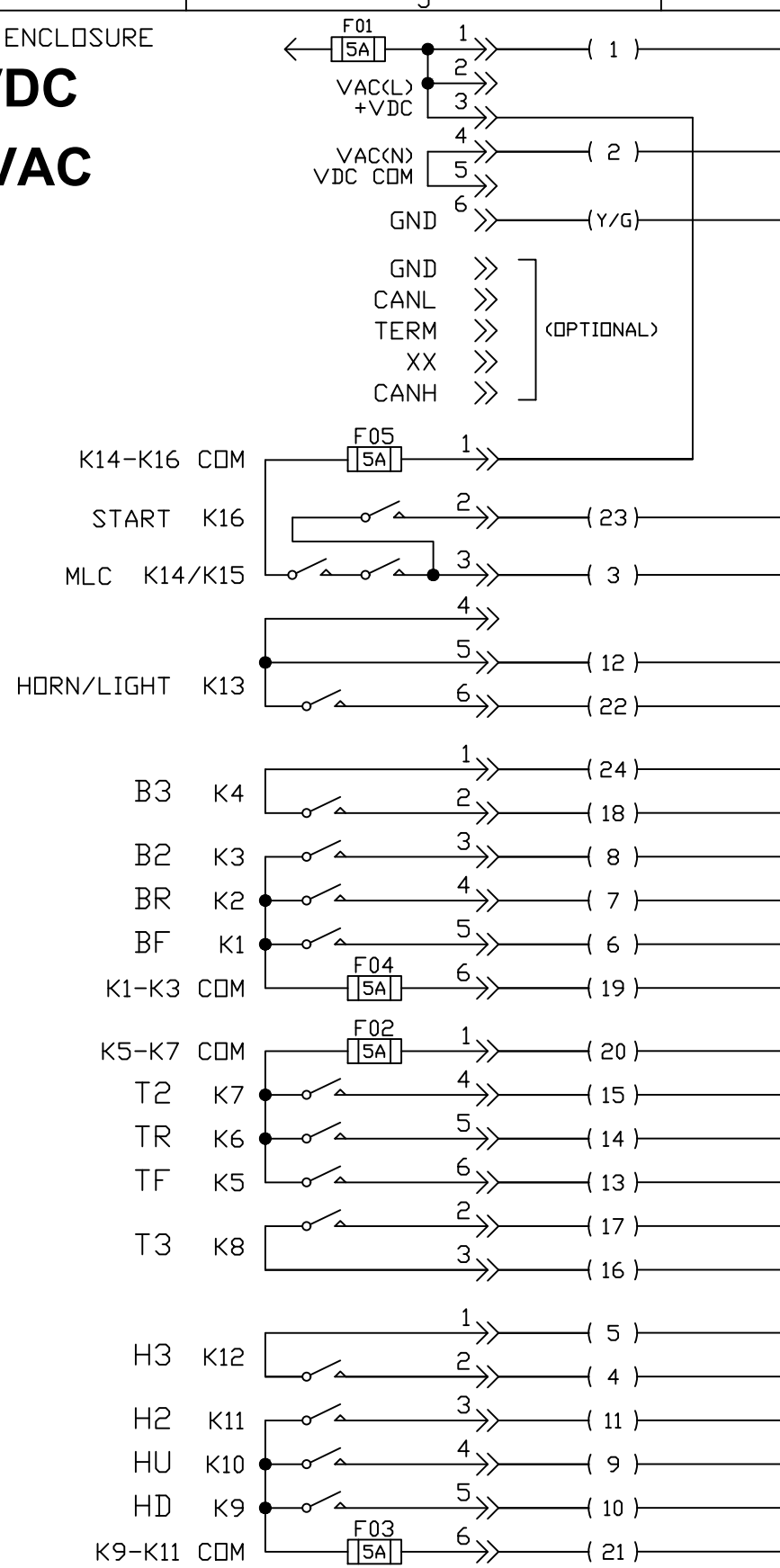


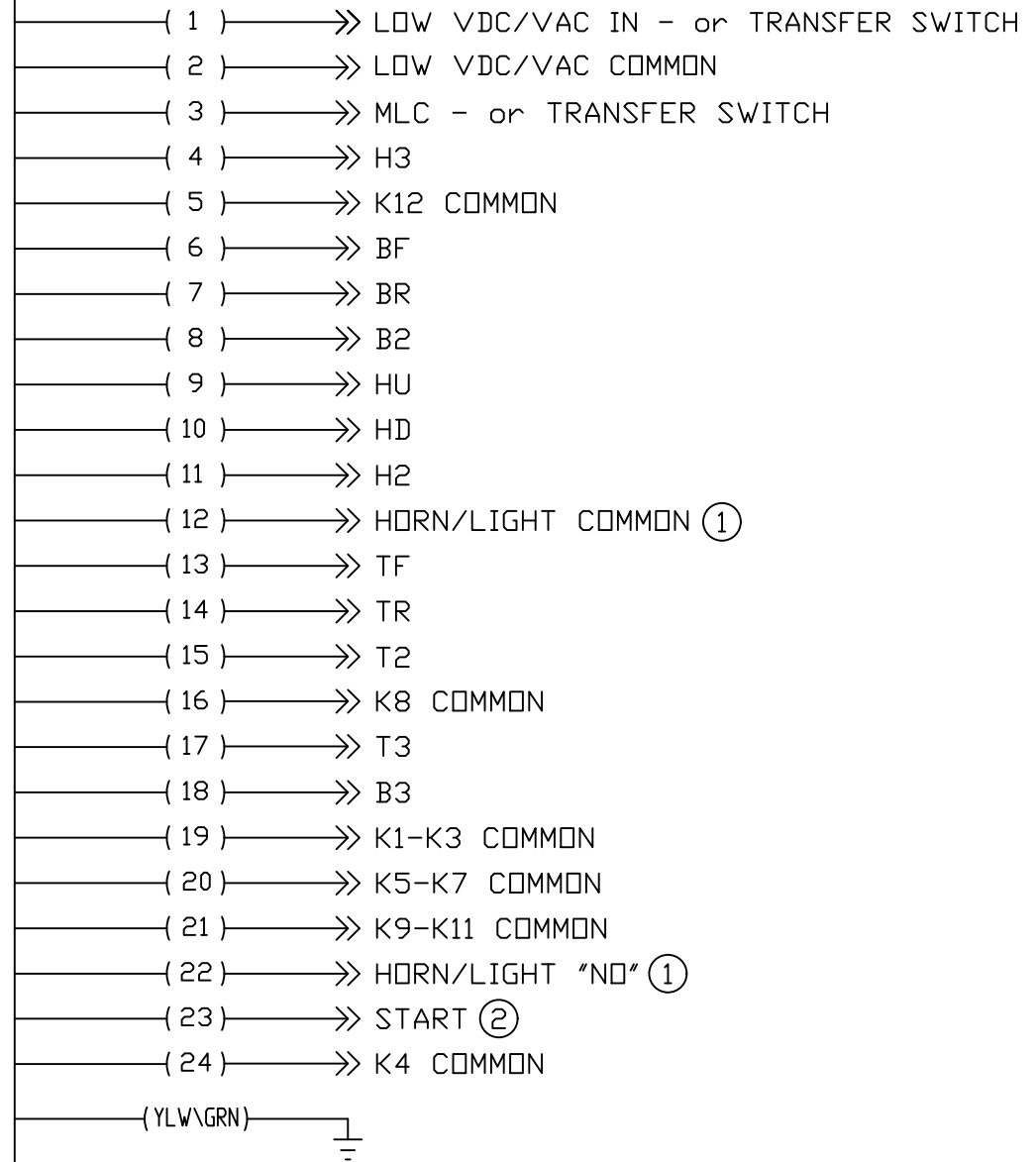
RADIO RECEIVER ENCLOSURE

**9 - 36 VDC**  
OR  
**10 - 28 VAC**



CONTROL CABLE  
6 FEET MAX

PIGTAIL WIRING  
DESIGNATION



CONTACT RATINGS:  
"MLC" RELAY: 8 AMPS @ 250 VAC  
CONTROL RELAYS: 8 AMPS @ 250 VAC

- ① K13 WIRES (12) & (22) MUST BE WIRED TO THE CRANES WARNING DEVICE FOR PROPER OPERATOR WARNING AND ANNUNCIATION DURING THE TX ASSOCIATION PROCESS.
- ② FOR USE IN APPLICATIONS WHERE ISOLATED START CONTROLS ARE REQUIRED. DURING COMMANDED FUNCTIONS THIS WIRE WILL HAVE A 120 VAC POTENTIAL ACROSS IT. TERMINATE WIRE ACCORDINGLY.

