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UNIVERGE SV8100

System Maintenance Manual

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Technology Development

Preface

Before Reading this Manual

This manual provides detailed information for diagnostic and maintenance information for the SV8100 system.

There are three parts to this manual:

Chapter 1 – Troubleshooting IP on an SV8100 System

This chapter provides some helpful tips for troubleshooting IP on the SV8100 system.

Chapter 2 – System Maintenance

The technician can use this chapter to troubleshoot and diagnose problems during and after SV8100 system installation. The troubleshooting flow charts and general test procedures help the technician identify possible causes of the problem by defining the problem area.

Chapter 2 – Diagnostics

This chapter provides a description of the SV8100 Diagnostic Interface Module (DIM) built into the CD-CP00-US blade. The DIM can monitor the activity of the system under the control of commands entered by the engineer.

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Troubleshooting IP on an SV8100 System

SECTION 1 INTRODUCTION

This book provides some helpful tips for troubleshooting IP on the UNIVERGE® SV8100 system.

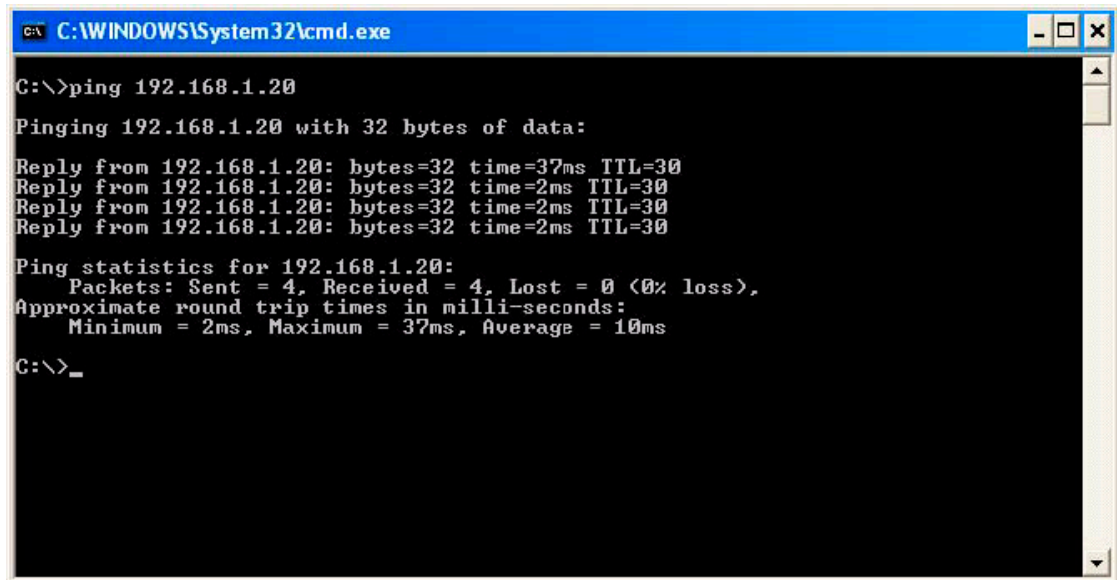
SECTION 2 PING

This is one of the most useful tools available to troubleshoot IP connectivity. PING is a standard component of Microsoft Windows® and is also implemented on the UNIVERGE SV8100 IP Phones. Ping sends a small IP packet to a specified destination and waits for a response back.

It should be possible to ping IP Phones, the CD-CP00-US (CPU), PZ-32IPLA (32 VoIP), PZ-64IPLA (64 VoIP), PZ-128IPLA (128 VoIP) and any other devices on the network. Send a ping and wait for a reply. If a reply is not received, the ping response “times out”. This indicates a connection problem.

Refer to [Figure 1-1 Ping Traces on page 1-2](#) for examples of these two conditions.

Successful Ping Trace



```
C:\WINDOWS\System32\cmd.exe

C:\>ping 192.168.1.20

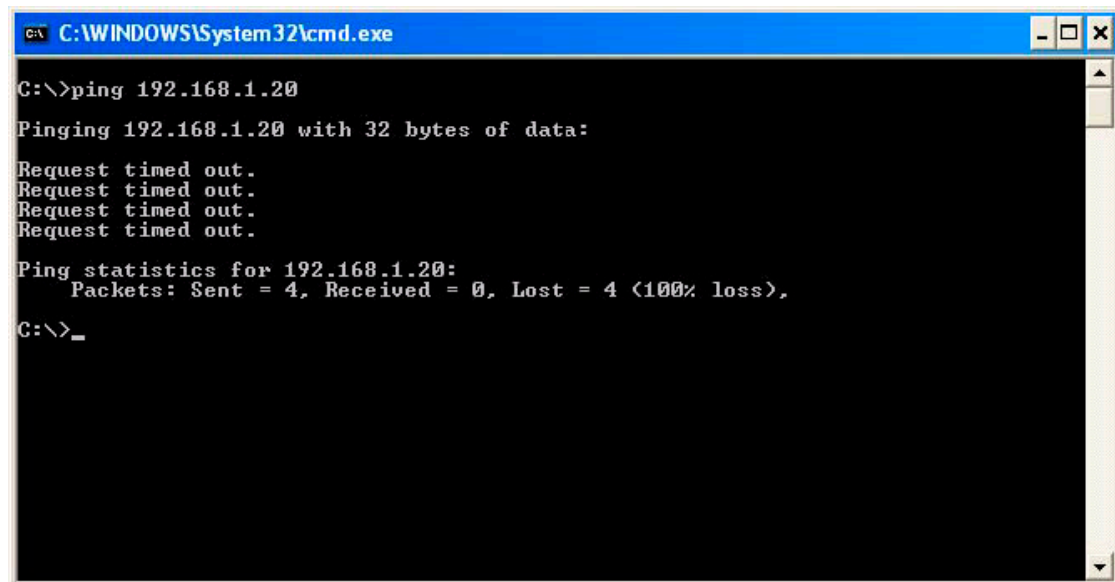
Pinging 192.168.1.20 with 32 bytes of data:

Reply from 192.168.1.20: bytes=32 time=37ms TTL=30
Reply from 192.168.1.20: bytes=32 time=2ms TTL=30
Reply from 192.168.1.20: bytes=32 time=2ms TTL=30
Reply from 192.168.1.20: bytes=32 time=2ms TTL=30

Ping statistics for 192.168.1.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 37ms, Average = 10ms

C:\>_
```

Unsuccessful Ping Trace



```
C:\WINDOWS\System32\cmd.exe

C:\>ping 192.168.1.20

Pinging 192.168.1.20 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.20:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>_
```

Figure 1-1 Ping Traces

If unable to ping a device, it may mean that either the source or destination device:

- ☐ is not configured correctly
- ☐ is not connected to the LAN (e.g., cable disconnected)
- ☐ has a developed a fault
- ☐ or any device in between the source or destination may be faulty (e.g., routers)

2.1 Pinging from a PC

The command syntax for ping is:

```
ping [-t] [-n count] [-l size] target
```

-t (optional) continually sends PING requests until Ctrl-C is pressed to cancel -n (optional) sends a specified number of PING requests -l (optional) sends packets of a specified size (bytes) target the destination IP address or host name

Note that there are other options available with the Microsoft Windows® implementation of ping. The most commonly used options are listed above.

Examples:

- ping 192.168.2.100 -t Continually pings 192.168.2.100 until Ctrl-C pressed
- 192.168.2.100 -n 10 -l 40 Sends ten 40-byte packets to 192.168.2.100
- ping 192.168.2.100 Sends four 32-byte packets (default) to 192.168.2.100

2.2 Pinging from an UNIVERGE SV8100 IP Phone

The System IP Phone has a version of ping within the Maintenance Menu.

```
Hold down help button for 3 sec
Press 3 (Ping)
Enter address
Press OK
```

The following options are available:

1. Echo request start: Starts the ping process using the settings in options 2 and 3 below.
2. Destination address: The target destination IP Address
3. A successful ping results in: 1.OK 2.OK 3.OK 4.OK Complete
A unsuccessful ping results in: 1.NG 2.NG 3.NG 4.NG Complete

An example of ping usage:

A UNIVERGE SV8100 IP Phone unsuccessfully attempts to connect to the UNIVERGE SV8100 system as shown in [Figure 1-2 Ping Usage Example](#).

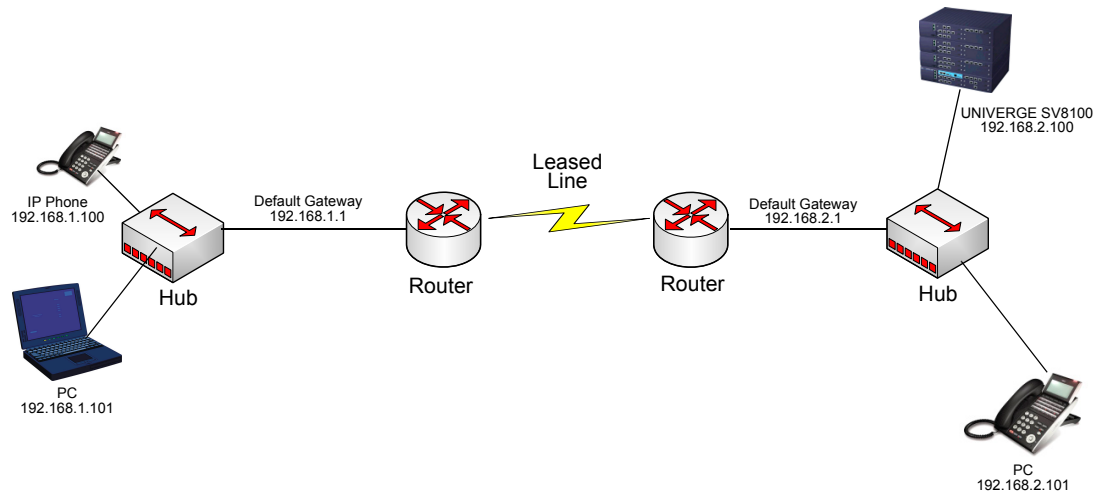


Figure 1-2 Ping Usage Example

As seen in [Figure 1-2 Ping Usage Example](#), there are several devices that could cause a connection problem:

- UNIVERGE SV8100 IP Phone (192.168.1.100)
- Local Hub
- Local Router (192.168.1.1)
- Leased Line
- Remote Router (192.168.2.1)
- Remote Hub
- UNIVERGE SV8100

You will see that by pinging from the System IP Phone and PCs, we can work out where the problem lies by process of elimination. We start by pinging the nearest device and working outward toward the intended destination.

Examples:

- The UNIVERGE SV8100 IP Phone can successfully ping all devices up to and including the local router. Anything beyond that point fails. This would suggest that the Leased Line or remote router has a problem.
- The local PC (192.168.1.101) can ping all devices except the UNIVERGE SV8100 IP Phone. The UNIVERGE SV8100 IP Phone can not ping anywhere. This would suggest that there is a problem with the UNIVERGE SV8100 IP Phone or its connection to the switch/hub.

SECTION 3 **PACKET TRACES**

It is possible to use a packet trace utility (also known as “Sniffers”) to determine what data is being transmitted and received on an ethernet network. These can be particularly useful to determine the cause of connection issues or voice quality issues.

The packet trace utility has to be run on a PC that is connected to the same hub (not a switched hub) where the UNIVERGE SV8100 system or UNIVERGE SV8100 IP Phone is connected.

There are many utilities available that will allow packet trace to be run on a network. One such utility is Ethereal. This is a software application distributed under a GNU general public license (www.wireshark.org). This allows the files to be captured and saved in a standard format for analysis later.

A sample trace file is shown in [Figure 1-3 Trace File Example on page 1-6](#).

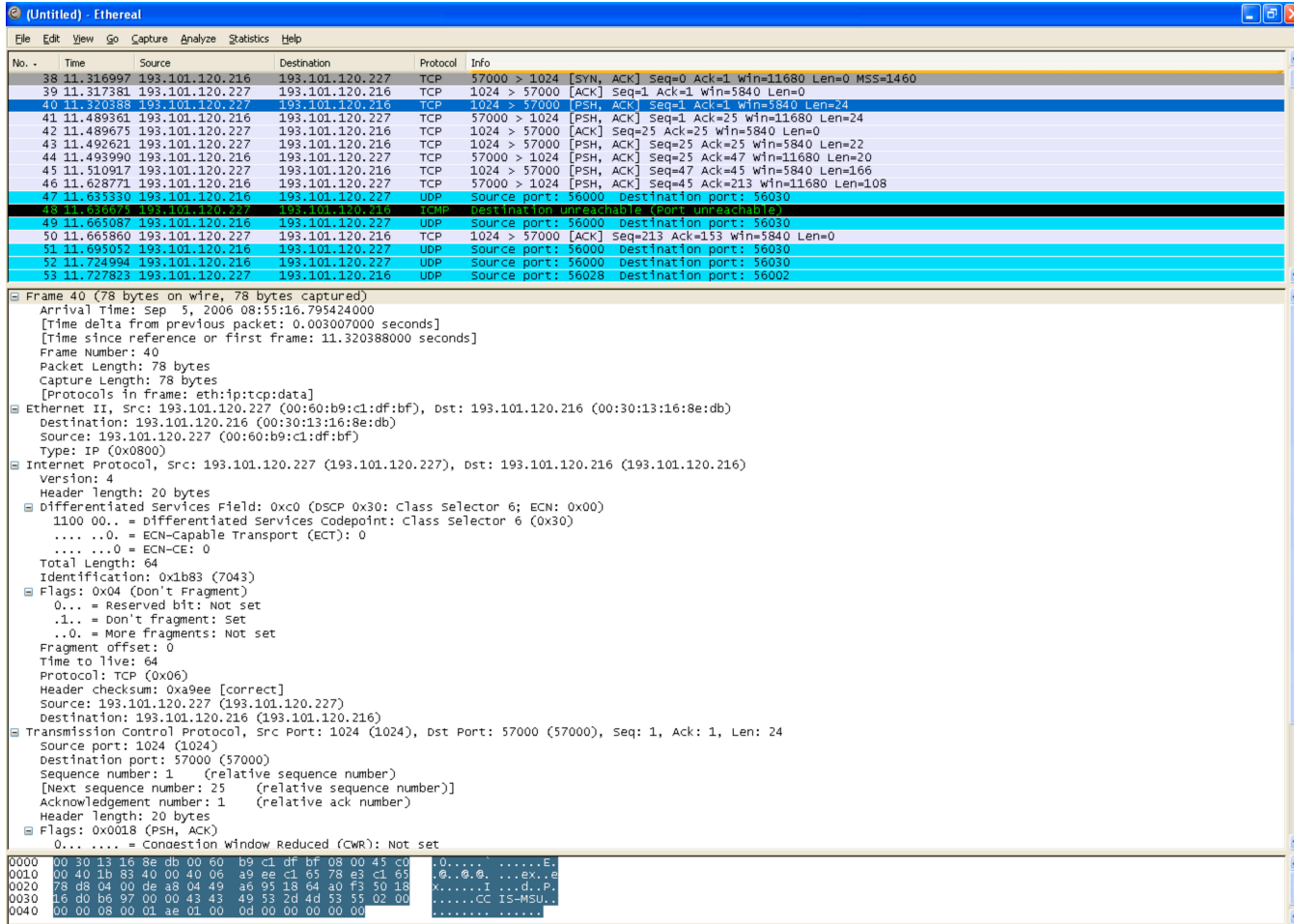


Figure 1-3 Trace File Example

System Maintenance

SECTION 1 INTRODUCTION

The technician can use this book to troubleshoot and diagnose problems during and after system installation. The troubleshooting flow charts and general test procedures help the technician identify possible causes of the problem by defining the problem area.

Using the System Data Upload/Download feature, all System Programming and Speed Dial data can be stored on disk for safe keeping. After all System Programming is completed, it should be downloaded to a disk for backup. When system memory fails, this data on the disk can be uploaded and the memory restored.

SECTION 2 OPERATIONAL TEST PROCEDURES

2.1 General Information

When an UNIVERGE SV8100 system is first powered up, an initialization is performed. During this process the CD-CP00-US (CPU), located in the first chassis, scans each interface slot to determine the hardware configuration used. This information is stored in the resident system program memory with the system default values. This section provides test procedures that are used before, during, and after the initialization process.

