

TechNotes

Revision 5/3/2024

Lutron Platform Support for Moden Form Fans

Options available from Abicus A1G20-DMX to control Modern Form Fans

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Background

Currently, Lutron LEAP protocol devices (RadioRA3, QSX, and Athena) do not have native control for ceiling fans. Recent versions of the Abicus A1G20-DMX Gateway (hereinafter "Gateway"), however, now provide for native support of both fan and lighting operations using familiar lighting User Interface (UIs) available within the Lutron App. In addition, direct control of specific fan speeds and light levels can be programmed to react to simple button presses from Lutron Seetouch[™], Palladiom[™], Sunnata [™] and other supported keypads as well as occupancy sensory and timeclock events. Modern Form fans have the capability of forward speeds (for summer cooling) and reverse speeds (for winter heating). Common to both operations is the normal operation of the built-in LED element for lighting.

This document assumes that you have already set up your device as per the Aispire documentatioon (see separate documents)

Functionality available with the Gateway combined with Athena/QXS/RadioRA3 and Modern Form fans includes the following: -Selection of Summer speeds (continuously variable) from OFF to ON.

-Selection of Winter speeds (continuously variable) from OFF to ON.

-Selection of any brightness level from the integrated LED light from OFF to ON.

Lutron Platform support/non-support matrix with RadioRA3/Homeworks[™] QSX and Athena processors

Supported Features	Non-supported/non-tested features
Fan speeds (Summer cooling as well as Winter heating) including on/off using Phantom Load dimmers within the	
Lutron App.	
Timeclock output can be tracked, if needed, by tracking a real or phantom load linked to those triggers (in Lutron Designer) with <u>SLIM</u>	Native Timeclock tracking is not possible
Button presses from Switches and Dimmers (real and phantom) can be tracked, if needed, by tracking a real or phantom load linked to those devices (in Lutron Designer) with <u>SLIM</u>	Tracking of connected loads to switches and dimmers is supported



User interfaces Available within Athena/ QSX/RadioRA3 for the control off Moden Form Fans

Moden Form Built-In Light	Moden Form Summer Operation	Modern Form Winter Operation
Area 001 Demo Box MF Light Off	Area 001 Demo Box MF Summer Off	Area 001 Demo Box MF Winter Off
	Ť.	
00	0	
Edit Device	Edit Device	Edit Device



HC	ow to create a (phantom) Use	er in	terrace to	control far	i opera	tion (Q	<u>,5X/</u>	Athena*)	
*Note:	abbreviated instructions for RadioRA3 ar	e WIP							
Step	Overview	Deta	Detail						
B1-1	Create three Phantom Loads (that will not be activated within Designer) and upload project to processor	 Within Lutron Designer/ Design/Loads window, select the + mark and a three Phantom Loads and name them -Fan Light -Fan Summer -Fan Winter (or anything that helps you identify them) 						+ mark and add	
		Zone Name (e) Lighting Layer Zone Description Fixture Ty MF Light Ambient MF Fan Light Undefined					ге Туре		
							Ur	ndefined	
			MF Summer	Ambient	MF Fan	Summer	Ur	ndefined	
			MF Winter	Ambient	MF Fan	Winter	Undefined		
		L	oad Type		Voltage	Voltage Emergen		cy Interface	
		Ir	candescent/Halog	en	120 V	No (1009	6)	None	
		Incandescent/Halogen			120 V	No (1009	6)	None	
		Ir	candescent/Halog	en	120 V	No (100%)		None	
		Not	e: You do not r	need to define	a fixture ty	vpe here		•	
81-2	Assign each Phantom Load to an existing or phantom piece of applicable Lutron equipment. Note : In order for Phantom Loads to be programmed to operate and therefore to be surfaced within the Lutron integration report (and therefore able to be discovered within the e-Node/Lutron/Devices window), you must assign any created "Phantom Loads" to a piece of Lutron hardware (real or phantom) that has sufficient slots available to which these Phantom	-	u don't have a ntom Loads car <u>e 2</u> below.	piece of existin	ig Lutron f	ardware ' <u>e 1</u> below,	to wh	nich these erwise, follow	

