

N2 Gateway Setup Guide

Overview

The ILC LightMaster N2 Gateway provides a gateway between a building Automation System (BAS) that uses the N2 communications protocol and the ILC LightMaster network via standard CAT-5 cable. The host system can then poll the status of the Node #1 LightMaster Controller's inputs, poll status of relay groups and issue ON/OFF commands to the LightMaster's network panels.

Hardware Setup

The N2 Gateway must be addressed with unique node addresses. (See Figure 1.) The BAS N2 network node address is set by the

DIP switch under the N2 Gateway's keypad as shown in Figure 1. The LightMaster network node address is set by the node address switches at the top of the processor board. The BAS network cable is a two wire shielded twisted pair. Consult the BAS system documentation for the exact specifications. Terminate the cable as shown in Figure 1.

Point Map

Fill out the point map for the LightMaster Controller (Tables 1 and 2). Note that only BI and BO point types are used. The completed point map will serve as the control schedule used to determine how LightMaster relay groups will be controlled.

ILC LightMaster N2 Rev 1 Unsupported Attributes		
All attributes in the following regions		
Analog Input Analog Output Internal Float Internal Integer Internal Byte		
Binary Input Unsupported Attributes		
Attribute 1		
Bit 0	COS_enabled	Always 1 (COS is always enabled)
Bit 1	Normal state	Always 0
Bit 3	Alarm_enabled	Always 0 (disabled)
Attribute 2		
Bit 0	Always reliable (0)	
Bit 1	Override active	Always 0 (not active)
Bit 4	Normal (0)	
Bit 5	JCI use only	
Attribute 3	JCI use only	
Attribute 4	JCI use only	
Binary Output Unsupported Attributes		
Attribute 1		
Bit 0	COS_enabled	Always 0 (COS is always enabled)
Bit 1	Normal state	Always 0
Attribute 2		
Bit 0	Always reliable (0)	
Bit 1	Override active	Always 0 (not active)
Bit 4	JCI use only	
Bit 5	JCI use only	
Attribute 3	Minimum ON time	Always 0
Attribute 4	Minimum OFF time	Always 0
Attribute 5	Maximum Cycles/Hour	Always 0
Attribute 6	JCI use only	
Attribute 7	JCI use only	

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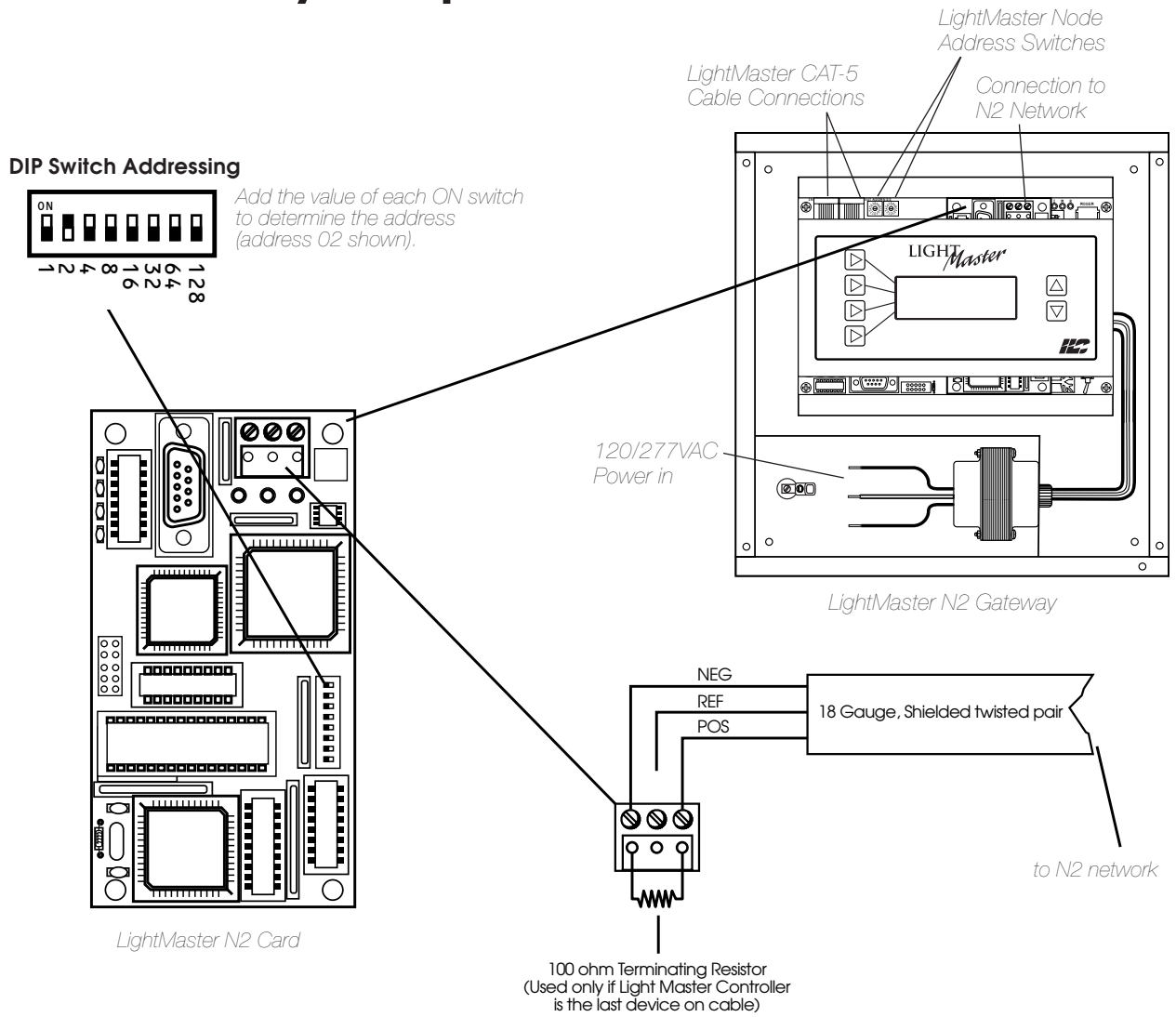


