



## **SLC<sup>®</sup> Series 5 Carrier System**

### **AUA8 System Display Unit — NCPQDCB Data Sheet/User's Manual**

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This data sheet describes the AUA8 system display unit (SDU) (COMCODE 103841011) and is intended for the end-user of the unit. The AUA8 SDU provides an 8-character alphanumeric display for the SLC<sup>®</sup> Series 5 Carrier System when used with an MC9775A1 bank control unit (BCU). The AUA8 SDU also provides bank overflow relays to indicate when all available timeslots in a digroup are busy (only in Mode 2). The AUA8 SDU is an option plug and is used in the sixth line interface unit (LIU) slot of the blue bank at the Feature Package I remote terminal (RT).

Figure 1 is a functional block diagram of the AUA8 SDU, and Figure 2 shows the faceplate. A *User's Manual* for the AUA8 SDU is provided as an attachment.

The AUA8 SDU provides craft personnel with access to information in the bank controller (BC) data base. Information is structured into categories, each of which has a list of data. Faceplate mounted pushbuttons are used to display this information. Since the information is stored in the BCU, the messages displayed depend on the BCU firmware.

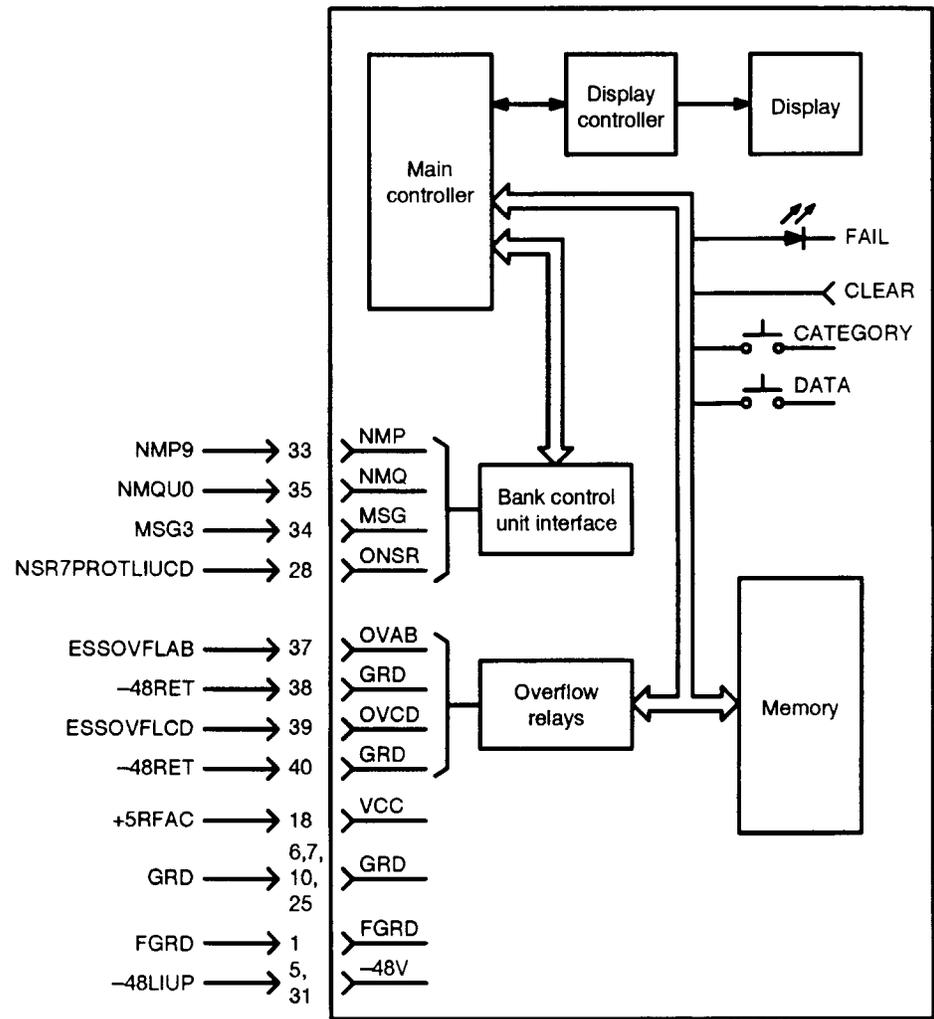
The following pin jack, LED indicator, and pushbuttons form the user interface and are located on the faceplate of the SDU.

**CLEAR** (pin jack) — When a pin is inserted into this jack, selected data is reset, when allowed by the BCU (for example, counters).

**FAIL** (Red LED) — When lighted, this LED indicates the AUA8 SDU is running the initialization routine. Also lights when the BCU decides the AUA8 SDU is not usable.

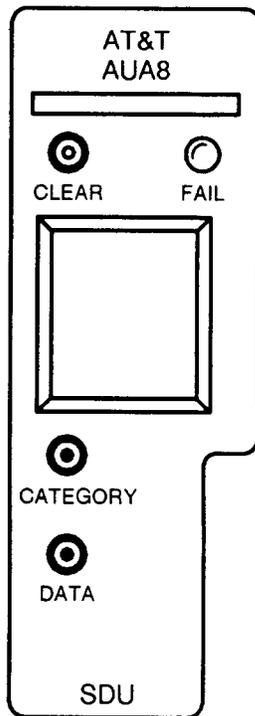
**CATEGORY** (Faceplate-mounted pushbutton) — When pushed, brings the AUA8 SDU out of the idle time-out mode and steps through the list of category names.

