

**SWITCHED SERVICE NETWORKS**  
**COMMON CONTROL SWITCHING ARRANGEMENTS (CCSA)**  
**TROUBLE REPORTING PROCEDURES**

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A. General . . . . .	4	1.01 This section describes the trouble reporting procedures for Common Control Switching Arrangements (CCSA) and Government Switched Networks. It also covers trouble handling responsibil- ities.	
B. Customer Initiated Reports . . . . .	4	1.02 The reasons for reissuing this section are listed below. Since this reissue is a general revision, no revision arrows have been used to denote significant changes.	
C. Automatic Detected Reports . . . . .	4	(a) To change title of section and incorporate information from Section 309-200-000.	
D. Referred-in Reports . . . . .	5	(b) To provide a uniform method for switched service network trouble reporting.	
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**1.03** CCSA provides the customer with a dedicated private switched communications network. Uniform features and options enable the customers to adapt the network to their specific requirements. Trouble reporting procedures are provided to direct trouble reports for all customers served by a switch to a specific Switched Services Bureau (SSB). The dedicated network and the Message Telecommunications System (MTS) (in event of major failure) are used for reporting.

**1.04** Although CCSA and Government Switched Networks are similar, there are specific differences. Any additions to this section for a Government Switched Network will be included in an appendix dedicated to that particular network (ie, AUTOVON, FTS, etc).

**1.05** CCSA networks consist of switching machines, intermachine trunks, access lines, and main PBX/Centrex (CTX) locations. The switching machines may be Bell Company provided (crossbar tandem, No. 5 crossbar, or No. 1 Electronic Switching System) or non-Bell Company switching machines provided by an independent company (ICO).

**1.06** Facilities for trunks may be Bell Company, ICO, or other common carrier (OCC) provided. Access line facilities may be Bell Company, ICO, OCC, or direct private line service interconnection/customer provided equipment (DPLSI/CPE). The customer end of access lines may terminate in Bell Company Centrexes, PBXs, key equipment, data sets, etc, or similar ICO or CPE equipment. This adds to the complexity of trouble handling procedures.

**1.07** Trouble in a network may be detected in the following ways:

(a) **Customer Report (CR):** A trouble report received directly from a customer, a customer's representative, or an employee representing a customer such as a station repair person who accepts a trouble report while on a customer's premises or a testroom employee in contact with a customer who reports dissatisfaction with a service.

(b) **Automatic Detected (AUTO DET) Reports:** Trouble reports which are generated by an employee who responds to an alarm condition or to analytical data which is produced by test equipment directly utilized in testing or sampling all or part of circuits, circuit groups, or systems which constitute a customer's service when there is no occasion to contact the customer regarding the

report. Any contact with the customer about the trouble changes the report type from AUTO DET to CR. Reports from a customer about alarms on telephone company (TELCO) equipment on their premises shall also be coded CR. AUTO DET reports may be referred out (RO). When it is necessary to contact the customer, the trouble report type changes from AUTO DET to CR.

(c) **Routine Tests:** Periodic testing and analyzing of automatic or manual test results.

(d) **Pattern Analysis:** Used to discover chronic or intermittent problems not readily located by other means. Detailed trouble analysis for CCSA and Government Switched Networks is covered in Section 309-200-005.

**1.08** Some troubles will be apparent and easily handled. Others may be of such a nature that only extensive efforts involving different locations over a period of time will result in a clearance. Cooperation between offices is required to clear troubles in a CCSA complex. Each office must maintain detailed and accurate trouble tickets and fully utilize the Special Services System (SSS).

