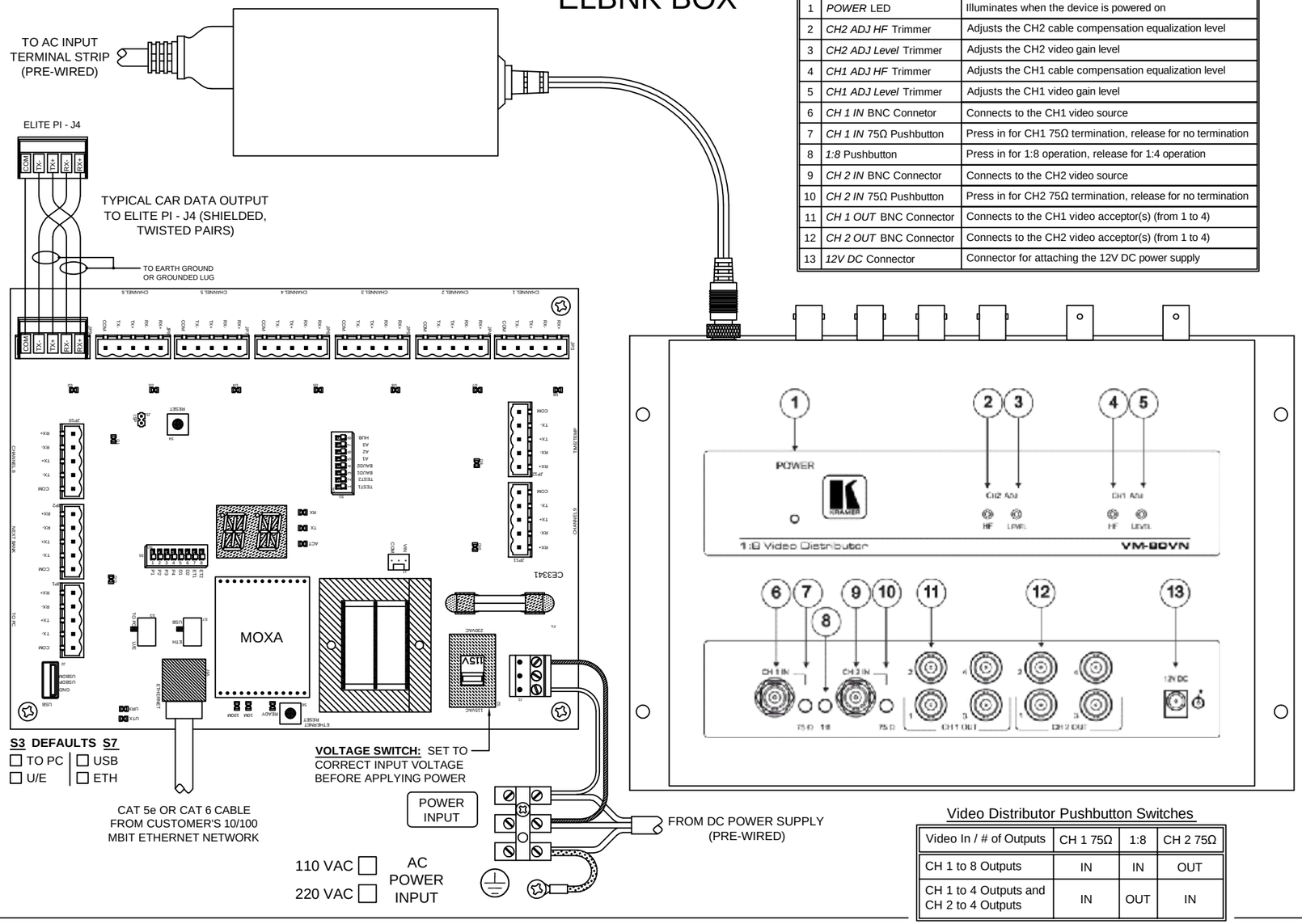
JOB# _____

ELBNK BOX



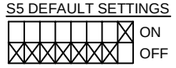
#	Feature	Function
1	*POWER* LED	Illuminates when the device is powered on
2	*CH2 ADJ HF* Trimmer	Adjusts the CH2 cable compensation equalization level
3	*CH2 ADJ Level* Trimmer	Adjusts the CH2 video gain level
4	*CH1 ADJ HF* Trimmer	Adjusts the CH1 cable compensation equalization level
5	*CH1 ADJ Level* Trimmer	Adjusts the CH1 video gain level
6	*CH 1 IN* BNC Connetor	Connects to the CH1 video source
7	*CH 1 IN* 75Ω Pushbutton	Press in for CH1 75Ω termination, release for no termination
8	*1:8* Pushbutton	Press in for 1:8 operation, release for 1:4 operation
9	*CH 2 IN* BNC Connector	Connects to the CH2 video source
10	*CH 2 IN* 75Ω Pushbutton	Press in for CH2 75Ω termination, release for no termination
11	*CH 1 OUT* BNC Connector	Connects to the CH1 video acceptor(s) (from 1 to 4)
12	*CH 2 OUT* BNC Connector	Connects to the CH2 video acceptor(s) (from 1 to 4)
13	*12V DC* Connector	Connector for attaching the 12V DC power supply

Video Distributor Pushbutton Switches

Video In / # of Outputs	CH 1 75Ω	1:8	CH 2 75Ω
CH 1 to 8 Outputs	IN	IN	OUT
CH 1 to 4 Outputs and CH 2 to 4 Outputs	IN	OUT	IN

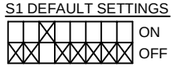
NOTE: When the 1:8 pushbutton is 'IN', only one of the 75Ω buttons should be 'IN', never both at the same time. When the 1:8 pushbutton is 'OUT', both 75Ω pushbuttons should be 'IN'.