**DATA** (Faceplate-mounted pushbutton) — When pushed, steps through the data list of a category.



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Figure 1. AUA8 SDU Block Diagram



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**Figure 2. AUA8 SDU Faceplate**

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the *SLC Series 5 Carrier System*. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

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## **SLC<sup>®</sup> Series 5 Carrier System**

### **AUA8 System Display Unit — User's Manual**

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The AUA8 system display unit (SDU) is a general purpose display unit with two 4-character dot-matrix displays. By using the SDU, craftspersons can display certain data associated with a system (blue or white). Each bank control unit (BCU) stores data for its system. However, an SDU in the blue system at the remote terminal (RT) communicates with the white system BCU through the automated channel test unit (ACTU). Therefore, the RT needs one SDU in the blue system to display data for both systems. At the central office terminal (COT), each system needs an SDU to display data. The data is stored in BCU memory under categories that differ at the COT and RT.

### **Faceplate Controls**

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In addition to the dot-matrix displays, the SDU has two faceplate-mounted pushbutton switches (CATEGORY and DATA) and a pin jack (CLEAR) (Figure 1).

### **CATEGORY Button**

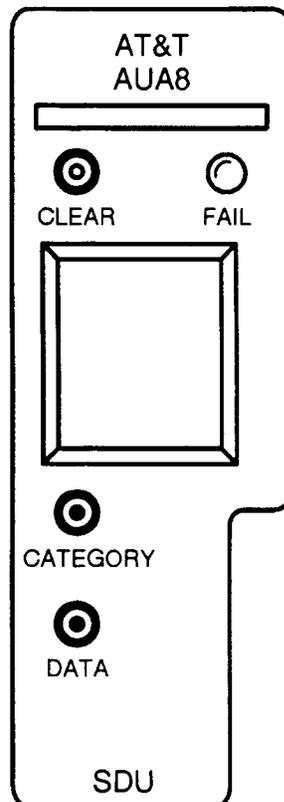
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When the SDU is in the idle state, pushing the CATEGORY button activates the SDU. The SDU retrieves the category list and displays the first category name. When the SDU is displaying a category name, pushing the CATEGORY button displays the next category name. When the SDU is displaying `End Ctg` (signaling the end of the category list), pushing the CATEGORY button returns the SDU to the beginning of the list (first category name).

Pushing and holding the CATEGORY button circles the SDU through the category names.

If the SDU is displaying a data item and on pushing the CATEGORY button, the SDU displays the category name corresponding to the data item. At this point, pushing the DATA button returns the SDU to the last data item viewed.

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Figure 1. SDU Faceplate

## DATA Button

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When the SDU is displaying a category name and on pushing the DATA button, the SDU retrieves from BCU memory the data associated with the category and displays the first data item under the category. If there are no data items under the category, the SDU displays *End Data* or *No Alrm*. When displaying a data item and on pushing the DATA button, the SDU displays the next data item under the same category. When the SDU is displaying *End Data*, pushing the DATA button returns the SDU to the first data item under the same category. If there are no data items under the category, the SDU displays *End Data* or *No Alrm* again.

Pushing and holding the DATA button circles the SDU through the data items under a category.

When the SDU is displaying a data item and on pushing the CATEGORY button, the SDU displays the category name where the data item falls. At this point, pushing the DATA button returns the SDU to the last data item viewed.

The data in the RT power-up test and routine test result categories is always current. For other categories, if the data in BCU memory changes (for example, an alarm clears) after the data retrieval, the SDU continues to display the data present at the time of the data retrieval (not the current data).

**⇒ NOTE:**

Resetting the bank controller clears all BCU category data. If viewing a category during the reset, the data clearing for that category is only evident on exiting and returning to the category.

To get the current data, exit the category (press the CATEGORY button while the SDU displays the category name) and come back to the category (go through all other category names until again the SDU displays the desired category name). When viewing alarm data, follow the above procedure or simply insert the pin into the CLEAR pin jack.

**⇒ NOTE:**

Inserting the pin into the pin jack when viewing clearable data items (those falling under the blocked call data, peak hourly traffic, and channel busy data categories) resets the data item.

## **CLEAR Pin Jack**

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The CLEAR pin jack allows the craftsperson at the COT to clear the blocked call (AB BLK and CD BLK), peak hourly traffic (AB TRAF and CD TRAF), and channel busy (AB BUSY and CD BUSY) data in the BCU of a COT system operating in concentrated mode (Mode 2). Use the following sequence to clear a data item.

1. Use the CATEGORY and DATA buttons to display the data item to clear.
2. Insert the pin into the CLEAR pin jack and wait for the data item to clear (reset to zero).
3. Remove the pin from the pin jack.

If a craftsperson attempts to clear a nonclearable data item, the SDU displays an error message (CANT RSET) while the pin remains in the pin jack. On removal of the pin, the data item remains unchanged.

When in an alarm category, inserting the pin into the CLEAR pin jack retrieves the current alarms.