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B1-3 Case 1	Add an applicable phantom equipment type within Designer to which at minimum 3 Phantom Loads can be assigned (for each fan that needs to be individually controlled). Note: There are various ways to perform this operation, but the described example below can be easily implemented to accomplish the goal here.	Step C1-1. Add the DPM Adaptive 4 Output (or similar) to your Lutron project within Designer, Image: DPM Adaptive 2 for Fans X Edit Step C1-2. Under Design Equipment find the phantom device created in Step C1-3 Image: Demote X MF Summer 16 Image: Demote X Image: Area 001 Demote X MF Summer 17 Image: Demote X Image: Area 001 Demote X MF Summer 18 Image: Demote X Image: Area 001 Demote X
		Item Description Area 001 Demo Box + DPM Adaptive 2 for Fans
B1-3 Case 2	Locate a suitable piece of <i>already</i> <i>programmed</i> Lutron equipment to which 3 or more Phantom Loads can be assigned.	<u>Step C2-1</u> . Within Designer, locate an existing piece of Lutron hardware already programemed within your system.



	DPM Adaptive 2 for Fans X Edit Edit Edit Edit Edit Edit Edit Show Wattage Summary Step C2-2. Under Design Equipment find the device located in Step C2-1 and assign a linkage to each Phantom Load under Zone Name below. Area Zone Name Load # Feed Load Type 1 Area 001 Demo tox MF Light 16 Incandescent/Halogen 3 Area 001 Demo tox MF Winter 18 Incandescent/Halogen 4 Assign 18 Incandescent/Halogen
B1-4 Within the Gateway's built-in web interface's Lutron tab, discover thos three Phantom Loads. Note: Recent versions of the Gateway will auto-discover any newly added Lutron devices after a reboot of the e-node/Abicus.	 -Verify that there is a connection to the Lutron processor within the Lutron/Settings page. Settings Table Connected SYSTEM RADIORA 3 ADAPTOR_IP 192.168.11.20 CONNECTION ENABLE CONNECTION ENABLE CONNECTION ENABLE CONNECTION ENABLE CONNECTION ENABLE CONNECTION ENABLE CONNECTOR Set on a secure connection is obtained (and "Connected" is seen above). You should see those three Phantom Loads previously created and uploaded through Designer. Devices Trace 1924 HQWD-w5BRL 4128 Hue 5468 I-Phantom Ketra 6218 Lightbar 8910 MF Light 8924 MF Summer 8938 MF Winter



B1-5	Program those three phantom sliders	Oper	the (Gateway'	s Lutron Table an	d associa	te each Phanto	om Load with
	to control applicable functions on the	assoc	ciation	ns to a pa	rticular Modern I	Form fan	feature availal	ble.
	discovered Fan							
		-On a	n unp	orogramn	ned line in the Da	select first the	e applicable	
		Lutro	on dev	ice that v	vill control the pa	articular f	^f eature on a Fa	n. Here the MF
		Sumr	ner fe	eature is s	elected.			
		-ID. Select the MF Summer (phantom dimmer)						
				TD	Butt	on ?	Action	X
		_						
		l	MF S	Summer	- V Dimn	ier 🗸 🛛 L	evel 🗸	- ·
				-				
		(Verify that Dimme r and Level are set as shown above and hit the Upload button to program						
		-Next	t com	plete the	programming the	at the firs	st Phantom Loa	ad (MF Summer
		or 89	10) b	by providi	ng the applicable	ZGN (ZO	ne/Group/Noc	le) addressing,
		as well as Device Type and Command as shown below.						
		_	_	_				
		Lu	tro	n Ir	itegration			
			Clea	ar)				
			Set	ttings (Table			
			· ·	Track		Cor	mmand	
			C	Lutron ID	Address	Device	Command	Value
			- 0					^
				8910,0	1.1.1	LED	SET	
				8924,0	1.1.2	LED	SET	
				8938,0	1.1.3	LED	SET 🔶	
		-Add	ress.	From the	scroll list (right o	click with	in Address) , se	elect the
		appli	cable	load (ZGI	N) address for the	e device t	to be controlle	d.
		-Devi	ice. F	rom the s	croll list (right cli	ck within	Device), selec	t the Device
		type	(LED 1	for lightin	g, Motor for mot	tor)		N I I I I
		-Com	mand	a. From th	ne scroll list (right	t Click wit	nin Command), select the
		appli	capie	comman	u snown above to	o track th	ie slider.	
		-Dun	licate	the abov	e step for (ii) MF	Winter (8924) and (iii) I	MF Light (8938)
		P						······································