-- REVISIONS --

NO.	DATE	DESCRIPTION
0-0	07.20.21	DRAWING ISSUED FOR PRODUCTION.
1-0	02.17.22	MADE DRAWING UPDATES, ADDED CFG NOTE. -GFM
2-0	07.26.22	UPDATED DRAWING TO LATEST STANDARD. -GFM

**WARRIOR ETHOS 33-LVU**

CUSTOMER: CERVIS, INC.

DESCRIPTION: MU-9X15-LVU RX WITH PRE-WIRED PIGTAIL

ASSEMBLY #15104525

DRAWN: ECJ  
ENGINEER: GFM

SCALE: N/A

SHEET: 1 OF 4

SIZE: B

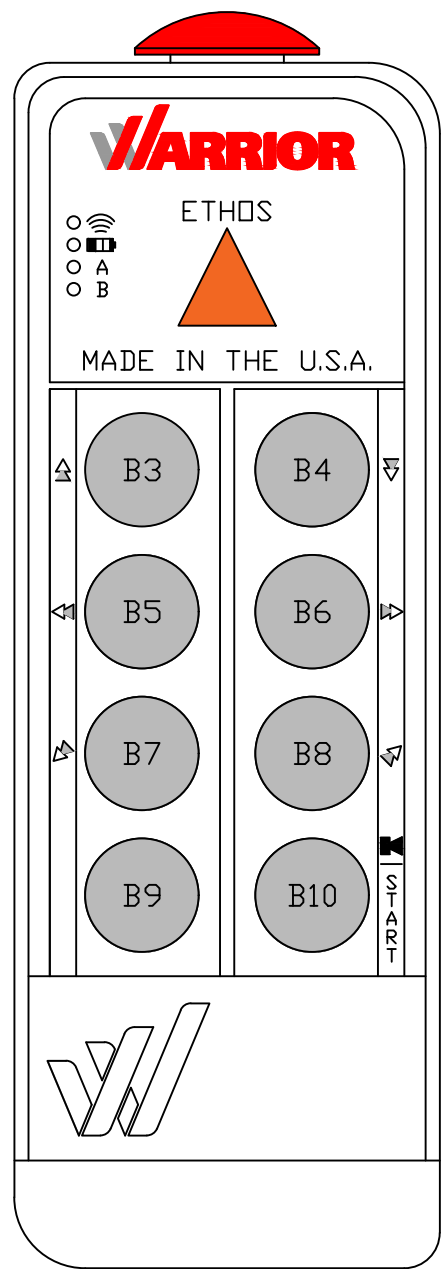
DWG NO.

#A100061

REV: 2-0

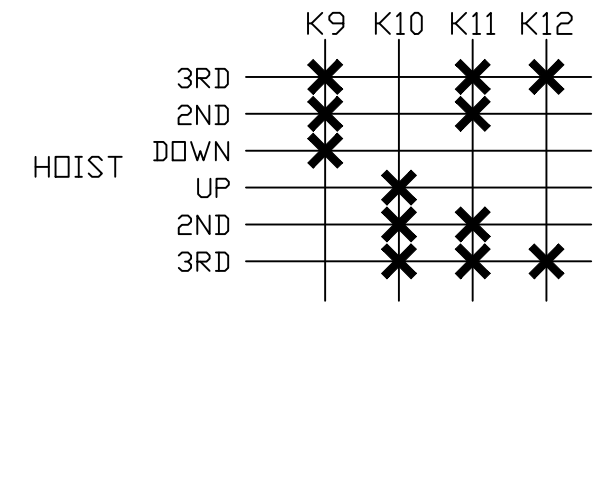
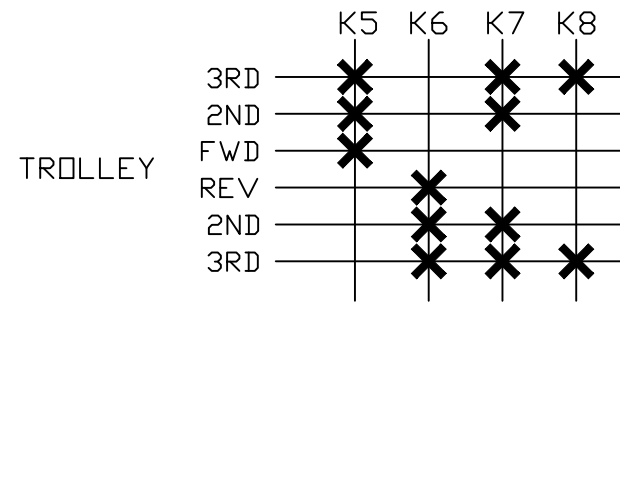
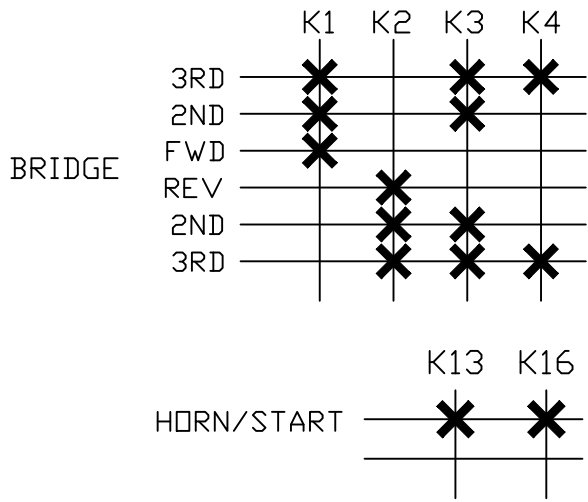