## SDU Categories

There are eight categories at the COT (Figure 2) and six at the RT (Figure 3). At the COT, whether a category contains data depends on RT routine test results (in a system with a supplemental data link), the mode of operation (Mode 1 or Mode 2), and the presence of system alarms. At the RT, whether a category contains data depends on RT routine test results, RT power-up test results, and the presence of alarms.

## Routine Test Results

Routine test results is a list of those channels that failed the RT automated channel test unit (ACTU) routine channel test. If the failed channel passes a later routine test or its channel unit is removed from the system, the BCU removes the channel from the list. The SDU displays `ITEM RMVD` if a channel is removed while viewing the corresponding SDU message for the channel. If while in this category new routine test results overwrite the data being viewed, the SDU displays `NEW TEXT`.

In a system with a supplemental data link, the `Rout Test` category at the COT contains a list of channels that failed the RT ACTU routine test. The `Blue Rout` and `White Rout` categories on the RT SDU contain a list of channels that failed the RT ACTU routine test in the blue and white systems.

If no channels failed the routine test, the category is empty (pushing the `DATA` button, the SDU displays only `End Data`). When the COT SDU is displaying `Rout Test` in systems without a supplemental data link and on pushing the `DATA` button, the SDU displays `Wrng Mode`. This message signals that the supplemental data link must be enabled for a COT SDU to display RT routine test results.

The following data format is displayed by the SDU:

■ RT##  
Fail

where ## is the channel number (1 to 96).

Table 1 contains the list of ACTU routine testable channel units.

**Table 1. ACTU Routine Testable Channel Units**

<u>Code</u>	<u>Description</u>
AUA25B	M <i>SPOTS</i> <sup>®</sup> channel unit (CU)
AUA27	POTS with <i>VerSuS</i> <sup>*</sup> alarm service
AUA51	POTS/ <i>SPOTS</i> CU
AUA53	Coin
AUA55	Multiparty
AUA56	DID
AUA57	FSR
AUA58B	POTS
AUA59	<i>SPOTS</i> CU
AUA150	<i>SPOTS</i> CU
AUA158	ALC POTS
AUA159	ALC POTS/ <i>SPOTS</i> CU

\* Registered trademark of Versus Technology, Inc.

## Power-Up Test Results

Power-up test results is a list of the results of RT ACTU channel power-up and type test. On insertion of a channel unit, the ACTU does a power-up and type test on each channel. On removal of the channel unit, the BCU removes the channel from the list. The SDU displays `ITEM RMVD` if a channel unit is removed while viewing the corresponding SDU message for the channel.

The `Blue PwUp` and `White PwUp` categories on the RT SDU contain the power-up test results for the blue and white systems. A COT SDU does not display this information.

The following data formats are displayed by the SDU:

- RT##  
Pass
- RT##  
No-T
- RT##  
Fail

where ## is the channel number (1 to 96).

**⇒ NOTE:**

Inserting a pin in the CLEAR pin-jack while in this category removes all RT## Pass and No-T messages.

The SDU displays RT## Pass if the channel passes the ACTU power-up test. RT## No-T signals that the channel is not power-up testable. RT## Fail signals that the channel failed the power-up or type test.

**⇒ NOTE:**

Although the AUA52(B) office channel unit (OCU) dataport is not power-up testable by the ACTU, no RT## No-T appears in this category. The craft should not assume this unit is faulty because of the absence of a power-up message.

Table 2 contains the list of ACTU power-up testable channel units.

**Table 2. ACTU Power-Up Testable Channel Units**

<u>Code</u>	<u>Description</u>
AUA25B	M SPOTS® channel unit (CU)
AUA27	POTS with VerSuS* alarm service
AUA41	4W special services (CF)
AUA42	2W E SPOTS special services (CS)
AUA43	2W E SPOTS special services (CF)
AUA44	4W special services (CS)
AUA45B †	Dual ringing repeater (DRR)
AUA51	POTS/SPOTS CU
AUA53	Coin
AUA54	4W E&M special services
AUA55	Multiparty
AUA56	DID
AUA57	FSR
AUA58B	POTS
AUA59	SPOTS CU
AUA75	2W PLAR
AUA141	4W special services (CF)
AUA142	2W E SPOTS (CS)
AUA150	SPOTS CU
AUA158	ALC POTS
AUA159	ALC POTS/SPOTS CU

\* Registered trademark of Versus Technology, Inc.

† Only type testing is performed on this unit.

## Blocked Call Data

Blocked call data is the number of calls blocked by the system in Mode 2. The AB BLK and CD BLK categories on the COT SDU contain this data. The RT SDU does not display this information. Clear this data by inserting the pin in the CLEAR pin jack.

The following data format is displayed by the SDU:

- Or##  
Te##

*where ## is the number of blocked calls (0 to 99).*

Or## is the number of originating calls blocked; Te## is the number of terminating calls blocked. If the number of blocked calls exceeds 99, the SDU displays 99. In a Mode 1 system, pushing the data button when the COT SDU is displaying AB BLK or CD BLK results in the SDU displaying *Wring Mode*; this message signals that this data is not present in Mode 1 systems.

