 226 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 semble the PDIU-DS and configure it to requirements vary with each manufacturer. operate like a DTE device by placing the jumper plugs (P1 ~ P9) in the “B-C” 6) Use Program 20 to configure the PDIU-DS to (MODEM) position.

Page 227 INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 to operate like a DTE device. In the example 400-096-209 provides PESU/PSTU station installation in Figure 8-28, the line side of the two (port) wiring information. modems are connected to PSTU/PESU ports to 5) Set the PDIU-DS DIP switch (SW1-1 ~ 4) for establish a modem pool;...

Page 228: Pdiu-Di/Pdiu-Ds Sw1 Dip Switch Information

ON: RI is on continuously during the DCD signal (AT&C1) ringing state SW1(4) must be ON. OFF: RI is 1 sec ON/3 sec OFF 4. If using Toshiba Personal during ringing state Computers and Toshiba Printers using X-ON/X-OFF RTS control...

Page 229: Pdiu-Ds Disassembly/Assembly Diagram

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 SIDE GROOVES POWER PERCEPTION DTE/MODEM JUMPER PLUGS P1~P9 PDIU-DS BOTTOM PANEL NOTES: Do not cut the PERCEPTION jumper wire for STRATA DK installations. Jumper wire is for PERCEPTION applications only. See Table 9-D regarding external power requirements. FIGURE 8-37 PDIU-DS DISASSEMBLY/ASSEMBLY DIAGRAM 8-58...

Page 230: Pc-To-Pc Test Call Using At Commands

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 § If more than one modem/PDIU-DS pair is 12.70 PDIU-DS Disassembly and Assembly configured as a system modem pool, the PDIU-DSs should be set to hunt each 12.71 To set the jumper plugs (P1 ~ P9) on the other in Program 22.

Page 231: Pc-To-Printer Test Call Using Manual Dialing

STRATA DK LAPTOP PC (Release 3 or higher) DKT/PDIU-DI RS-232 (201) PDKU (PORT 01) SERIAL PRINTER PDKU (PORT 03) RS-232 PDIU-DS TOSHIBA POWER READY CONNECT (203) FGURE 8-39 PC-TO-PRINTER TEST CALL USING MANUAL DIALING 8-60...

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PESU LINE 1 NETWORK INTERNAL (PORT 08) MODEM (208) TELEPHONE LINE PDKU RS-232 674-4700 (PORT 04) RS-232 PDIU-DS EXTERNAL TOSHIBA POWER READY CONNECT (204) MODEM (AUTO ANSWER) LAPTOP PC 1 RS-232 DKT/PDIU-DI LAPTOP (200) PDKU PC 2 (PORT 00)

Page 233: Internal-Pc-To-External-Pc Test Call Using At Commands

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 (DATA) (Code 56) and DataÍRelease (DRLS) (Code 54), and Modem (MO- (DRLS) (Code 54) buttons should be DEM) (Code 55) buttons should be pro- provided. vided. • • Default settings for PDIU-DI S-Regis- Default settings for PDIU-DI and PDIU- ters.

Page 234: External-Pc-To-Internal-Pc Test Call Using At Commands

LINE 1 NETWORK INTERNAL (PORT 08) MODEM (208) TELEPHONE LINE PDKU RS-232 674-4700 (PORT 04) RS-232 PDIU-DS EXTERNAL TOSHIBA POWER READY CONNECT (204) MODEM LAPTOP PC 1 LAPTOP RS-232 DKT/PDIU-DI PC 2 (200) PDKU (PORT 00) FIGURE 8-41 EXTERNAL-PC-TO-INTERNAL-PC TEST CALL USING AT COMMANDS XXXX, where XXXX is the data transmis- 200 will be unlit.

Page 235: Pc-Auto Dial-Voice-Call Test

INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 STANDARD TELEPHONE DIALED LINE LAPTOP PC 2 STRATA DK (Release 3 or higher) DKT/PDIU-DI RS-232 PUBLIC (201) PDKU PCOU TELEPHONE (PORT 01) LINE 1 NETWORK FIGURE 8-42 PC-AUTO DIAL VOICE-CALL TEST • Internal modem: set to auto answer lines.

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INSTALLATION-PERIPHERALS SECTION 400-096-208 SEPTEMBER 1992 b) Type A T H from the PC keyboard used that the communication parameters of the PC in Step 5a. and application software are set to the same • PC 1’s and PC 2’s screens both dis- values.

Page 237

INSTALLATION-WIRING DIAGRAMS TOSHIBA SYSTEM PRACTICES DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-209 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 INSTALLATION Chapter Nine WIRING DIAGRAMS...

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INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992...

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INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TABLE OF CONTENTS PARAGRAPH SUBJECT PAGE GENERAL .....WIRING DIAGRAMS .....2.10 Station Wiring Diagrams .....2.20 CO/TIE Line Wiring Diagrams .....2.30 Power Failure Cut-through (DPFT) Wiring Diagrams ..... 2.40 PIOU,PIOUS, and

PEPU Wiring Diagrams .....2.50 Power Supply DC Out Wiring Diagram.....

Page 240

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 FIGURE LIST (continued) FIGURE TITLE PAGE 9-23 PDKU STATION/MDF CROSS CONNECT RECORD .....9-27 9-24 MDF WIRING/PEKU AMPLIFIED TWO-CO LINE CONFERENCE .....9-28 9-25 MDF WIRING-DOOR PHONE/LOCK TO PDKU ..... 9-29 9-26 EXTERNAL POWER FOR DIGITAL TELEPHONE CONNECTION ..... 9-30...