Figure 1 – Hardware Set-Up

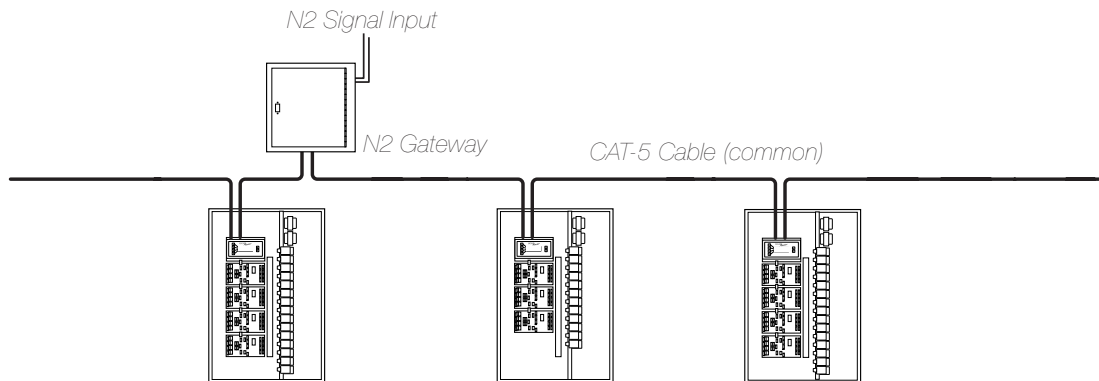


Figure 2 – N2 Gateway Connection to LightMaster network



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POINT MAP – Controller Node #1