## Peak Hourly Traffic

Peak hourly traffic is a calculation of the peak hourly traffic rate in terms of hundred called seconds (CCS) for a Mode 2 system. The AB TRAF and CD TRAF categories on the COT SDU contain this data. The RT SDU does not display this information. Clear this data by inserting the pin in the CLEAR pin jack.

The following data format is displayed by the SDU:

- ###  
CCS

*where ### is a number between 0 and 999.*

In a Mode 1 system, pushing the DATA button when the COT SDU is displaying AB TRAF or CD TRAF results in the SDU displaying *Wring Mode*; this message signals that this data is not present in Mode 1 systems.

## Channel Busy Data

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Channel busy data is the number of seconds all channels in a Mode 2 system are busy. The `AB BUSY` and `CD BUSY` categories on the COT SDU contain this data. The RT SDU does not display this data. Clear this data by inserting the pin in the CLEAR pin jack.

The following data format is displayed by the SDU:

- ####  
Sec

where #### is a number between 0 and 9999.

In a Mode 1 system, pushing the DATA button when the COT SDU is displaying `AB BUSY` or `CD BUSY` results in the SDU displaying `Wrng Mode`; this message signals that this data is not present in Mode 1 systems.

## System Alarms

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The SDU displays system alarms. The `Bank Alrm` category on a COT SDU shows alarms for its system (bank). The `White Alrm` and `Blue Alrm` categories on the RT SDU show alarms in the white and blue systems. If no alarms are present, pushing the DATA button while in an alarm category results in the SDU displaying `No Alrm`.

### ⇒ NOTE:

If alarms change after entering an alarm category, the SDU is not displaying the current alarms. To get the current alarms, insert a pin into the CLEAR pin jack, or exit the alarm category and circle back to it.

If there are no alarms present, the `No Alrm` message appears under the alarm categories.

Table 3 contains a list of SDU alarms. If the recommended action in Table 3 fails to clear the alarm, refer to AT&T 363-205-500G.

## Miscellaneous Messages

If a channel fails a power-up test or routine test while the SDU is idle, the SDU displays `CU FAIL`. To clear the message, either press the category button (the SDU displays the first category name) or remove the failed channel unit.

If additional data is transferring from the BCU to the SDU, the SDU displays `WAIT` and ignores the faceplate pushbuttons until the transfer completes.

If the SDU has problems retrieving data from the BCU, the SDU displays `NO RESP` and ignores the faceplate pushbuttons for 2 seconds. To clear the `NO RESP` message, push either the `DATA` or `CATEGORY` button. The buttons advance the display to the next data item or category.

**Table 3. AUA8 System Display Unit Alarms**

<b>Alarm</b>	<b>Description/Action</b>
A ON PROT	A switch of digroup A to the DS1 protection line. If the digroup A force switch on the LSU faceplate was unintentionally set toward <i>f</i> , move it away from <i>f</i> . Ignore this message if intentionally set toward <i>f</i> . Otherwise, check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, do T1 fault locating (see AT&T 363-200-001).
ACTU CUs	The detection of one or more channel unit failures by the ACTU. Replace those CUs with CH## FAIL messages under this category.
ACTU FAIL	A failure on the ACTU. Replace the ACTU.
ADMN MEM	3-way mismatch of administration memory. Remove the ADU and set the NORM/CLR option plug for CLR. Reinstall the ADU. If at the RT, wait for the PRV LED on the ADU to go out; at the COT, wait 5 minutes. Remove the ADU and set the NORM/CLR option plug for NORM. Reinstall the ADU.
ADU FAIL	A failure on the ADU. Replace the ADU.
ADU LAN	A failure of the LAN localized to the ADU. If ADU switch S1-8 is set toward NLAN, set it toward LAN. Otherwise, replace the ADU.
ADU MEM	A failure on the ADU EEPROM. Replace the ADU.
ADU SWCH	An incompatible switch setting on the ADU. Remove the ADU and correct the switch option setting.
B ON PROT	A switch of digroup B to the DS1 protection line. If the digroup B force switch on the LSU faceplate was unintentionally set toward <i>f</i> , move it away from <i>f</i> . Ignore this message if intentionally set toward <i>f</i> . Otherwise, check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, do T1 fault locating (see AT&T 363-200-001).
BATT FUSE	A fuse is blown on the 181A apparatus mounting (battery shelf), an AC power failure at the RT, or an RT fan alarm. Replace the fuse. Otherwise, check the AC circuit breaker and AC power. Otherwise, check the FCU and the fan unit.
BCU MEM	A failure on the BCU EEPROM. Replace the BCU.

*Continued on next page*

Table 3. AUA8 System Display Unit Alarms (Contd)