Page 241: General

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 • 1 GENERAL Figure 9-23—PDKU Station/MDF Cross Con- nect Record • 1.01 This chapter contains point-to-point wiring Figure 9-24—MDF Wiring/PEKU Amplified Two- CO Line Conference diagrams for connection of telephones, lines, pe- • Figure 9-25—MDF Wiring-Door Phone/Lock to ripheral equipment, and power supplies to the DK PDKU systems.

Page 242: Station Loop Requirements

3. Two-pair or larger wire (or external power) is required to achieve maximum range, see Table 9-D. 4. Electronic telephones must have 3-pair wiring to receive Off-hook Call Announce calls. TABLE 9-C NETWORK REQUIREMENTS TOSHIBA Printed Circuit Board Facility Interface Code Network Jack...

Page 243

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TABLE 9-D DIGITAL TELEPHONE/DIU/DDSS CONSOLE/LOOP LIMITS Maximum line length (24 AWG) PPSU 1 Pair plus 1 Pair 2 Pair Battery Backup external power MODE PPSU 1000 ft (303 m) 1000 ft (303 m) 1000 ft (303 m) DKT Ringing (Volume Max) Battery Backup...

Page 244: Digital Telephone/Diu/Ddss Console/Ddcb Loop Limits

□□□□ □□□□ INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 BUILDING #1 BUILDING #2 HESB STANDARD PSTU TELEPHONE ELECTRONIC HDSS OR TOSHIBA Night 1 OR DIGITAL All Call DDSS □ □ □□□□ □ □ □□□ TELEPHONE CONSOLE PEKU PESU PDKU ELECTRONIC OR...

Page 245: Mdf Wiring/Electronic Telephone To Peku

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PEKU W/FEMALE STATION CABLING BRIDGING JACKETED TWISTED PAIRS CONNECTOR CLIPS 24 AWG VOICE T1 (VT) W-BL VOICE R1 (VR) BL-W DATA T1 (DT) DATA R1 (DR) W-GN GN-W CIRCUIT 2 W-BR BR-W CIRCUIT 3 R-BL OCAR OCAT...

Page 246: Mdf Wiring/Hdss Console And Associated Electronic Telephone Wiring To Peku

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PEKU W/FEMALE BRIDGING CONNECTOR CLIPS VOICE T1 W-BL VOICE R1 BL-W DATA T1 DATA R1 W-GN GN-W CIRCUIT 2 W-BR BR-W CIRCUIT 3 R-BL JACKETED BL-R STATION CABLE TWISTED PAIR 24 AWG 6 5 4 3 2 1 CIRCUIT 4 R-GN GN-R...

Page 247: Mdf Wiring-Door Phone/Lock To Peku/Pesu

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 SCREW TO PEKU OR PESU TERMINALS BRIDGING W/FEMALE CONNECTOR CLIPS W-BL BL-W CIRCUIT 1 W-GN GN-W USED CIRCUIT 2 W-BR 6 5 4 3 2 1 DOOR PHONE A BR-W MDFB (REAR VIEW) HDCB CIRCUIT 3 R-BL DOOR PHONE...

Page 248: Peku Background Music Connection

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PEKU W/FEMALE STATION CABLING (24 AWG, TWISTED PAIRS) BRIDGING CONNECTOR CLIPS VOICE T1 (VT) W-BL VOICE R1 (VR) BL-W TO ELECTRONIC TELEPHONE 1 DATA T1 (DT) (PORT 00) DATA R1 (DR) W-GN GN-W CIRCUIT 2 TO ELECTRONIC W-BR TELEPHONE (PORT 01)

Page 249: Peku Station/Mdf Cross Connect Record

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 MDF BLOCK NO. KSU SLOT NO. COLOR PORT INTERCOM ELECTRONIC TELEPHONE/ DESIGNATION CODE NUMBER NUMBER NUMBER DEVICE LOCATION W-Bl Bl-W (See Note 2) W-Br Br-W (See Notes 2 and 3) R-

Bl Bl-R R-Br (See Note 4) Br-R Bk-Bl...

Page 250: Mdf Wiring/Standard Telephone, Voice Mail, Dpft To Pstu/Pstu2

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PSTU OR PSTU2 BRIDGING JACKETED TWISTED STATION CABLE W/FEMALE CONNECTOR CLIPS 24 AWG TIP 1 W-BL RING 1 BL-W NOT USED W-GN GN-W W-BR NOT USED BR-W R-BL NOT USED BL-R 6 5 4 3 2 1 R-GN NOT USED GN-R...

Page 251: Pstu Station/Mdf Cross Connect Record

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 MDF BLOCK NO. KSU SLOT NO. PORT COLOR INTERCOM STANDARD TELEPHONE/ DESIGNATION CODE NUMBER DEVICE LOCATION NUMBER NUMBER W-Bl Bl-W NOT USED NOT USED W-Br NOT USED Br-W NOT USED (Note 3) R- Bl NOT USED Bl-R NOT USED...

Page 252: Pesu Wiring Diagram

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PESU W/FEMALE STATION CABLING JACKETED TWISTED PAIRS (24 AWG) CONNECTOR BRIDGING CLIPS TIP 1 W-BL RJ11 RING 1 BL-W NOT USED TIP 2 W-GN RJ11 RING 2 GN-W W-BR 6 5 4 3 2 1 NOT USED BR-W RING...