STOP  PULL START



HOIST UP  
TROLLEY REV  
BRIDGE REV  
NOT USED

HOIST DWN  
TROLLEY FWD  
BRIDGE FWD  
HORN/START



START PROCEDURE:

1. PULL STOP SWITCH UP TO "WAKE" TX.
2. WAIT FOR TX/RX LED TO START FLASHING.
3. PRESS HORN/START PUSHBUTTON (B10) TO ENERGIZE THE "MLC" RELAY.

STOP:

1. PRESS STOP BUTTON TO DE-ENERGIZE "MLC" RELAY & ALL OTHER OUTPUTS.

PROGRAMMING NOTES:

1. FIRST COME - FIRST SERVE SOFTWARE.
2. WITH THE 3-STEP RELAY CONFIGURATION NO AUXILIARY FUNCTIONS ARE POSSIBLE.
3. BUTTONS 9 & 10 WILL ONLY BE USED DURING THE ASSOCIATION PROCESS.


TX/RX = COMM  
BATT = LOW BAT  
A = NOT USED  
B = NOT USED

1. TX TIMEOUT = 10 MINUTES
2. B3 - B8 ARE 3-STEP PUSHBUTTONS
2. B9/B10 ARE 2-STEP PUSHBUTTONS

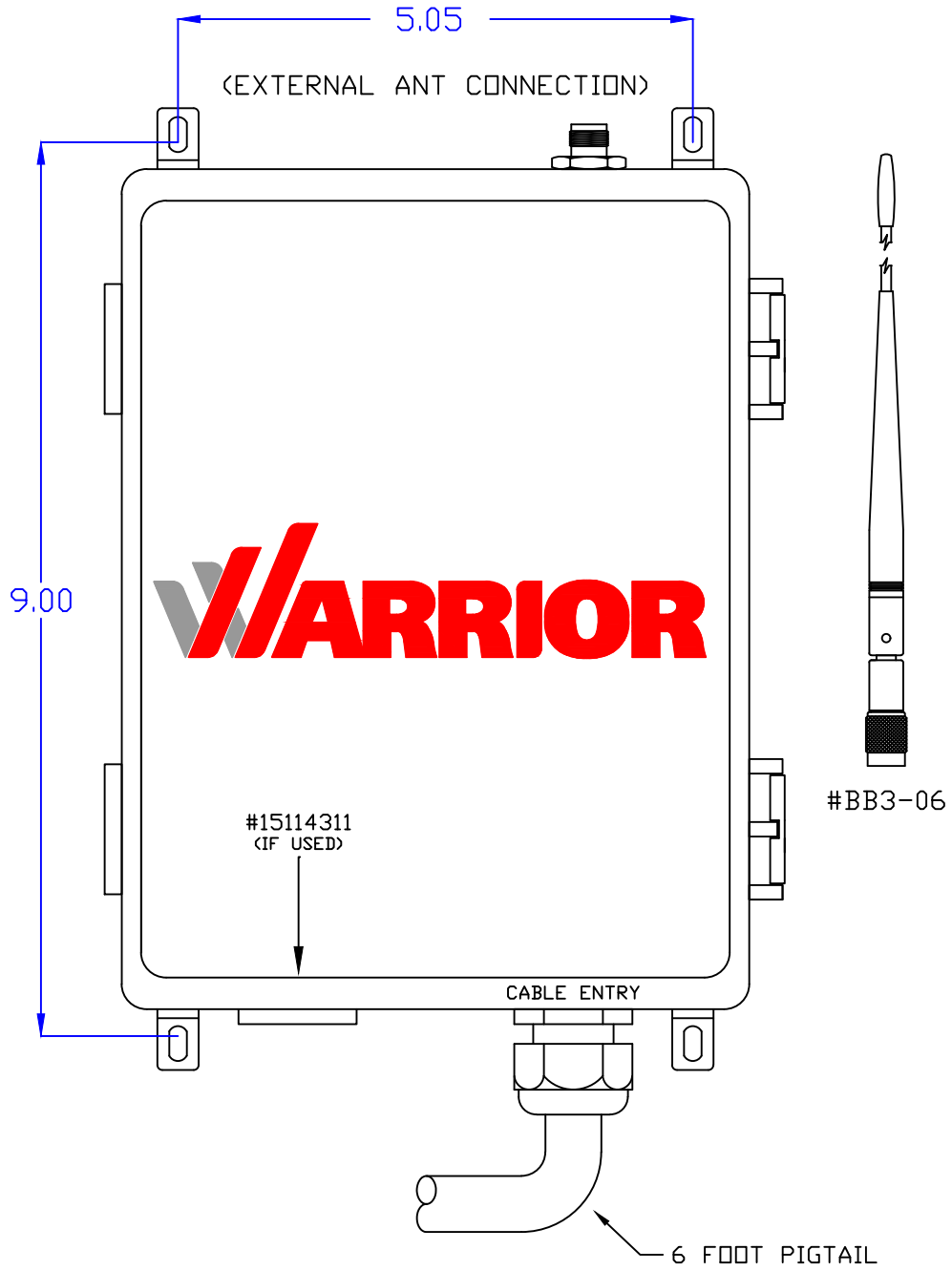
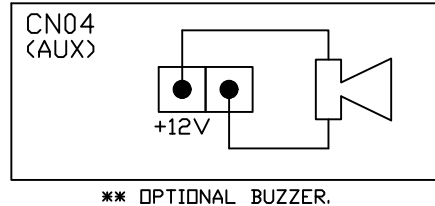
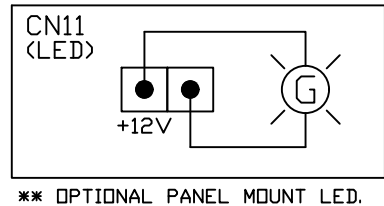
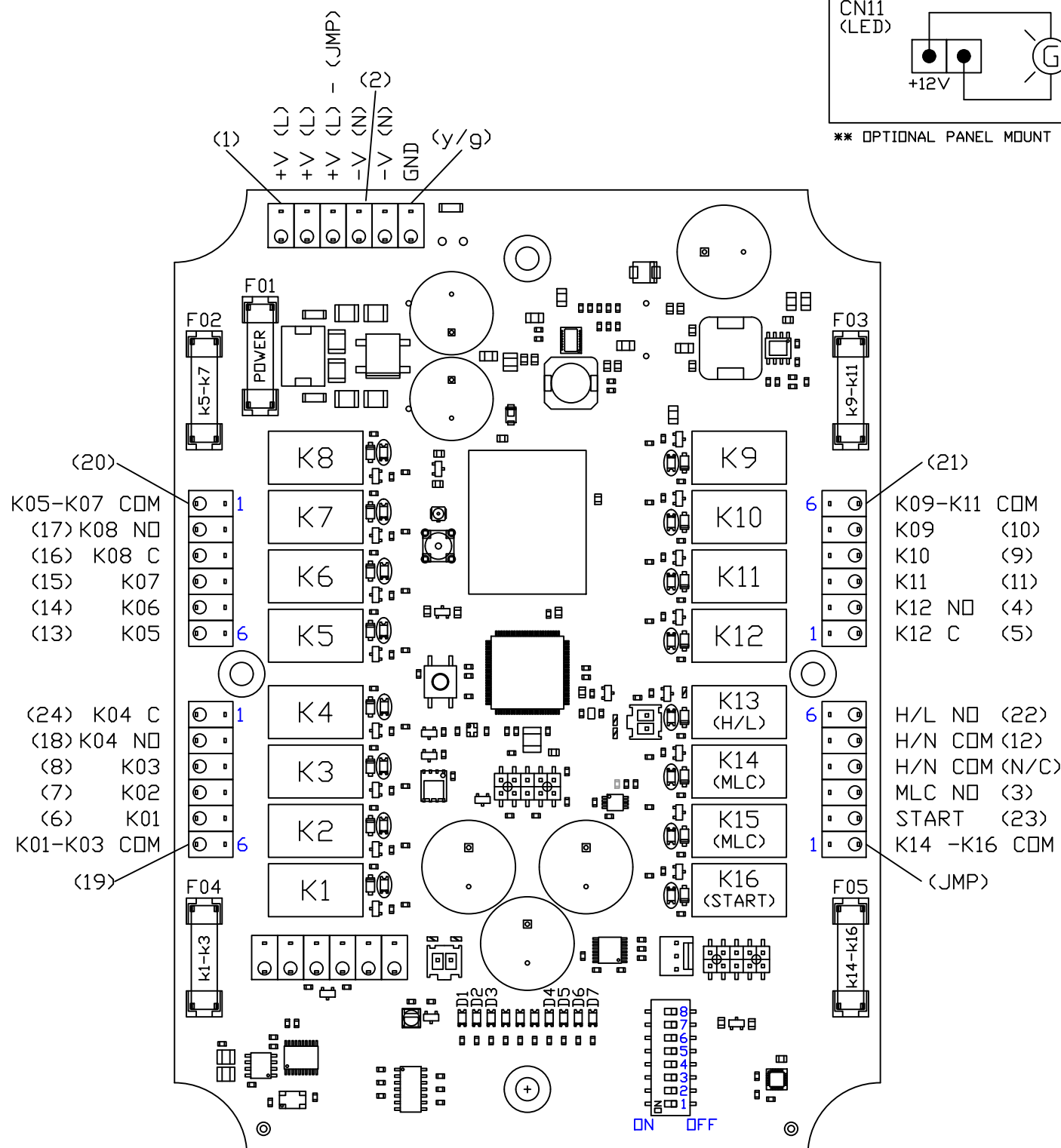
**CERVIS**  
Model: HHMS-xS9Xxx  
Cervis 915 MHz  
XXXXX  
XXXXX  
Input: 1.6-3.2V Rev 0  
Serial #