**B. Terms**

**1.09** There are many terms associated with trouble handling in a CCSA network. Several terms used in this section have been abbreviated. These are as follows:

ABBREVIATION	TERM
AUTOVON	Automatic Voice Network
CAROT	Centralized Automatic Reporting On Trunks
CCSA	Common Control Switching Arrangement
CPE	Customer Provided Equipment
DPLSI	Direct Private Line Service Interconnection
ICO	Independent Company
MTS	Message Telecommunications System

NCO	Network Control Office
NORAD	North American Air Defense
OCC	Other Common Carrier
PCO	Plant Control Office
SAC	Strategic Air Command
SAGE	Semi-Automatic Ground Environment
SARTS	Switched Access Remote Testing System
SMAS	Switched Maintenance Access System
SNCO	Subnetwork Control Office
SSB	Switched Services Bureau
SCC	Switching Control Center
SSC	Special Services Center
SSS	Special Services System
STC	Serving Test Center
SVB	Serving Bureau
TRCO	Trouble Reporting Control Office

## 2. RESPONSIBILITIES

### A. General

**2.01** To ensure proper handling of reports, certain responsibilities have been assigned to various operations offices serving a network. This section lists these offices and their trouble reporting responsibilities. For further details of CCSA office responsibilities, see Section 309-200-001.

### B. Network Control Office

**2.02** The Network Control Office (NCO) has the overall responsibility for ensuring satisfactory service to the customer. The NCO may be an actual

operations office providing CCSA service or an administrative location not directly on the network. If the NCO is on the network, it may also perform SSB or Plant Control Office (PCO) functions. The NCO should, through regular contact with the other offices on the network, control any situation that could degrade service to the customer.

**2.03** On certain CCSAs, the NCO may designate one or more Subnetwork Control Offices (SNCO) for certain portions of the network. The SNCO performs the functions of the NCO and relays appropriate information to the NCO. The NCO retains the responsibility for the overall service.

### C. Switched Services Bureau

**2.04** The SSB is the PCO for the access lines homed on its switch and may be designated PCO for any of the trunks terminated on its switch. It is also a Serving Bureau (SVB) per Section 660-225-101 under the SSS Plan. The SSB must:

- (a) Submit and maintain a valid circuit inventory
- (b) Handle all troubles as required
- (c) Submit trouble ticket (E-6944) to the SSS Plan.

**2.05** SSB responsibilities are covered in more detail in Section 309-200-001. The SSB will be SVB for the switched end of an access line while a Special Services Center/Serving Test Center would be SVB for the customer end. If there is no remote SVB for the customer end of a local access line, the SSB becomes SVB for both ends. The SSB will also be designated Trouble Reporting Control Office (TRCO) where applicable.

**2.06** The SSB is the receiving location for all customer reports. Marketing should supply each customer with two trouble reporting numbers. One will be an on-net number (990-6161) to be reached through the CCSA. The other, an MTS number, can be called collect using the message network.

**2.07** The PCO/SSB is responsible for overall service on the circuits it controls. It should sectionalize troubles and refer them to appropriate locations for handling. The PCO/SSB retains the responsibility for prompt trouble clearance even

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when a trouble is referred out and must maintain current status on any outage of unusual length.

### D. Special Services Center/Serving Test Center (SSC/STC)

**2.08** The SSC or STC is responsible for the junction of the intertoll and the local facility portion for the customer's premises end of an access line. On Centrex-central office (CO), the STC is also responsible for network access from the Centrex stations. The SSC/STC will accept referred-in reports from the SSB for handling and advise the SSB of any condition that could affect the customer's service. The responsibilities of the SSC/STC are covered in Section 309-200-001.

**2.09** The SSC/STC is a designated SVB under the SSS Plan for the customer end of the access line. It must maintain a valid circuit inventory and must input SS trouble tickets (E-6944) to the plan. These actions are covered in Section 660-225-1ZZ.

**2.10** The SSC/STC will analyze troubles and clear those in its territory. Troubles outside its territory will be referred via SSB. The SSC/STC is responsible for maintenance at the customer location and will arrange for TELCO coverage when required.

**2.11** The SSC/STC will forward all trouble clearances to the SSB promptly and provide status on extended outages as required.

**2.12** All offices should accept customer reports, even if they are not their responsibility. They should forward the reports to the proper location for handling and at the same time advise the customer of the proper procedure to be used.

### E. Miscellaneous Responsibilities

**2.13** The SSB/PCO is designated TRCO for the central office connecting facilities when OCC facilities are used in CCSA service. The SSB will always be TRCO for the switched end of a CCSA circuit. The responsibilities of a TRCO are covered in Section 471-200-001.

