



ATC Facilities

ATO

Facility Power Panel Schedule (FPSS) Data System



**Configuration Management
Workshop
September 18-20, 2007**





Introduction

ATO

- Developed through the auspices of the National Power Systems Integrated Power Team by a cross functional team consisting of AOS-1000, AOP-600, AFZ-700, ANE-471, and AGL-471
- Originally intended to manage Critical Power Panel breaker assignments at all ARTCC and Terminal facilities
- Provides Detailed Panel Information and Graphical Representation of Power Panel Schedules
- Extended to all power panels, i.e. including those not under CM
- Began implementation in 2002



Critical Power

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- Critical power management is a primary element in assuring the reliability of the National Airspace System (NAS), safety of the flying public, and is essential to adequately plan the integration of NAS subsystems with minimal impact to the facilities.
 - Governed by Order 6950.2
 - Important to NAS operations
- The FPPS Data System was developed to manage power panel designations in a centrally based, secure environment that can be easily accessed through the FAA Intranet.
 - Provides improved planning for NAS power requirements
 - Assists in the validation of system compliance with the order to prevent NAS system outages



Benefits

ATO

- Risk Management.
- Manage Power Resources More Effectively.
- Vital for Facility Transition Planning.
- Maintain Configuration Management.
- Facility Power Data Available Nationally.
- Useful for all Power Panels (Critical, Essential and Commercial Power).



FPPS Applicability

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- Order 1800.66 “Configuration Management Policy” requires the documentation of Power Panel Schedules
- FAA-STD-058 requires the use of the FPPS to document Power Panel Schedules
- Part of the execution process of new programs is to document what you’ve done



Implementation Status

ATO

- Fully implemented for all of the ARTCCs as per ATO-W direction
- Read access to all within the FAA's firewall
- Write access to environmental engineers who have been designated by the Service Area CM managers
- Testing completed for 2nd revision to the FPPS for the En Route Centers
- Terminal BU to apply FPPS to all Large TRACONs and OEP ATCTs



Accessibility and Functionality

ATO

- Accessible through the CAEG web page <http://caeg.faa.gov/> under Expert Applications
- Provides the ability to graphically drill down by SMO and ARTCC to appropriate power panel
- New release to provide enhanced search features and reports
- Provides power panel breaker assignments in a drawing format
- Provides harmonics information where available
- Provides online user documentation



Our Commitment

ATO

- End-User Support
 - Users Guide Available On-Line
 - Help Desk Support
 - Application Problem Reporting Procedure



Role of Configuration Managers

ATO

- **Allow “write” privileges to environmental engineers for panel breaker assignments**
- **Spot check for errors during configuration audits**
- **Include standard CCD action for power system related NCPs to “update the FPPS Critical Power Panel breaker assignments with the approved system”**
- **Monitor CCD action completion from the desktop**
 - **Access FPPS**
 - **Denote time/date stamp of power panel changes and compare to CCD approval**
- **Help spread the word of the availability of the FPPS within each of the service areas**



FPPS V 2.0 UPGRADES

ATO

- **Group Search/ Print Functionality**

- Ability to search and view the panel information.

- Ability to print a group of panel directories at a single time.

- **Track Change History Forms**

- Ability to track all the change history forms.

- Ability to access, view and print the change history forms created for a specific panel.



CAEG MAIN PAGE

ATO

- To access the FPPS system, select 'CAEG Applications' from the left menu and click on ' Facility Power Panel Schedule (FPPS)' link from the CAEG main page as shown below.



“ I've always been told that I'm persistent. When I start something, I like to finish it. ”
[Read More »](#)

Ian Dargin, FAA engineer and Ironman competitor



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CAEG Applications

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Updated: 2:10 pm ET June 14, 2007

In response to customer requirements, the CAEG Program has developed several applications coined "Expert Applications" to meet the requirements identified by the customers. Below is a listing of the Expert Applications that have been or are being developed by the CAEG Program. Click on the appropriate link for additional information for each program identified below.

- [Radio Coverage Analysis System \(RCAS\)](#) [Run RCAS](#)
- [Facility Power Panel Schedule \(FPPS\)](#)
- [CAEG Maintenance Website](#)
- [On-Line National Flight Data Center \(NFDC\) Data](#)
- [Request Password](#)
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- [MicroStation Training](#)
- [Application Problem Reports \(APR\)](#)



FPPS HOME PAGE

ATO

- To search for a panel, click on the SMO or search by entering the LOC ID or Facility Type as shown below.

FPPS V.2 [What's New]

Facility Power Panel Schedule Data System

[Help](#) [APR](#) [Logout](#)

[Create New Panel](#)

Click on a SMO to start your "Drill Down" Search.