Page 253: Pesu Station/Mdf Cross Connect Record

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 MDF BLOCK NO. KSU SLOT NO. COLOR PORT INTERCOM DEVICE/STANDARD TELEPHONE/ DESIGNATION CODE NUMBER NUMBER NUMBER ELECTRONIC TELEPHONE LOCATION W-Bl Bl-W NOT USED NOT USED W-Br NOT USED Br-W NOT USED NOT USED NOT USED R- Bl NOT USED Bl-R...

Page 254: Mdf Wiring/Co Lines To Pcou

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 NETWORK BRIDGING CLIPS TELCO-PROVIDED MODULAR BLOCK, 625-TYPE OR EQUIVALENT 6 5 4 3 2 1 PCOU 2 3 4 5 MODULAR CORD CO3+4 SAME CO1+2 PCOU PIN-OUT NETWORK JACK: RJ14C FIC: 02LS2 66M150 SPLIT BLOCK FIGURE 9-10 MDF WIRING/CO LINES TO PCOU 9-14...

Page 255: Mdf Wiring/2-Wire Tie Line To Pemu

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 NETWORK BRIDGING CLIPS TELCO-PROVIDED MODULAR BLOCK, 625-TYPE OR EQUIVALENT 6 5 4 3 2 1 PEMU 2-WIRE MODULAR CORD SAME SAME SAME PEMU * NOT USED PIN-OUT NETWORK JACK: RJ2EX FIC: TL11M 66M150 SPLIT BLOCK FIGURE 9-11 MDF WIRING/2-WIRE TIE LINE TO PEMU 9-15...

Page 256: Mdf Wiring/4-Wire Tie Line To Pemu

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 BRIDGING NETWORK CLIPS TELCO-PROVIDED MODULAR BLOCK, 625-TYPE OR EQUIVALENT PEMU 4-WIRE 6 5 4 3 2 1 2 3 4 5 MODULAR CORD SAME SAME SAME PEMU NETWORK JACK: RJ2GX PIN-OUT FIC: TL31M DK WIRE PAIR FUNCTIONS DK, TRANSMIT T, R 66M150 SPLIT BLOCK...

Page 257: Pcou/Pemu/Mdf Cross Connect Record

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 CO LINE CROSS-CONNECT RECORD TIE LINE CROSS-CONNECT RECORD MDF PAIR MDF PAIR KSU SLOT KSU SLOT CO LINE NUMBERS NUMBERS NUMBER NUMBER TIE LINE NUMBER RJ14C (PCOU) 2-WIRE 4-WIRE NUMBER (PEMU) RJ2EX RJ2GX FIGURE 9-13 PCOU/PEMU/MDF CROSS CONNECT RECORD 9-17...

Page 258: Office Line Connection & Dpft Control

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 LEAD PCOU PCB COLOR FUNCTION PAIR CODE DESIGNATION POSITION W-Bl TIP-CO Bl-W RING-CO TIP-PCOU RING-PCOU TIP-CO RING-CO W-Br TIP-PCOU Br-W RING-PCOU TIP-CO RING-CO R-Bl TIP-PCOU Bl-R RING-PCOU TIP-CO RING-CO TIP-PCOU RING-PCOU R-Br TIP-CO Br-R RING-CO TIP-PCOU RING-PCOU...

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INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 COLOR LEAD PSTU PCB FUNCTION PAIR DESIGNATION POSITION CODE W-Bl TIP-TEL Bl-W RING-TEL TIP-PSTU RING-PSTU TIP-TEL RING-TEL W-Br TIP-PSTU Br-W RING-PSTU TIP-TEL RING-TEL R-Bl TIP-

PSTU BI-R RING-PSTU TIP-TEL RING-TEL TIP-PSTU RING-PSTU R-Br TIP-TEL Br-R RING-TEL TIP-PSTU RING-PSTU...

Page 260: Mdf Wiring/Piou Or Pepu Peripherals (25-Pair)

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 MDF 66M PIOU 25PR. PEPU/PIOU PCB MULTI-ZONE PAGE BLOCK CONNECTIONS 30W MAX./COMPOSITE IMPEDANCE COLOR 300 OHMS PG.OUT 1 S-Bk ZONE (35) PG.IN 1 Bk-S PG.OUT 2 ZONE (36) PG.IN 2 ZONE PAGE PG.OUT 3 Br-Y (39) PIOU...

Page 261: Piou/Tty And Smdr Wiring

• 1–STOP BIT 6 (W) TYCD 6-PIN MODULAR TYDTR (6-PIN JACK TYDSR MODULAR TYTD 3-PAIR JACK) TYRD MODULAR TOSHIBA RS-232/MODULAR CORD MAX. SMSG ADAPTOR PART NO. PPTC 50 FT WITH SMDR SMCD DB-25 RS-232 24 AWG SMDTR (6-PIN (MALE) SMDSR MODULAR...

Page 262: Pious Page/Relay/Alarm Connections

INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 KSU BACKPLANE HESB PAGE PAGE AMPLIFIER BREAK MUTE CONTROL DOOR MAKE LOCK CONTROL BREAK MAKE SOURCE UNIT NIGHT BELL NORMAL OPEN ALMT FACILITY ALARM ALARM SENSOR UNIT ALMR NORMAL CLOSE PIOUS • All wiring connections must be 24 AWG twisted pairs. Dotted lines show optional connections;...