ASSOCIATION PROCEDURE	
1. B9/B10: INITIATES MAINTENANCE MODE.	
2. B3/B4: INITIATES ASSOCIATION MODE (HOLD FOR 5 SEC'S)	
3. PRESS B9 TO SEARCH FOR TARGET RX.	
4. PRESS B10 TO SELECT THE TARGET RX.	
5. B3/B4 + B5: CLEARS ID.	
** REFER TO MANUAL FOR DETAILS	

Software: Warrior Ethos 33 CFG - [1DCFA883]

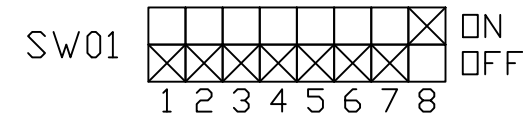
CUSTOMER: CERVIS, INC.					
DESCRIPTION: HHMS-9XW08-3S-ND PROGRAMMING DETAILS					
DRAWN: ECJ	SCALE: N/A	SHEET: 2 OF 4	SIZE: B	DWG NO. #A100061	REV: 2-0
ENGINEER: GFM					

<XX> - PIGTAIL WIRE NUMBERS



DIAGNOSTIC LED'S:

D1	HEALTH/OPERATIONAL
D2	TX
D3	RX
D4	LOGIC 3.3V
D5	SYSTEM 3.3V
D6	RF 3.3V
D7	SYSTEM 12V



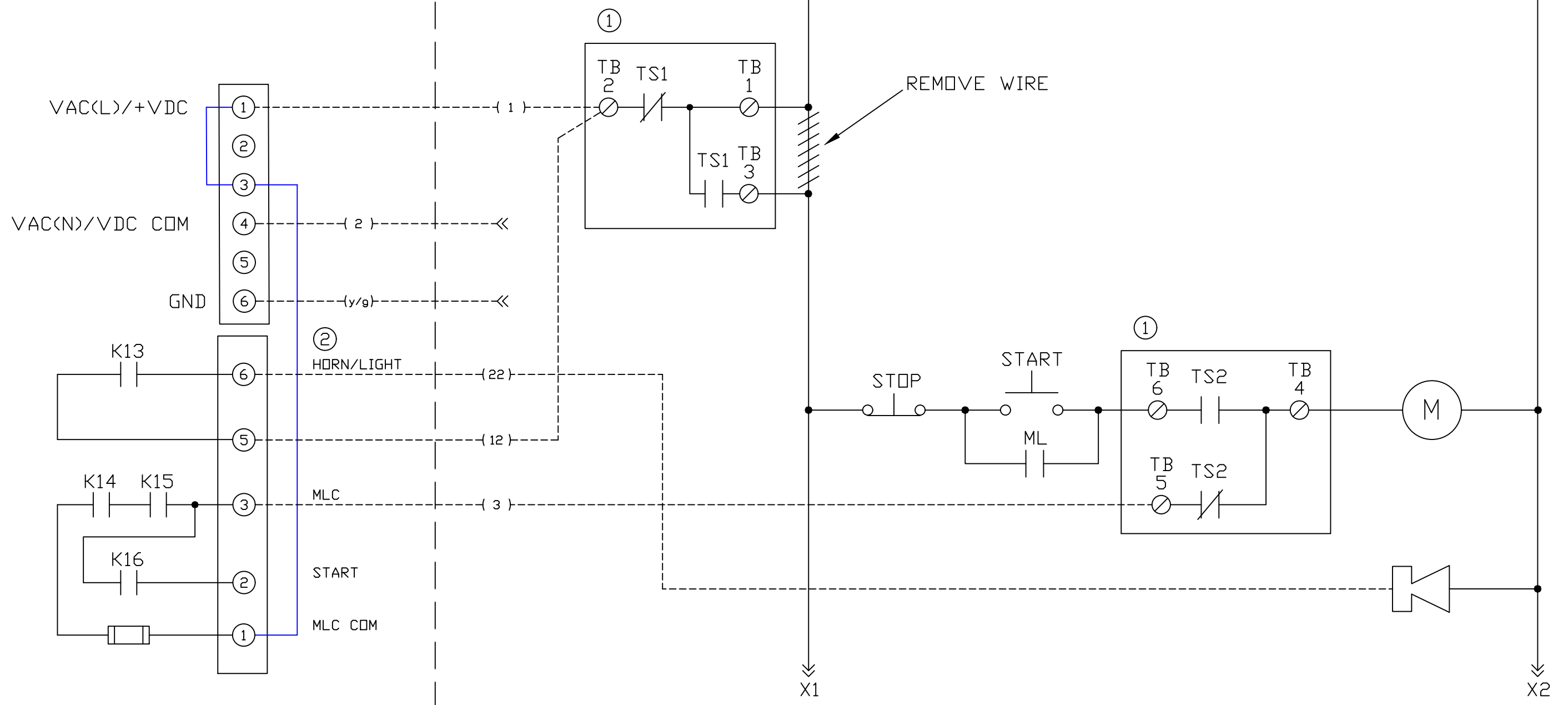