Alarm	Description/Action
C ON PROT	A switch of digroup C to the DS1 protection line. If the digroup C force switch on the LSU faceplate was unintentionally set toward <i>f</i> , move it away from <i>f</i> . Ignore this message if intentionally set toward <i>f</i> . Otherwise, check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, do T1 fault locating (see AT&T 363-200-001).
CH## COMP	The CU associated with channel ## (where ## is an odd number between 1 and 95) is incompatible. Check the work order or office records to remedy the compatibility problem.
CH## FAIL	A failure in the CU associated with channel ## (where ## is an odd number between 1 and 95). Replace the CU.
CKT MEM	3-way mismatch of CU provisioning memory. Remove the BCU and insert a pin plug into the PROV TRANS pin jack on the BCU faceplate. Reinstall the BCU. If at the RT, wait for the PRV LED on the ADU to go out; at the COT, wait 5 minutes. Remove the pin plug and use the CIU to verify that the provisioning data agrees with the office records. Change corrupt data.
CTU COMP	An incompatible CTU in the dual-channel bank. At the RT, replace the CTU with an AUB22, AUB25, or AUB30. At the COT, replace the CTU with an AUB2B CTU.
CuAB FUSE	The AB fuse on the CFU providing -48 V DC protection to the digroup A and B CUs is blown. Replace the fuse.
CuCD FUSE	The CD fuse on the CFU providing -48 V DC protection to the digroup C and D CUs is blown. Replace the fuse.
CUT CLR	On the RT ADU, the NORM/CLR option switch is set to CLR and switch S2-3 is set to CUT. Not advisable since these settings can clear memory when autocut. Correct the settings.
D ON PROT	A switch of digroup D to the DS1 protection line. If the digroup D force switch on the LSU faceplate was unintentionally set toward <i>f</i> , move it away from <i>f</i> . Ignore this message if intentionally set toward <i>f</i> . Otherwise, check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, do T1 fault locating (see AT&T 363-200-001).

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Table 3. AUA8 System Display Unit Alarms (Contd)

Alarm	Description/Action
DCUA COMP	DCUs in digroup A. DCUs are incompatible with this feature package, remove the DCUs.
DCUB COMP	DCUs in digroup B. DCUs are incompatible with this feature package, remove the DCUs.
DCUC COMP	DCUs in digroup C. DCUs are incompatible with this feature package, remove the DCUs.
DCUD COMP	DCUs in digroup D. DCUs are incompatible with this feature package, remove the DCUs.
DL A RECV	Incoming data link failure. Replace the AB shelf TRU at the FE.
DL A XMIT	Outgoing data link failure. Replace the AB shelf TRU.
DL C RECV	Incoming data link failure. Replace the CD shelf TRU at the FE.
DL C XMIT	Outgoing data link failure. Replace the AB shelf TRU.
DS1A HiEr	The number of BPVs on digroup A DS1 exceeds the $10^{-4}$ protection switch threshold, or a complete DS1 failure. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001) or maintenance on the multiplexers.
DS1A LoEr	The number of BPVs on digroup A DS1 is between the protection switch threshold ( $10^{-5}$ or $10^{-6}$ ) set through the OI and the $10^{-4}$ threshold. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001).
DS1B HiEr	The number of BPVs on digroup B DS1 exceeds the $10^{-4}$ protection switch threshold, or a complete DS1 failure. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001) or maintenance on the multiplexers.

*Continued on next page*

**Table 3. AUA8 System Display Unit Alarms (Contd)**

<b>Alarm</b>	<b>Description/Action</b>
DS1B LoEr	The number of BPVs on digroup B DS1 is between the protection switch threshold ( $10^{-5}$ or $10^{-6}$ ) set through the OI and the $10^{-4}$ threshold. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001).
DS1C HiEr	The number of BPVs on digroup C DS1 exceeds the $10^{-4}$ protection switch threshold, or a complete DS1 failure. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001) or maintenance on the multiplexers.
DS1C LoEr	The number of BPVs on digroup C DS1 is between the protection switch threshold ( $10^{-5}$ or $10^{-6}$ ) set through the OI and the $10^{-4}$ threshold. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001).
DS1D HiEr	The number of BPVs on digroup D DS1 exceeds the $10^{-4}$ protection switch threshold, or a complete DS1 failure. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001) or maintenance on the multiplexers.
DS1D LoEr	The number of BPVs on digroup D DS1 is between the protection switch threshold ( $10^{-5}$ or $10^{-6}$ ) set through the OI and the $10^{-4}$ threshold. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001).

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**Table 3. AUA8 Display Unit Alarms (Contd)**

<b>Alarm</b>	<b>Description/Action</b>
DS1P HiEr	The number of BPVs on protection DS1 exceeds the $10^{-4}$ protection switch threshold, or a complete DS1 failure. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001) or maintenance on the multiplexers.
DS1P LoEr	The number of BPVs on protection DS1 is between the protection switch threshold ( $10^{-5}$ or $10^{-6}$ ) set through the OI and the $10^{-4}$ threshold. Check that the line code settings (B8ZS and ZCS) on the NE and FE LIU, and, if present, on the multiplexers (AMI is compatible with ZCS) are the same. If the line code settings are the same, replace the LIU at the FE. Otherwise, do T1 fault locating (see AT&T 363-200-001).
FE DGRA	An alarm on digroup A at the far end. Read other SDU alarms at near and far end to determine cause of alarm.
FE DGRB	An alarm on digroup B at the far end. Read other SDU alarms at near and far end to determine cause of alarm.
FE DGRC	An alarm on digroup C at the far end. Read other SDU alarms at near and far end to determine cause of alarm.
FE DGRD	An alarm on digroup D at the far end. Read other SDU alarms at near and far end to determine cause of alarm.
FE MJ	A major alarm at the far end. Read other SDU alarms at near and far end to determine cause of alarm.
FE MN	A minor alarm at the far end. Read other SDU alarms at near and far end to determine cause of alarm.
FE MSC1	A MISC1 alarm at the RT. Use local procedures to clear the alarm.
FE MSC2	A MISC2 alarm at the RT. Use local procedures to clear the alarm.
FE PMN	A power minor alarm at the RT. Check the AC circuit breaker and AC power at the RT. Replace any 336A( ) rectifier with its ALARM LED lighted.
FsDL FAIL	A failure of the data link. Replace the AB shelf TRU.
LAN FAIL	A failure of the LAN localized to the LAN cabling. Check and/or replace the SIU jumper, LAN main, and DCB-T cables.