Page 263 TYCD 6-PIN MODULAR (IMDU) • 1–STOP TYDTR JACK (6-PIN TYDSR MODULAR TYTD 3-PAIR JACK) TYRD MODULAR TOSHIBA RS-232/MODULAR CORD MAX. SMSG ADAPTOR PART NO. PPTC 50 FT WITH SMDR SMCD DB-25 RS-232 24 AWG (6-PIN SMDTR (MALE) SMDSR MODULAR SMTD...

Page 264 INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 CABLE FROM REAR OF POWER SUPPLY VOLTAGE OUTPUT SPECIFICATION –24V1 POWER FOR PPSU24/56/96 SUPPLY –24V2 CONNECTOR BACKPLANE NOMINAL RANGE PPSU24 –24V –26.3 ~ –27.8 BLUE –5V +4.5 ~ +5.5 –5V –4.5 ~ –5.5 POWER SUPPLY PPSU56 FRONT PANEL CONNECTOR DC OUT (PIN NUMBERS) DC POWER...

Page 265 INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PDKU JACKETED TWISTED PAIRS STATION CABLING BRIDGING W/FEMALE CONNECTOR 24 AWG (1 OR 2 PAIR, SEE NOTE 2) CLIPS T1 (VOICE/DATA) W-BL (GND) R1 (VOICE/DATA) BL-W PT1 (ADD, POWER) (GND) PR1 (ADD. POWER) W-GN GN-W CIRCUIT 2 TO DKT 2...

Page 266: Mdf Wiring For Digital Telephones (Dkts) With Pdiu-Di And Pdiu-Ds To Pdku

MODULAR CORD FEMALE V-BR TO RJ11 JACK CONNECTOR ON THE BR-V TO MODEM, PRINTER, BACK SIDE OR HOST COMPUTER OF PDIU-DS ETC. TOSHIBA 66M150 SPLIT BLOCK RS-232 POWER READY CONNECT CABLE (SEE SECTION 400-096-208) NOTES: PDIU-DS Voltage levels: T, PT = -26.3 ~ 27.8 VDC...

Page 267 INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 MDF BLOCK NO. KSU SLOT NO. COLOR PORT DIGITAL TELEPHONE/ INTERCOM DESIGNATION CODE DEVICE LOCATION NUMBER NUMBER NUMBER W-Bl Bl-W PWR T PWR R W-Br PWR T Br-W PWR R R- Bl PWR T Bl-R PWR R PWR T...

Page 268 INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 TO PEKU W/FEMALE BRIDGING CONNECTOR CUSTOMER SUPPLIED CLIPS W-BL TWO-WAY AMPLIFIER BL-W CIRCUIT 1 TO EKT LINE REPEATERS (SEE NOTE 2) W-GN PEKU, CIRCUIT 2 VOICE PAIR PORT A (CENTRAL OFFICE SIDE) GN-W W-BR NOT USED BR-W PEKU, CIRCUIT 3 VOICE PAIR...

Page 269 INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 SCREW TO PDKU W/FEMALE TERMINALS BRIDGING CONNECTOR CLIPS W-BL BL-W CIRCUIT 1 W-GN GN-W USED CIRCUIT 2 W-BR 6 5 4 3 2 1 DOOR PHONE A BR-W MDFB (REAR VIEW) DDCB CIRCUIT 3 R-BL DOOR PHONE BL-R...

Page 270 INSTALLATION-WIRING DIAGRAMS SECTION 400-096-209 SEPTEMBER 1992 STATION CABLING JACKETED TWISTED PAIRS PDKU CONNECTOR BRIDGING 24AWG (1 PAIR) CLIPS T1 (VOICE/DATA) W-BL (GND) R1 (VOICE/DATA) BL-W (NOT USED) W-GN DC OUTPUT GN-

W CKT 2 W-BR BR-W AC/DC EXTERNAL POWER SOURCE CKT 3 R-BL BL-R AC INPUT...

Page 271 TOSHIBA SYSTEM PRACTICES STRATA DK FAULT FINDING DIGITAL KEY TELEPHONE SYSTEM SECTION 400-096-500 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 FAULT FINDING PROCEDURES...

Page 272 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 TABLE OF CONTENTS PARAGRAPH SUBJECT PAGE GENERAL .....FAULT CLASSIFICATION .....FAULT CLEARING PROCEDURES .....DEFECTIVE APPARATUS RETURNS .....FAULT IDENTIFICATION AND ELIMINATION PROCEDURES .....POWER SUPPLY .....STATION CABLE CONTINUITY CHECK..... 7.11 Voltmeter Test .....

Page 273: General

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 IMPORTANT! 1 GENERAL Many system features are assigned, en- abled or disabled using software entries 1.01 This section describes the maintenance pro- as described in Programming Procedures. cedures used to diagnose faults in the STRATA It is very important to verify that the sys- DK digital key telephone system.

Page 274: Defective Apparatus Returns

3.06 The following precautions must be observed unit with string (not wire) so the tag can remain attached during the testing and repair process. when handling PCBs: Return tags are available from Toshiba America DO NOT: Information Systems, Inc., TSD Division. •...

Page 275: Station Cable Continuity Check

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 TABLE D can be employed to further isolate possible causes DK96 CIRCUIT BREAKER DISTRIBUTION before removal of the KSU back cover or the power supply unit. Figure 2 shows backplane connector Circuit Backplane PCB Backplane PCB PCTU...

Page 276: Ohmmeter Test

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 4) For the MDF-to- telephone (digital or elec- and Table H for digital telephones, DDSSs tronic) cable, a more precise check is made and DDCBs. using an ohmmeter. 7.20 Cable Installation 7.10 Ohmmeter Test 7.21 If cable voltmeter and ohmmeter tests are 7.11 The continuity of the cable run between the within limits, digital telephones may not operate...

