

ATC CABINET TEST & DIAGNOSIS

General Overview

The following document is designed to help ATC cabinet users interpret switches and component indicators by providing an outline for switch and component status under the following conditions:

- Normal operation
- Stop time activated
- Flash activated from the output assembly
- Flash activated from the police panel
- Switching from normal operation to signal off
- Switching from flash to signal off
- Cabinet power supply AC line fuse burned
- Cabinet power supply 24VDC fuse burned
- Cabinet power supply 48VDC fuse burned

This document also includes:

- What to expect when components are removed or turned off
- Circuit breaker guide
- Switches guide

Understanding the Tables

To properly select a table, identify the state of the cabinet's switches then reference the corresponding table.

Table Legend

1 Switching from FLASH mode to SIGNAL OFF

2 When switching from FLASH mode (Auto Mode) to SIGNAL OFF the switches and components' status should look like the following:

3 Switch Status
 Output Assembly switches: AUTO, Stop Time OFF
 Police Panel switches: AUTO, Signal OFF

4 Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

5 Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	CU / Local Flash	Off

6 (Callout to the CU / Local Flash cell in the OA table)

TABLE KEY

The table components include:

1. Table name
2. Table description
3. Indicates the current state of switches
4. Sorts components by assembly type
5. Component name, as listed on part
6. Highlighted fields indicate current status
 - Yellow: Normal operation
 - Red: Variation from normal operation

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Normal Operation

During normal operation (auto mode) the switch and component status should appear as follows:

Switch Status

Output Assembly switches: AUTO, Stop Time OFF
Police Panel switches: AUTO, Signal ON

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	No Fault *	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
Cabinet Power Supply	On	Off	
ADU-2220	No Fault		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

* The "12VDC FAIL" blinking means 12VDC not being monitored.

Stop Time Activated

If the cabinet is operating in stop time the switch and component status should appear as follows:

Switch Status

Output Assembly switches: AUTO, Stop Time ON
Police Panel switches: AUTO, Signal ON

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	No Fault	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
Cabinet Power Supply	On	Off	
ADU-2220	No Fault		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

Operating in Flash Mode from Output Assembly

If flash has been activated from the output assembly the switch and component status should appear as follows:

Switch Status

Output Assembly switches: FLASH, Stop Time OFF
Police Panel switches: AUTO, Signal ON

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off *
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	CU / Local Flash	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
Cabinet Power Supply	On	Off	
ADU-2220	Local Flash		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

* Activating 24VDC Bypass Switch will turn-on the HDSP-FU inputs

Operating in Flash Mode from Police Panel

If flash has been activated from the police panel the switch and component status should appear as follows:

Switch Status

Output Assembly switches: AUTO, Stop Time OFF
Police Panel switches: FLASH, Signal ON

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off*
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	CU /Local Flash	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
Cabinet Power Supply	On	Off	
ADU-2220	Local Flash		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

* Activating 24VDC Bypass Switch will turn-on the HDSP-FU inputs

Switching From Normal Operations to Signal Off

When switching from normal operation (auto mode) to signal off the switch and component status should appear as follows:

Switch Status

Output Assembly switches: AUTO, Stop Time OFF
Police Panel switches: AUTO, **Signal OFF**

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	No Fault	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
Cabinet Power Supply	On	Off	
ADU-2220	No Fault		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

Switching From Flash Mode to Signal Off

When switching from flash mode to signal off the switch and component status should appear as follows:

Switch Status

Output Assembly switches: AUTO, Stop Time OFF
Police Panel switches: AUTO, **Signal OFF**

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On*	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	CU / Local Flash	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
Cabinet Power Supply	On	Off	
ADU-2220	Local Flash		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

* No Red, Yellow or Green inputs; instead flashing Red.