S5 DEFAULT SETTINGS

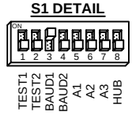


S5 DETAIL

S1 DEFAULT SETTINGS



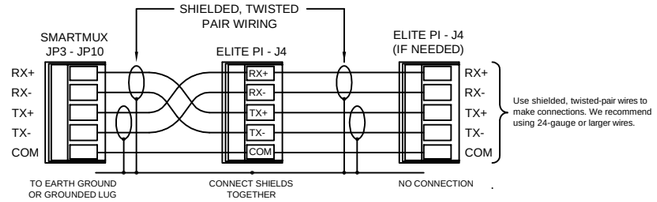
S1 DETAIL



CODE VERSION _____

BOARD VERSION CE3341 ___

SMARTMUX to ELITE PI and (if needed) to ELITE PI



NOTE: Shields MUST be grounded to controller/earth ground lug

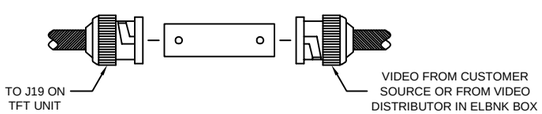
STEPS TO TEST LINK FROM ELBNK TO ELITE PI

NOTE: Test assumes the ELBNK to ELITE PI connections are complete.

1. To test the output channel links, set S1, DIP switch 1 to *ON*.
2. Use the table below to set the S5 DIP switches for the channel to test.
   a. If the two-digit display shows Cn and then flashes between D1 and OK, go to Step 4.
   b. If the two-digit display shows Cn and then flashes between D1 and --, go to Step 3.
3. Unplug the connector from the output channel jack (JPn) and swap RX+ with TX+, swap RX- with TX-, and then plug the connector back into JPn.
   a. If the two-digit display shows Cn and then flashes between D1 and OK, go to Step 4.
   b. If the two-digit display still shows Cn and then flashes between D1 and --, contact C.E. Electronics Tech Support department at 419-636-6705, extn. 730.
4. Return to Step 2 for any remaining outputs in use.
5. After testing all of the outputs in use, set S1, DIP switch 1 to *OFF*.