Page 277 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 TABLE E (PEKU OR PESU) TABLE F (PEKU OR PESU) STATION CABLE CONTINUITY STATION CABLE CONTINUITY CHECK USING VOLTMETER CHECK USING OHMMETER FROM FROM VOLTAGE Resistance Pair Wire Color Pair Wire Color Pair Wire Color...

Page 278 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 1 FAULT CLASSIFICATION Please read the NOTE: Before proceeding, maintenance check that the fault is not information due to erroneous programming. before proceeding. START Start here to clear faults in STRATA DK Systems.

Page 279 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 1 FAULT CLASSIFICATION (cont.) From From This Page 6 Page it a MOH, BGM, it a TIE Page 26 Page 19 Page or Line fault? Relay fault? it an it an SMDR Page 15 Page 21...

Page 280: Fault Classification

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 2 POWER FAULTS From Pages 6 & 10 Start here to clear Power faults. Go to you arrive Page 6 here from the to classify Fault Classification fault. Flowchart? Power down and lightly press all power supply circuit breakers.

Page 281: Station Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 3 STATION FAULTS From Pages 6 & 7 Start here to clear Station faults. you arrive Go to Page 6 here from the to classify Fault Classification fault. Flowchart? From Pages 16 &...

Page 282 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 3 STATION FAULTS (cont.) From From this and Page 9 Page 9 it an Replace the OCA fault for EOCU on the it an all stations on PEKU, appropriate PEKU OCA fault? PESU, or PDKU, or PESU, if used, or...

Page 283: Ksu Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 4 KSU FAULTS From Page 6 Start here to clear KSU faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? power present at the digital and electronic Page 8 telephones?

Page 284: Co Line Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 5 CO LINE FAULTS From From PCOU This Page 6 Page Start here to clear CO/PBX faults. you arrive Go to the fault here from the Page 6 to This Fault Classification classify fault.

Page 285 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 5 CO LINE FAULTS (cont.) From Page 12 Replace the PCTU. NOTES: Perform the initialization sequence before proceeding. Reprogram as required. the fault cleared? Remove all PCBs from the KSU except: ¥...

Page 286 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 5 CO LINE FAULTS (cont.) From Page 13 NOTES: Replace all PCBs, Perform initialization one at a time sequence when PCTU until the fault is replaced. is cleared. Reprogram as required. Reinstall remaining Tag the PCBs, one at a time.

Page 287: Intercom Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 6 INTERCOM FAULTS From Page 7 Start here to clear Intercom faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? Is it a From transmission fault?

Page 288: Dss Console Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 7 DSS CONSOLE FAULTS From Page 7 Start here to clear DSS Console faults. Go to you arrive Page 6 to here from the classify fault. Fault Classification Flowchart? Is this a Reprogram programming as required.

Page 289 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 7 DSS CONSOLE FAULTS (cont.) From Page 16 Replace the PEKU or PDKU. Replace the fault the PCTU. cleared? Tag the the fault defective unit(s) cleared? and return for repair. Call the Service Center for assistance.

Page 290: Speed Dial Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 8 SPEED DIAL FAULTS From Page 7 Start here to clear Speed Dialing faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? this a Reprogram programming as required.

Page 291: Moh, Bgm, Page & Relay Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 9 MOH, BGM, PAGE & RELAY FAULTS From Page 7 Start here to clear faults with Music-on-Hold, Background Music, Paging. you arrive Go to here from the Page 6 to Fault Classification classify fault.

Page 292 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 9 MOH, BGM, PAGE & RELAY FAULTS (cont.) From Page 19 ¥ Verify external the problem equipment. only over external ¥ Verify programming. page? Replace the fault the PCTU. cleared? Replace PIOU or the fault PEPU or PIOUS PCB,...

Page 293: Smdr Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 10 SMDR FAULTS From Page 7 Start here to clear SMDR faults. you arrive Go to here from the Page 6 to

Fault Classification classify fault. Flowchart? NOTE: Verify the following: •...

Page 294: Pstu Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 11 PSTU FAULTS From PSTU Page 7 Start here to clear PSTU faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? NOTE: Verify the following: •...

Page 295: Door Phone Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 12 DOOR PHONE FAULTS From Page 6 Start here to clear Door Phone faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? Is the Door Phone DDCB HDCB...

Page 296 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 12 DOOR PHONE FAULTS (cont.) From From Page 23 Page 25 If you short Is the the wires to the DP, system programmed Program system will digital or electronic for the DDCB or HDCB for Door Phone output.

Page 297 STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 12 DOOR PHONE FAULTS (cont.) From Page 23 Does Can you DP work in speak over DP from any other DDCB or Page 24 digital or electronic HDCB output? telephone? If you the system dial the DP...

Page 298: Tie Line Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 13 TIE LINE FAULTS From Page 7 Start here to clear TIE Line faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? Verify programming.

Page 299: Remote Maintenance/Tty Faults

STRATA DK FAULT FINDING SECTION 400-096-500 SEPTEMBER 1992 CHART NO. 14 REMOTE MAINTENANCE/TTY FAULTS From Page 7 Start here to clear Remote Maintenance/ TTY faults. you arrive Go to here from the Page 6 to Fault Classification classify fault. Flowchart? NOTES: Verify programming.