## 3. TROUBLE REPORTING PROCEDURES

### A. General

**3.01** To ensure accurate reporting and rapid clearance of troubles, Marketing will furnish

the customer two trouble reporting numbers. One will be an on-net CCSA number (990-6161) which can be reached over the CCSA network. Any location dialing 990-6161 will reach the SSB serving that location. The other is an MTS number to be called collect on the message network. This number should be the listed directory number of the SSB serving that location. Some networks may also use special procedures such as centralized trouble reporting or a universal trouble reporting number. In any case every effort should be made to ensure that each customer is aware of the proper procedure and the location for reporting troubles.

### B. Customer Initiated Reports

**3.02** When receiving a report from the customer or his agent, the SSB should obtain sufficient information to complete the trouble ticket (E-6944) as shown in Fig. 1 and to initiate sectionalization and clearance of trouble. Details of the SSS trouble ticket (E-6944) are covered in Section 660-225-104.

**3.03** The SSB must first verify whether or not it has a valid CCSA trouble or a trouble that may not be on the CCSA network. Customers in this situation would normally report a trouble to their local attendant who would determine where to properly report the problem.

**3.04** Once the customer report has been received and properly documented, the trouble should be cleared as quickly as possible and the clearance given to the customer. In cases of unusual duration, the customer should be given regular reports as to progress and current status. A final report should be given to the customer when service is restored.

**3.05** If the customer reports a trouble but wishes to continue using the impaired service (this is an information report), the trouble outage repair should not be initiated until the STC has been authorized (by the customer via the PCO) access to clear the trouble. At that time normal trouble procedures will begin.

### C. Automatic Detected Reports

**3.06** Reports that result from automatic test equipment, alarms, or employee action should be cleared promptly. Quite often these reports

can be cleared and service restored without direct customer involvement. The following reports should be cleared locally or referred out as required:

- (a) In all cases where an automatic detected report results in a repair action, the ticket (E-6944) must be correctly prepared and submitted. See Fig. 2.
- (b) In cases where an automatic detected report results in a clearance of "came clear," a ticket need not be submitted if the total duration is 9 minutes or less. In no case will the ticket be a "found okay."

**3.07** Some of these reports may result from analysis of trouble information. Quite often analysis over an extended period of time will disclose trouble conditions that cannot be detected by other methods. When the fault has been isolated to a circuit or circuit component, an Information Report should be initiated. CCSA trouble analysis is covered in Section 309-200-005.

#### **D. Referred-in Reports**

**3.08** A referred-in report may originate as a customer report (see Fig. 3 and 4) or an automatic detected report. The referred-in report should be analyzed, sectionalized, and, if necessary, referred out like any other report. The office receiving a referred-in report (see ticket in Fig. 4) must report status and clearance information to the referring office. Referred-in reports can only come from another SVB. Any referred-in report not properly coded to another SVB will be rejected by SSS.

**3.09** In a CCSA network, multilink connections may cause a report to be referred in and out of several offices before the trouble is cleared. Each office should handle the report in a normal manner, referring it to the next office and passing the clearance and other pertinent information back to the referred-from office. It is important that each office maintain continuity if the customer is to receive prompt and accurate clearance.

#### **E. Administrative Circuit Number**

**3.10** The administrative circuit number should be used on a trouble ticket (E-6944) when the report received cannot be determined to be a definite circuit. The administrative circuit number should be used with the variable field "G" (called-calling) entry on the trouble ticket (E-6944) when a trouble is

reported on a cross network, multilink call. See Fig. 5 for example using variable field "G." This prevents a trouble ticket being written against a circuit that is not in trouble. The trouble ticket procedure is covered in Section 660-225-104. An administrative circuit number must be inventoried per Section 660-225-103 before it can be used.

**3.11** An administrative circuit number ticket can be referred out and handled as any other ticket but each office must use its own administrative circuit number. The use of variable field "G" (called-calling) as an analysis tool is covered in Section 309-200-005.