S5 - Channel Select for Two-Digit Display

DS1 P1	DS2 P2	DS3 P3	DS4 P4	Port to Test (JPn)	Display (Cn)
OFF	OFF	OFF	OFF	Channel 1 - JP3	C1
ON	OFF	OFF	OFF	Channel 2 - JP4	C2
OFF	ON	OFF	OFF	Channel 3 - JP5	C3
ON	ON	OFF	OFF	Channel 4 - JP6	C4
OFF	OFF	ON	OFF	Channel 5 - JP7	C5
ON	OFF	ON	OFF	Channel 6 - JP8	C6
OFF	ON	ON	OFF	Channel 7 - JP9	C7
ON	ON	ON	OFF	Channel 8 - JP10	C8



COAX IS RECOMENDED FOR VIDEO SIGNALS

NOTE: IF USING SHIELDED TWISTED PAIRS, BALUNS ARE REQUIRED - CE# V23501P02

ELBNK-DMX

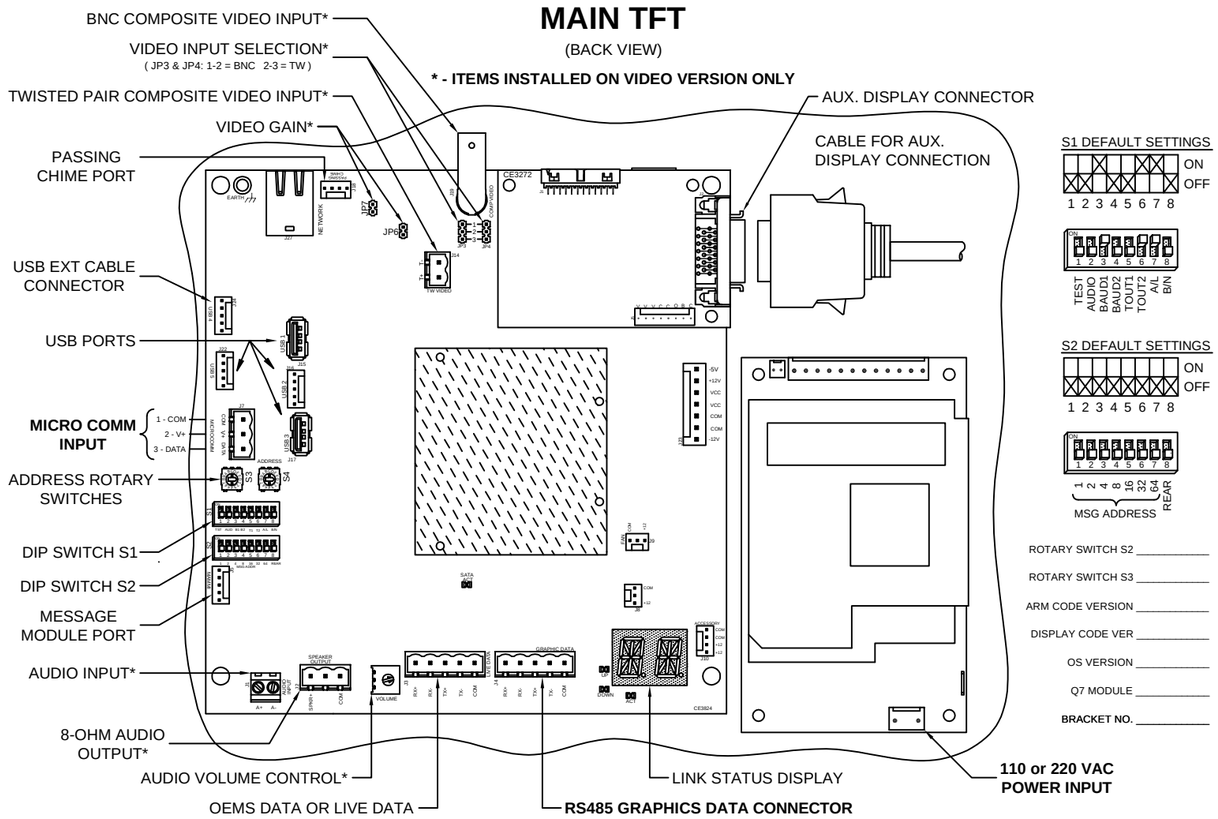
WITH VIDEO DISTRIBUTOR AND MOXA

DATE DRAWN:	DRAWN BY:	REQUESTED BY:	C.E. ELECTRONICS, INC. 2107 Industrial Drive Bryan, Ohio 43506 (419) 636-6705
08/03/17	DAC	TE	
BOARD NUMBER: N/A	LAST DATE REVISED: 10/20/17	APPROVED BY:	
PRODUCT: ELBNK with Video Distributor and MOXA		DWG. NO. ELBNK-DMX_01	REV: A

MAIN TFT

(BACK VIEW)