Direct Search	
LOC ID	<input type="text"/>
FAC TYPE	<input type="text"/>
	<input type="button" value="SEARCH"/>
Panel Group Search	
LOC ID	<input type="text" value="ZTL"/>
FAC TYPE	<input type="text"/>
	<input type="button" value="SEARCH"/>
Reports	
All Panels Report	<input type="button" value="FIND"/>
Panel DataSheets	





SEARCH RESULTS

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- Click on the panel to view the panel information and the panel diagram.

FPPS V.2 [What's New]

Facility Power Panel Schedule Data System

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[Create New Panel](#)

There were 190 Power Panels found using the search criteria provided. Click on the Power Panel in which you are interested.

Power Panel Search						
All	Facility Type	LOC ID	Panel Name	Panel Type	Poles/Circuit	Phase
<input type="checkbox"/>	ARTCC	ZTL	C-B101-B	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C-B101A	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C-B120-I	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C-B120-J	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C-B120-K	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C-B120-L	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C-B120B-1	CRITICAL	30	3
<input type="checkbox"/>	ARTCC	ZTL	C/E NADIN I/II	CRITICAL	12	3
<input type="checkbox"/>	ARTCC	ZTL	C1052A	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C1052B	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C1052C	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C1052D	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C1052E	CRITICAL	42	3
<input type="checkbox"/>	ARTCC	ZTL	C1052F	CRITICAL	42	3



VIEW PANEL INFORMATION

ATO

Panel Name: C-B101-B

CRITICAL

Panel Identification/Location			
Location ID: ZTL	Room No.: B120	Facility Type: ARTCC	Room Name: CNTL BSMT
Wall: S		Panel Name: C-B101-B	Panel Service Type: CRITICAL
Panel Characteristics			
Manufacturer: SQUARE D	Model Number: NQOB	Mount Type: FLUSH	Enclosure Dimensions (inches): (H) (W)
No. of Sources: 2	Panel BUS Rating: 225 Amps	Feeder Wire Type: THHN	Ground Wire Type: THHN
Feeder Wire Size: 2/0	Ground Wire Size: 6	Neutral Wire Type: THHN	Neutral Wire Size: 2/0
Panel Main Information			
Configuration: MAIN LUGS ONLY	Rating: Amps	Breaker Type Code:	Voltage: 208/120
Manufacturer:	Phases: 3	Total Poles:	42
CM Managed: YES	No. of Wires: 4		
Panel Measured Data			
BUS A		BUS B	
Current: 4.4 amps	Voltage: 122 volts	Current: 1.3 amps	Voltage: 122 volts
Apparent Power: 0.5 kVA	Power: -2 kW	Apparent Power: 0.2 kVA	Power: 0 kW
Harmonic Values		Harmonic Values	
Voltage THD(rms): 3.000%	Current THD(rms): 74.000%	Voltage THD(rms): 3.000%	Current THD(rms): 72.000%
BUS C		General Information	
Current: 0.2 amps	Voltage: 122 volts	Time/Date Measured: 08/27/2004	Neutral: Current: amps
Apparent Power: 0.0 kVA	Power: 0.0 kW		
Harmonic Values			
Voltage THD(rms): 3.000%	Current THD(rms): 87.000%		
Source 1			
Source Type: CPC	Breaker Position No: MFR:	Panel Name: CPC-C	Rating: AMPS
		Model No.:	Serial No.:
Source 2			
Source Type: CPC	Breaker Position No: MFR:	Panel Name: CPC-B	Rating: AMPS
		Model No.:	Serial No.:
Transfer Switch			
Name: ASCO	Type: AUTO-CLOS TRANS. STATIC	Rating: 150 AMPS	Model: 302C1527HC
Fed From Source: 1	Manufacturer: ASCO	Serial No.: 101275 3	



VIEW PANEL DIAGRAM

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SYSTEM	LOAD	Pole	AMPS	AMPS	Pole	LOAD	SYSTEM
	FAASAT MUX CAB B POWER	-1	20	20	2-	FAASAT MODEM CAB B POWER	
	FAASAT RFT CAB B POWER	-3	20	20	4-	SPARE	
	SPARE	-5	20	20	6-	SPARE	
	SPARE	-7	20	20	8-	SPARE	
	SPARE	-9	20	20	10-	SPARE	
	SPARE	-11	20	20	12-	SPARE	
	SPARE	-13	20	20	14-	SPARE	
	SPARE	-15	20	20	16-	SPARE	
	SPARE	-17	20	20	18-	SPARE	
	SPARE	-19	20	20	20-	SPARE	
	BLANK	-21			22-	BLANK	
	BLANK	-23			24-	BLANK	
	BLANK	-25			26-	BLANK	
	BLANK	-27			28-	BLANK	
	BLANK	-37			38-	BLANK	
	BLANK	-39			40-	BLANK	
	BLANK	-41			42-	BLANK	

NOTES:
 Drawing No.: ZTL-A-ARTCC-
 Drawing Title.:
 Drawing Date:
 Approved By:
 Submitted By:



PRINT PANEL DIAGRAM

ATO

- To print the panel diagram for multiple panels, select the panels and click on the printer icon as shown below.