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Table 3. AUA8 Display Unit Alarms (Contd)

Alarm	Description/Action
LIUA COMP	An incompatible LIU in digroup A. Replace the LIU with a D-version LIU.
LIUA FAIL	A failure on the digroup A LIU. If a TRUA FAIL alarm is also present, replace the TRU in the AB shelf. Otherwise, replace the LIU.
LIUA SWCH	An incompatible switch option setting on the digroup A LIU. Remove the LIU and correct the switch setting.
LIUA SwRq	The GTD-5* EAX is preventing a copy switch back to LIU A to allow the system to stabilize. This alarm clears after the GTD-5 EAX determines the system is stable.
LIUB COMP	An incompatible LIU in digroup B. Replace the LIU with a D-version LIU.
LIUB FAIL	A failure on the digroup B LIU. If a TRUA FAIL alarm is also present, replace the TRU in the AB shelf. Otherwise, replace the LIU.
LIUB SWCH	An incompatible switch option setting on the digroup B LIU. Remove the LIU and correct the switch setting.
LIUC COMP	An incompatible LIU in digroup C. Replace the LIU with a D-version LIU.
LIUC FAIL	A failure on the digroup C LIU. If a TRUC FAIL alarm is also present, replace the TRU in the CD shelf. Otherwise, replace the LIU.
LIUC SWCH	An incompatible switch option setting on the digroup C LIU. Remove the LIU and correct the switch setting.
LIUD COMP	An incompatible LIU in digroup D. Replace the LIU with a D-version LIU.
LIUD FAIL	A failure on the digroup D LIU. If a TRUC FAIL alarm is also present, replace the TRU in the CD shelf. Otherwise, replace the LIU.
LIUD SWCH	An incompatible switch option setting on the digroup D LIU. Remove the LIU and correct the switch setting.

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Table 3. AUA8 System Display Unit Alarms (Contd)

Alarm	Description/Action
LIUP COMP	An incompatible LIU in the LIU-P slot. Replace the LIU with a D-version LIU.
LIUP FAIL	A failure on the protection LIU. Replace the LIU.
LIUP SWCH	An incompatible switch option setting on the protection LIU. Remove the LIU and correct the switch setting.
LIUP SwRq	The GTD-5 EAX is preventing a copy switch back to LIU P to allow the system to stabilize. This alarm clears after the GTD-5 EAX determines the system is stable.
LOOP BK A	The PCM looping test message — clears when test is complete.
LOOP BK B	The PCM looping test message — clears when test is complete.
LOOP BK C	The PCM looping test message — clears when test is complete.
LOOP BK D	The PCM looping test message — clears when test is complete.
LOOP BK P	The PCM looping test message — clears when test is complete.
LSU COMP	The rate switch (S2) on the LSU is incorrectly set to position 32. Set S2 to position 64.
LSU FAIL	A failure on the LSU. Replace the LSU.
LSU SWCH	A faceplate switch on the LSU is set to force or deny a protection switch. If the switch was unintentionally set toward <i>f</i> or <i>d</i> , move it away from <i>f</i> or <i>d</i> . Ignore this message if intentionally set toward <i>f</i> or <i>d</i> .
Ln P FUSE	The protection fuse on the LFU providing -48 V DC protection to the protection LIUs (blue and white system) is blown. Replace the fuse.
LnAB FUSE	The AB fuse on the LFU providing -48 V DC protection to the digroup A and B LIUs is blown. Replace the fuse.
LnCD FUSE	The CD fuse on the LFU providing -48 V DC protection to the digroup C and D LIUs is blown. Replace the fuse.
M2 A LOOP	Failure to receive loop test message for digroup AB. Replace the COT AB shelf TRU.
M2 A NoAL	In Mode 2 applications, failure to receive the keep alive message for digroup AB. Replace the COT AB shelf TRU.
M2 C LOOP	Failure to receive loop test message for digroup CD. Replace the COT AB shelf TRU.

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Table 3. AUA8 System Display Unit Alarms (Contd)

<u>Alarm</u>	<u>Description/Action</u>
M2 C NoAL	In Mode 2 applications, failure to receive the keep alive message for digroup CD. Replace the COT CD shelf TRU.
MSC1 ALRM	A MISC1 alarm is present at the RT. Use local procedures to clear the alarm.
MSC2 ALRM	A MISC2 alarm is present at the RT. Use local procedures to clear the alarm.
NEFE SWCH	Incompatible switch settings between the NE and FE. Correct the incompatible switch settings.
NEFE IDs	The system ID switch settings at the NE and FE do not agree. Correct the switch settings.
OFFC CLCK	A failure of the office clock input. Check the office clock wiring.
ON PROT	A switch of a digroup to the DS1 protection line. Another message in this category identifies the digroup on protection. Do the steps listed under that message.
PROV ACTV	Either a provisioning data transfer or clearing operation is in progress. The message clears when the operation completes.
PROV ADMN	An updating of administration memory through the OI. This message clears when the updating activity stops.
PROV CKTS	An updating of circuit provisioning memory through the OI and CIU. This message clears when the updating activity stops.
PROV FAIL	Failure to successfully provision a system with the CIU. Replace the BCU and ADU in that order.