2.2 Before Initializing

The technician must follow these steps before initializing the system.

2.2.1 Cable Connections

All wiring for power supplies or flat cable connectors should be checked for solid connections.

2.2.2 Initialization Check

To determine if the system is initializing correctly, only the first chassis, CD-CP00-US, one CD-8DLCA, and terminals should be installed on the system. After initialization, all the terminals assigned to the CD-8DLCA can be used for internal calls to one another. (By default, these stations are assigned station numbers 101~108).

2.3 System Initialization

Before initialization is performed and verified, the entire system should be initialized.

With power OFF, all interface and option cards can be installed in the controlling chassis. The technician can then power up the system to perform a First Initialization. After the initialization, each station display shows default time and date indications.

For example: **12-2 FRI 10:47 AM**

2.4 After Initialization



Ensure that the battery is installed in CN15 on the CD-CP00-US.

Check all blade slots in software to ensure the initialization process scanned the installed hardware correctly.

A general system operation check should be performed using default values prior to system programming.

After all previous steps are performed and any problems corrected, system programming is complete.

After System Programming is finished, the technician should perform a Second Initialization. Performing the First Initialization a second time causes all programming memory to be lost. Second Initialization refreshes the system RAM without losing any memory.

This completes the installation procedure for the UNIVERGE SV8100 system. The technician should check the operation of each Multiline Terminal to ensure the system is working properly.

SECTION 3 TROUBLESHOOTING

3.1 Remote Administration and Maintenance

PCPro can remotely access the UNIVERGE SV8100 system for maintenance and diagnostics. The remote PC and the system are connected using a modem on the CD-CP00-US or using IP.

3.2 Problem Solving

To find the cause, consider all problem symptoms carefully. As each aspect of the problem is considered, the technician is guided to a probable solution. The problem must be defined as accurately as possible, so that the most efficient steps to the solution can be taken. Flowcharts in the next section help define the problem.

3.2.1 System Down

This term describes one of the following situations:

- ☐ No access to internal dial tone on any installed Multiline Terminal or Single Line Telephone.
- ☐ No LED or display indication on any installed Multiline Terminal.
- ☐ No system tones are generated.

3.2.2 Partial Operation

This term refers to any situation that cannot be completely described under the System Down conditions.

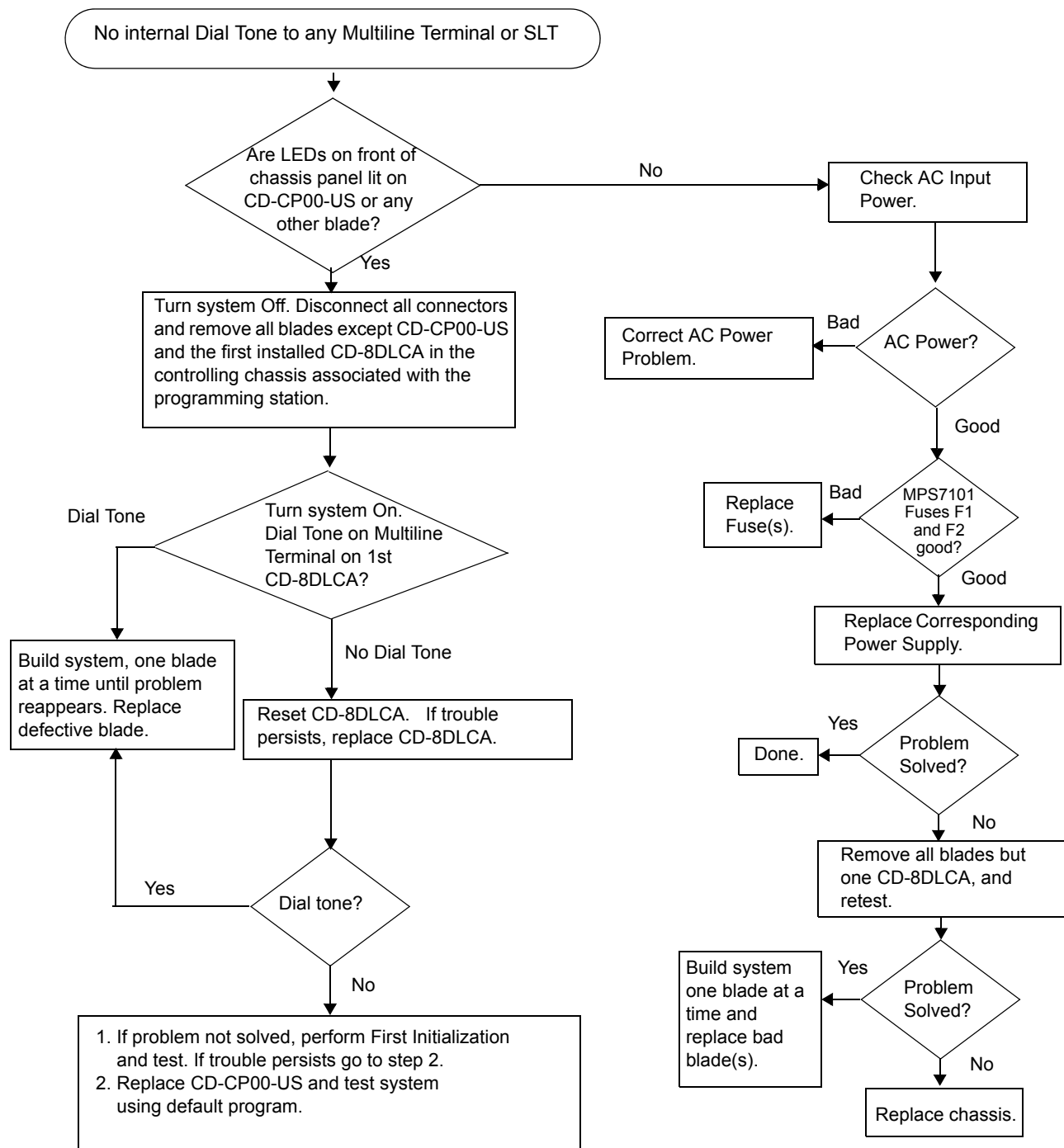
3.2.3 Reset

At times, the station and/or the blade must be reset. The following resets are used in the system:

- ☐ Terminal Reset – Unplug the station line cord from the station and then plug it back into the station.
- ☐ Blade Reset - Unseat the blade and reseat.

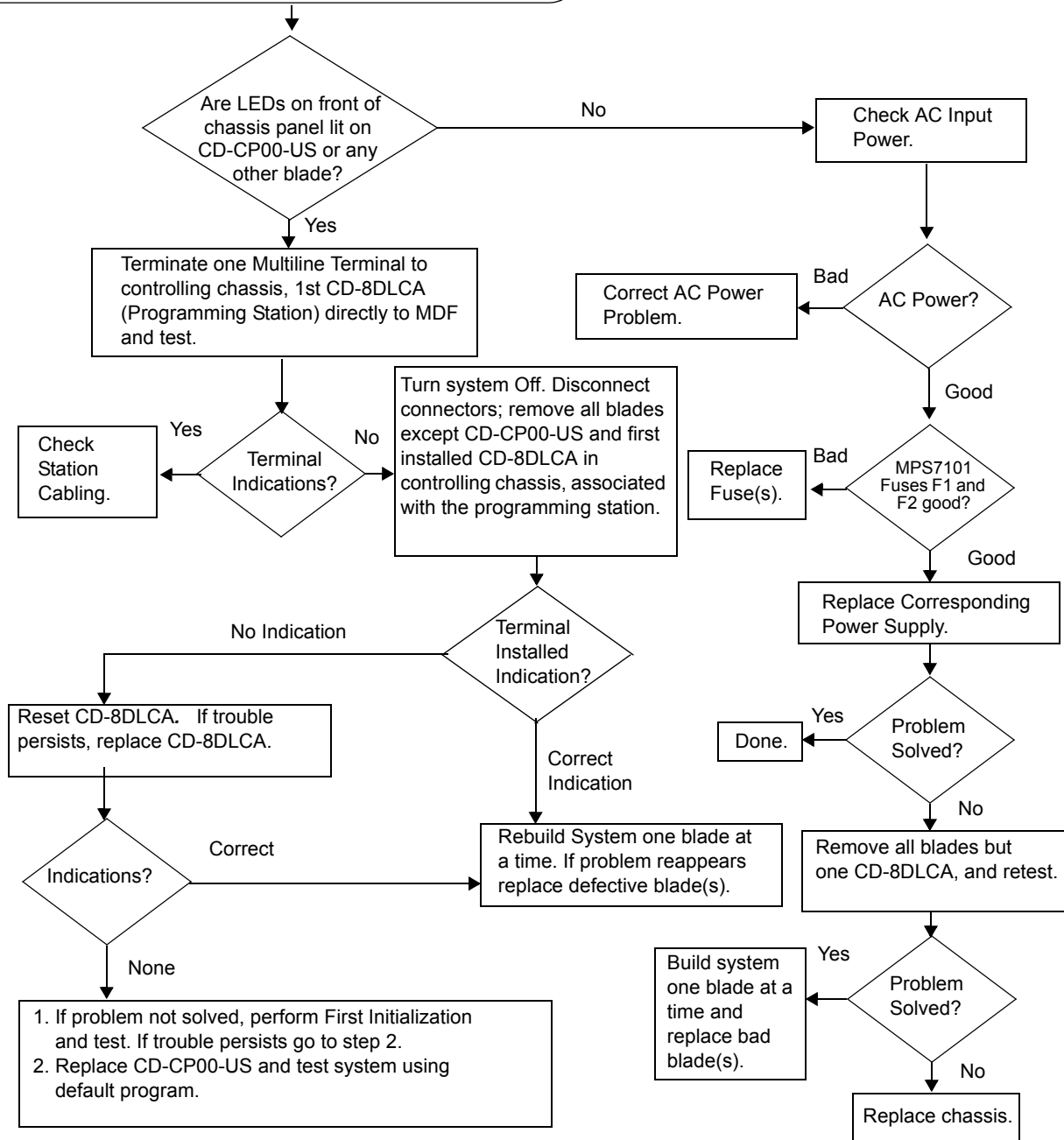
3.3 Flowcharts

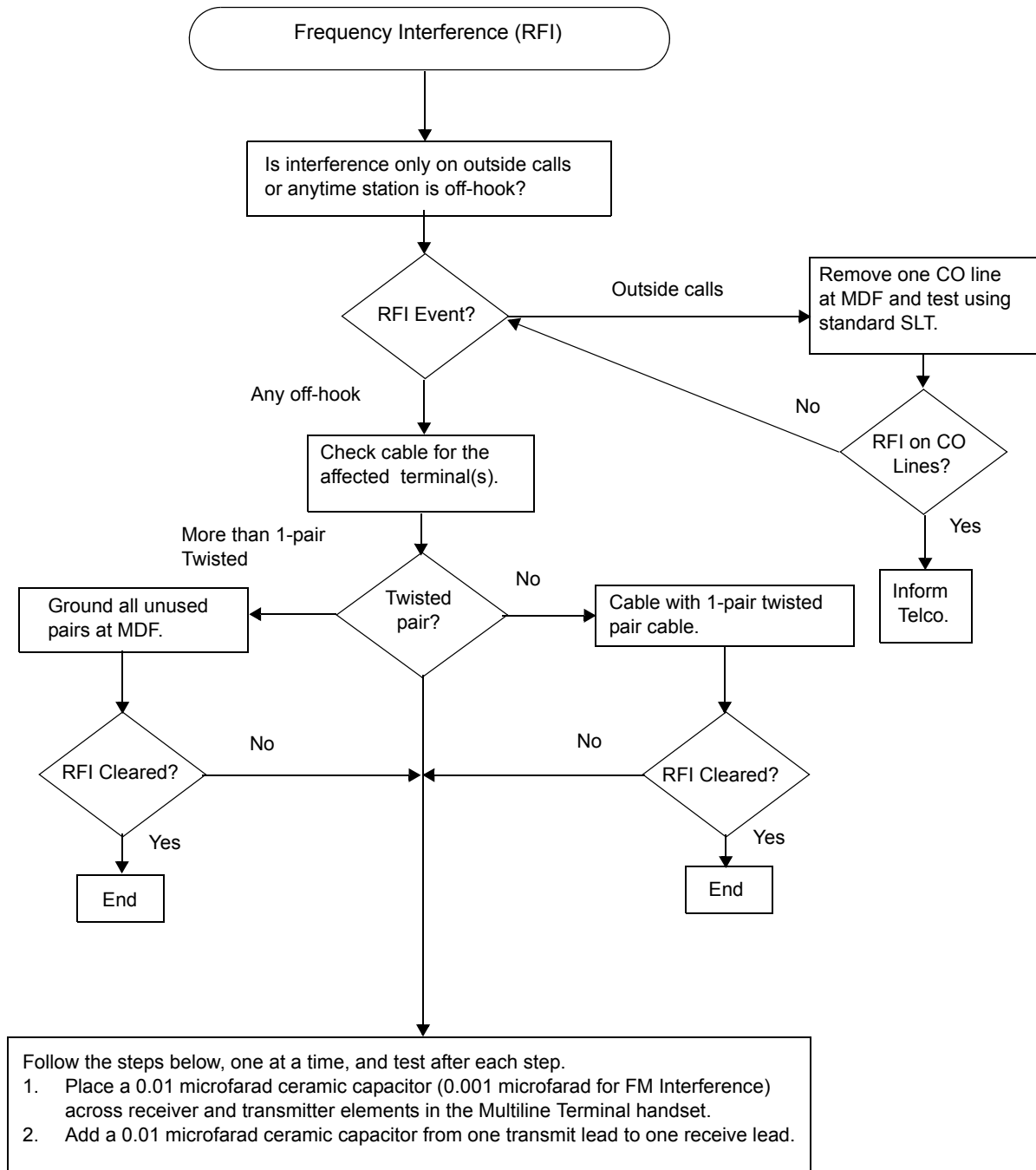
Condition	Flowchart	Page
A. System Down		
1. No Internal Dial Tone to any Multiline Terminal or SLT	A1	2-5
2. No LED or Display Indications on any Multiline Terminal	A2	2-6
B. Partial Operations		
1. Frequency Interference	B1	2-7
2. No or Intermittent CO/PBX Ring	C1	2-8
3. Call Dropping	C2	2-9
4. No Outside Dial Tone Access	C3	2-10
5. CO/PBX Dialing Problem: Cannot Dial Out on CO	C4	2-11
C. Multiline Terminal Problems		
1. Multiline Terminal Function	D1	2-12
2. Multiline Terminal Ringing	D2	2-13
3. Multiline Terminal Dial Tone Access	D3	2-14
D. Single Line Telephone Problems		
1. No Dial Tone Access on SLT	E1	2-15
2. Ringing Problem on SLT	E2	2-16
3. No Dial Access to SLT Features	E3	2-17
E. Low Volume Problems	F1	2-18
F. External Paging Problems	G1	2-19
G. SMDR Output Problems No Call Accounting System	H1	2-20