#### **F. Reports Involving Off-Net Calling**

**3.12** CCSA networks may be arranged to route CCSA calls to or from an MTS. This may be done through the use of off-net access lines (ONAL), local off-net access lines (LONAL), foreign exchange (FX) circuits, or Wide Area Telecommunications Service (WATS). Troubles that locate in these access circuits should be handled as a normal CCSA trouble. Troubles that locate in the message network are not CCSA troubles and should be referred to the appropriate MTS location or SVB.

#### **G. Other Common Carriers**

**3.13** The facilities of OCCs may be used to provide a portion of CCSA trunks or access lines. The SSB will be designated TRCO for the central office connecting facilities. Information on the functions and responsibilities of a TRCO are covered in Section 471-200-001.

#### **H. Overseas**

**3.14** Certain CCSA networks have overseas access as part of their service. This requires special routing and procedures which may differ for each network. The service may incorporate TELCO, OCC, or CPE facilities for the overseas trunking. Certain CCSA offices will be designated as "Gateways" and all overseas traffic will be routed through them. Overseas troubles should be referred to the proper gateway for resolution. The specifics of a particular network's overseas service will be covered in the appendix for that network.

#### **I. Customer Credit Allowance**

**3.15** The customer credit allowance (CCA) is taken automatically from the trouble ticket

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(E-6944) by the SSS Plan, provided the inventory for that circuit is designated for automatic CCA. All tickets must be entered correctly and promptly to ensure that the customer gets a prompt and accurate rebate. The customer credit allowance procedure in SSS is covered in Section 660-225-108.

**J. Maintenance of Service Charges**

**3.16** Maintenance of service charges are billed service charges resulting from a TELCO repairman dispatched to a customer's premises to clear a reported trouble when the difficulty is caused by CPE. These charges are billed from the trouble ticket (E-6944) (Section 660-225-108) when the following conditions are met:

- (a) The trouble code is 12 (frame) or 13 (Carbons-Heat Coils)

- (b) The dispatch indicator is Y or B. Y (yes) indicates that a repair person has been dispatched, and B (bulk) indicates that several individual customer's reports were dispatched to a single repair person.

- (c) A variable field indicator "D" (maintenance of service charge) entry is made.

All of these conditions must be met so that maintenance of service charges can be properly billed by comptrollers.

**K. Customer Directed Participative Testing**

**3.17** Certain circuits may be subject to customer directed participative testing (CDPT) on CCSA or government switched networks. The detailed procedure for CDPT ticketing is covered in Section 480-050-100.

660-225-104 Local Serial No. 12345 E-6944 (678)

SS Trouble Ticket

Record Type  C  X Tracking Serial Number 1DW99912345 1 12

Originator's DPI Code 1DW999 Serial Number 12345

Serial # Format Prefix GP Circuit Type 99999 Base Number 99999 13 24

Tel. # Format Prefix 001 SVCCd - Mod - NPA - Co Unit Ctr - 25 33

Suffix - Co. Asgn. Ck ID -

Line No. Code - Extn. Trunk Code -

Seq With Report - C/D SVB Rec From VQ1111 34 42

Customer USAF Report Type  CR  RN  INF

Reported By DK Tel. No. 703-555-1212  2  3 43

Trouble Reported CAN'T HEAR  6  7  9

Received By DW Received Time Mo Day Clock Time 02051901 44 51

Referred To Referred Time Mo Day Clock Time 52 59

Restored To DK Restored Time Mo Day Clock Time 02051916 60 67

ST	SVB	CT	FR							
01	04	06	07	09	10	11	12	13		
CC	17	21	22	23	24	25	26	29	30	31

Type Analysis  8  12  - - -  - - - - - 70 72

Y  N  B  M - - - - - 73 75

Variable Field Analysis C TH = C O L D S O L D E R  
J O I N T O N F R A M E

19 70

Fig. 1 — Example of SS Trouble Ticket

660-225-104  
Local Serial No. 12346 E.6944  
(678)

SS Trouble Ticket

Record Type  C  NC Tracking Serial Number 112

7X 1DW99912346  
Originator's DPI Code Serial Number

Serial # Format	Prefix	Circuit Type	Base Number
	SVCCd	Mod	Serial Number
	-	GP	99999