Cabinet Power Supply AC Line Fuse Burned

If the cabinet power supply AC line fuse burns out the switch and component status should appear as follows:

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	CU/ Local Flash	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
CPS AC Line Indicator	On	Off	
ADU-2220	Dark		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

Cabinet Power Supply 24VDC Fuse Burned

If the cabinet power supply 24VDC fuse burns out the switch and component status should appear as follows:

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	24 VDC FAIL	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off	
CU Stop Time	Off	On	
CPS 24 VDC Indicator	On	Off	
ADU-2220	24VDC FAIL		
HDFTR	On	Off	
Signal Indicators	Auto	Dark	Flash

Cabinet Power Supply 48VDC

Fuse Burned

If the cabinet power supply 48VDC fuse burns out the switch and component status should appear as follows:

Input Assembly (IA)

SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
AC Devices (i.e., DC Isolator)	On	Off
DC Devices (i.e., Detector)	On	Off

Output Assembly (OA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
HDSP-FU: Inputs	On	Off
SIU: Power	On	Off
SIU: SB#1 Rx/Tx	Blinking	Off
CMU: Power	On	Off
CMU: SB#1 & #3 Rx	Blinking	Off
CMU	CU / Local Flash	

Service Assembly (SA)

HDSP-FU: Power	On	Off
HDSP-FU: Rx/Tx	Blinking	Off
SHA1250-ITS	On	Off

Miscellaneous

Controller Unit (CU)	On	Off
CU Stop Time	Off	On
CPS 48 VDC Indicator	On	Off
ADU-2220	Dark	
HDFTR	On	Off
Signal Indicators	Auto	Dark
		Flash

What to Expect When Components are Removed or Turned Off

If the following components are removed or turned off the switch and component status should appear as follows:

Removing Datakey with Front Door Open

CMU	Diagnostic blink		
ADU-2220	No Fault		
Signal Indicators	Auto	Dark	Flash

Removing Datakey with Front Door Closed

CMU	Diagnostic on		
ADU-2220	Datakey no present		
Signal Indicators	Auto	Dark	Flash

Removing OA SIU

CMU	CU / Local Flash		
ADU-2220	CU Non-lashed Flash		
Signal Indicators	Auto	Dark	Flash

Removing an HDSP-FU from OA

CMU	SB#3 Error		
ADU-2220	Serial Bus 3 Fail		
Signal Indicators	Auto	Dark	Flash

Note: Must turn off OA CB to plug back in

Removing an HDSP-FU from SA

CMU	No fault		
ADU-2220	Flasher Alarm Active		
Signal Indicators	Auto	Dark	Flash

Removing SA HDSP-FU Fuse

CMU	No Fault		
ADU-2220	Flasher Alarm Active		
Signal Indicators	Auto	Dark	Flash

Removing Flash Program Block (FPB)

CMU	Lack of Signal		
ADU-2220	Lack of Signal		
Signal Indicators	Auto	Dark	Flash

Removing HDFTR

CMU	Lack of Signal		
ADU-2220	Lack of Signal		
Signal Indicators	Auto	Dark	Flash

Removing CMU

ADU-2220	NO SB# COMM from CMU		
Signal Indicators	Auto	Dark	Flash

Removing SA SHA-1250

CMU	CU / Local Flash		
ADU-2220	Off		
Controller Unit	Off		
SIUs	Off		
Cabinet Power Supply	Off		

Removing CU SB1/B2 Cable

CMU	SB #1 Fail		
ADU-2220	Serial Bus 1 Error		
Signal Indicators	Auto	Dark	Flash

Circuit Breaker Guide

The following outlines what each cabinet circuit breaker controls power to.

Circuit Breaker	Controlled Part
Service Assembly (SA) MAIN Circuit Breaker (CB)	Entire ATC cabinet
SA CLEAN POWER CB	Clean power bus
SA RAW PWR/GFCI/FAN/LIGHTS CB controls	Outlets, GFCI, fan(s) and light(s)
SA HDFU CB	SA HDSP-FU
SA OUTPUT ASSEMBLY (OA) CB	Output Assembly
OA CB1	HDSP 1 & 2
OA CB2	HDSP 3 & 4
OA CB3	HDSP 5 & 6
OA CB4	HDSP 7 & 8

Switches Guide

The following outlines the role of each switch.

Switch

Manual Control Enable (MCE) switch places call into the CU and activates stop time
Interval Adv. switch advances the CU when MCE is on
FDS (Front Door Switch) to notify the CMU when Front Door is open
RDS (Rear Door Switch) to notify the CMU when Rear Door is open
FLS (Front Light Switch) to turn on the Front Light
RLS (Rear Light Switch) to turn on the Rear Light
Fan Test to verify if the Fans work
Opto 1-4 place calls into Input Assembly SIU Opto Input 1-4