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Table 3. AUA8 System Display Unit Alarms (Contd)

Alarm	Description/Action
PSM ALM	<p>A minor alarm condition caused by the failure of one ringing generator, positive ringing unit (PRU), ring switch unit (RSU), or ring control unit (RCU); or a blown output fuse (faceplate accessible) on a PRU or RCU; battery shelf fuse failure, rectifier failure, failed or open battery string, battery charger failure. Replace any blown output fuses. If no fuses are blown, replace the failed PRU (if present), ringing generator (FAIL LED lighted), failed RCU (if present) (RMN LED lighted), rectifier (FAIL LED lighted), or battery charger (FAIL LED lighted). If battery charger "OPEN BAT" LED is lighted, check battery shelf fuses and check for failed battery string(s) or failed battery charger. If an RSU is present, measure the AC and DC ringing voltages, -20 Hz (1) and -20 Hz (2), on the RSU. If the AC voltages are not between 90 and 110 volts and the DC voltages are not between -50 and -60 volts, replace the RSU.</p>
RING GEN	<p>A major alarm condition caused by the failure of the main or main &amp; protection ringing generators, PRU, RSU, or RCU; or a blown output fuse (faceplate accessible) on a PRU or RCU. Replace any blown output fuses. If no fuses are blown, replace the failed PRU (if present) or ringing generators (FAIL LED lighted), or replace the failed RCU (if present) (RMJ LED lighted). If an RSU is present, measure the AC and DC ringing voltages, -20 Hz (1) and -20 Hz (2), on the RSU. If the AC voltages are not between 90 and 110 volts and the DC voltages are not between -50 and -60 volts, replace the RSU.</p>
RgAB FUSE	<p>The AB fuse on the CFU providing 20-Hz ringing protection to the digroup A and B CUs is blown. Replace the fuse.</p>
RgCD FUSE	<p>The CD fuse on the CFU providing 20-Hz ringing protection to the digroup C and D CUs is blown. Replace the fuse.</p>
SDU COMP	<p>An SDU is installed in the white system at the RT. Remove the SDU from the white system.</p>
SDU FAIL	<p>A failure on the SDU. Replace the SDU.</p>
SIU LAN	<p>A failure of the LAN localized to the SIU. Replace the SIU.</p>

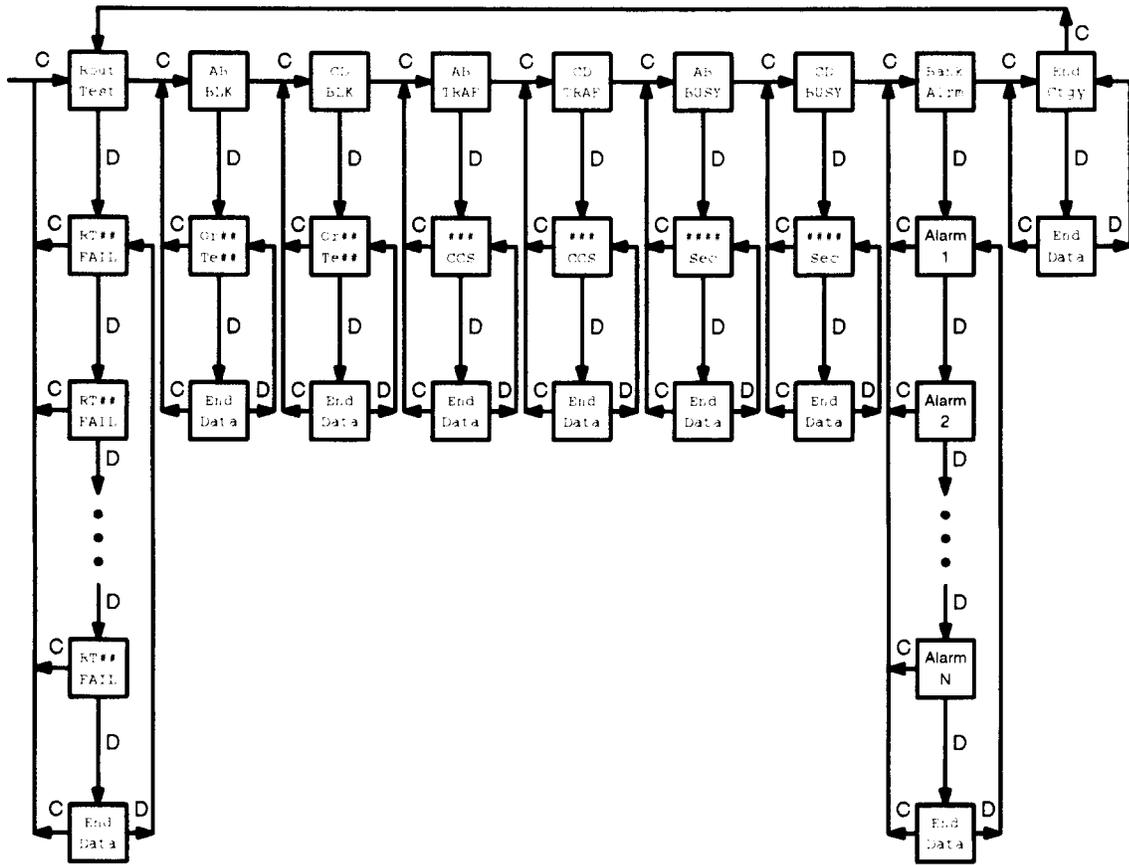
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Table 3. AUA8 System Display Unit Alarms (Contd)