*** - ITEMS INSTALLED ON VIDEO VERSION ONLY**



S1 DEFAULT SETTINGS

ON / OFF

1 2 3 4 5 6 7 8

TEST, AUDIO, BAUD1, BAUD2, TOUT1, TOUT2, A/L, BIN

S2 DEFAULT SETTINGS

ON / OFF

1 2 3 4 5 6 7 8

1 2 4 8 16 32 64 REAR

MSG ADDRESS

ROTARY SWITCH S2 _____

ROTARY SWITCH S3 _____

ARM CODE VERSION _____

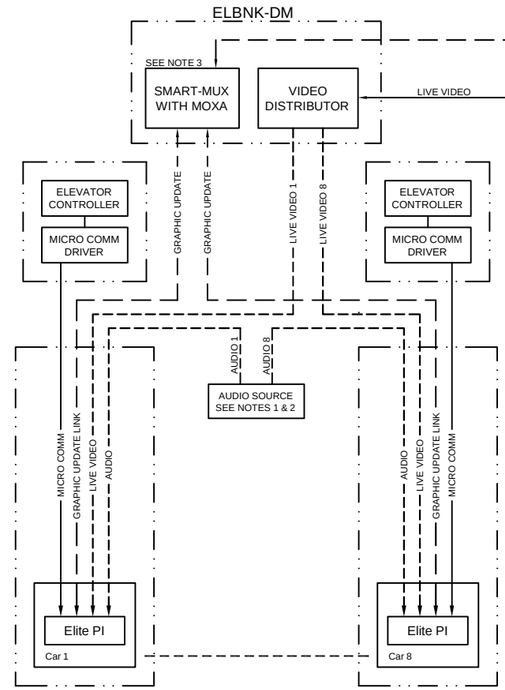
DISPLAY CODE VER _____

OS VERSION _____

Q7 MODULE _____

BRACKET NO. _____

ELITE PI SYSTEM DIAGRAM



The ELBNK-DM can support up to 8 cars and one hall link.

NOTE:

1. BASEBAND VIDEO AND LINE LEVEL AUDIO
2. EQUIPMENT NOT SUPPLIED BY C.E.
3. REQUIRES STATIC IP ADDRESS

Use the Host Computer to create new layouts and to transfer them to the Elite PI displays. Otherwise, the Host Computer isn't used.

FEATURE	WIRING	DESCRIPTION
Graphics Update	Two twisted, shielded pairs and a common wire (24 AWG or larger)	Allows customer to make changes to the screen content using a host computer. While transferring changes, normal display operation will continue.
MICRO COMM	Three 18 AWG Wires	Allows the display to know position, direction, door strobe, priority messages, etc.
Live Video - Coax	One Coax Cable (RG6 Recommended)	Allows the Elite PI to display a real-time composite video image (i.e. CCTV, Security Desk, News Network, etc.)
Live Video - Twisted Pair	One twisted, shielded pair (24 AWG or larger)	Allows the Elite PI to display a real-time composite video image. This option requires more hardware than live video over coax and video quality is harder to control.
Audio	One twisted, shielded pair (24 AWG or larger)	Allows audio to be used in conjunction with the Live Video. The speaker is supplied by the customer.

S1 DIP SWITCH SETTINGS

DIP Switch 1 - Test Mode
- Off = Normal Run Mode
- On = Test Mode. The display will cycle up and down through all programmed floors (Front Side Only).

DIP Switch 2 - Audio Output
- Off = Audio Software Controlled
- On = Audio Enabled

DIP Switch 4, 3 - RS485 Configuration Link Baud Rate (Must match Transfer Program)

DS4	DS3	BAUD RATE
OFF	OFF	9600
OFF	ON	19200 (Default)
ON	OFF	38400
ON	ON	57600

DIP Switch 6, 5 - Watchdog Period (Length of time PIC waits for response from Elite Display before resetting the display)

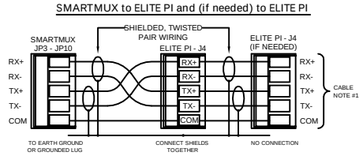
DS6	DS5	Wait Period
OFF	OFF	One Minute
OFF	ON	Two Minutes
ON	OFF	Three Minutes (Default)
ON	ON	Never Reset Display

DIP Switch 7 - Converter Board Display Mode (does not affect TFT screen)
- Off = Scan Slot Data Displayed
- On = ASCII Data Displayed

NOTE: Left Cube Dot = Priority Message Present
Right Cube Dot = Door Strobe Active

DIP Switch 8 - Single/Multi-Car
- Off = Single Car - Standard MICRO COMM Links
- On = Multi-Car - Special 8-to-1 MICRO COMM Links Only!