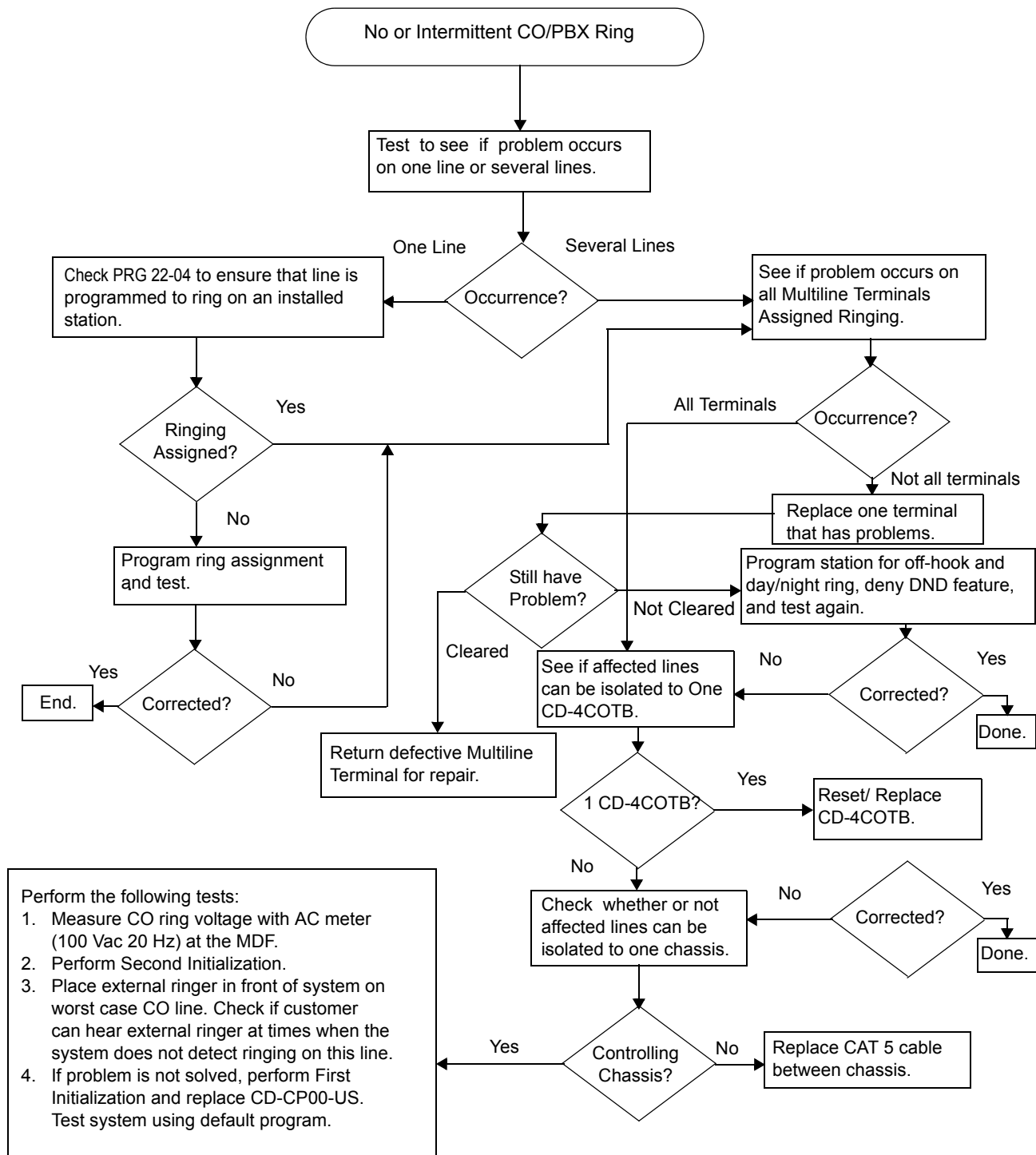
A1

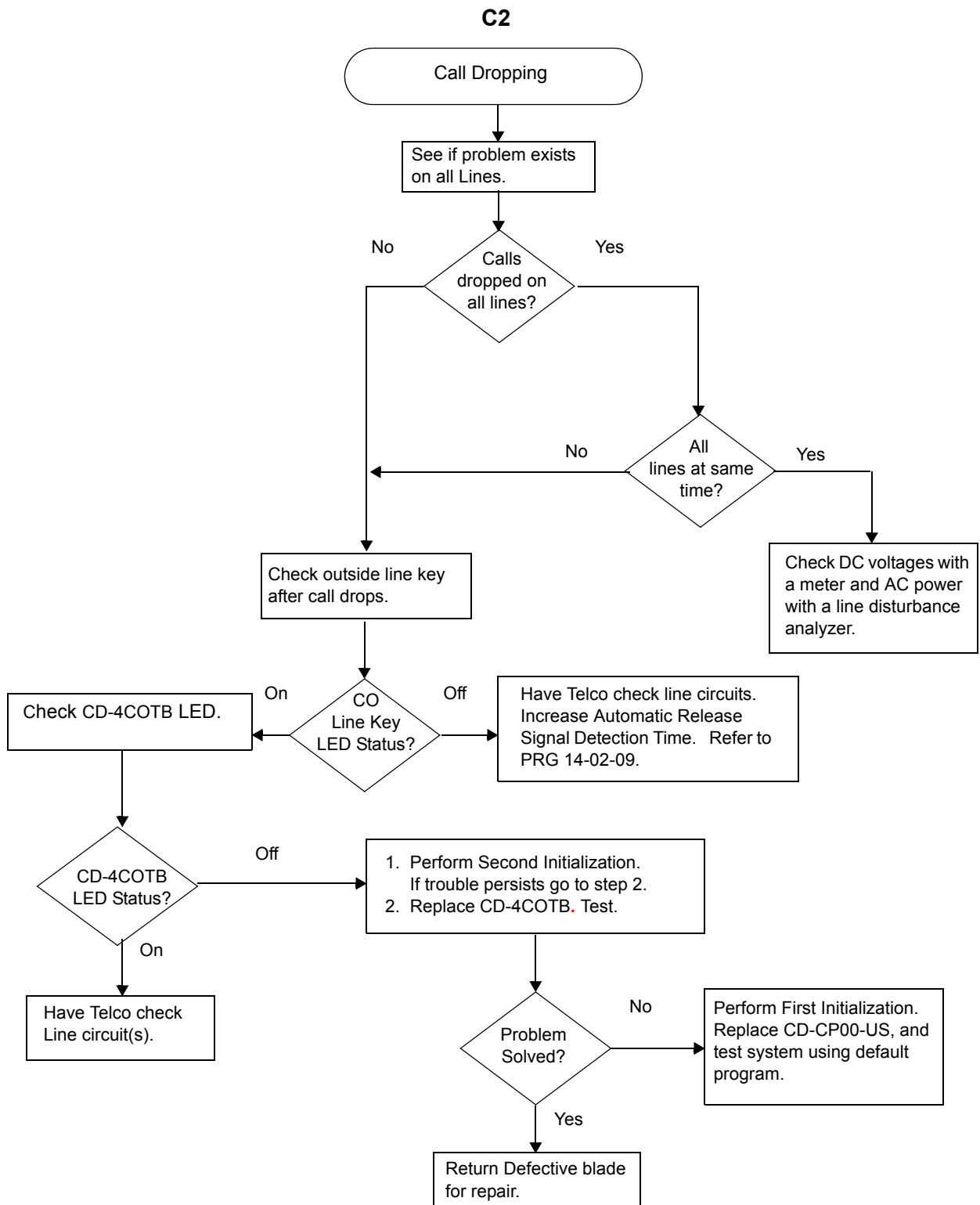
A2

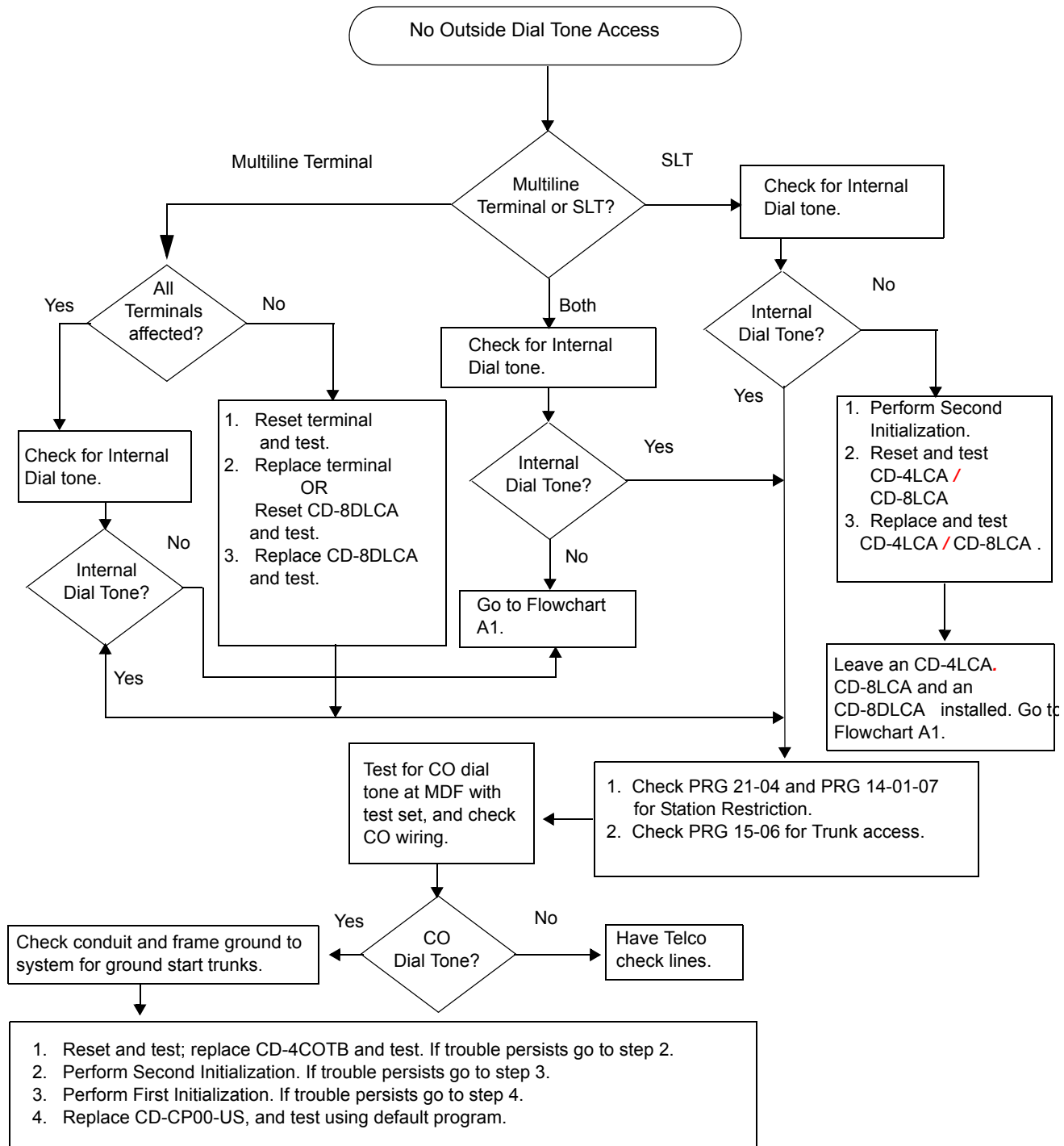
No LED or Display Indications on any Multiline Terminal