1. DIP SWITCH 8 SHOULD BE "OFF" WHEN THE SYSTEM IS SHIPPED.
2. DO NOT MOVE DIP SWITCH POSITIONS 1-7 ON THIS MODEL, RELAYS ARE NOT CONFIGURABLE.

"PCB LAYOUT"

CUSTOMER: CERVIS, INC.					
DESCRIPTION: BOARD/ENCLOSURE					
DRAWN: ECJ	SCALE: N/A	SHEET: 3 OF 4	SIZE: B	DWG NO. #A100061	REV: 2-0
ENGINEER: GFM					

CERVIS RADIO RECEIVER

TYPICAL MAINLINE



- ① TRANSFER SWITCH SHOWN IN "RADIO" MODE - FOR REFERENCE ONLY. TRANSFER SWITCH IS SUPPLIED BY CUSTOMER.
- ② TYPICAL WIRING OF THE HORN/LIGHT (ASSOCIATION) RELAY. FOR PROPER OPERATOR WARNING AND ANNUNCIATION DURING THE TX ASSOCIATION PROCESS.

CUSTOMER: CERVIS, INC.			
DESCRIPTION: TYPICAL MAINLINE INTERFACE			
DRAWN: ECJ	SCALE: N/A	SHEET: 4 OF 4	SIZE: B
ENGINEER: GFM		DWG NO. #A100061	REV: 2 - 0