FPPS V.2 [What's New] Facility Power Panel Schedule Data System
[Help](#) [APR](#) [Logout](#) [Create New Panel](#)

There were 190 Power Panels found using the search criteria provided. Click on the Power Panel in which you are interested.

Power Panel Search							
All	Facility Type	LOC ID	Panel Name	Panel Type	Poles/Circuit	Phase	
<input type="checkbox"/>	ARTCC	ZOA	C1051-A	CRITICAL	42	3	
<input checked="" type="checkbox"/>	ARTCC	ZOA	C1051-B	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1051-C	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1051-J	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1051-K	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1051-L	CRITICAL	42	3	
<input checked="" type="checkbox"/>	ARTCC	ZOA	C1052-A	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1052-B	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1052-C	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1052-D	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1052-E	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1052-F	CRITICAL	42	3	
<input type="checkbox"/>	ARTCC	ZOA	C1052-G	CRITICAL	42	3	



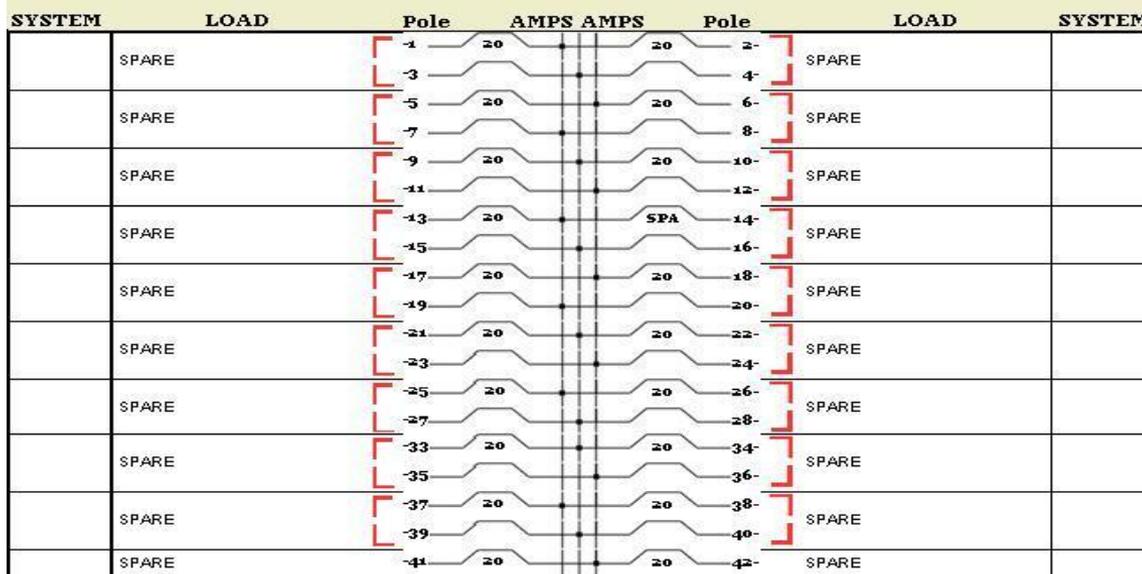
PRINT PANEL DIAGRAM

ATO

Panel Name: C1051-A

CRITICAL

Panel Information		Panel Main Information		Total Measured Loads	
Location ID: Z0A	Room: 1051	Configuration: MAIN LUGS ONLY	Manufacturer: CH	BUS A: Amps	
Wall: W	Panel Name: C1051-A	Panel Rating: N/A Amps	Panel Voltage: 120/208	BUS B: Amps	
Panel BUS Rating: 225		Phases: 3	Num. Wires: 4	BUS C: Amps	
				Neutral: Amps	
				GROUND: Amps	
				Date Measured:	
Source 1		Source 2		Transfer Switch	
Source Type: CPC	Source Name: CPC-F(F)	Source Type: CPC	Source Name: CPC-E(F)	Fed From Source: 1	Rating: AMPS
Breaker Position No: F5	Rating: 150 AMPS	Breaker Position No: F6	Rating: AMPS	Manufacturer: TBD	Serial No:
				Model No:	