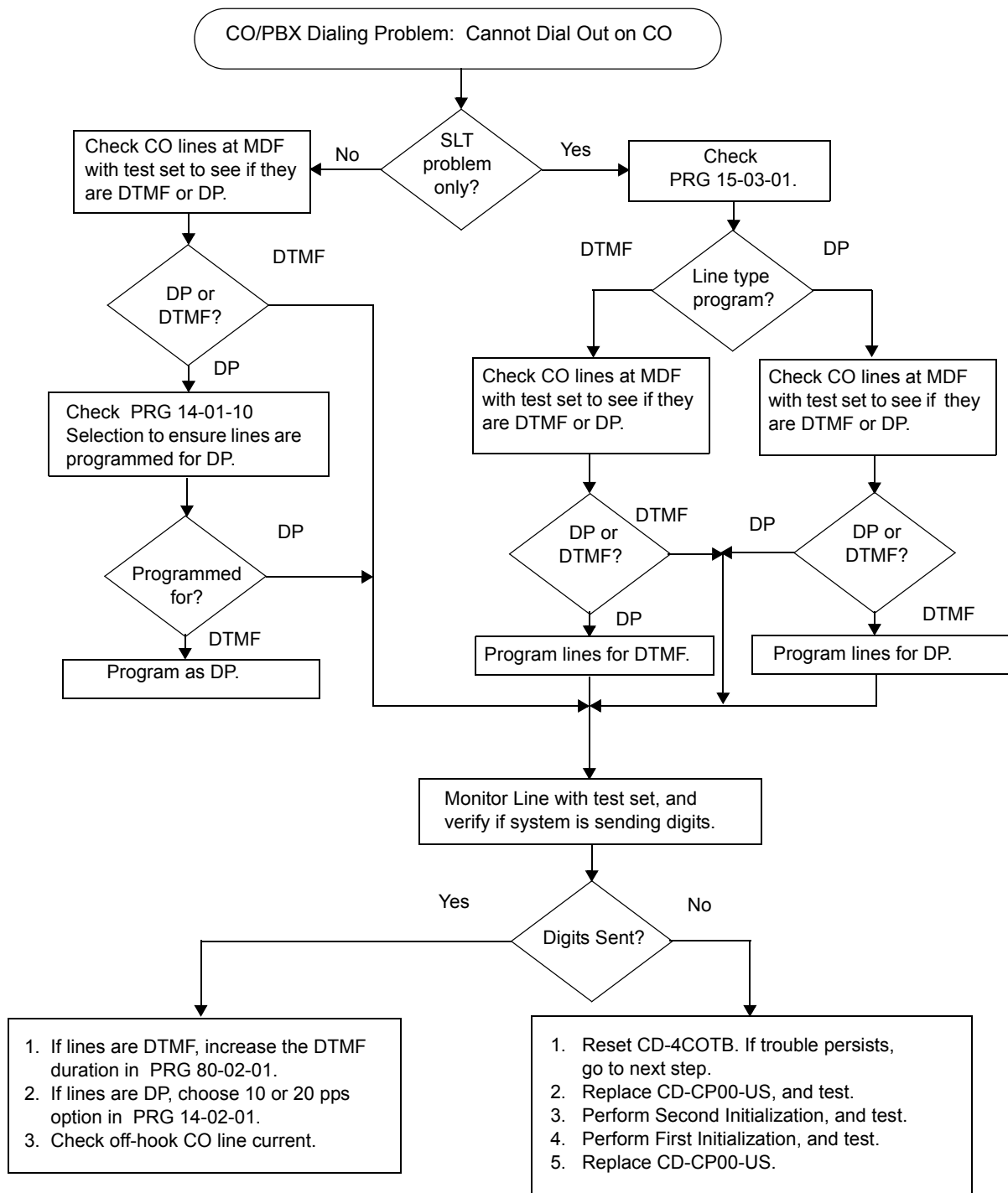
B1

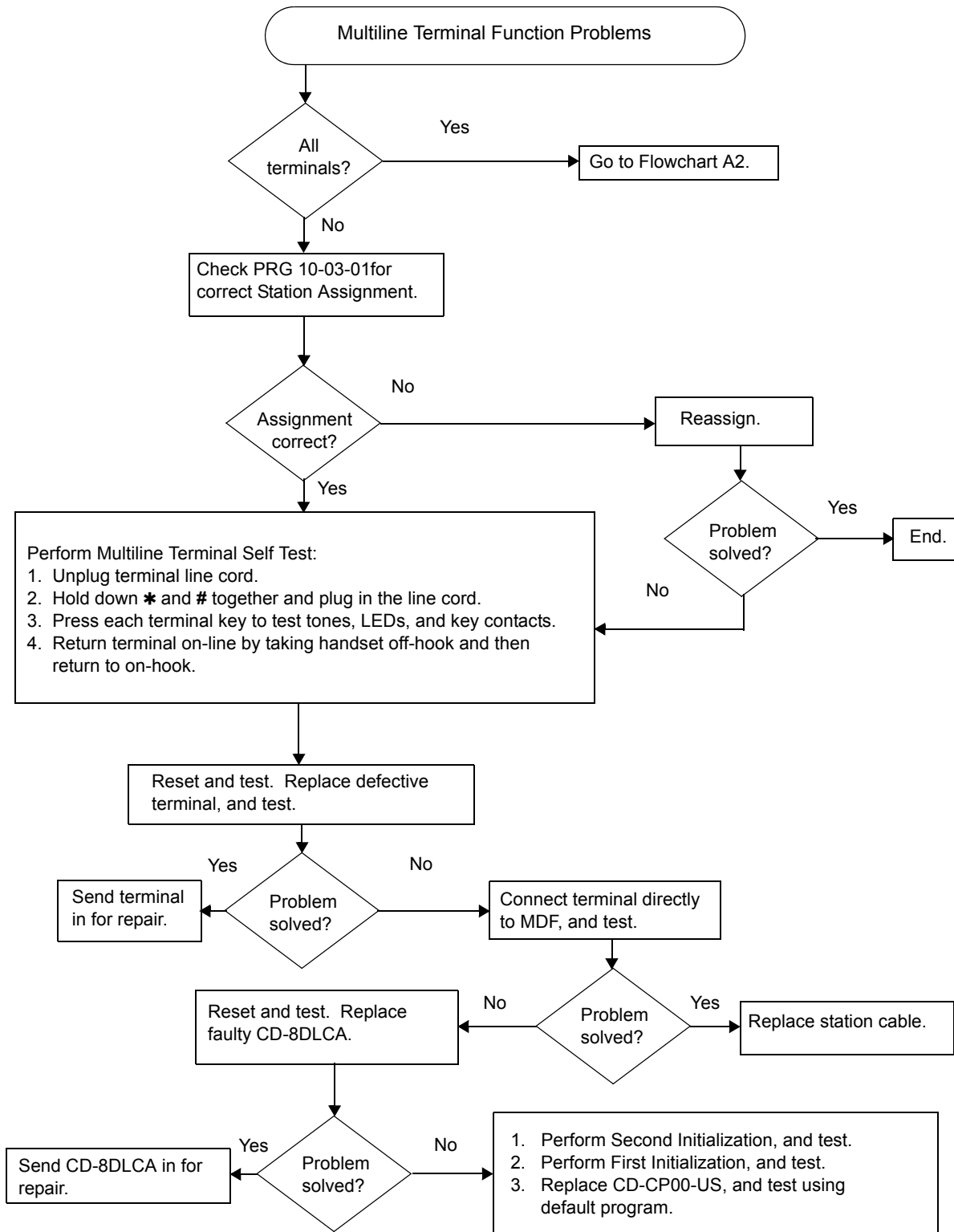
C1

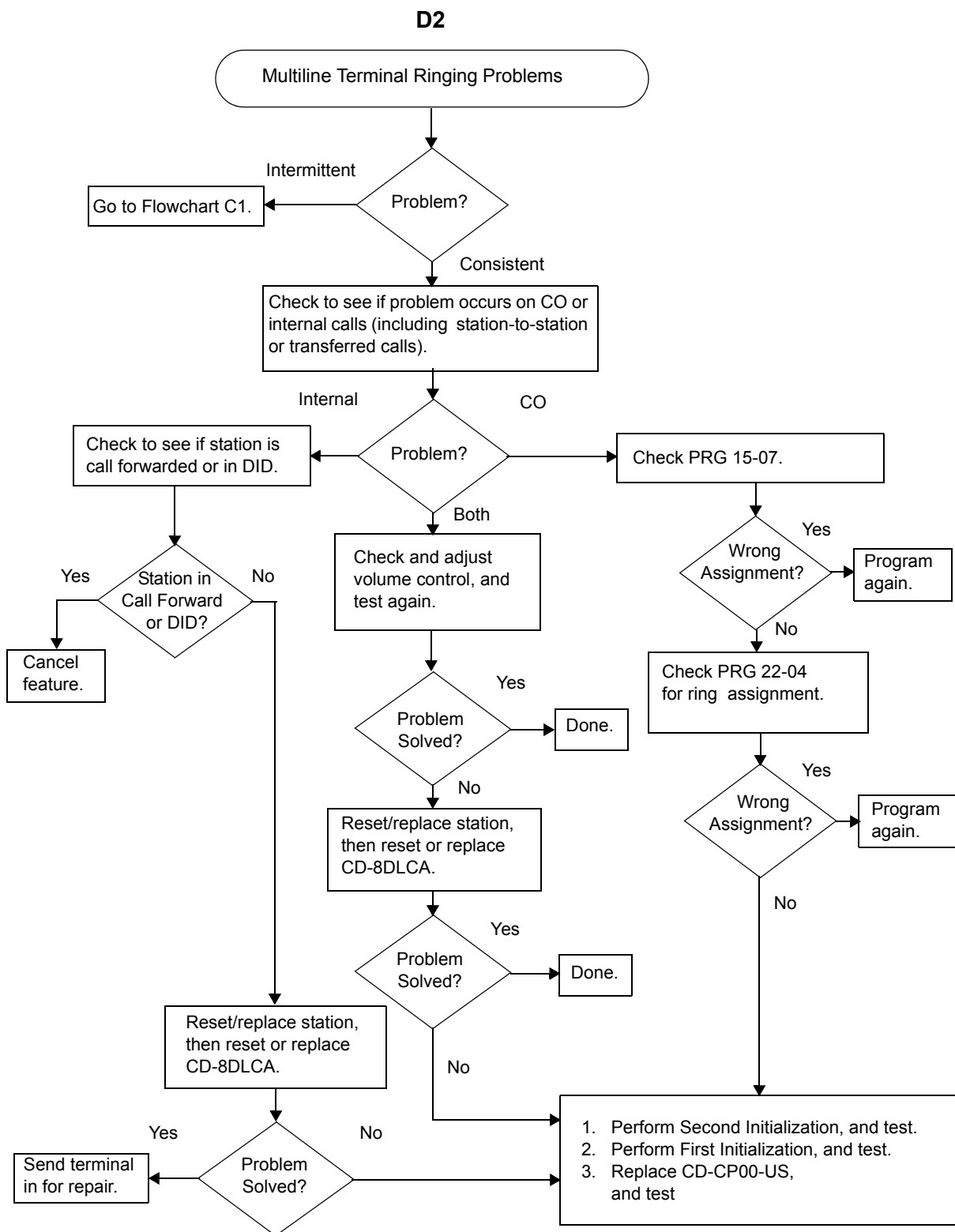


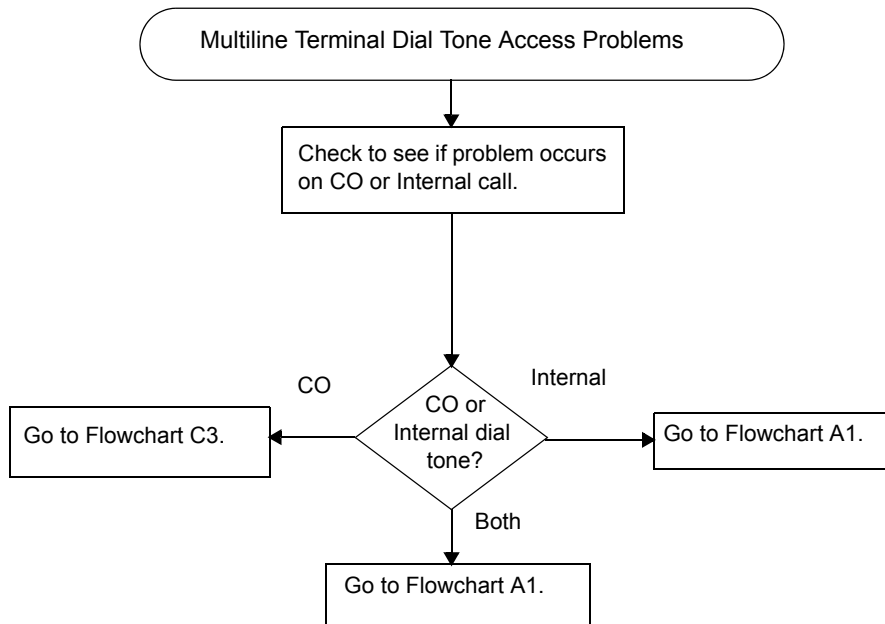
C3

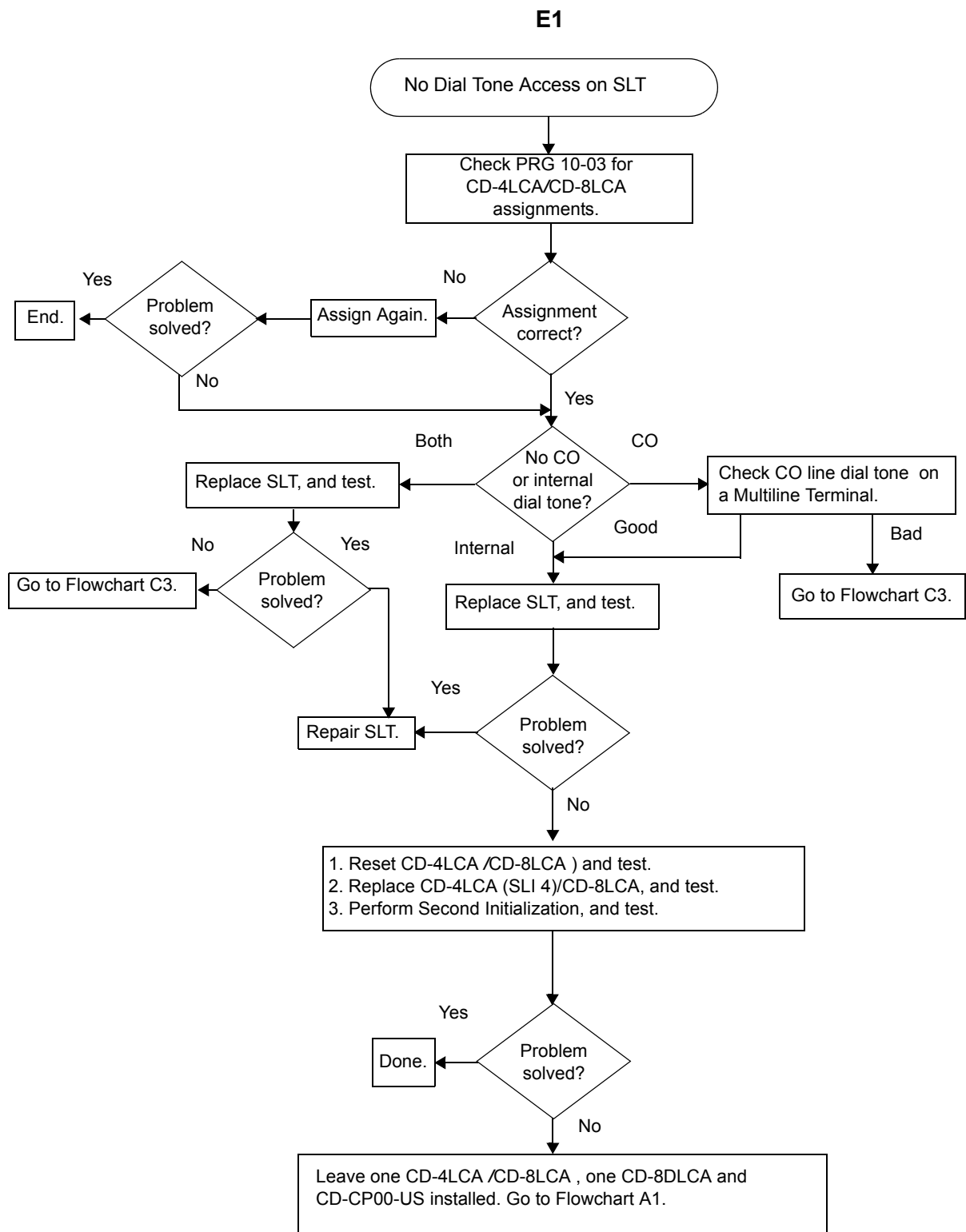
C4

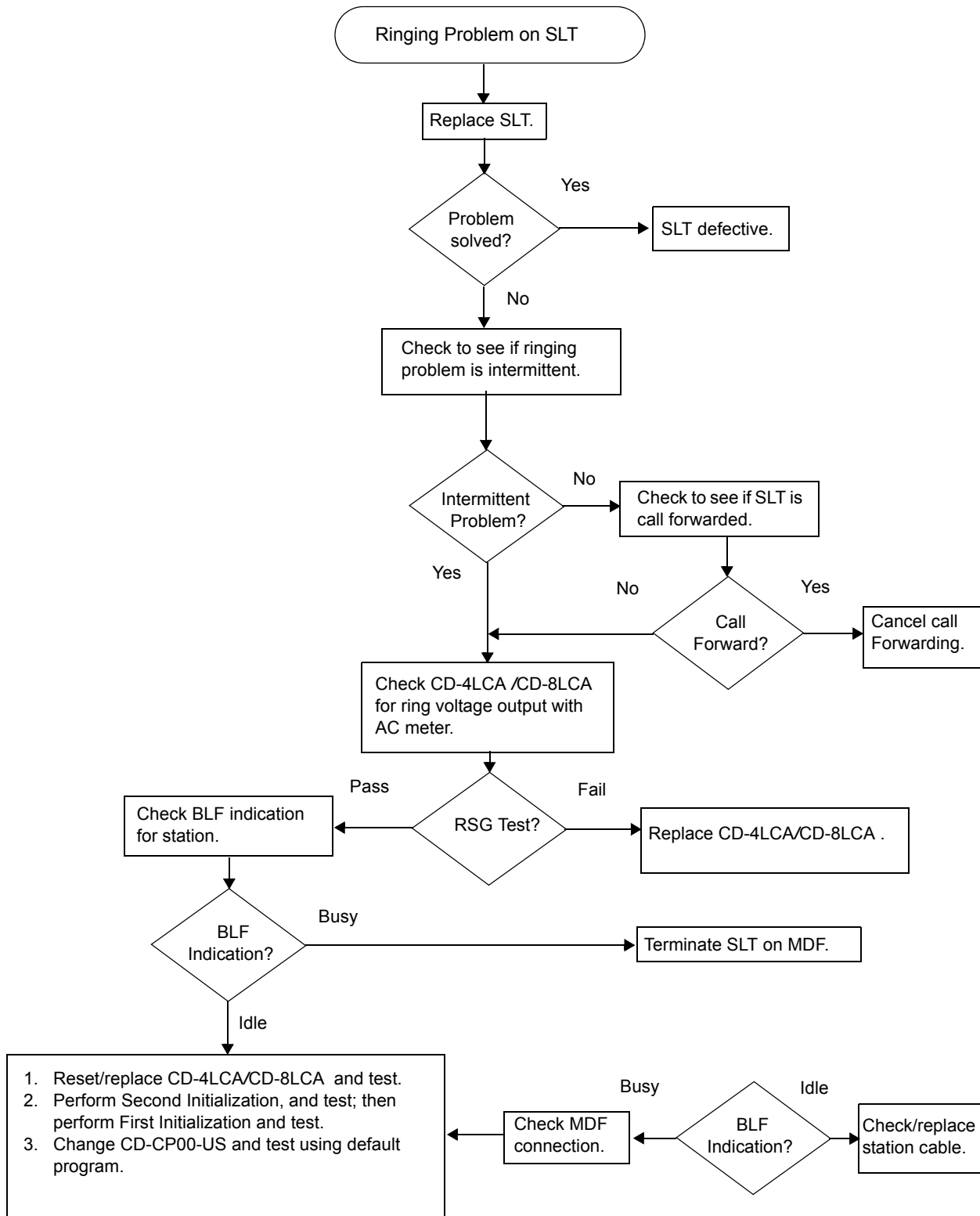


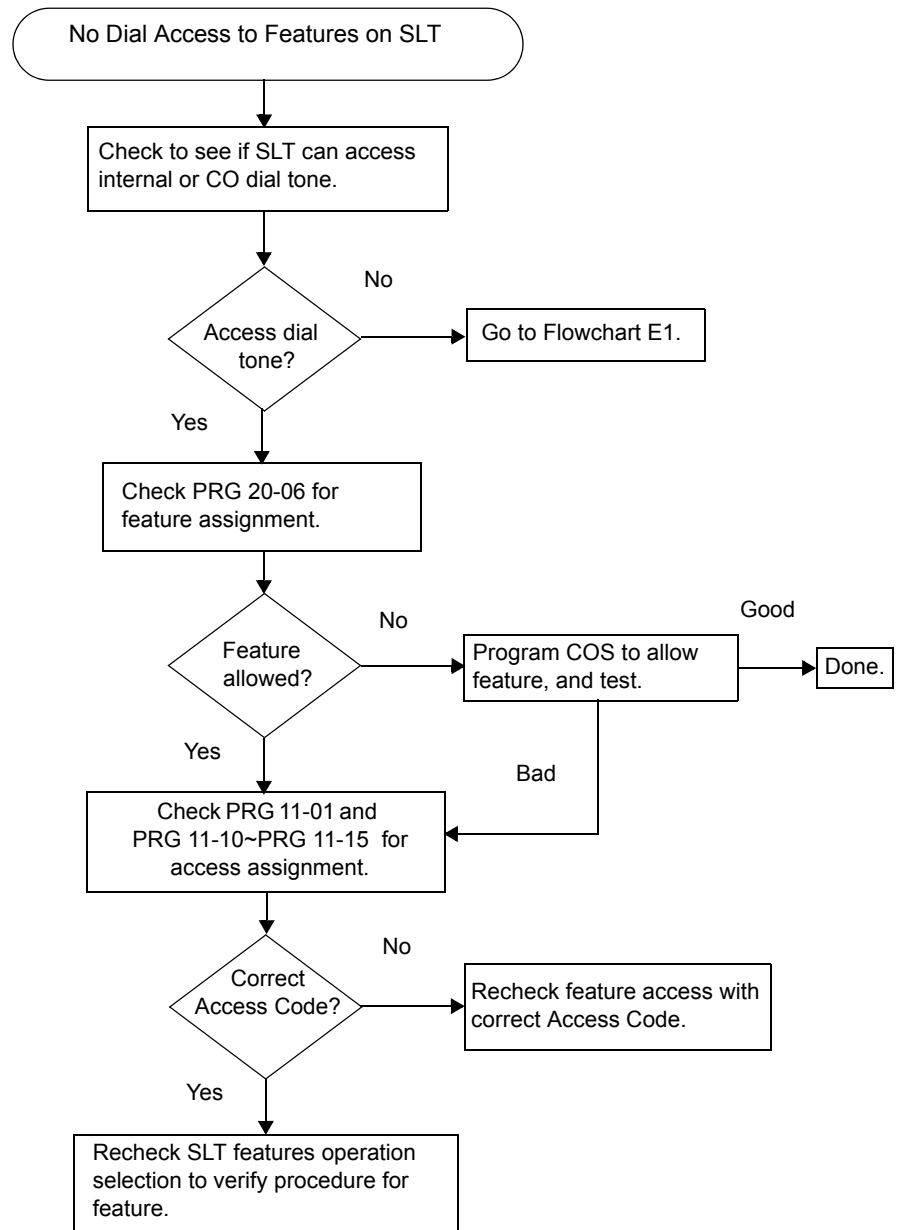
D1

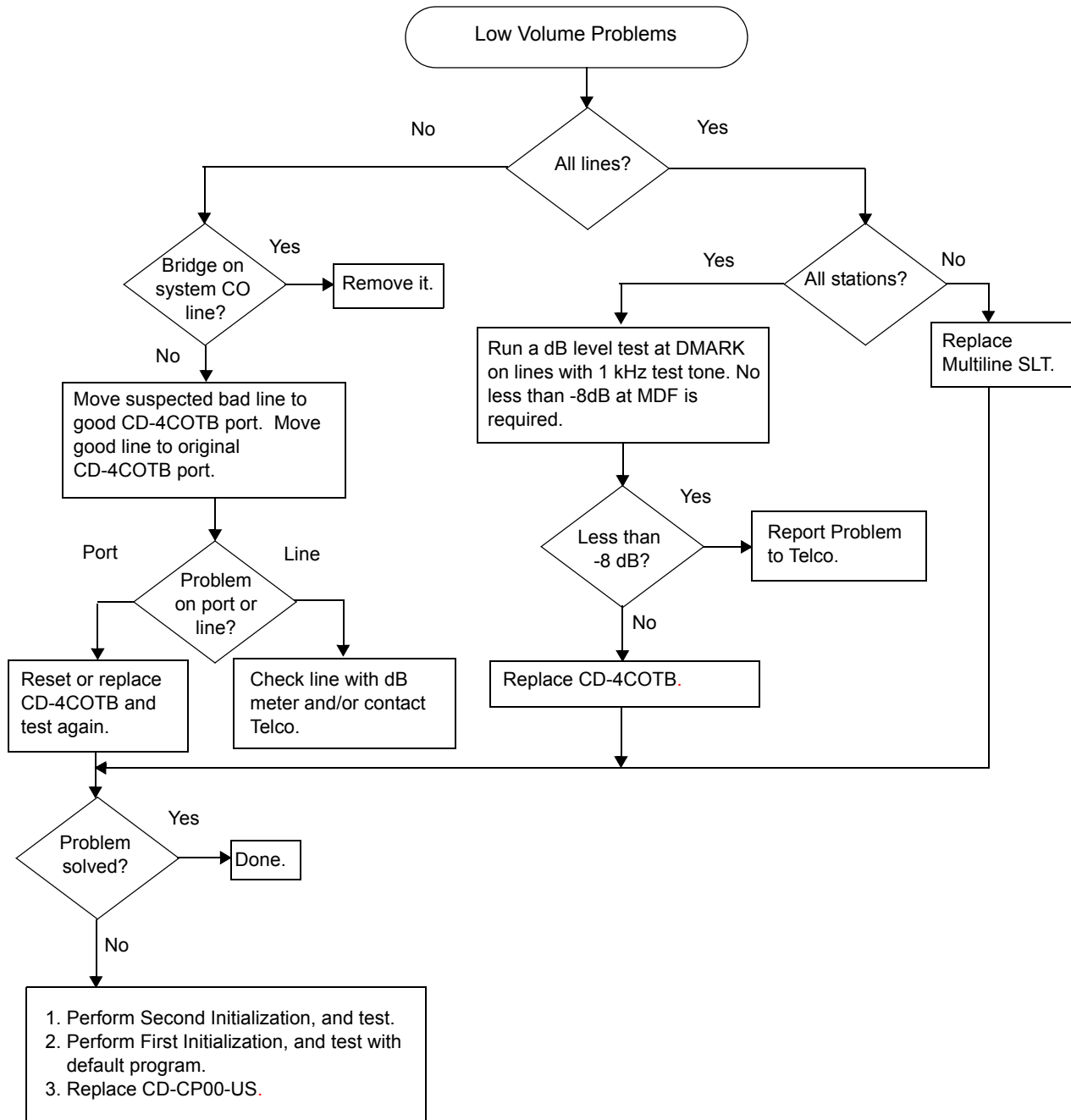


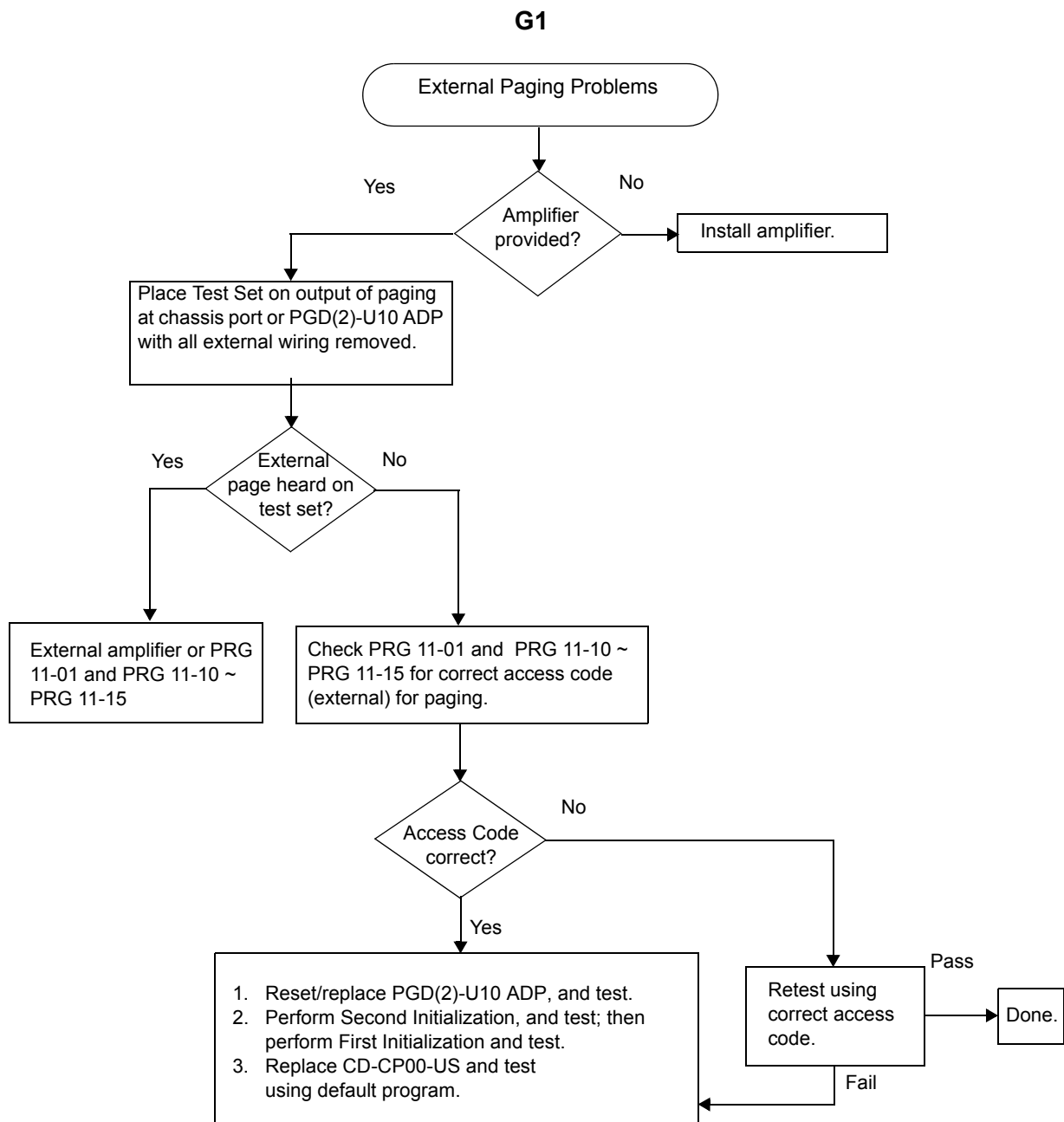
D3