13 24

Tel. # Format	Prefix	SVCCd	Mod	NPA	Co Unit Ctl

Suffix	Co. Asgn. Ck ID	--
002	-	-

25 33

Seq With Report	CID SVB	Rec From
-	VQ	11111

34 42

Customer USAF Report Type

CR	RN	INF
1	2	3

43

Reported By DK Tel. No. 703-555-1212

Trouble Reported NOISY

Atc	Rel	Ass
6	7	9

Received By DW Received Time

Mo	Day	Clock Time
02	05	2115

44 51

Referred To WC Referred Time

Mo	Day	Clock Time
02	05	2120

52 59

Restored To DK Restored Time

Mo	Day	Clock Time
02	05	2150

60 67

ST	SVSB	CT	Trk	Mod	Rel	Ass
01	04	06	07	09	10	11

17 21 22 23 24 25 26 29 30 31

Type Analysis 8 1DX999

Y  N  B M - - -

Variable Fault Analysis

NSY	=	DIRTY	RELAY
CONTACTS	AT	CUSTOMER	

19 26

Fig. 2 — Example of an Automatic Detected Report

660-225 104  
Local Serial No. 23666 E 6944 (6 78)

SS Trouble Ticket

Record Type C Tracking Serial Number 0X 1DW99923666 1 12

Originator's DPI Code Serial Number

Serial # Format Prefix Circuit Type Base Number  
SVCCd Mod Serial Number  
--GP-- 99999 13 24

Tel # Format Prefix SVCCd Mod NPA Co Unit C-1  
Suffix Co. Asgn. Ck ID --  
001 ---- 25 33

Line No. Code Extn. Trans Code

Seq With Ref. --- G.D. SvB Rec From 1DW999 34 42

Customer DECCO Report Type  
Reported By DW Tel. No. 703-555-1212 1 2 3 43  
Trouble Reported PERM SIGNAL 6 7 9  
Auto Release

Received By DW Received Time  
Mo Day Clock Time  
07091401 44 51

Referred To Referred Time  
Mo Day Clock Time

Restored To DW Restored Time  
Mo Day Clock Time  
07091412 61 67

01	04	06	07	09	10	11	12	13
<u>17</u>	21	22	23	24	25	26	28	31

View Always 8 03 --- -----

Y N B M ---

PRS = HELD UP AT  
CUST LOCN

18 75

Fig. 3 — Example of Trouble Ticket for a Customer Report

660-225-104	23366	E 6944 (6 78)
Local Serial No.	SS Trouble Ticket	
Record Type	Tracking Serial Number	
<input type="checkbox"/> C <input checked="" type="checkbox"/> NC	<input checked="" type="checkbox"/> X	1DW99912346
	Originator's DPI Code	Serial Number
Serial # Format	Prefix	Circuit Type
	SVCCd	Mod
	--5B--99999	
	Serial Number	
Tel. # Format	Prefix	SVCCd
	Mod	NPA
	Co. Unit	Cl
	Suffix	Co. Asgn. Ck ID
	002-----	
	Line No. Code Extn. Trunk Code	
Seq With Report	CLD SVB Rec From	1DW999
Customer	USAF	
Reported By	DW Tel. No. 703-777-7777	
Trouble Reported	NOISY	
	CR	IR
	INF	S
	123	679
	Atd	Rel
	Ass	St
Received By	WC	
	Received Time	
	Mo	Day
	02	05
	21	20
	Clock Time	
	2120	
Referred To	US	
	Referred Time	
	Mo	Day
	02	05
	21	25
	Clock Time	
	2125	
Restored To	DW	
	Restored Time	
	Mo	Day
	02	05
	21	46
	Clock Time	
	2146	
	Time of Day	
	ST SVB CT	
	01 04 06 07 09 10 11 12 13	
	17 21 22 23 24 25 26 29 30 31	
Type Analysis	8 41 001 WW0110	
Originator	YNB M-----	
Variable Field Analysis	NSY=DIRTY RELAY CONTACTS AT CU STOMER	