Page 301: Remote Administration

TOSHIBA SYSTEM PRACTICES REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES DIGITAL KEY TELEPHONE SYSTEMS SECTION 400-096-600 SEPTEMBER 1992 RELEASE 1, 2, 3, and 4 REMOTE ADMINISTRATION MAINTENANCE PROCEDURES...

Page 302 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992...

Page 303 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE of CONTENTS PARAGRAPH SUBJECT PAGE USING REMOTE ADMINISTRATION AND MAINTENANCE.....GENERAL DESCRIPTION .....HARDWARE REQUIREMENTS .....SET-UP .....4.00 General ..... 4.10 Hardware Verification .....4.20 Programming ..... 4.30 On-site Testing .....LOCAL TERMINAL .....

Page 304 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE LIST TABLE SUBJECT PAGE RM-A SECTION FLOWCHART .....RM-B PROGRAMMING PROMPTS ..... RM-C RM-C thru RM-BS .....12 ~ 65 FIGURE LIST FIGURE SUBJECT PAGE PIOUS/IMDU CIRCUIT DIAGRAM .....LOCAL TERMINAL CONNECTION ..... DATA DUMP PRINTOUT EXAMPLE .....

Page 305: Using Remote Administration And Maintenance

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 1 USING REMOTE ADMINISTRATION AND MAINTENANCE 1.01 Table RM-A is provided as a quick reference aid in using this section. General Description: The functions available on STRATA DK systems via local or Remote Terminal are explained in Paragraph 2.

Page 306: General Description

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 2 GENERAL DESCRIPTION Program Mode: Provides for complete program- ming of all STRATA DK programs (including speed dial adds/changes). 2.01 Remote Administration and Maintenance is accomplished with a remote terminal/modem Test Mode: Provides for testing of STRATA DK communicating over the public telephone net- stations and CO lines.

Page 307: Set-Up

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 4 SET-UP NOTE: If modem tone is not received, check to see 4.00 General that the SW3 switch on the PIOU/PIOUS is set to "MODEM". See Section 400-096-206. 4.01 This section assumes that the system has been properly installed per the appropriate section 3) Press the Spkr...

Page 308: Local Operation

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 LOCAL TERMINAL PPTC MODULAR TO DB25 ADAPTOR PIOU(S) RS-232 INTERNAL DATA BUSS (300 OR 1200 BPS) 50 FEET MAX. 24 AWG TERMINAL See Peripherals Installation, Section 400-096-208, for detailed pin-out information. FIGURE 2 LOCAL TERMINAL CONNECTION 1) Connect the RS-232 cable to the terminal...

Page 309: Remote Terminal Site

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 NOTE: Stop bits: 1 The security code can be entered any time the Parity: Even CODE prom pt appears. 6.20 Remote Operation 6) To continue, go to Paragraph 7. 6.21 Automatic connection via ringing assignments: 6 REMOTE TERMINAL SITE To establish communication between the remote terminal and the IMDU, call the number of the...

Page 310: Operation

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 NOTE: TABLE RM -B— PROGRAMMING PROMPTS If the connection is not com pleted or com m u- Mode Function Mode Name Prompt Return nication is unsuccessful, the remote term inal Program PROG displays: NO CARRIER.

Page 311: Program Types

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 8.20 Program Types 8.40 Programming Procedures 8.21 There are three types of programs: 1) Refer to a completed System Record Sheet. Type 1: All Type 1 programs use the same proce- dure;...

Page 312: Test Mode

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 CO LINE NUMBERS 1:SELECT(LED ON) 11111111 11111111 11111111 11111111 11111111 00000000...

Page 313: Co Line Testing

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 PUBLIC TELEPHONE REMOTE SITE NETWORK PC OR TERMINAL TERMINAL RS-232 CO LINE CO LINE A MODEM CO LINE A (300 or 1200 BPS) IMDU DATA BUSS STATION 2000 SERIES REMOTE CO LINE CO LINE B CO LINE B STATION B...

Page 314: Remote Called Station Message Mode

13.01 Exit the current mode per Paragraph 13.02 tion. and select the desired mode via Paragraph 7. TERMINALS MODEMS SOFTWARE COMPUTERS Texas Instruments Hayes: Smartmodem Toshiba: T3100/20, Crosstalk 1200 T1100, & T1000 Silent 700 Universal Data Systems: Procomm Model 103J LP Panasonic KXD-4920 U.S.

Page 315: Discontinue Operation

REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER

1992 14.11 Exit current operating mode via Paragraph 13.02 To exit the PROG, DUMP, TEST or SPEED 13 and observe that the MODE prompt is displayed DIAL mode: on the terminal. • At the P, D, T or R prompt, enter Q U I T CR 14.12 To discontinue remote operation:...

Page 316 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-C PROGRAM 90 INITIALIZING PROGRAMS 00 ~ 97 STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt enter P R O G CR. Enter Program Number 90 P 90 Press CR.

Page 317 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-D PROGRAM 92 STATION SPEED DIAL, SPEED DIAL MEMO, VM ID CODES INITIALIZATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 92 P 92 Press CR.

Page 318 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-E PROGRAM 92 (continued) SYSTEM SPEED DIAL, SPEED DIAL MEMO INITIALIZATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 92 P 92 Press CR.

Page 319 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-F PROGRAM 92 (continued) LCD CHARACTER MESSAGE MEMORY INITIALIZATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 92 P 92 Press CR.

Page 320 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-G PROGRAM 92 (continued) TIMED REMINDERS INITIALIZATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 92 P 92 Press CR.