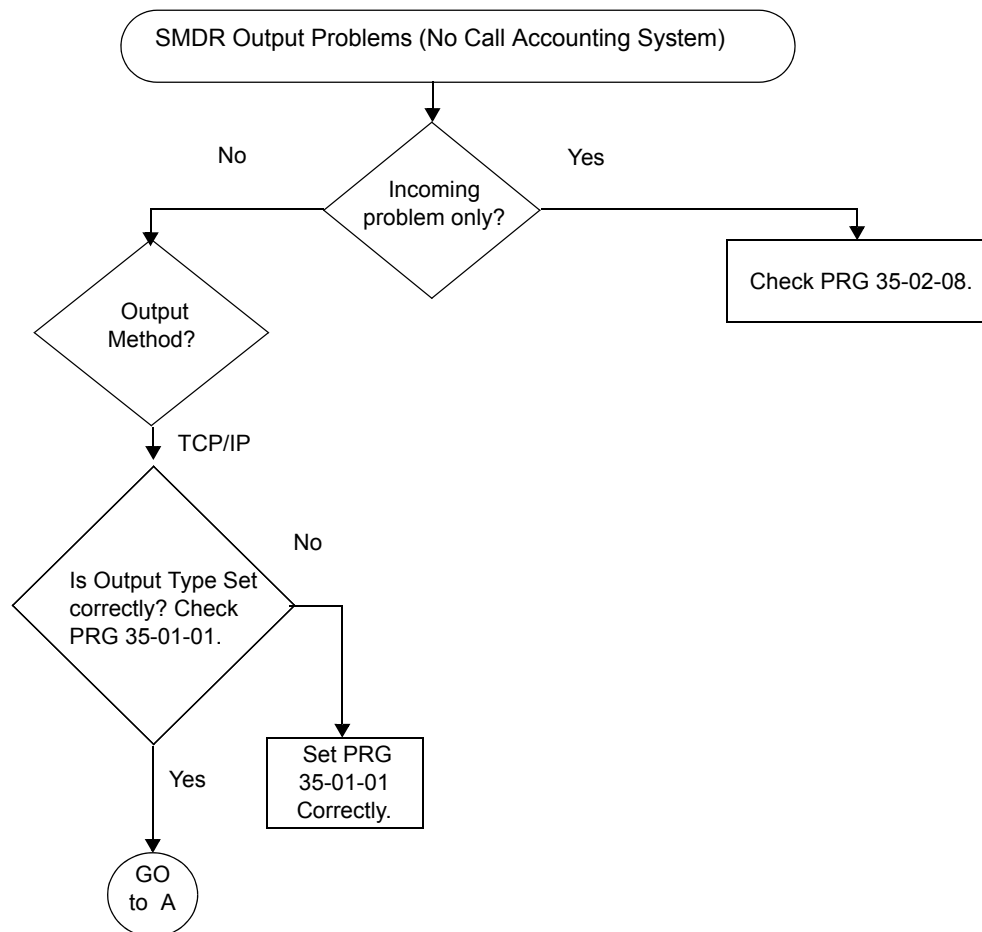


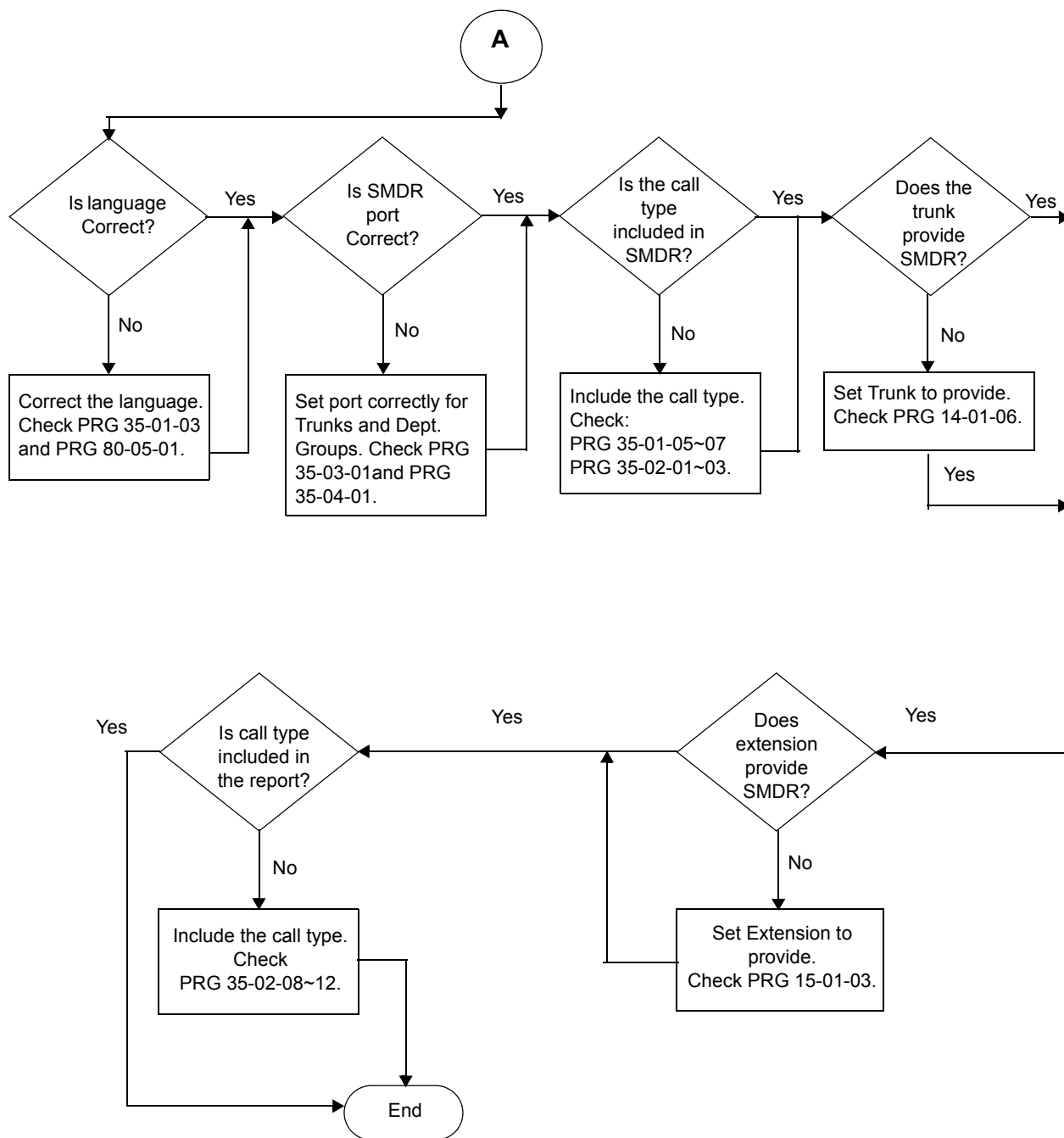
E2

E3

F1



H1



- - NOTES - -

Diagnostics

SECTION 1 **WHAT IS AVAILABLE?**

The SV8100 has a Diagnostic Interface Module (DIM) built into the CD-CP00-US (CPU) blade. The DIM can monitor the activity of the system under the control of commands entered by the engineer. The DIM is accessed via the Ethernet interface of the CD-CP00-US blade.