Fig. 4 — Example of a Referred-In Trouble Report

660-225-104 Local Serial No. 12347 E-6944 (678)

SS Trouble Ticket Tracking Serial Number

Record Type  C  NC  1 DW99912347 1-12  
Originator's DPI Code Serial Number

Serial # Format Prefix Circuit Type Base Number  
 SVCCd Mod Serial Number  
1DW99921B08- 13-24

Tel. # Format Prefix SVCCd Moo NPA Co. Unit Cd  
 Suffix Co. Asgn. Ck. ID --  
 -- -- -- -- -- -- -- -- 25-33  
 Line No. Code Extn. #/Trunk Code

Seg With Report --- CLD/SVB Rec From --- 34-42

Customer USN Report Type CR R INF  
 Reported By WK Tel. No. 703-555-1212 023 43  
 Trouble Reported NRNA 679  
Atc Rel Ass Net st

Received By DW Received Time Mo Day Clock Time  
02052200 44-51

Referred To WW Referred Time Mo Day Clock Time  
02052210 52-59

Restored To WK Restored Time Mo Day Clock Time  
02052230 60-67

Trouble Code  

ST	SVB	CT	TRK	FCR	PCA	ACH	UCPE	
01	04	06	07	09	10	11	12	13

10 66-69

CC IS IT LF TP INF SQ NPC FC TR  

17	21	22	23	24	25	26	29	30	31
----	----	----	----	----	----	----	----	----	----

Rec. Type Analysis Code Seg. With Trk. With Trk. Or SVB Ref. To  
0 -- --- 1WW999 1-12  
CLD/COD With Trk. Or SVB Ref. To

Dispatch Indicator Variable Field Identifiers  
YNB GM--- 13-18

Variable Field And History (Precede History With (-) Sign)  

7	4	7	1	0	1	1	-	-	-	+	3	3	3	9
2	2	0	-	-	-	N	R	A	=	C	P	E		
P	B	X		T	B	L		A	T	H	O	L	S	
V	M		A	F	B									

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660-225-104 Local Serial No. 22367 E-6944 (678)

SS Trouble Ticket Tracking Serial Number

Record Type  C  NC  0 X 1 DW99912347 1-12  
Originator's DPI Code Serial Number

Serial # Format Prefix Circuit Type Base Number  
 SVCCd Mod Serial Number  
1WW99921B08- 13-24

Tel. # Format Prefix SVCCd Moo NPA Co. Unit Cd  
 Suffix Co. Asgn. Ck. ID --  
 -- -- -- -- -- -- -- -- 25-33  
 Line No. Code Extn. #/Trunk Code

Seg With Report --- CLD/SVB Rec From 1DW999 34-42

Customer USN Report Type CR R INF  
 Reported By DW Tel. No. 703-777-7777 123 43  
 Trouble Reported NRNA 679  
Atc Rel Ass Net st

Received By WW Received Time Mo Day Clock Time  
02052210 44-51

Referred To Sgt Clark Referred Time Mo Day Clock Time  
02052215 52-59

Restored To DW Restored Time Mo Day Clock Time  
02052227 60-67

Trouble Code  

ST	SVB	CT	TRK	FCR	PCA	ACH	UCPE	
01	04	06	07	09	10	11	12	13

10 66-69

CC IS IT LF TP INF SQ NPC FC TR  

17	21	22	23	24	25	26	29	30	31
----	----	----	----	----	----	----	----	----	----

Rec. Type Analysis Code Seg. With Trk. With Trk. Or SVB Ref. To  
0 76 001 --- 1-12  
CLD/COD With Trk. Or SVB Ref. To

Dispatch Indicator Variable Field Identifiers  
YNB GM--- 13-18

Variable Field And History (Precede History With (-) Sign)  

7	4	7	1	0	1	1	-	-	-	+	3	3	3	9
2	2	0	-	-	-	N	R	A	=	B	A	D		
N	C		S	E	L		A	T		A	O	L	S	U
M		A	F	B										

 19-70

Fig. 5 — Example Using Variable Field G

**COMMON CONTROL SWITCHING ARRANGEMENT (CCSA)  
TROUBLE REPORTING PROCEDURES  
AUTOMATIC VOICE NETWORK (AUTOVON)**

**1. GENERAL**

**1.01** This appendix provides trouble reporting and associated office procedures for the Automatic Voice Network (AUTOVON).