<u>Alarm</u>	<u>Description/Action</u>
SUPL DLNK	A failure of the supplemental data link. Check for a mismatch between COT ADU switch S1-7 and RT ADU switch S2-5. Otherwise, replace the TRU, ADU, and BCU in that order.
TEST ALM	A failure to setup a test through the ACTU at the RT. If an ACTU FAIL message also appears under this category, replace the ACTU. Otherwise, examine the test setup procedure.
TRUA COMP	An incompatible TRU in the AB shelf. Replace the TRU with an AUA111 TRU.
TRUA FAIL	A failure on the TRU in the AB shelf. Replace the TRU.
TRUC COMP	An incompatible TRU in the CD shelf. Replace the TRU with an AUA111 TRU.
TRUC FAIL	A failure on the TRU in the CD shelf. Replace the TRU.

**Abbreviations :**

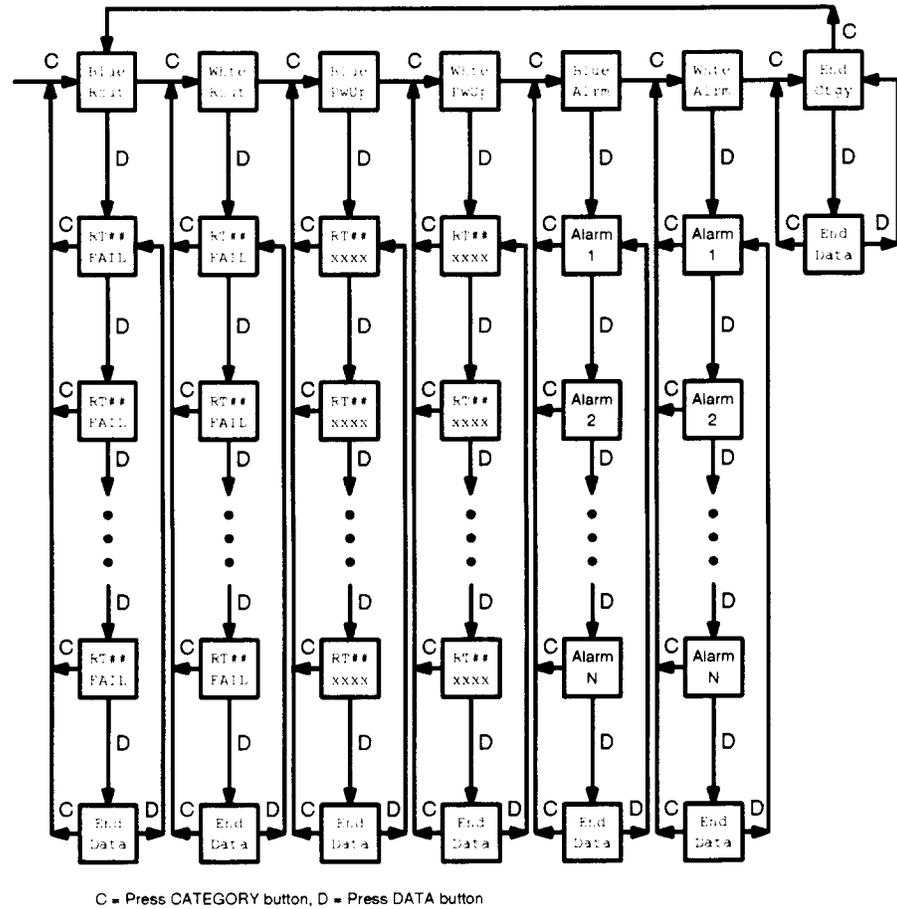
ACTU — automated channel test unit	FCU — fan control unit
ADU — alarm display unit	FE — far end
AMI — alternate mark inversion	LAN — local area network
B8ZS — bipolar with 8-zeros substitution	LFU — line fuse unit
BCU — bank control unit	LIU — line interface unit
LSU — line switch unit	NE — near end
BPV — bipolar violations	OI — Operations Interface
CFU — channel fuse unit	PCM — pulse code modulation
CIU — craft interface unit	RT — remote terminal
COT — central office terminal	SDU — system display unit
CTU — channel test unit	SIU — site interface unit
CU — channel unit	TRU — transmit/receive unit
DCU — digital connectivity unit	ZCS — zero code suppression



C = Press CATEGORY button, D = Press DATA button

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Figure 2. SDU Display Flow at the Central Office Terminal



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Figure 3. SDU Display Flow at the Remote Terminal