SECTION 2 **BEFORE YOU START**

As well as monitoring the system, the DIM can also be used to change the operation of the system.

For this reason **DO NOT** enter the following commands, as they will cause a system restart:

- ☐ RESET
- ☐ RESTART
- ☐ SHUTDOWN
- ☐ or any other command that looks like a reset request.

Some DIM commands give a real time output when the command is entered, others will give an output until you enter the command that turns it off. You can turn on multiple DIM outputs by entering relevant commands one after the other.

The SV8100 will continue to operate normally with the DIM is running.



The SV8100 CD-CP00-US can slow down when the DIM is running on a busy SV8100 system. This is unavoidable, as the CD-CP00-US must process all system activity and output the corresponding information to the DIM.

SECTION 3 **TO LOG ON TO THE DIM LOCALLY VIA THE ETHERNET SOCKET OF THE CD-CP00-US**

Connect to CD-CP00-US Ethernet socket using a crossover cable or via a hub. Set the IP address of your NIC card within the range of the SV8100 CD-CP00-US. The default IP address of the CD-CP00-US is **192.168.0.10** (Sub Net Mask = **255.255.255.0**)

Using a terminal application (e.g. Hyperterminal), set the connection to TCP/Winsock. The Host IP address is set by Program 10-12-01 on the SV8100. The default is **192.168.0.10** as shown below. The default port number is **5963**.

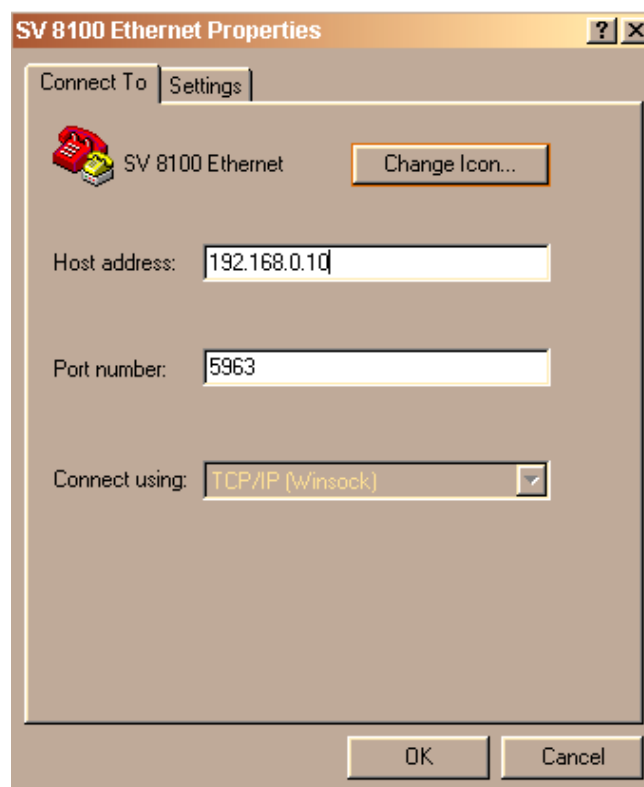


Figure 3-1 SV8100 Ethernet Properties

When the connection is made the following information is required:

- ☐ User ID: **monimoni**
- ☐ Password: **hihi**

Connection to the DIM is made and system activity is observed. Refer to [Figure 3-2 SV8100 System Activity](#).

```
[Welcome to Aspire remote dim service. VerD2.00] 07/08/14 11:24
== 14/AUG/2007, 11:24:36 ==
*(EVENT),ID:0000H,P1:0405H,P2:0013H,P3:000AH,P4:0000H,P5:0000H
>>>> PORT:0405H STATUS 0000H => 0002H
rvo_control Port=0405H, LiveRec_Cont=0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
== 14/AUG/2007, 11:24:37 ==
*(EVENT),ID:0000H,P1:0405H,P2:0013H,P3:000AH,P4:0000H,P5:0000H
>>>> PORT:0405H STATUS 0002H => 0000H
rvo_control Port=0405H, LiveRec_Cont=0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
== 14/AUG/2007, 11:24:38 ==
*(EVENT),ID:0000H,P1:0405H,P2:0013H,P3:000AH,P4:0000H,P5:0000H
>>>> PORT:0405H STATUS 0000H => 0002H
rvo_control Port=0405H, LiveRec_Cont=0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
-
Connected 0:00:17 ANSIW TCP/IP SCROLL CAPS NUM Capture Print echo
```

Figure 3-2 SV8100 System Activity

SECTION 4 TO DISCONNECT FROM THE DIM LOCALLY VIA THE ETHERNET SOCKET OF THE CD-CP00-US

Turn off any DIM commands that you have enabled. Refer to [Section 5 SV8100 DIM Commands on page 3-4](#).

Disconnect from the terminal session.

SECTION 5 SV8100 DIM COMMANDS

Once connected to the DIM, commands are entered by typing the command (with correct syntax), and pressing **Enter**.

To display the list of DIM commands available on the SV8100 type: **help**

Typed Command	Displayed Result
DATE	Date/Time
RB	Read 8bits
RW	Read 16bits
RD	Read 32bits
WB	Write 8bits
WW	Write 16bits
WD	Write 32bits
DUMP	Memory Dump
FILL	Memory Fill
MEMSET	Memory Fill
MEMCPY	Memory Copy
MEMCMP	Memory Compare
RESET	Self-restart
MAIL	Post a mail
SLOT	Slot control
INFO	Information
DEL	FILE DELETE
MKDIR	CREATE DIR
RMDIR	DELETE DIR
DIR	DIRECTORY
OPENDISK	OPEN DISK
CLOSEDISK	CLOSE DISK
FILEOPEN	FILE OPEN
FILECLOSE	FILE CLOSE
FILEWRITE	FILE WRITE
FILEREAD	FILE READ




Typed Command	Displayed Result
TYPE	FILE DISP
COPY	FILE COPY
FDUMP	FILE DUMP(Binary)
RENAME	FILE RENAME
DSP	DSP direct r/w
LCD	LCD Request
POWER	Power Management
CALLKEY	am::Callkey module
ESIU	ESIU control
SH3	SH3 control
HELP	This help display
SYSDT	System data
OFFLINE	OFFLINE
OPMS	OPMS info
IP	IP monitor
VOIPU	VOIPU
GKDEBUG	Simple GK Debug
VOIPCCDEBUG	VoIP CC Debug
TEXT	Text Message
CIM	Class No Edit
PHSSET	PHS Set
RESTART	Restart system
TMR	ctmr:: Module
DSPDBU	DSPDBU access
TRLOGOUT	Trillium Debug
NGTDEBUG	Ngt Debug
OPMSDEB	OPMS DEBUG
IOCSDEB	IOCS DEBUG
PKGSIZE	PKG SIZE
DTIP	DTIP DEBUG
FTEST	File test

Typed Command	Displayed Result
SHUTDOWN	Shutdown
EVNTCTRL	Event Controller
CIDTX	Caller ID sender
TONE	LOCAL TONE
IPPATH	IP JITTER & SW
P2PSTS	p2pStatus[] Disp
DTERMCTRL	Dterm Control
NWINFO	Networking Information
TRLHC	Trillium HC layer debug information
SENDTONE	SendTone
PRGINFO	PRGINFO
RL	Read LANC Register
STATUS	Show the Status
HEAP	Heap test
NDC	new/delete checker
PING	Ping Command
DETECTOR	Detector Assignment
BARGE	dump barge info

SECTION 6 COMMON DIM COMMANDS

Enter	Function	DIM Output
Mail in 0000	Output of all system activity is turned on. No ISDN information output.	Enter CAPS debug mode. The activity of all extensions and lines is output.
Mail in 0000	Output of all system activity is turned off.	Exit CAPS debug mode.

Enter	Function	DIM Output
Mail in 0012	Output of all ISDN activity on the system is turned on.	Enter ISDN debug mode. master current bid : xxH master current line : xxH The activity of all ISDN blades will be output.
Mail in 0012	Output of all ISDN activity on the system is turned off.	Exit ISDN debug mode.

-  When the ISDN output is turned on, the DIM will output the ISDN blade slot and circuit that is currently set as the master clock for the system.
-  The slot number is shown by master current bid : xxH (xx is the slot number in hexadecimal).
-  The circuit of the blade is shown by master current line : xxH (xx is the circuit number in hexadecimal).

The output is shown similar to that of an ISDN Layer 3 analyzer:

```
SEND PORT = 4C1FH  
S ISDN : >>>>>>>>>>>>>>>>>>>>  
  
11 A1 11 02 01 00          USL (3,2), SETUP ACK REQ  
08 01 84 0D                Callref: DES (4), SETUP ACKNOWLEDGE  
18 01 89                    Channel identification [B1 channel (exclusive)]  
1E 02 82 88                 Progress indicator
```

Example shown above:

4C1FH

The logical port type and number of the ISDN circuit on the SV 8100.

4C indicates S-point port type (see reading traces later in this manual)

1F is the port number in hexadecimal

S ISDN : >>>>>>>>>>>>

The direction of the event. **S >>>** indicates Send, **R <<<** indicates Receive.

USL(3,2),

The slot and circuit number of the ISDN card that the event was sent/received on.

If you have more than one ISDN card in the system, the slot and circuit number can be identified by this information.

The first number is the slot number in decimal (**3** in this example).

The second number is the circuit in decimal (**2** in this example).

The remainder of the information is appropriate to the type of message and is similar to an ISDN analyzer.

SECTION 7 SV8100 NET DIM COMMANDS

Enter	Function	DIM Output		
NWINFO	Lists the commands available	NWINFO	DEBUG	Networking Debug Information [ON OFF]
		NWINFO	RSRC	Netport Resource Controller
		NWINFO	BLF	Blf Memory Dump
		NWINFO	TCPINIT	Dummy CR data send Task refresh
		NWINFO	TCPDEBUG	Networking TCP Information Debug [ON OFF]
		NWINFO	TCPSHOW	Networking TCP Information showing
		NWINFO	CALLINFO	Networking Call Status Information
		NWINFO	KEEPALIVE	Networking KeepAlive Information
		NWINFO	SYSTEM	Networking System Information
		NWINFO	OPCHG	Networking error operation change
		NWINFO	PARKHOLD	Parkhold debug information
		NWINFO	CALLID	Networking CallID mode selection
		NWINFO	CHSHOW	Show ch condition LED on Dterm
		NWINFO	ROAMING	PHS Roaming Debug
		NWINFO	TASKINIT	NwInfoSend task initialize
		NWINFO	TASKKP	Nwsend Task Keepalive setting
		NWINFO	VMI	Remote VMI information

To display the syntax for each command – type in the command.

Example:

nwinfo parkhold

NWINFO PARKHOLD DEL	Deletes the specified parkhold
NWINFO PARKHOLD SHOW	Shows the specified parkhold information
NWINFO PARKHOLD MODE	Changes Networking Parkhold mode [RUN STOP]
NWINFO PARKHOLD DEBUG	Park Hold Trace Information [ON OFF]
NWINFO PARKHOLD CLEAR	Park Hold Clear at All of systems

nwinfo parkhold del

NWINFO PARKHOLD DEL	<park group no> <park orbit>
----------------------------	------------------------------

(The values within the brackets are the specific number related to the command, the brackets are not entered.)

In the NWINFO PARKHOLD DEL command to delete park hold orbit 04 that is within park group 01 you would enter: **nwinfo parkhold del 01 04**

nwinfo debug on should only be used in the lab (or after normal working hours at a customer site), as it causes a large amount of information to be output and can slow the SV8100.

❑ **Date**

Enter	Function	DIM Output
date	Displays the current date / time and general system information including CD-CP00-US software version and PAL type.	Current date/time : 1-1-2002 (TUE) 0:17:41 System build date : Jul 16 2004 16:56:25 [Target is North America (Electra)] Main software version : 00.1u PAL TYPE : V-PALB FPGA version : 001FH CCPU-DSP version : 7628H DSPDBU version : 0000H MAC1 Address : 00-60-B9-01- MAC2 Address : 00-60-B9-01-FD-3B C/C++ library heap 112945388Bytes free [Total=118132660Bytes, Used=5187272Bytes] Maximum intervals): Drivers : 0.11sec. H levels : 0.11sec. B levels : 0.16sec. Mail tasks : 1.01sec. Idle tasks : 5.45sec.

❑ **Status**

Enter	Function	DIM Output
status	List the status commands available.	STATUS logical_port(HEX) STATUS [STA TRK VRS] <start_serial_port(HEX)><end_serial_port(HEX)> STATUS SET <logical_port(HEX)> <new_status (HEX)>

- To display the status of one port:

status ll nn

Where **ll** is the logical port type and **nn** is the port number in hexadecimal.
(example – to display the status of key telephone port 10 = **status 040a**)

- To display the status of a range of ports:

status sta/trk nn nn

Where **ll** is the logical port type and **nn** is the port number in hexadecimal.
(example – to display the status of extension ports 01 through to 16 = **status sta 01 0f**)

* PORT STATUS (0401 --> 000f)*

```

PORT(PHYS)  STATUS      CALL  HOLD
0401h(0001h) :  IDLE( 0h) 0000h 0000h
0402h(0101h) :  IDLE( 0h) 0000h 0000h
---h(---h) :    (---h) ---h ---h no station port is assigned
---h(---h) :    (---h) ---h ---h no station port is assigned
---h(---h) :    (---h) ---h ---h no station port is assigned
---h(---h) :    (---h) ---h ---h no station port is assigned
---h(---h) :    (---h) ---h ---h no station port is assigned
---h(---h) :    (---h) ---h ---h no station port is assigned
0009h(0002h) :  IDLE( 0h) 0000h 0000h
000ah(0102h) :  IDLE( 0h) 0000h 0000h
000bh(0202h) :  IDLE( 0h) 0000h 0000h
000ch(0302h) :  IDLE( 0h) 0000h 0000h
000dh(0402h) :  IDLE( 0h) 0000h 0000h
000eh(0502h) :  IDLE( 0h) 0000h 0000h
000fh(0602h) :  IDLE( 0h) 0000h 0000h

```

- To display the status of trunk ports 1 through to 10:

status trk 01 0a

❑ Slot

Enter	Function	DIM Output	
slot	List the slot commands available.	SLOT RX	Rx simulation
		SLOT TX	Tx a packet (DSP,64K)
		SLOT TXB	Tx a packet (128K)
		SLOT TXC	Tx a packet (LKTS C/0)
		SLOT TXK	Tx a packet (LKTS KTEL)
		SLOT TXS	Tx a packet (LKTS STA)
		SLOT RESET	Reset unit/slot
		SLOT INFO	Slot/Unit info
		SLOT DUMP	Dump Tx message
		SLOT KEEPALIVE	Keep alive control
		SLOT IF	Slot interface
		SLOT WATCHSUBME	(only PRI) watch SUBME

- To display the information related to the Blade installed into a slot:

slot info nn

Where **nn** is the slot number 01 to 24 in hexadecimal
(example – an ESIU in slot 1 will show the following):

slot info 01

```

Slot information)
Slot ID : 1
Status : RUNNING
Logical unit ID : ESIU
Dump down message : Disable
Number of Tx errors : 1
Slot started delay : 2.83sec.
Common unit driver information)
Slot ID : 1

```

Real unit ID : 12H
 Version : 1.8
 Lines / unit : 8
 Block switch : RUN
 Timeslot : 000H-00FH (16)

Firmware loaded onto the Blade
Number of ports on the card (8ESIU)
Block switch set to RUN

slot info 03

Slot information)
 Slot ID : 3
 Status : RUNNING
 Logical unit ID : BRIU
 Dump down message : Disable
 Number of Tx errors : 0
 Slot started delay : 468.99sec.
 Common unit driver information)
 Slot ID : 3
 Real unit ID : 60H
 Version : 3.3
 Lines / unit : 2
 Block switch : BLOCK
 Timeslot : 040H-043H (4)
 BRIU driver information)

Firmware loaded onto the blade
Number of ports on the card (2BRIU)
Block switch set to BLOCK

- To reset the Blade installed in a slot:

slot reset nn

Where nn is the slot number 01 to 10 in hexadecimal.