**2. NETWORK CONTROL OFFICE**

**2.01** The Network Control Office (NCO) for AUTOVON is Government Services Operations located at Dranesville, Virginia.

**2.02** The NCO for AUTOVON has designated nine subnetwork control offices (SNCOs). These SNCOs and the subnetworks they administer are as follows:

**4. OVERSEAS**

**4.01** AUTOVON provides network dialed overseas service to several areas through designated gateways. The overseas areas and gateways are:

OVERSEAS AREA	GATEWAY
Europe	Cedar Brook, New Jersey Pottstown, Pennsylvania
Caribbean	Ellisville, Florida Moseley, Virginia
Pacific	Lodi, California San Luis Obispo, California

SUBNETWORK	SNCO
SAGE-NORAD 20th Region	Petersburg, Virginia
SAGE-NORAD 21st Region	North Syracuse, New York
SAGE-NORAD 22nd Region	North Bay, Canada
SAGE-NORAD 23rd Region	Duluth, Minnesota
SAGE-NORAD 24th Region	Great Falls, Montana
SAGE-NORAD 25th Region	McChord Air Force Base, Washington
SAGE-NORAD 26th Region	Luke Air Force Base, Arizona
Strategic Air Command (SAC)	Lyons, Nebraska
Message Call Detail System (MCDS)	Dranesville, Virginia

**3. TROUBLE REPORTING**

**3.01** In addition to the standard trouble reporting number 990-6161, the customer has a universal trouble reporting number, 550-1611, that may be used at any location.

**3.02** All trouble tickets (E-6944) and any other trouble documentation for AUTOVON will use "ZULU" military time, which coincides with Greenwich mean time rather than local time.

**4.02** When the overseas trunks and switching machines are provided by Other Common Carrier/Customer Provided Equipment (OCC/CPE), all troubles should be referred to the proper gateway for resolution.

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**COMMON CONTROL SWITCHING ARRANGEMENT (CCSA)  
TROUBLE REPORTING PROCEDURES  
FEDERAL TELECOMMUNICATIONS SYSTEM (FTS)**

**1. GENERAL**

**1.01** The Network Control Office (NCO) for the Federal Telecommunications System (FTS) is Government Services Operations at Dranesville, Virginia. Trouble reporting responsibilities are outlined in Section 309-200-004.

**2. TROUBLE REPORTING**

**2.01** Certain locations serving FTS may already have nonstandard trouble reporting numbers. These numbers may be found in the FTS Training

Manual available from Government Services in Washington, D.C.

**3. OVERSEAS**

**3.01** Overseas access from FTS is available to certain users. Details of this service are covered in the FTS Routing Guide.

**4. OFF-NET SERVICE**

**4.01** Off-net service is available to users on an automatic basis or on a manual basis through attendants. The details are furnished by the FTS Routing Guide.

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**COMMON CONTROL SWITCHING ARRANGEMENT (CCSA)  
TROUBLE REPORTING PROCEDURES  
NORTH AMERICAN AIR DEFENSE/SEMI-AUTOMATIC GROUND EQUIPMENT  
(NORAD/SAGE)**

**1. GENERAL**

**1.01** This appendix provides trouble reporting and associated office procedures for the North American Air Defense/Semi-Automatic Ground Equipment (NORAD/SAGE) service.