Page 321 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-H PROGRAM 92 (continued) DIGITAL TELEPHONE VOLUME LEVEL INITIALIZATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 92 P 92 Press CR.

Page 322 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-I PROGRAM 92 (continued) CALL FORWARD BACKUP RAM INITIALIZATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 92 P 92 Press CR.

Page 323 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-J TYPE 1 PROGRAM PROCEDURE EXAMPLE (PROGRAMS: 10-1, 10-2, 10-3, 15, 16, 42-0, 77-1, 77-2) STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number P 10 Refer to the record sheet and enter the desired program number.

Page 324 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-K TYPE 2 PROGRAM PROCEDURE EXAMPLE (PROGRAMS: 17, 20, 30, 31, 35, 40, 41, 43, 79, 81 ~ 89) STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number P 30 Refer to the record sheet and enter the desired program number.

Page 325 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-L PROGRAM 00 SOFTWARE CHECK/REMOTE MAINTENANCE—SECURITY CODE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 00 P 00 Press CR.

Page 326 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-M PROGRAM 03 SLOT ASSIGNMENTS STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 03 P 03 Press CR.

Page 327 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-N PROGRAM 04 PORT/STATION NUMBER ASSIGNMENT STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt enter

P R O G CR. Enter Program Number 04 P 04 Press CR.

Page 328 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-P PROGRAM 12 SYSTEM ASSIGNMENTS – BASIC TIMING STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 12 P 12 Press CR.

Page 329 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-R PROGRAM 19 BACKGROUND MUSIC SLOT IDENTIFICATION (RELEASE 3 AND HIGHER) STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 19 P 19 Press CR.

Page 330 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-T PROGRAM 22 DATA STATION HUNTING (DATA CALL ONLY) (RELEASE 3 AND HIGHER) STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 22 P 22 Press CR.

Page 331 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-V PROGRAM 29 DSS CONSOLE BUTTON ASSIGNMENTS STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number P 29 Press 2 9 CR.

Page 332 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-W PROGRAM 32 AUTOMATIC PREFERENCE STEP ACTION DISPLAY/PRINTOUT >MODE PROG Enter the Program Mode At the >MODE prompt, enter P R O G CR. Enter the Program Number 32 P 32 Press CR.

Page 333 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-Y PROGRAM 34 HOLD RECALL TIMING STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 34 P 34 Press CR.

Page 334 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AA PROGRAM 37 RING TRANSFER (CAMP-ON) RECALL TIME STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter the Program Number 37 P 37 Press CR.

Page 335 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AB PROGRAM 38 DIGITAL AND ELECTRONIC TELEPHONE BUTTONSTRIP TYPE STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter the Program Number 38 P 38 Press CR.

Page 336 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AC PROGRAM 39 FLEXIBLE BUTTON ASSIGNMENT STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter PROGCR Enter the Program Number 39 P 39 Press Refer to the System Record Sheet and enter P39 00 the required port number.

Page 337 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AD PROGRAM 42-1 ~ 8 PBX ACCESS CODE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 42 P 42 Press CR.

Page 338 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AE PROGRAM 60 SMDR OUTPUT/ACCOUNT CODE DIGIT LENGTH STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter PROGCR Enter Program Number 60 P 60 Press SMDR Threshold Time P60 21 Enter: Item code 2.

Page 339 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AF PROGRAM 69 VERIFIABLE ACCOUNT CODE ENTRY (RELEASE 3 AND HIGHER) STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 69 P 69 Press CR.

Page 340 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AG PROGRAM 70 VERIFY ACCOUNT CODE/TOLL RESTRICTION ASSIGNMENT (RELEASE 3 AND HIGHER) STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 70 P 70 Press CR.

Page 341 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AH PROGRAM 78 CO LINE SPECIAL RINGING ASSIGNMENTS-DISA/IMDU/ NIGHT RINGING OVER EXTERNAL PAGE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 78 P 78 Press CR.

Page 342 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AI PROGRAM 80 DIGITAL AND ELECTRONIC TELEPHONE RINGING TONES STEP ACTION DISPLAY/PRINTOUT Enter Program Mode. >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 80 P 80 Press CR.

Page 343 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AJ PROGRAM 93 CO LINE IDENTIFICATION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 93 P 93 Press CR.

Page 344 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AL PROGRAM 45-1 TOLL RESTRICTION DIAL PLAN STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 45 P 45 Press CR.

Page 345 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AN PROGRAM 45-3 ~ 6 EQUAL ACCESS, SPECIAL COMMON CARRIER NUMBERS & AUTHORIZATION CODE DIGIT LENGTH STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 45 P 45 Press CR.

Page 346 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AP PROGRAM 46–2 ~ 4 TOLL RESTRICTION ALLOWED/DENIED AREA CODES ASSIGNED BY CLASS STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 46 P 46 Press CR.

Page 347 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AQ PROGRAM 46-6 ~ 8 TOLL RESTRICTION ALLOWED/DENIED OFFICE CODES ASSIGNED BY CLASS STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 46 P 46 Press CR.

Page 348 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AR PROGRAM 46-10 ~ 40 TOLL RESTRICTION CLASS PARAMETERS STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 46 P 46 Press CR.

Page 349 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AS PROGRAM 47 TOLL RESTRICTION EXCEPTION OFFICE CODES ASSIGNED BY AREA CODE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 47 P 47 Press CR.