The Blade is reset, any calls in progress at the Blade are disconnected.

The Blade operates normally after the reset.




The reset has the same operation as removing and re-installing the Blade.
 (example – to reset the Blade in slot 3 = **slot reset 03**)

❑ Detector

Enter	Function	DIM Output			
Detector	List the status of the DTMF/Tone detectors on the CD-CP00-US (and DSPDB if installed).	Number of Channels = 64			
		CPRU = 32 , DSPDBU = 32			
		No	Type	Status	Target
		01(1401)	DTMF	ACTIVE	000d
		02(0000)	NOT USED	READY	0000
		03(0000)	NOT USED	READY	0000
		04(0000)	NOT USED	READY	0000
		05(0000)	NOT USED	READY	0000
		:	:	:	:
64(0000)	NOT USED	READY	0000		

❏ **Power**

Enter	Function	DIM Output
Power	List the status of the power and backup battery.	Power off request : none Power source : AC(Normal) System battery : normal Backup battery : normal No power keep requests available

-  *Power off request : The status of the power switch on the PSU
none = powered on
guarding = waiting to power off*
-  *Power source : AC Power source
AC(Normal) = AC power via PSU in use
None = DC power via battery cabinet in use (if installed)*
-  *Backup battery : CD-CP00-US memory backup battery
Normal = CD-CP00-US memory backup battery
Alarm = CD-CP00-US memory backup battery failed*

SECTION 8 IP RELATED COMMANDS

Enter	Function	DIM Output
IP INFO	Displays a list of IP information	Usage> ip info [para] [para] : 0(IP Version) : 2 (CAPS Call Info Table Dump) : 3 (IP Station Regist Table Dump) : 4 (VoIPU Reset Flag Dump) : 5 (Inter-Connection System Table Dump) : 6 (VOIPCC Current Number of Call Counter) : 7 (Trillium Alloc Bucket Size Dump) : 8 (NTCPU IP Address) : 9 (VoIPU PKG IP Address) : a (IP Trunk Registration Information) : b (IP Active Call Information) : c (IP Call Delete Command) Usage> ip info c [physicalport] : d (IP status change) : e (IP Disconnect Timer Show)

☐ **ip info**

IP INFO <option code>

The values within the brackets are the specific number related to the command, the brackets are not entered.

☐ **ip info 3**

This command shows a table of IP Extension registrations. The extension type will be shown as "DtermIP" for IP Keytelephones or "H.323" for H.323 extensions.

This table shows all extensions that are registered to the SV8100 – not those that are currently connected.

```
##### IP Phone Table #####
--DtermIP-----
Extension Number = 3203
SerialPort = 257
IP Address 192.168.1.131
Voice Path Port=4000
CALL SIG Port=3458
Terminal Type=2
-----
--DtermIP-----
Extension Number = 3232
SerialPort = 258
IP Address 192.168.100.200
Voice Path Port=4000
CALL SIG Port=3458
Terminal Type=2
-----
--DtermIP-----
Extension Number = 3290
SerialPort = 266
IP Address 192.168.102.200
Voice Path Port=4000
CALL SIG Port=3458
Terminal Type=2
-----
--H.323-----
Extension Number = 3291
SerialPort = 270
IP Address 192.168.1.193
RAS Port=56782
Call SIG Port=1720
Terminal Type=1
-----
Total = 4 IP Terminals
#####
```

❑ ip info 5

This table shows H.323 trunk registrations. An entry for each H.323 endpoint will be listed, along with the IP address and E.164 (telephone number) assignment. SV8100 Net IP destinations are not listed.

```
Example:
##### IP Inter-Connection TABLE #####
--1 system-- Registered
SYSTEM IP: 192.168.1.20
E164 ADDR:1
E164 Len :1

Total : 1 system
#####
```

❑ **ip info 8**

This command shows the CD-CP00-US IP Address information entered in PRG10-12.

```
Example:
[ CCPU IP Info ]
  IP Addr      : 192.168. 1. 20
  Sub Net Mask : 255.255.255. 0
  Default Gateway : 192.168. 1.254
  Time Zone    : 21
  NIC          : Auto Detect
```

❑ **ip info 9 <slot number>**

This command shows the VoIPU IP Address information entered in PRG84-05. The slot number should be entered in hex.

```
Example:
IP INFO 9 8

[ VoIPU PKG IP Address ]
slot08 IP Addr = 172. 16. 0. 27   NIC : Auto Detect
```

❑ **ip info a <slot number>**

This command shows the registration status of H.323/SIP trunks. This will show as “Registered” or “not Registered”.

```
-----
IP TRUNK REGISTRATION INFORMATION
-----
H.323 TRUNK:
      not REGISTERED to GK (SD)
SIP TRUNK:
[RegId0][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId1][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId2][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId3][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId4][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId5][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId6][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId7][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId8][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId9][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId10][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId11][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId12][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId13][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId14][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId15][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId16][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId17][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId18][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId19][UserId:] not REGISTERED to SIP Server(1/30 8:50)
```

```

[RegId20][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId21][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId22][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId23][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId24][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId25][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId26][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId27][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId28][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId29][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId30][UserId:] not REGISTERED to SIP Server(1/30 8:50)
[RegId31][UserId:] not REGISTERED to SIP Server(1/30 8:50)
-----

```

Enter	Function	DIM Output
IP GW	Displays the SV8100 Default Gateway (PRG10-12-03)	[Default Gateway] : 192.168.1.254
IP ARP	Displays the SV8100 ARP (Address Resolution Protocol) cache. This is a table of MAC address to IP Address mappings.	See below
IP ROUTE	Displays the SV8100 routing table. Usually this will consist of just a few entries, as the default gateway is used for any traffic destined for a different IP subnet.	See below
IP DSP INFO	This shows how many DSP channels are in use at a particular moment in time.	See below.
IP DSP INFO 1	This shows how many DSP channels are in use at a particular moment in time for all device types.	See below.
Ping <ip address>	The commonly used "ping" utility has been implemented on the CD-CP00-US. This is a very useful fault finding tool.	<p>VoIPU >ping 192.168.11.200</p> <p>Pinging 192.168.11.200 with 32 bytes of data:</p> <p>Reply from 192.168.11.200: Reply from 192.168.11.200: Reply from 192.168.11.200: Reply from 192.168.11.200: Ping statistics for 192.168.11.200: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss):</p>

Enter	Function	DIM Output
voipccdebug 0 1 [switch on]	This displays the SIP messages that are output from the system.	
voipccdebug 0 0 [switch off]		

☐ **ip arp**

Internet Address	Physical Address	Time Information
127.000.000.001	00:00:00:00:00:00	8181
192.168.001.164	00:0A:E6:02:D4:AE	113788539
192.168.001.154	00:60:B9:C2:93:BB	113779299
192.168.100.200	00:60:B9:C4:48:11	81637340
192.168.001.254	00:30:13:16:E8:6F	113785925
192.168.001.030	00:60:B9:C1:B2:30	113749983
192.168.001.040	00:60:B9:C1:C3:BF	113749986
192.168.102.200	00:60:B9:C2:07:4F	82736183
192.168.001.131	00:60:B9:C1:71:AA	113776316
192.168.001.121	00:30:05:44:98:5D	113778849
192.168.001.144	00:30:13:B5:D2:27	441024
192.168.001.146	00:00:86:63:25:87	113800591
192.168.001.197	00:30:13:B5:E8:79	17550119

 Any NEC Infrontia device has a MAC address beginning with 00:60:b9.

❑ **ip route**

Network	DestAddr	Netmask	Gateway	Next Hop	Metric
127.000.000.000		255.000.000.000	127.000.000.001	000.000.000.000	1
224.000.000.001		255.255.255.255	127.000.000.001	000.000.000.000	1
192.168.001.000		255.255.255.000	192.168.001.020	000.000.000.000	1
192.168.001.020		255.255.255.255	127.000.000.001	000.000.000.000	1

Default Route: 192.168.001.254

❑ **ip dsp info**

VoIPU Dsp Resource Management Table)

```
#Slot:01 Busy:- -----
#Slot:02 Busy:- -----
#Slot:03 Busy:- -----
#Slot:04 Busy:- -----
#Slot:05 Busy:- -----
#Slot:06 Busy:- -----
#Slot:07 Busy:- -----
#Slot:08 Busy:- -----
#Slot:09 Busy:- -----
#Slot:10 Busy:- -----
#Slot:11 Busy:- -----
#Slot:12 Busy:- -----
#Slot:13 Busy:- -----
#Slot:14 Busy:- -----
#Slot:15 Busy:- -----
#Slot:16 Busy:02 16VoIPU
[01-04] 0505 e001 ---- ----
[05-08] ---- ---- ---- ----
[09-12] ---- ---- ---- ----
[13-16] ---- ---- ---- ----
```

VoIPU Active Flag Table)

```
12345678901234567890123456789012
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```
05xx  IP Keytelephone (DtermIP)
DCxx  IP Trunk (H.323)
E0xx  SV8100Net IP
```

The example above shows that there is a 16VoIPU in slot 16, and that DSP1 is in use by an extension, and DSP2 is in use by SV8100Net IP. This command can be useful to determine how many VoIPU resources (channels) are being used.

☐ ip dsp info 1

IP Station Physical Port Table

01-010]	----
[011-020]	-----
[021-030]	-----
[031-040]	-----
[041-050]	-----
[051-060]	-----
[061-070]	-----
[071-080]	-----
[081-090]	-----
[091-100]	-----
[101-110]	-----
[111-120]	-----
[121-130]	-----
[131-140]	-----
[141-150]	-----
[151-160]	-----
[161-170]	-----
[171-180]	-----
[181-190]	-----
[191-200]	-----
[201-210]	-----
[211-220]	-----
[221-230]	-----
[231-240]	-----
[241-250]	-----
[251-260]	-----
[261-270]	-----
[271-280]	-----
[281-290]	-----
[291-300]	-----
[301-310]	-----
[311-320]	-----
[321-330]	-----
[331-340]	-----
[341-350]	-----
[351-360]	-----
[361-370]	-----
[371-380]	-----
[381-390]	-----
[391-400]	-----
[401-410]	-----
[411-420]	-----
[421-430]	-----
[431-440]	-----
[441-450]	-----
[451-460]	-----
[461-470]	-----
[471-480]	-----
[481-490]	-----
[491-500]	-----
[501-510]	-----
[511-520]	----

IP Trunk Physical Port Table

[001-010]	----
[011-020]	----
[021-030]	----
[031-040]	----
[041-050]	----
[051-060]	----
[061-070]	----
[071-080]	----
[081-090]	----
[091-100]	----
[101-110]	----
[111-120]	----
[121-130]	----
[131-140]	----
[141-150]	----
[151-160]	----
[161-170]	----
[171-180]	----
[181-190]	----
[191-200]	----

IP Networking Physical Port Table

[001-010]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[011-020]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[021-030]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[031-040]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[041-050]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[051-060]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[061-070]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[071-080]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[081-090]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[091-100]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[101-110]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[111-120]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[121-130]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[131-140]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[141-150]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[151-160]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[161-170]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[171-180]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[181-190]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[191-200]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[201-210]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[211-220]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[221-230]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[231-240]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[241-250]	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
[251-260]	0000 0000 0000 0000 0000 0000

VoIPU DSP Resource Management Table

#Slot:01 Busy:- -----
#Slot:02 Busy:- -----
#Slot:03 Busy:- -----
#Slot:04 Busy:- -----
#Slot:05 Busy:- -----
#Slot:06 Busy:- -----
#Slot:07 Busy:- -----
#Slot:08 Busy:- -----
#Slot:09 Busy:- -----
#Slot:10 Busy:- -----
#Slot:11 Busy:- -----
#Slot:12 Busy:- -----
#Slot:13 Busy:- -----
#Slot:14 Busy:- -----
#Slot:15 Busy:- -----
#Slot:16 Busy:- -----

VoIPU Active Flag Table

12345678901234567890123456789012
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

SECTION 9 READING SV8100 DIM TRACES

The DIM trace can be partly decoded by the engineer but only NEC Infrontia Japan can decode the full trace.

This section describes the basic decode to enable the engineer to identify the extension and trunk port number.

☐ Extensions

Each extension type has a unique logical port type as shown below.

Type	Logical ID
Key telephone	04
SLIU	00
S-Point	4c
DECT	e9

The port number is identified by the two digits (in hexadecimal) following the logical port type. The two digits are 00 to ff hexadecimal (00 to 255 in decimal).

(example: keytelephone port 1 will be 0401 as shown below.)

>>>> PORT : 0401H STATUS 0000H => 0002H

☐ Trunks

Each trunk type has a unique logical port type as shown below.

Type	Logical ID
COIU	0c
ISDN	34

The port number is identified by the two digits (in hexadecimal) following the logical port type. The two digits are 00 to ff hexadecimal (00 to 255 in decimal).

(example: ISDN port 17 will be 3411 as shown below.)

>>>> PORT : 3411H STATUS 00D0H => 00B1H

❑ SV8100Net

Each trunk type has a unique logical port type as shown below.

Type	Logical ID
ISDN	7c
IP	7c

The port number is identified by the two digits (in hexadecimal) following the logical port type. The two digits are 00 to ff hexadecimal (00 to 255 in decimal).

(example: SV8100Net port 01 is 7c01 as shown below.)