NETWORK POINT TYPE	NETWORK POINT ADDRESS	UNITS	POINT DESCRIPTION	RANGE/VALUE	NOTES
BI	1		SWITCH INPUT #1 OFF	0-OPEN 1-CLOSED	
BI	2		SWITCH INPUT #1 ON	0-OPEN 1-CLOSED	
BI	3		SWITCH INPUT #2 OFF	0-OPEN 1-CLOSED	
BI	4		SWITCH INPUT #2 ON	0-OPEN 1-CLOSED	
BI	5		SWITCH INPUT #3 OFF	0-OPEN 1-CLOSED	
BI	6		SWITCH INPUT #3 ON	0-OPEN 1-CLOSED	
BI	7		SWITCH INPUT #4 OFF	0-OPEN 1-CLOSED	
BI	8		SWITCH INPUT #4 ON	0-OPEN 1-CLOSED	
BI	9		SWITCH INPUT #5 OFF	0-OPEN 1-CLOSED	
BI	10		SWITCH INPUT #5 ON	0-OPEN 1-CLOSED	
BI	11		SWITCH INPUT #6 OFF	0-OPEN 1-CLOSED	
BI	12		SWITCH INPUT #6 ON	0-OPEN 1-CLOSED	
BI	13		SWITCH INPUT #7 OFF	0-OPEN 1-CLOSED	
BI	14		SWITCH INPUT #7 ON	0-OPEN 1-CLOSED	
BI	15		SWITCH INPUT #8 OFF	0-OPEN 1-CLOSED	
BI	16		SWITCH INPUT #8 ON	0-OPEN 1-CLOSED	
BI	17		SWITCH INPUT #9 OFF	0-OPEN 1-CLOSED	
BI	18		SWITCH INPUT #9 ON	0-OPEN 1-CLOSED	
BI	19		SWITCH INPUT #10 OFF	0-OPEN 1-CLOSED	
BI	20		SWITCH INPUT #10 ON	0-OPEN 1-CLOSED	
BI	21		SWITCH INPUT #11 OFF	0-OPEN 1-CLOSED	
BI	22		SWITCH INPUT #11 ON	0-OPEN 1-CLOSED	
BI	23		SWITCH INPUT #12 OFF	0-OPEN 1-CLOSED	
BI	24		SWITCH INPUT #12 ON	0-OPEN 1-CLOSED	

Table 1 – Light Master Node #1 Switch Input N2 Point Map



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NETWORK POINT TYPE	NETWORK POINT ADDRESS	UNITS	POINT DESCRIPTION	RANGE/VALUE	NOTES
BI	25		SWITCH INPUT #13 OFF	0-OPEN 1-CLOSED	
BI	26		SWITCH INPUT #13 ON	0-OPEN 1-CLOSED	
BI	27		SWITCH INPUT #14 OFF	0-OPEN 1-CLOSED	
BI	28		SWITCH INPUT #14 ON	0-OPEN 1-CLOSED	
BI	29		SWITCH INPUT #15 OFF	0-OPEN 1-CLOSED	
BI	30		SWITCH INPUT #15 ON	0-OPEN 1-CLOSED	
BI	31		SWITCH INPUT #16 OFF	0-OPEN 1-CLOSED	
BI	32		SWITCH INPUT #16 ON	0-OPEN 1-CLOSED	
BI	33		SWITCH INPUT #17 OFF	0-OPEN 1-CLOSED	
BI	34		SWITCH INPUT #17 ON	0-OPEN 1-CLOSED	
BI	35		SWITCH INPUT #18 OFF	0-OPEN 1-CLOSED	
BI	36		SWITCH INPUT #18 ON	0-OPEN 1-CLOSED	
BI	37		SWITCH INPUT #19 OFF	0-OPEN 1-CLOSED	
BI	38		SWITCH INPUT #19 ON	0-OPEN 1-CLOSED	
BI	39		SWITCH INPUT #20 OFF	0-OPEN 1-CLOSED	
BI	40		SWITCH INPUT #20 ON	0-OPEN 1-CLOSED	
BI	41		SWITCH INPUT #21 OFF	0-OPEN 1-CLOSED	
BI	42		SWITCH INPUT #21 ON	0-OPEN 1-CLOSED	
BI	43		SWITCH INPUT #22 OFF	0-OPEN 1-CLOSED	
BI	44		SWITCH INPUT #22 ON	0-OPEN 1-CLOSED	
BI	45		SWITCH INPUT #23 OFF	0-OPEN 1-CLOSED	
BI	46		SWITCH INPUT #23 ON	0-OPEN 1-CLOSED	
BI	47		SWITCH INPUT #24 OFF	0-OPEN 1-CLOSED	
BI	48		SWITCH INPUT #24 ON	0-OPEN 1-CLOSED	
BI	49		SWITCH INPUT #25 OFF	0-OPEN 1-CLOSED	