Lutron Button (real and phantom) button press operation

In addition to Lutron App control of various features, keypads and other User Interfaces can be programmed as well.

The following is an example that can be used to program a real or phantom keypad with the below <u>Fan</u> and <u>LED</u> operations to control a Moden Form Fan with the following ZGN (**Z**one/**G**roup/**N**ode) addresses.

-ZGN address of 1.1.1 for LED (illumination)

-ZGN address of 1.1.2 for Fan_Down or Summer

-ZGN address of 1.1.3 for Ran_Up for Winter

Fixtures Q, 🕮 (new 52 Settings ID MF_Fan_F0862C LABEL new 52 IΡ 192.168.11.117 ZONE 1 GROUP 1 NODE 1 LIGHT NODE 2 FAN DOWN FAN UP NODE 3

MF Fan Discovery 1

Fan Operations (mapped to a keypad)						
Button #*	Operation					
1						
	Summer 100% (full) speed					
2	Summer 50% speed					
3	Winter 100% (full) speed					
4	Summer 50% speed					
16	FAN OFF					

Light Operations (mapped to a keypad)					
Operation					
LED 100% (full) brightness					
LED 75% brightness					
LED 50% brightness					
LED 25% brightness					
LED Off					

*Button numbers are described below. They can also be found here.



Steps to make this happen

Note: We will assume that you have programmed the below Lutron keypad to respond to single action button presses (i.e., a PRESS which we shall refer to as "3") below. Other types of operations are permitted, but that level of detail is beyond the scope of this document. Therefore, make sure your keypad is transmitting a "3" after the Lutron ID that can be seen through the TRACE function under the Lutron Tab (after that physical button is depressed with a "Connected" system.



Step	Overview	Detail
1	Identify a keypad that you will use to	Let's assume that you will be using a 10-button desktop keypad
	control various fan operations	T10-RL
		Note: if you do not have a real keypad that will be purposed to perform this operation, simply create a phantom keypad with Lutron Designer and upload the new program which includes that new keypad to the processor t (but don't activate that keypad if it is Phantom keypad)
2	Reboot the Gateway after the Lutron processor has finished it program upload	-This allows the Gateway to automatically discover new Lutron programmed keypads
3	Within the Gateway/ Lutron/Table view perform the following programming for the FAN (as per the <u>example</u> above).	-Program each element for fan operation (listed in the <u>example table</u> above) by selecting a new/empty line and program as per the directions below.







4	Within the Abicus/Lutron Table perform the following programming for the LIGHT	Follow light (L	the abov ED) oper tings	ve directions in ations. Table	<u>Step 3</u> bu	t refer to th	e screen shot	below for
		-	Track		Cor	nmand		
		C	Lutron ID	Address	Device	Command	Value	
	Button 6 Button 7 Button 8 Button 9 Button 16		1450,3 1454,3 1458,3 1462,3 1474,3	1.1.1 1.1.1 1.1.1 1.1.1 1.1.1 1.1.1	LED LED LED LED LED	SET SET SET SET SET	240 180 120 60	

Please see separate <u>documentation</u> on how to program button presses to control color on e-Node/xxx connected devices (as well as monitoring timeclock and occupancy sensor triggers).