SMARTMUX to ELITE PI and (if needed) to ELITE PI



NOTE: Shields MUST be grounded to controller/earth ground lug

S2 DIP SWITCH SETTINGS

ARRIVAL ARROWS & DESTINATIONS
DS1 - DS7 set the unit's floor number.

DS7 (64)	DS6 (32)	DS5 (16)	DS4 (8)	DS3 (4)	DS2 (2)	DS1 (1)	FLOOR NUMBER
OFF	OFF	OFF	OFF	OFF	OFF	OFF	CAR UNIT
OFF	OFF	OFF	OFF	OFF	OFF	ON	FLOOR 1
OFF	OFF	OFF	OFF	OFF	ON	OFF	FLOOR 2
OFF	OFF	OFF	OFF	OFF	ON	ON	FLOOR 3
:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:
ON	ON	ON	ON	ON	OFF	ON	FLOOR 125
ON	ON	ON	ON	ON	ON	OFF	FLOOR 126
ON	ON	ON	ON	ON	ON	ON	NOT USED

Switch 8 sets the unit as front or rear.
DS8 OFF - Front Unit DS8 ON - Rear Unit

ROTARY SWITCH SETTINGS

Rotary Switch S3 - Used for USB transfers. Default setting is 0.

Rotary Switch S4 - Unit Address

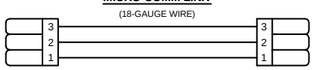
This switch sets the address of the Elite PI unit. The default is address 1, which is switch setting 0.

NOTE: This address must match the Transfer program setting.

S4	Unit Address	S4	Unit Address
0	1	8	9
1	2	9	10
2	3	A	11
3	4	B	12
4	5	C	13
5	6	D	14
6	7	E	15
7	8	F	16

MICRO COMM LINK

(18-GAUGE WIRE)



CABLE NOTES:

1) Use shielded, twisted pair wires. We recommend using 24-gauge or larger wires. NOTE: Connect shields to controller/earth ground.
2) Use one wire of a twisted pair or a separate wire for common.
3) The audio input cable should be a shielded, twisted pair cable.
4) BNC composite video cable - 75 ohm RG6 recommended.
5) Twisted pair video cable - Unshielded twisted-pair wire recommended. Baluns required - C.E.# V23501P02

VIDEO TEST MODE

Video test mode uses a combination of DIP switch and rotary switch settings. Please write down the initial setting of the S3 and S4 rotary switches before starting this process.

Entering Video Test Mode

Set DIP switch 1 to OFF, then set S3 and S4 to position F. Next, set DIP switch 1 to ON. The Live Video Adjustment menu will appear on the screen with Brightness highlighted.

Choosing Item to Adjust

The highlighted item is the current selection. To choose a different item to adjust, set S3 as shown below:

S3	Adjustment	S3	Adjustment
F	Brightness	B	Video Standard
E	Contrast	A	Vertical Stretch
D	Color	9	Default
C	Tint	8	Original

Making Adjustments

Highlight the item to change and turn S4 for the best display quality.

Default and Original Settings

Default will reset the display to the factory default settings, and Original will cancel any changes made and restore the values stored before entering Video Test mode. Highlight the item to use, turn S4 in eithe direction, and wait five seconds. The display will reset to the default or previous settings.

Exiting Video Test Mode

To save the new video settings and exit Video Test, set DIP switch 1 to OFF. Reset S3 and S4 to the values recorded before starting the process.

Video Gain

JP7 and JP6 control the video gain. Use a shunt to short the pins of the switches as shown in the table below (OFF = No Shunt, ON = Shunt):

JP7	JP6	VIDEO GAIN
OFF	OFF	No Gain (Default)
OFF	ON	Lowest Gain
ON	OFF	| | |
ON	ON	Highest Gain

Adjusting Audio Volume

If audio is needed, connect an 8-ohm speaker to J1 on the converter board. Set the volume by adjusting Volume pot R2 (3/4-turn pot). Adjust the pot clockwise to increase the volume.