Table 1 – Light Master Node #1 Switch Input N2 Point Map



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BI	50		SWITCH INPUT #25 ON	0-OPEN 1-CLOSED	
BI	51		SWITCH INPUT #26 OFF	0-OPEN 1-CLOSED	
BI	52		SWITCH INPUT #26 ON	0-OPEN 1-CLOSED	
BI	53		SWITCH INPUT #27 OFF	0-OPEN 1-CLOSED	
BI	54		SWITCH INPUT #27 ON	0-OPEN 1-CLOSED	
BI	55		SWITCH INPUT #28 OFF	0-OPEN 1-CLOSED	
BI	56		SWITCH INPUT #28 ON	0-OPEN 1-CLOSED	
BI	57		SWITCH INPUT #29 OFF	0-OPEN 1-CLOSED	
BI	58		SWITCH INPUT #29 ON	0-OPEN 1-CLOSED	
BI	59		SWITCH INPUT #30 OFF	0-OPEN 1-CLOSED	
BI	60		SWITCH INPUT #30 ON	0-OPEN 1-CLOSED	
BI	61		SWITCH INPUT #31 OFF	0-OPEN 1-CLOSED	
BI	62		SWITCH INPUT #31 ON	0-OPEN 1-CLOSED	
BI	63		SWITCH INPUT #32 OFF	0-OPEN 1-CLOSED	
BI	64		SWITCH INPUT #32 ON	0-OPEN 1-CLOSED	
BI	65		SWITCH INPUT #33 OFF	0-OPEN 1-CLOSED	
BI	66		SWITCH INPUT #33 ON	0-OPEN 1-CLOSED	
BI	67		SWITCH INPUT #34 OFF	0-OPEN 1-CLOSED	
BI	68		SWITCH INPUT #34 ON	0-OPEN 1-CLOSED	
BI	69		SWITCH INPUT #35 OFF	0-OPEN 1-CLOSED	
BI	70		SWITCH INPUT #35 ON	0-OPEN 1-CLOSED	
BI	71		SWITCH INPUT #36 OFF	0-OPEN 1-CLOSED	
BI	72		SWITCH INPUT #36 ON	0-OPEN 1-CLOSED	
BI	73		SWITCH INPUT #37 OFF	0-OPEN 1-CLOSED	

Table 1 – Light Master Node #1 Switch Input N2 Point Map



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BI	74		SWITCH INPUT #37 ON	0-OPEN 1-CLOSED	
BI	75		SWITCH INPUT #38 OFF	0-OPEN 1-CLOSED	
BI	76		SWITCH INPUT #38 ON	0-OPEN 1-CLOSED	
BI	77		SWITCH INPUT #39 OFF	0-OPEN 1-CLOSED	
BI	78		SWITCH INPUT #39 ON	0-OPEN 1-CLOSED	
BI	79		SWITCH INPUT #40 OFF	0-OPEN 1-CLOSED	
BI	80		SWITCH INPUT #40 ON	0-OPEN 1-CLOSED	
BI	81		SWITCH INPUT #41 OFF	0-OPEN 1-CLOSED	
BI	82		SWITCH INPUT #41 ON	0-OPEN 1-CLOSED	
BI	83		SWITCH INPUT #42 OFF	0-OPEN 1-CLOSED	
BI	84		SWITCH INPUT #42 ON	0-OPEN 1-CLOSED	
BI	85		SWITCH INPUT #43 OFF	0-OPEN 1-CLOSED	
BI	86		SWITCH INPUT #43 ON	0-OPEN 1-CLOSED	
BI	87		SWITCH INPUT #44 OFF	0-OPEN 1-CLOSED	
BI	88		SWITCH INPUT #44 ON	0-OPEN 1-CLOSED	
BI	89		SWITCH INPUT #45 OFF	0-OPEN 1-CLOSED	
BI	90		SWITCH INPUT #45 ON	0-OPEN 1-CLOSED	
BI	91		SWITCH INPUT #46 OFF	0-OPEN 1-CLOSED	
BI	92		SWITCH INPUT #46 ON	0-OPEN 1-CLOSED	
BI	93		SWITCH INPUT #47 OFF	0-OPEN 1-CLOSED	
BI	94		SWITCH INPUT #47 ON	0-OPEN 1-CLOSED	
BI	95		SWITCH INPUT #48 OFF	0-OPEN 1-CLOSED	
BI	96		SWITCH INPUT #48 ON	0-OPEN 1-CLOSED	