Page 350 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AT PROGRAM 48 STATION TOLL RESTRICTION CLASSIFICATION STEP ACTION DISPLAY/PRINTOUT Enter the Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 48 P 48 Press CR.

Page 351 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AV PROGRAM 50-2 LCR HOME AREA CODE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 50 P 50 Press CR.

Page 352 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AX PROGRAM 50-4 LCR LDI PLAN NUMBER STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter PROGCR Enter Program Number 50 P 50 Press Enter the number 4 P50 4 1 The system will display the present LDI route number.

Page 353 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-AZ PROGRAM 50-6 LCR DIAL ZERO TIMEOUT STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 50 P 50 Press CR.

Page 354 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BB PROGRAM 52 LCR OFFICE CODE EXCEPTIONS FOR SPECIFIED AREA CODE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 52 P 52 Press CR.

Page 355 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BC PROGRAM 53 LCR SCHEDULE ASSIGNMENT STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 53 P 53 Press CR.

Page 356 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BD PROGRAM 54 LCR ROUTE DEFINITION STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 54 P 54 Press CR.

Page 357 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BE PROGRAM 55-0 LCR MODIFIED DIGITS-DELETE STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 55 P 55 Press CR.

Page 358 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BF PROGRAM 55-1 LCR MODIFIED DIGITS-ADD STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 55 P 55 Press CR.

Page 359 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BG PROGRAM 55-2 LCR MODIFIED DIGITS-END STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 55 P 55 Press CR.

Page 360 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BH PROGRAM 56 LCR STATION GROUP ASSIGNMENT STEP ACTION DISPLAY/PRINTOUT Enter Program Mode >MODE PROG At the >MODE prompt, enter P R O G CR. Enter Program Number 56 P 56 Press CR.

Page 361 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BJ SPEED DIALING DATA DUMP STEP ACTION DISPLAY/PRINTOUT Enter the Data Dump Mode >MODE DUMP At the >MODE prompt, enter D U M P CR. To Output Speed Dialing Data Enter R E P ---or--- R E P = A L L or S Y S...

Page 362 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BL MODE 95 REMOTE CALLING STATION MESSAGING (ADD/REVIEW/CHANGE) STEP ACTION DISPLAY/PRINTOUT Enter the Message Mode >MODE MESG At the >MODE prompt, enter M E S G CR. To Add Or Review a Calling Station Message m 95 Set the terminal keyboard to the lower case (cap lock off) and enter m 9 5.

Page 363 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BM MODE 97 REMOTE CALLING STATION MESSAGING (ADD/CHANGE) STEP ACTION DISPLAY/PRINTOUT Enter the Message Mode >MODE MESG At the >MODE prompt, enter M E S G CR. To Add a Message (or change a previously stored message) m 97 Set the terminal keyboard to lower case (caps lock off) and...

Page 364 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600

SEPTEMBER 1992 TABLE RM-BN MODE 94 REMOTE CALLED STATION MESSAGING (ADD/REVIEW/CHANGE) STEP ACTION DISPLAY/PRINTOUT Enter the Message Mode >MODE MESG At the >MODE prompt, enter M E S G CR. To Add Or Review a Called Station Message m 94 Set the terminal keyboard to the lower case (cap lock off) and enter m 9 4.

Page 365 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BO MODE 96 REMOTE CALLED STATION MESSAGING (ADD/CHANGE) STEP ACTION DISPLAY/PRINTOUT Enter the Message Mode >MODE MESG At the >MODE prompt, enter M E S G CR. To Change or Add a New Called Station Message m 96 Set the terminal keyboard to the lower case (cap lock off) and enter m 9 6.

Page 366 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BP STATION/CO LINE STATUS CHECK STEP ACTION DISPLAY/PRINTOUT Enter the Test Mode >MODE TEST At the >MODE prompt, enter T E S T CR. To Check Station Line Status T SEKT XX IDLE ON-HOOK Enter S E K T X X X X = port number.

Page 367 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BR CO LINE TEST STEP ACTION DISPLAY/PRINTOUT Enter the Test Mode >MODE TEST At the >MODE prompt, enter T E S T CR. To Verify Station/CO Line Status T SEKT XX IDLE ON-HOOK Station line status, enter S E K T X X X X = station port).

Page 368 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BS SYSTEM DATE/DAY/TIME SETTING PROCEDURE STEP ACTION DISPLAY/PRINTOUT Enter the Test Mode >MODE TEST At the >MODE prompt, enter T E S T CR. To Set Date T TK00 K01 651YYMMDD# Enter T K 0 0 K 0 1 6 5 1 Y Y M M D D # CR.

Page 369 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 TABLE RM-BT SPEED DIAL MODE (CHANGE/REVIEW) STEP ACTION DISPLAY/PRINTOUT Enter the Speed Dial Mode >MODE REPT At the >MODE prompt, enter R E P T CR. Enter the station port number for which the speed dial number will be programmed Station Port Number Press...

Page 370 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 Remote Maintenance Procedures Index Initialization Procedures Page No Program Procedure Program Type Page No. System Programs (90) 46-6 ~ 8 Station Speed Dial, VM ID Codes (92) 46-10 ~ 40 System Speed Dial (92) LCD Messages (92) Timed Reminders (92) 50-1...

Page 371 REMOTE ADMINISTRATION & MAINTENANCE PROCEDURES SECTION 400-096-600 SEPTEMBER 1992 MESSAGE RECORD SHEET—Use several sheets if necessary MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ MESG.#_____ -67-...

This manual is also suitable for:

Strata dk96Strata dk56