SMARTMUX-8 SWITCH FUNCTIONS

S3 and S7 SLIDE SWITCH SETTINGS

Slide Switches S3 and S7 select the active PC Input connection

S3	S7	Active Input Connection
TO PC	USB	JP1 - TO PC - Connects as noted on reverse
TO PC	ETH	JP1 - TO PC - Connects as noted on reverse
U/E	USB	J2 - USB - Connects to PC using a standard USB cable (10-ft. max)
U/E	ETH	J6A - ETHERNET - Must have optional Ethernet board installed (Network Enabler Administration software is used on the PC for the Virtual Serial Port)

S5 DIP SWITCH SETTINGS

DIP Switches 1, 2, 3, 4 - Test Port Address - Selects Port to use for Port Test

DS1 P1	DS2 P2	DS3 P3	DS4 P4	Port Selected
OFF	OFF	OFF	OFF	Channel 1 - JP3
ON	OFF	OFF	OFF	Channel 2 - JP4
OFF	ON	OFF	OFF	Channel 3 - JP5
ON	ON	OFF	OFF	Channel 4 - JP6
OFF	OFF	ON	OFF	Channel 5 - JP7
ON	OFF	ON	OFF	Channel 6 - JP8
OFF	ON	ON	OFF	Channel 7 - JP9
ON	ON	ON	OFF	Channel 8 - JP10
OFF	OFF	OFF	ON	Time/Temp - JP12
ON	OFF	OFF	ON	Bank Channel - JP11

DIP Switches 5, 6
Display Address for Port Test

DS5 D1 (1)	DS6 D2 (2)	Display Address
OFF	OFF	Display 1
ON	OFF	Display 2
OFF	ON	Display 3
ON	ON	Display 4

DIP Switches 7, 8
Ethernet Timeout

DS7 ET1	DS8 ET2	Function
OFF	OFF	Ethernet does not reset
ON	OFF	Ethernet resets if no serial traffic for 7 minutes
OFF	ON	Ethernet resets if no serial traffic for 2 hours
ON	ON	Ethernet resets if no serial traffic for 24 hours

S1 DIP SWITCH SETTINGS

DIP Switches 1, 2 - Run Mode

DS1 Test1	DS2 Test2	UNIT RUN MODE
OFF	OFF	Normal Operating Mode
ON	OFF	Port/Display Test Mode: Sends out test packets to the Port/Address specified on S5. Display shows "D1" then "OK" for success or "--" for failure.
OFF	ON	Alternating Output Test: Sends an alternating 255 and 0 out to the port (meter checks).
ON	ON	Factory Test Mode: Used at the factory for initial board tests.

DIP Switches 3, 4 - Baud Rate

DS3 Baud1	DS4 Baud2	BAUD RATE - NOTE: Elite Pi display and PC Transfer application must also be set to the same baud rate
OFF	OFF	9600
ON	OFF	19200 - Factory Default
OFF	ON	38400
ON	ON	57600

DIP Switches 5, 6, 7, 8 - Board Address

DS5 A1	DS6 A2	DS7 A3	DS8 HUB	ADDRESS - NOTE: The PC Transfer app must also be set to use this address
OFF	OFF	OFF	OFF	Bank 1 - Factory Default
ON	OFF	OFF	OFF	Bank 2
OFF	ON	OFF	OFF	Bank 3
ON	ON	OFF	OFF	Bank 4
OFF	OFF	ON	OFF	Bank 5
ON	OFF	ON	OFF	Bank 6
OFF	ON	ON	OFF	Bank 7
ON	ON	ON	OFF	Bank 8
OFF	OFF	OFF	ON	Hub 1
ON	OFF	OFF	ON	Hub 2

DATE DRAWN: 08/10/17	DRAWN BY: DAC	REQUESTED BY: TE	C.E. ELECTRONICS, INC. 2107 Industrial Drive Bryan, Ohio 43506 (419) 636-6705
BOARD NUMBER: N/A	LAST DATE REVISED: 10/18/17	APPROVED BY:	
PRODUCT: ELBNK-DMX TFT SYSTEM		DWG. NO.: ELBNK-DM BACK	REV.: A