***(INTER),ID:7C01H,P1:0401H,P2:0000H,P3:0802H,P4:0000H,P5:0000H**

SECTION 10 ISDN LAYER 3 TRACE (MAIL IN 0 0 1 2)

A typical ISDN Layer 3 trace is shown:

```

9:56:48 >>
9:56:48 >>mail in 0 0 1 2
9:56:53 >>
Enter ISDN debug mode
master current bid : 08H
master current line : 00H
ACD Data Size error. or socket close...caps_service():Returns NORMAL
caps_service():Returns NORMAL
ITR_NULL_P_STA: DES_ANSWER_FLAG CLEAR!
ITR_NULL_P_STA: TM_DES_ANSWER_WAIT_L SET!

ACD Data Size error. or socket close...** CLR_ISDN_FLAG IS CALLED **
** LPORT_W = 3415H **2
SET_CALL_REF CALLED!
PHYSICAL_W
=0108HSET_CALL_REF: PRI =8003H
*** set_call_ref resource#: 1H ***
<<< prgrd1501.cpp(38) read s sta clip enable >>> port : 0, data : 1

```

SISDN:>>>>>>>>>>>>>>>	
F4 A1 04 01 01 00	USL(8,1),SETUP REQ
08 02 00 03 05	Callref:ORG(3),SETUP
04 03 80 90 A3	Bearer capability [speech]
18 03 A9 83 81	Channel identification
6C 02 00 81	Calling party number
7C 03 80 90 A3	Low layer compatibility
7D 02 91 81	High layer compatibility

**ISDN Setup Sent
Blade in Slot 8, CCT 1 used
Call Ref = 3
Speech call
No calling party number
included.**

```
R ISDN : <<<<<<<<<<<<<<<
15 0B A1 0F 01 01 00      USL(8,1),MORE INFO IN
08 02 80 03 0D            Callref:DES(3),SETUP
ACKNOWLEDGE
18 03 A9 83 81            Channel identification
1E 02 82 88                Progress indicator
PHYSICAL W =0108H itr cint mrifind called
```

**Network returns
Setup Acknowledge
Use the Call Ref to
follow the call
through.**

```
S ISDN : >>>>>>>>>>>>
F4 A1 0E 01 01 00      USL(8,1),INFO REQ
08 02 00 03 7B         Callref:ORG(3),INFORMATION
70 02 81 32             Called party number [2]
```

User dials 200

```
S ISDN : >>>>>>>>>>>>
F4 A1 0E 01 01 00      USL(8,1),INFO REQ
08 02 00 03 7B         Callref:ORG(3),INFORMATION
70 02 81 30             Called party number [0]
```

```
S ISDN : >>>>>>>>>>>>
F4 A1 0E 01 01 00      USL(8,1),INFO REQ
08 02 00 03 7B         Callref:ORG(3),INFORMATION
70 02 81 30             Called party number [0
```

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SECTION 11 ISDN LAYER 3 TRACE (MAIL IN 0 0 1 2) WITH SV8100 MAIN ACTIVITY (MAIL IN 0 0 0 0)

If the same call is traced with both ISDN debug (mail in 0 0 1 2) and SV 8100 Main Activity (mail in 0 0 0 0) switched on the trace will be as shown below.

```
10:12:31 >>mail in 0 0 1 2
10:12:36 >>
Enter ISDN debug mode
master current bid : 08H
master current line : 00H
mail in 0 0 0 0
10:12:40 >>Enter CAPS debug mode
== 1/JAN/2002, 10:12 ==
```

Switch on ISDN and SV8100 Main Activity trace

```
*(EVENT),ID:0000H,P1:0401H,P2:0013H,P3:000AH,P4:0000H,P5:0000H
>>>> PORT:0401H STATUS 0000H => 0002H
ACD Data Size error. or socket
close...*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1101H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0008H,P3:000AH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0000H,P3:0001H,P4:0000H,P5:0000H
>>>> PORT:0401H STATUS 0002H => 000FH
*(EVENT),ID:0000H,P1:0401H,P2:0000H,P3:0001H,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0008H,P3:000BH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:000AH,P3:000AH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:000BH,P3:000BH,P4:0000H,P5:0000H
== 1/JAN/2002, 10:12 ==
*(EVENT),ID:0000H,P1:0401H,P2:0005H,P3:000AH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0000H,P3:0001H,P4:0000H,P5:0000H
caps_service():Returns NORMAL
*(EVENT),ID:0000H,P1:0401H,P2:0005H,P3:000BH,P4:0000H,P5:0000H
== 1/JAN/2002, 10:12 ==
*(EVENT),ID:0000H,P1:0401H,P2:000AH,P3:000AH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:000AH,P3:000BH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0002H,P3:000AH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0002H,P3:000BH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0001H,P3:000AH,P4:0000H,P5:0000H
*(EVENT),ID:0000H,P1:0401H,P2:0000H,P3:0001H,P4:0000H,P5:0000H
caps_service():Returns NORMAL
>>>> PORT:0401H STATUS 000FH => 0043H
*(INTER),ID:0401H,P1:3415H,P2:0000H,P3:083FH,P4:0000H,P5:0000H
ITR_NULL_P_STA: DES_ANSWER_FLAG CLEAR!
ITR_NULL_P_STA: TM_DES_ANSWER_WAIT_L SET!
>>>> PORT:3415H STATUS 0000H => 00D0H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:0840H,P4:0000H,P5:0000H
>>>> PORT:0401H STATUS 0043H => 0087H
ACD Data Size error. or socket close...
*(INTER),ID:0401H,P1:3415H,P2:0000H,P3:08E5H,P4:0000H,P5:0000H
** CLR_ISDN_FLAG IS CALLED **
** LPORT_W = 3415H **
```

Keyphone port 1 goes off-hook

Keyphone port 1 begins dialing

8
0
5
0
2
1

To seize trunk port 21

Keyphone port 1 uses ISDN trunk port 21.

Trunk port 21 goes from idle to 'reserved'.

The trace will be the same as the previous listing, but with additional information included related to the operation of the SV8100 system.

```
R ISDN : <<<<<<<<<<<<<<<<<<
11 0B A1 02 01 01 00      USL(8,1),CALL PROCEEDING IND
08 02 80 04 02            Callref:DES(4),CALL PROCEEDING
18 03 A9 83 81            Channel identification
PHYSICAL_W =0108H..... 3415(00B2-0401) 0981
>>>> PORT:3415H STATUS 00B2H => 00B3H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08EAH,P4:0000H,P5:0000H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08F1H,P4:0000H,P5:0000H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08EAH,P4:0000H,P5:0000H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08EBH,P4:0000H,P5:0000H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08FCH,P4:0000H,P5:0000H
*(EVENT),ID:0004H,P1:080BH,P2:0000H,P3:E07D4F8H,P4:0000H,P5:0000H
R ISDN : <<<<<<<<<<<<<<<<<<
15 0B A1 01 01 01 00      USL(8,1),ALERTING IND
08 02 80 04 01            Callref:DES(4),ALERTING
18 03 A9 83 81            Channel identification
1E 02 81 81              Progress indicator
PHYSICAL_W =0108H..... 3415(00B3-0401) 0980
>>>> PORT:3415H STATUS 00B3H => 00B4H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08EAH,P4:0000H,P5:0000H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08EBH,P4:0000H,P5:0000H
*(INTER),ID:3415H,P1:7801H,P2:0401H,P3:0C76H,P4:0000H,P5:0000H
*(EVENT),ID:001FH,P1:1102H,P2:0000H,P3:0000H,P4:0000H,P5:0000H
== 1/JAN/2002, 10:12 ==
*(EVENT),ID:0004H,P1:080BH,P2:0000H,P3:DF080F8H,P4:0000H,P5:0000H
R ISDN : <<<<<<<<<<<<<<<<<<
13 0B A1 30 01 01 00      USL(8,1),SETUP CONF
08 02 80 04 07            Callref:DES(4),CONNECT
29 05 04 08 02 0A 0D      Date/Time [04. 8. 2 10:13]
..... 3415(00B4-0401) 0991
ITR_CINT_STUPCNF: DES_ANSWER_FLAG SET!
ITR_CINT_STUPCNF: TM_DES_ANSWER_WAIT_L CANCEL!
>>>> PORT:3415H STATUS 00B4H => 0011H
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:0810H,P4:0000H,P5:0000H
>>>> PORT:0401H STATUS 0087H => 0011H
ACD Data Size error. or socket
close...*(EVENT),ID:0000H,P1:0401H,P2:0703H,P3:093EH,P4:0000H,P5:0000H
== 1/JAN/2002, 10:12 ==
*(EVENT),ID:0004H,P1:080BH,P2:0000H,P3:DF080F8H,P4:0000H,P5:0000H
R ISDN : <<<<<<<<<<<<<<<<<<
14 0B A1 09 01 01 00      USL(8,1),DISCONNECT IND
08 02 80 04 45            Callref:DES(4),DISCONNECT
08 02 80 90               Cause (16)
1E 02 81 88              Progress indicator
..... 3415(0011-0401) 0988
T305 TIMER CLEAR !!!
>>>> PORT:3415H STATUS 0011H => 00BCH
*(INTER),ID:3415H,P1:0401H,P2:0000H,P3:08BBH,P4:0000H,P5:0000H
>>>> PORT:0401H STATUS 0011H => 0088H
ACD Data Size error. or socket
close...*(EVENT),ID:0000H,P1:0401H,P2:0013H,P3:000AH,P4:0000H,P5:0000H
HP_LCD_REQ(0401,0001,0000,0000,0000)
>>>> PORT:0401H STATUS 0088H => 0000H
ACD Data Size error. or socket close...
```

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SECTION 12 SV8100NET TRACE (NWINFO DEBUG LIGHT)

The following trace shows an SV8100Net trace of a call from extension port 01 that dials a remote extension: 200. It is useful to monitor the Network ID and IP Address used for SV8100Net calls.

You will find that the SV8100 activity can also be monitored with the ISDN debug trace (mail in 0 0 1 2). Refer to [Section 13 SV8100Net Trace Using the ISDN Debug Trace \(Mail in 0012\) on page 3-34](#).

```

10:41:26 >>nwinfo debug light
** Networking Light Weight debug flag is turned ON **
10:41:32 >>ACD Data Size error. or socket close...
<<< KAN : sta_org_target_dial_set >>> sta_port:0401h, dial:0000h
* NwInfo> Call is generated as 1
<<< KAN : sta_org_target_dial_set >>> sta_port:0401h, dial:0aa2h
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> Search Free Resource... * NwInfo> [00000aa2] -> Networking System ID :
[1]
* NwInfo> IP Address: 0f0010ac
* NwInfo> Port: 1730
* NwInfo> We can use RSRD No. 1 !
* NwInfo> Choose VoIP Networking ! target:172. 16. 0. 15
* NwInfo> Free RsrcID is found port #01.
* NwInfo> cnetwork_pro00 is called
<<< prgrd1501.cpp(38) read_s_sta_clip_enable >>> port : 0, data : 1
* NwInfo> create_network_packet( rsrc_id_w:1 bid:7 rsrc:1 line:1)
* NwInfo> **<!* ** Caller ID 0Ea'u'2@!! **<!* **
* NwInfo> Networking Resource type is H.323 Interface
* NwInfo> IP Address: 0f0010ac
* NwInfo> Port: 1730
* NwInfo> Status is changed...(7c01) 0000 -> 00b6
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 0000 -> 00b6
Tone information for port E001H
Timeslot : 0101H
Level : Tx=20H, Rx=20H
Current : 0000H Level=20H
Sender : Not opened
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> cnetwork_pro06 is called
* NwInfo> Status is changed...(7c01) 00b6 -> 00b9
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 00b6 -> 00b9
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> cnetwork_pro09 is called
* NwInfo> get_inter_signal_target( 0802H ) called
* NwInfo> send_internal_signal : target=0401 third=0000
response_while_frouting Selfport = 7c01 Target = 401 signal = 802
* NwInfo> Status is changed...(7c01) 00b9 -> 0024
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 00b9 -> 0024

```

Keyphone port 1
Dials 200.

The SV8100 routes
the call to Network ID 1
to IP Address
172.16.0.15

```

* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> cnetwork_pro07 is called
* NwInfo> Process comes to exception procedure. (event:0990)
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 0024 -> 0024
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> Process comes to exception procedure. (event:001c)
* NwInfo> create_network_packet( rsrc_id_w:1 bid:7 rsrc:1 line:1)
* NwInfo> Networking Resource type is H.323 Interface
* NwInfo> send user to user information message... CR:6
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 0024 -> 0024
* NwInfo> IP Address: 0f0010ac
* NwInfo> Port: 1730
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> cnetwork_pro07 is called
* NwInfo> get_inter_signal_target( 0810H ) called
* NwInfo> send_internal_signal : target=0401 third=0000
response_while_frouting Selfport = 7c01 Target = 401 signal = 810
* NwInfo> create_network_packet( rsrc_id_w:1 bid:7 rsrc:1 line:1)
* NwInfo> Networking Resource type is H.323 Interface
* NwInfo> Status is changed...(7c01) 0024 -> 0011
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 0024 -> 0011
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> T305 TIMER CLEAR !!!
* NwInfo> cnetwork_pro10 is called
* NwInfo> get_inter_signal_target( 0804H ) called
* NwInfo> send_internal_signal : target=0401 third=0000
response_while_frouting Selfport = 7c01 Target = 401 signal = 804
* NwInfo> create_network_packet( rsrc_id_w:1 bid:7 rsrc:1 line:1)
* NwInfo> Networking Resource type is H.323 Interface
* NwInfo> Status is changed...(7c01) 0011 -> 00c3
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0401 rsrc:1(H323)
status 0011 -> 00c3
* NwInfo> IP Address: 0f0010ac
* NwInfo> Port: 1730
* NwInfo> CNETWORK_MAIN is called.[7c01]
* NwInfo> T305 TIMER CLEAR !!!
* NwInfo> cnetwork_pro19 is called
* NwInfo> -- network(0) VMI mode=0
* NwInfo> -- network(0) VMI port=0000h
* NwInfo> -- network(0) VMI third=0000h
* NwInfo> *** atrk_release_req : target_port_w = 0401H
* NwInfo> Release resource information : 1(01h)CALLED
clr_conf_system_id_on_cnetport() src_port=7c01
* NwInfo> ** Call Information Clearing Complete.[7c01] **
* NwInfo> Status is changed...(7c01) 00c3 -> 0000
* NwInfo> Invalid parameter [netport_rsrc_type_read]
cnetmain src:7c01 oldSrcPort:0401->src_port_w:0000 rsrc:0(ISDN)
status 00c3 -> 0000
HP_LCD_REQ(0401,0001,0000,0000,0000)
ACD Data Size error. or socket close...
* NwInfo> CNETWORK_MAIN is called.[7c01]

```

```
* NwInfo> Search Free Resource...
* NwInfo> Free resource searching abort...!!
signal:0804
* NwInfo> cnetwork_pro00 is called
Networking procedure was not executed.
```



```
+00 03 04 02 08 00 00 04
+0C 45 58 54 20 32 30 30
+20 20 20 20 20 1A 01 00
+05 01 01 13 01 01 21 01
+00 2E 01 00 3B 04 01 04
+00 00
response_while_frouting Selfport = 7c01 Target = 401 signal = 802
R ISDN : <<<<<<<<<<<<<<<
16 0B A1 1F 01 01 00      USL(0,0),MESSAGE RECEIVED IND
08 02 80 08 20            Callref:DES(8),USER INFORMATION
A0                          More data
7E 07 00 03 04 1B 00 00   User-user [7 octets]
+00
S ISDN : >>>>>>>>>>>>>>>
14 A1 1F 01 01 00          USL(7,1),MESSAGE SEND REQ
08 02 00 08 20            Callref:ORG(8),USER INFORMATION
7E 07 00 03 04 1C 00 00   User-user [7 octets]
+00
R ISDN : <<<<<<<<<<<<<<<
5A 0B A1 30 01 01 00       USL(0,0),SETUP CONF
08 02 80 08 07            Callref:DES(8),CONNECT
7E 4C 00 04 0C 45 58 54   User-user [76 octets]
+20 32 30 30 20 20 20 20
+20 1A 01 00 05 01 01 13
+01 01 21 01 00 2E 01 00
+3B 04 01 04 00 00 07 01
+01 02 01 01 24 01 02 2B
+11 11 00 00 00 00 00 00
+00 00 00 00 00 00 00 00
+00 00 0A 04 A2 0A 00 00
+03 04 10 08 00 00
response_while_frouting Selfport = 7c01 Target = 401 signal = 810
S ISDN : >>>>>>>>>>>>>>>
0B A1 05 01 01 00          USL(7,1),SETUP COMPLETE REQ
08 02 00 08 0F            Callref:ORG(8),CONNECT ACKNOWLEDGE
R ISDN : <<<<<<<<<<<<<<<
1D 0B A1 09 01 01 00       USL(0,0),DISCONNECT IND
08 02 80 08 45            Callref:DES(8),DISCONNECT
08 02 80 90               Cause (16)
1E 02 81 82               Progress indicator
7E 07 00 03 04 04 08 00   User-user [7 octets]
+00
response_while_frouting Selfport = 7c01 Target = 401 signal = 804
S ISDN : >>>>>>>>>>>>>>>
0F A1 0C 01 01 00          USL(7,1),RELEASE REQ
08 02 00 08 4D            Callref:ORG(8),RELEASE
08 02 80 90               Cause (16)
R ISDN : <<<<<<<<<<<<<<<
0C 0B A1 33 01 01 00       USL(0,0),RELEASE CONF
08 02 80 08 5A            Callref:DES(8),RELEASE COMPLETE
CALLED clr_conf_system_id_on_cnetport() src_port=7c01
HP_LCD_REQ(0401,0001,0000,0000,0000)
ACD Data Size error. or socket close...
Networking procedure was not executed.
```

- - NOTES - -

UNIVERGE SV8100

System Maintenance Manual

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