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POINT MAP – System Wide

NETWORK POINT TYPE	NETWORK POINT ADDRESS	UNITS	POINT DESCRIPTION	RANGE/VALUE	NOTES
BO	1		RELAY GROUP #1	0-OFF (Open) 1-ON (Closed)	
BO	2		RELAY GROUP #2	0-OFF (Open) 1-ON (Closed)	
BO	3		RELAY GROUP #3	0-OFF (Open) 1-ON (Closed)	
BO	4		RELAY GROUP #4	0-OFF (Open) 1-ON (Closed)	
BO	5		RELAY GROUP #5	0-OFF (Open) 1-ON (Closed)	
BO	6		RELAY GROUP #6	0-OFF (Open) 1-ON (Closed)	
BO	7		RELAY GROUP #7	0-OFF (Open) 1-ON (Closed)	
BO	8		RELAY GROUP #8	0-OFF (Open) 1-ON (Closed)	
BO	9		RELAY GROUP #9	0-OFF (Open) 1-ON (Closed)	
BO	10		RELAY GROUP #10	0-OFF (Open) 1-ON (Closed)	
BO	11		RELAY GROUP #11	0-OFF (Open) 1-ON (Closed)	
BO	12		RELAY GROUP #12	0-OFF (Open) 1-ON (Closed)	
BO	13		RELAY GROUP #13	0-OFF (Open) 1-ON (Closed)	
BO	14		RELAY GROUP #14	0-OFF (Open) 1-ON (Closed)	
BO	15		RELAY GROUP #15	0-OFF (Open) 1-ON (Closed)	
BO	16		RELAY GROUP #16	0-OFF (Open) 1-ON (Closed)	
BO	17		RELAY GROUP #17	0-OFF (Open) 1-ON (Closed)	
BO	18		RELAY GROUP #18	0-OFF (Open) 1-ON (Closed)	
BO	19		RELAY GROUP #19	0-OFF (Open) 1-ON (Closed)	
BO	20		RELAY GROUP #20	0-OFF (Open) 1-ON (Closed)	
BO	21		RELAY GROUP #21	0-OFF (Open) 1-ON (Closed)	
BO	22		RELAY GROUP #22	0-OFF (Open) 1-ON (Closed)	
BO	23		RELAY GROUP #23	0-OFF (Open) 1-ON (Closed)	
BO	24		RELAY GROUP #24	0-OFF (Open) 1-ON (Closed)	

Table 2 – Light Master System Wide Group Control N2 Point Map



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BO	25		RELAY GROUP #25	0-OFF (Open) 1-ON (Closed)	
BO	26		RELAY GROUP #26	0-OFF (Open) 1-ON (Closed)	
BO	27		RELAY GROUP #27	0-OFF (Open) 1-ON (Closed)	
BO	28		RELAY GROUP #28	0-OFF (Open) 1-ON (Closed)	
BO	29		RELAY GROUP #29	0-OFF (Open) 1-ON (Closed)	
BO	30		RELAY GROUP #30	0-OFF (Open) 1-ON (Closed)	
BO	31		RELAY GROUP #31	0-OFF (Open) 1-ON (Closed)	
BO	32		RELAY GROUP #32	0-OFF (Open) 1-ON (Closed)	
BO	33		RELAY GROUP #33	0-OFF (Open) 1-ON (Closed)	
BO	34		RELAY GROUP #34	0-OFF (Open) 1-ON (Closed)	
BO	35		RELAY GROUP #35	0-OFF (Open) 1-ON (Closed)	
BO	36		RELAY GROUP #36	0-OFF (Open) 1-ON (Closed)	
BO	37		RELAY GROUP #37	0-OFF (Open) 1-ON (Closed)	
BO	38		RELAY GROUP #38	0-OFF (Open) 1-ON (Closed)	
BO	39		RELAY GROUP #39	0-OFF (Open) 1-ON (Closed)	
BO	40		RELAY GROUP #40	0-OFF (Open) 1-ON (Closed)	
BO	41		RELAY GROUP #41	0-OFF (Open) 1-ON (Closed)	
BO	42		RELAY GROUP #42	0-OFF (Open) 1-ON (Closed)	
BO	43		RELAY GROUP #43	0-OFF (Open) 1-ON (Closed)	
BO	44		RELAY GROUP #44	0-OFF (Open) 1-ON (Closed)	
BO	45		RELAY GROUP #45	0-OFF (Open) 1-ON (Closed)	
BO	46		RELAY GROUP #46	0-OFF (Open) 1-ON (Closed)	
BO	47		RELAY GROUP #47	0-OFF (Open) 1-ON (Closed)	
BO	48		RELAY GROUP #48	0-OFF (Open) 1-ON (Closed)	

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