NOTES: ** INSTALLED CRITICAL PANEL FUTURE NOT IN SERVICE AT THIS TIME NOT WIRED TO CPS'S BREAKER ASSIGNMENT IN CPC'S RESERVED NO TRANSFER SWITCH INSTALLED

THIS DRAWING IS UNDER CONFIGURATION CONTROL. CHANGES REQUIRE AUTHORIZING CCD

Rev	Date	Description	JCN	Redline Date	APVD

Department of Transportation		
Federal Aviation Administration		
AWP Region/ Los Angeles Implementation Center-FREMONT , CALIFORNIA		
ARTCC		
FREMONT	OAKLAND ARTCC	CALIFORNIA



PRINT PANEL DIAGRAM

ATO

Panel Name: C1051-B

CRITICAL

Panel Information		Panel Main Information		Total Measured Loads			
Location ID: Z0A	Room: 1051	Configuration: MAIN LUGS ONLY	CU	BUS A: 32 Amps	BUS B: 25 Amps		
Wall: W	Panel Name: C1051-B	Manufacturer: N/A	Panel Rating: 120/208	BUS C: 22 Amps	Neutral: Amps		
Panel BUS Rating: 225		Phases: 3	Num. Wires: 4	GROUND: Amps	Date Measured:		
Source 1		Source 2		Transfer Switch			
Source Type: CPC	Source Name: CPC-A	Source Type: CPC	Source Name: CPC-C	Fed From Source: 1	Rating: 54 KVA		
Breaker Position No: 20	Rating: 150 AMPS	Breaker Position No: 18	Rating: 150 AMPS	Manufacturer: POWER PARAGON	Serial No: 98682		
				Model No: SST-SP-208Y-150/150			
SYSTEM	LOAD	Pole	AMPS	AMPS	Pole	LOAD	SYSTEM
	663 SUPPORT SPECIALIST PDU-1	1	20	20	2	691 "A" CONSOLE	
	SPARE	3	20		4		
	641 SUPERVISOR DESK # 2 PDU-1	5	20	20	6	692 "R" CONSOLE VSCS PRI	VSCS
	SPARE	7	20		8		
		9	20	20	10	693 "D" CONSOLE VSCS PRI	VSCS
		11	20		12		
VSCS	672 FDRP VSCS PRI PDU-1	17	20	20	18	696 "R" CONSOLE VSCS PRI	VSCS
		19	20		20		
	676 FLIGHT STRIP PRINTER	21	20	20	22	697 "D" CONSOLE VSCS PRI	VSCS
		23	20		24		
RADAR	625R & 625D CONTROLLER WS PDU-1 VSCS PRI	25	20	20	26	698 & 699 VSCS SEC	VSCS
		27	20		28		
VSCS	627R & 627D CONTROLLER WS PDU-1 VSCS PRI	29	20	20	30	692 ATOP FIBER SWITCH CHANNEL "A"	
		31	20		32		
	SPARE	33	20	20	34	672 SUPPORT VSCS SEC	VSCS
CTAS	CTAS TERMINAL	35	20		36		
	AIS TERMINAL	37	20	20	38	HARRIS BUSS LAN RK 12A223B	
	HARRIS BUSS LAN RK 13A222B	39	20	20	40	HARRIS BUSS LAN RK 13A221B	
	HARRIS BUSS LAN RK 13A220B	41	20	20	42	HARRIS BUSS LAN RK 12A219B	

NOTES:

THIS DRAWING IS UNDER CONFIGURATION CONTROL. CHANGES REQUIRE AUTHORIZING CCD

Rev	Date	Description	JCN	Redline Date	APVD

Department of Transportation Federal Aviation Administration			
AWP Region/ Los Angeles Implementation Center-FREDMONT, CALIFORNIA			
ARTCC			
FREDMONT	OAKLAND ARTCC	CALIFORNIA	
Reviewed By:	Submitted by: JESSE LEE	Approved By:	
	Submitters Title:	Approvers Title:	
	Designed by: NAS Implementation	Date: 04/17/2003	JCN:
	Drawn:	Drawing No. OAK-A-ARTCC-	Rev
	Checked:	ANI-X00	



Conclusion

ATO

- Goal is to expand the usage:
 - Across all business units
 - Include all panels
 - 100% panel accuracy
- Need the help of the configuration managers to spread the word across all facilities
- Service level agreements will include the requirement to use FPPS for power panel layouts