**2. NETWORK CONTROL OFFICE**

**2.01** The Network Control Office (NCO) for NORAD/SAGE has designated the following locations as Subnetwork Control Offices (SNCOs):

SUBNETWORK	SNCO
20th Region	Petersburg, Virginia
21st Region	North Syracuse, New York
22nd Region	North Bay, Canada
23rd Region	Duluth, Minnesota
24th Region	Great Falls, Montana
25th Region	McChord Air Force Base, Washington
26th Region	Luke Air Force Base, Arizona

**3. TROUBLE REPORTING PROCEDURES**

**3.01** Automatic Voice Network/Air Defense Command (AUTOVON/ADC) service generally differs from regular Switched Service Network (SSN) service in that most customer locations home on more than one switching center. In addition, the circuits are engineered to provide vital communication links in our national defense. If a trouble is reported to a Switched Services Bureau (SSB) other than the one to which the call is routed, delay results and unproductive work effort is expanded trying to find

the faulty condition. It follows that for troubles on AUTOVON calls, wherever possible, the access line should be identified and the report directed to the appropriate SSB. This will result in the most efficient and rapid trouble clearing effort. If a circuit cannot be identified as a trouble location, the trouble ticket (E-6944) should use the administrative number format.

**A. Regional Control Center (RCC) Procedures**

**3.02** The user reports all troubles to the customer's local maintenance control center. Troubles encountered by PBX users should be reported via the PBX attendant who may be able to identify the circuit for reference to this center.

**3.03** The maintenance control center attendant refers the trouble to the SNCO. Where dial restoration panels (DRP) are installed, the center may be able to assist the SNCO by identifying the circuit in use.

**3.04** The SNCO attempts to isolate the trouble condition in or out of the office. This may require testing data sets, digital data transmitters (DDTs), digital data receivers (DDR), or common user group (CUG) equipment.

**3.05** The SNCO relays the case to the appropriate SSB for whatever action is necessary to identify and clear the trouble. If the SNCO finds a trouble condition within the office while investigating a trouble report, the details should be relayed to the appropriate SSB to be included with other AUTOVON trouble reports. The SSB is determined by the access line involved in the call.

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## **SECTION 309-200-004**

### **Appendix 3**

**3.06** If the user reports trouble on a call in which the connection is not held (the access line is not identified), the SNCO relays the report to any one SSB as a called-calling administrative circuit number report (see Section 309-200-004). The report will then be included in the network summary printout for later analysis.

#### **B. Sites with Customer Local Maintenance Control Centers**

**3.07** The user reports all troubles to the customer's local maintenance control center. Troubles encountered by PBX users should be reported via the PBX attendant (if available) who may be able to identify the circuit for reference to this center.

**3.08** For data and ground/air circuits, the site maintenance control center attendant usually calls the RCC maintenance control center involved for assistance and confirmation of the condition. In this case, the RCC maintenance control center reports the trouble to the SNCO.

**3.09** For troubles on AUTOVON voice calls, the site attendant attempts to identify the access line in use and report the trouble to the appropriate SSB. This procedure is preferable for rapid trouble clearing but may be modified at user demand. If an access line is found to be unusable, the SSB should notify the SNCO.

**3.10** At the NORAD Cheyenne Mountain Complex, the user reports all troubles to the customer's local maintenance center.

#### **C. Sites without Customer Local Maintenance Control Centers**

**3.11** Generally, the military user can identify the access line in use by either manual

selection (operating key) or by the PBX attendant meeting the user on the circuit. For data and ground/air circuits, the user usually calls the RCC maintenance control center for assistance and confirmation of the condition. The RCC then reports the case to the SNCO.

**3.12** When the trouble is an AUTOVON call, the user or PBX attendant, upon identifying the access line in use, reports the case to the appropriate SSB.

#### **D. Trouble Report Reception**

**3.13** When receiving a trouble report with a specific access line held, the SSB or SNCO should immediately attempt to determine whether or not the originating access line is in trouble and advise the customer of the condition as soon as possible. In addition, if the access line is out of service, the appropriate SNCO must be informed.

**3.14** Detailed trouble investigation may show that the far-end access line is in trouble. The SSB for that access line must notify the appropriate SNCO as required.

**3.15** The SNCOs serving the air divisions of an Air Force headquarters (RCC) will be responsible for keeping the test center at the RCC advised of outages.

**3.16** All trouble tickets (E-6944) and any other trouble records for NORAD/SAGE will use "ZULU" military time, which coincides with Greenwich mean time, rather than local time.